

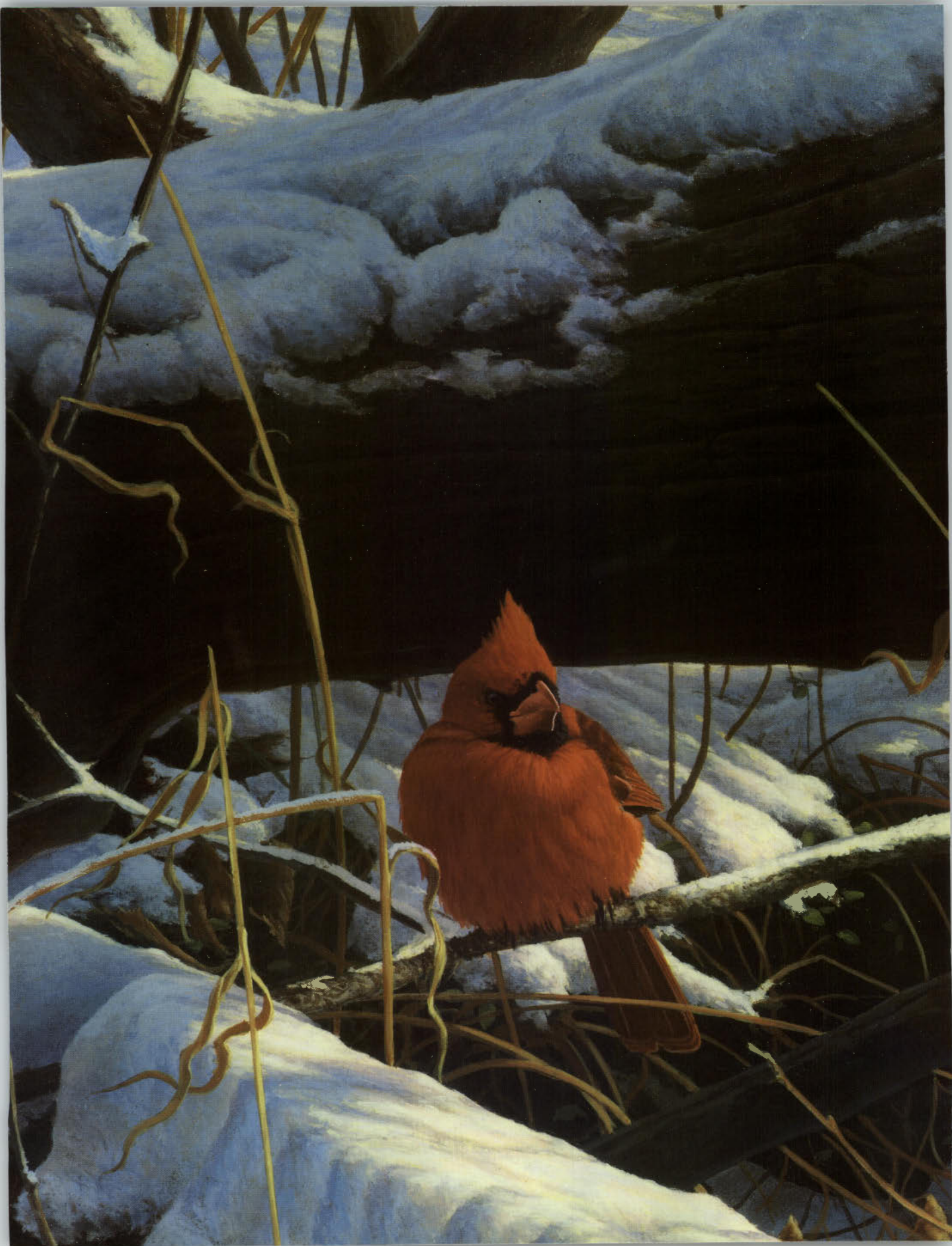
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November/December 1989

NJPB

New Jersey Outdoors



MAR 8 1990
TRENTON



New Jersey Outdoors

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Front: The Frilled Anemone, found from the Arctic Ocean south to Delaware Bay, is our most common and largest anemone. Photograph by Herb Segars/Undersea Photo.

Inside Front: "Winter Playground — Cardinal." Original oil painting by Michael Budden.

Inside Back: "Screech Owl." Original acrylic painting by Carol Decker.

Back: The Ironmasters' Mansion at Historic Batsto Village. Photograph by Michael Hogan.

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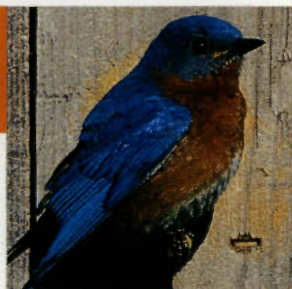
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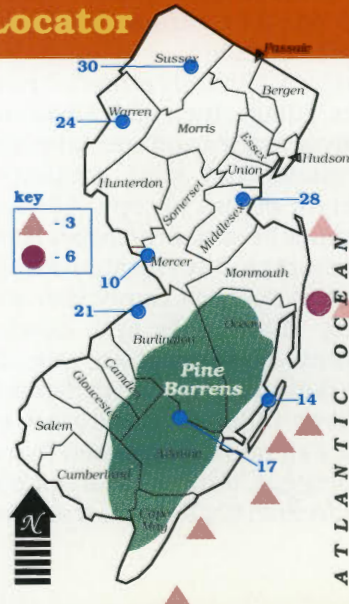
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Story Locator



Editorial

As we enter the holiday season, our thoughts and activities now focus on gatherings of family and friends, special holiday meals, and mental notes, for some, of what should I be giving and regrettably, for many, of what am I going to get.

Rather than dwell on sugar plums dancing in the head, *NJO* would like to address simpler and more basic gifts. In this issue we offer three features on the volunteers who give so freely of their time and of themselves to operate, maintain and beautify state facilities or aid and support our wildlife resources. Due to short falls in budget and staffing, the department relies heavily on volunteers, especially in the natural resource areas, to support and enhance our programs. Their mission of caring, as Director Marshall states, is a special contribution to the resources the DEP holds stewardship over.

The Batsto Citizens Committee, the Wildlife Conservation Corps and the volunteers that aid the Natural Lands Trust are very special people indeed. But they are by no means the only individuals or groups who do so much for the department and the citizens of New Jersey. There are a tremendous number that we could cite but cannot because of space limitations.

As the *NJO* family already knows, Allaire Village, Inc., with 12 months of daily activities and special events, has made that state property a model for others to copy. Although the James Fennimore Cooper House in Burlington City is state-owned, it is the Burlington County Historical Society that staffs and develops programs at the historic site. The State Botanical Garden at Skylands has been cultivated and nurtured by the Friends of Ringwood Manor. The Bergen County Historical Society is frequently cited in the calen-

dar of events and on these pages for their activities and labors of love at the Steuben House and the Campbell-Christie House in River Edge. The society and the state recently celebrated the Golden Anniversary of this Partnership in Pride.

Thanks, too, to the New Jersey Beach Buggy Association for their planting dune grass and erecting storm fences, projects designed to protect the dunes and prevent beach erosion at a number of coastal locations. Bill Vibbert, Superintendent of Island Beach State Park, has said that without the help of crews from the association, the division would not have been able to do fencing last spring.

There are also the Whitesbog Preservation Trust, numerous Friends of the Parks organizations, and a myriad of clubs and groups that provide us with the opportunity to enjoy state-owned properties, to appreciate the recovery of certain endangered species, to have fun in the woods or at the beach, and have managed wildlife populations that are among the best in the east. It is our wish that all of those who donate their time, knowledge, expertise and love get back, in turn, 100-fold for all that they give.

Happy Holidays to all of them and to all of you. As we celebrate the winter solstice and those special days that follow, let us also give a very special and sincere thanks to the cadre of volunteers who make it possible for us to still get out there and "eNJOy!"



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New Jersey Outdoors Credo
This publication is dedicated to the wise management and conservation of our natural resources and to the fostering of greater appreciation of the outdoors. The purpose of this publication is to promote proper use and appreciation of our natural cultural and recreational resources and to provide information that will help protect and improve the environment of New Jersey.

Let's protect our earth



NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION

Marine Havens

By Jeanette Bowers

For more than five years, the DEP Division of Fish, Game and Wildlife has been constructing an artificial reef network along the New Jersey coast. These man-made reefs support an array of marine fauna, providing sea-floor habitat for a variety of fish and shellfish sought by recreational and commercial anglers, as well as divers and underwater photographers.

Scientific investigations were conducted by the federal government in the 1960s on the best materials to be used for constructing artificial reefs. Information gleaned from the 15-year study, initiated at the federal fisheries laboratory at Sandy Hook, enabled the DEP Marine Fisheries Administration to design and construct structures that would provide our marine resources with the same benefits inherent in naturally occurring reefs.

Currently there are eight artificial reef sites along the coast. The Sandy Hook, Shark River, Sea Girt, Garden State North and South, Atlantic City, Ocean City and Cape May sites encompass nearly 11 square miles of ocean bottom. Additionally, over 120 small patch reefs have been constructed within these larger reef sites.

Various types of materials have been used to construct the patch reefs, including concrete slabs, specially designed tire units, and derelict vessels. Since the program was inaugurated in 1983, more than 40 freighters, tankers, barges and commercial fishing boats have been sunk. These underwater structures furnish the fish and shellfish with a multitude of hiding places and provide an attachment surface for encrusting organisms.

Once a reef structure is submerged, colonization by marine life begins almost immediately,

depending on the time of year, the water temperature and the species involved.

Recruitment of fish during spring and fall migrating seasons occurs within hours. In the winter and summer months, when fish are less active, colonization takes longer. Similarly, encrusting organisms such as anemones, barnacles, mussels and hydroids establish themselves on reef structures at various rates depending on the season, with almost no colonization occurring during winter.

Encrusting organisms begin life as planktonic larvae, drifting with oceanic currents until a hard substrate, such as the reef materials, becomes available as a foothold. The initial colonizing species, it appears, is determined largely by whatever species happens to be just prior to reef construction.

Within months of the initial colonization, structures are transformed into colorful "living carpets" of tiny organisms, and this reef food

chain, in turn, attracts a variety of fish and shellfish. Although the colonization of the reef structure initially occurs rapidly, the development of a diverse community of encrusting organisms, fish and shellfish probably takes five years or longer. NJ



New Jersey State Library

A spearfishing diver exhibits her prized 10-pound tautog. Also known as blackfish or slippery bass, the tautog is a bottom-dwelling species found frequently on reef sites. These fish feed primarily on crunchy shellfish (mainly mussels) and crustaceans (crabs and shrimp). The delicious-tasting blackfish is reported to reach 22 pounds and live for 34 years. Tautogs grow slowly; an 8-pound fish is approximately 8 to 10-years old.



Herb Segars

Herb Segars

*A former wildlife technician for the division, **Jeanette Bowers** is now director of the Alliance For A Living Ocean in Beach Haven. She is continuing studies in marine science, and this marks her NJO debut.*

A mixed mussel colony is shown with several frilled anemones. Mussels secure themselves to any available firm support or foothold using anchor threads, but this mollusk can also use its "foot" to move to another location. These filter-feeding bivalves have two siphons, one bringing in food and oxygen-enriched water and an excurrent siphon eliminating waste products.





Herb Segars

Herb Segars

ARTIFICIAL REEFS

(top) The juvenile black sea bass is a bottom-dwelling, reef-dependent species and one of the most abundant fish found on New Jersey's artificial reefs. Also called rock bass, the sea bass begins life as a female and then undergoes a gender change to male when they reach a larger size. The male develops a hump on its back, along with iridescent blue patches. Sea bass feed primarily on small crustaceans such as crabs and shrimp, reaching an average weight of 1½ pounds. Large males may reach 6 pounds.



Herb Segars

(center) The handsomely colored spotfin butterfly fish strays northward with the Gulf Stream. One of the smaller fish to visit New Jersey's artificial reefs, this tropical species can be seen in late summer and early fall. The photogenic little fish is a favorite of underwater photographers.



A northern lobster created its den by burrowing beneath a reef structure. A favorite food of many fish, lobsters seek shelter from larger predators, wave action and tidal currents by utilizing the multitude of hiding places the reef provides. These valuable crustaceans are highly prized by scuba divers and commercial fishermen, who set out wooden lobster traps to capture those of legal size. Molting periodically, lobsters grow slowly, with 4-year-olds weighing between 1½ and 2 pounds.

A Warm, Dry Journey to a New Jersey Artificial Reef

By Herb Segars

Join me on an armchair visit to marvel at the marine environment found right in our home waters. Our journey will be to a favorite dive site of mine, put there by the DEP Division of Fish, Game and Wildlife. It is a ship called the Spartan, a canal tugboat built in 1957 in Chicago that worked the Great Lakes and New York Harbor.

Donated to the State of New Jersey, it was scuttled in January 1986 as an artificial reef. Eighty-five feet long and 25 feet wide, the Spartan sits upright in 70 feet of water, three miles east of Manasquan. To ensure an environmentally sound marine habitat, her fuel tanks and bilges were thoroughly cleaned and much of her equipment, including the engines, stripped before her placement on the reef.

Rolling over the side of the boat into the green Atlantic water, my first sensation is one of mild shock as the cold water flushes away the body heat that had built up while suiting up in the 80°F August sunshine. With 20-foot visibility, I must follow the anchor line to the bottom 70 feet below. I make a quick check of my equipment and begin the three-minute descent.

The midwater is full of comb jellies, salps, lion's mane jellyfish and an occasional seahorse. The shapes of the salps and comb jellies — translucent bodies lined with fluorescent, multi-colored canals — fascinate me. I see small fish taking refuge in the trailing tentacles of the lion's mane jellyfish, while a solitary seahorse seems lost on a journey with an unknown end.

In a few short minutes, the dark shape of the Spartan appears. The steel hull and decks have acquired a covering that requires closer inspection. Colonies of blue mussels, the same type found in restaurants, have covered the majority of the steel surfaces. These mussels anchor themselves utilizing a number of threads which emanate from the mussels' body. They are secured to a hold-fast with a waterproof adhesive, a substance that dentists and doctors are studying in the hopes of finding a man-made duplicate.

Competing for surface area on the hull and decks is the metridium anemone, a frilly flower-like animal that feeds on plankton collected from the water by its many tentacles. The railings along the top deck provide a home for the tubularian hydroid, a

pink-colored, flower-like colony that lends a splash of color to the Spartan. From an underwater photographer's perspective, these three reef inhabitants provide an endless array of photographic subjects.

There are many other Spartan inhabitants. The most prominent being the sea star (starfish), whose favorite food is the blue mussel. I particularly enjoy watching the starfish as its multitude of suction cup-shaped feet move in unison, propelling the invertebrate rather quickly. One of the sea stars has chosen its dinner and is using its powerful arms to open a mussel shell and feast on the tasty meat.

If you're a saltwater angler, you might not be familiar with the starfish, anemones or mussels, but you would recognize the finny inhabitants of Spartan — sea bass, blackfish (tautog) and bergalls (cunner). Today, a large school of sea bass and blackfish are hovering just above the pilot house. They sense little danger as I approach, and the school parts to let me by. The majority of the fish in the school are small to medium in size. The larger members are extremely wary and tend to inhabit the innards of the ship.

In the center of the ship's upper portion, there is a large opening that allows me to drop down to the lowest section of the engine



Northern sea horse.

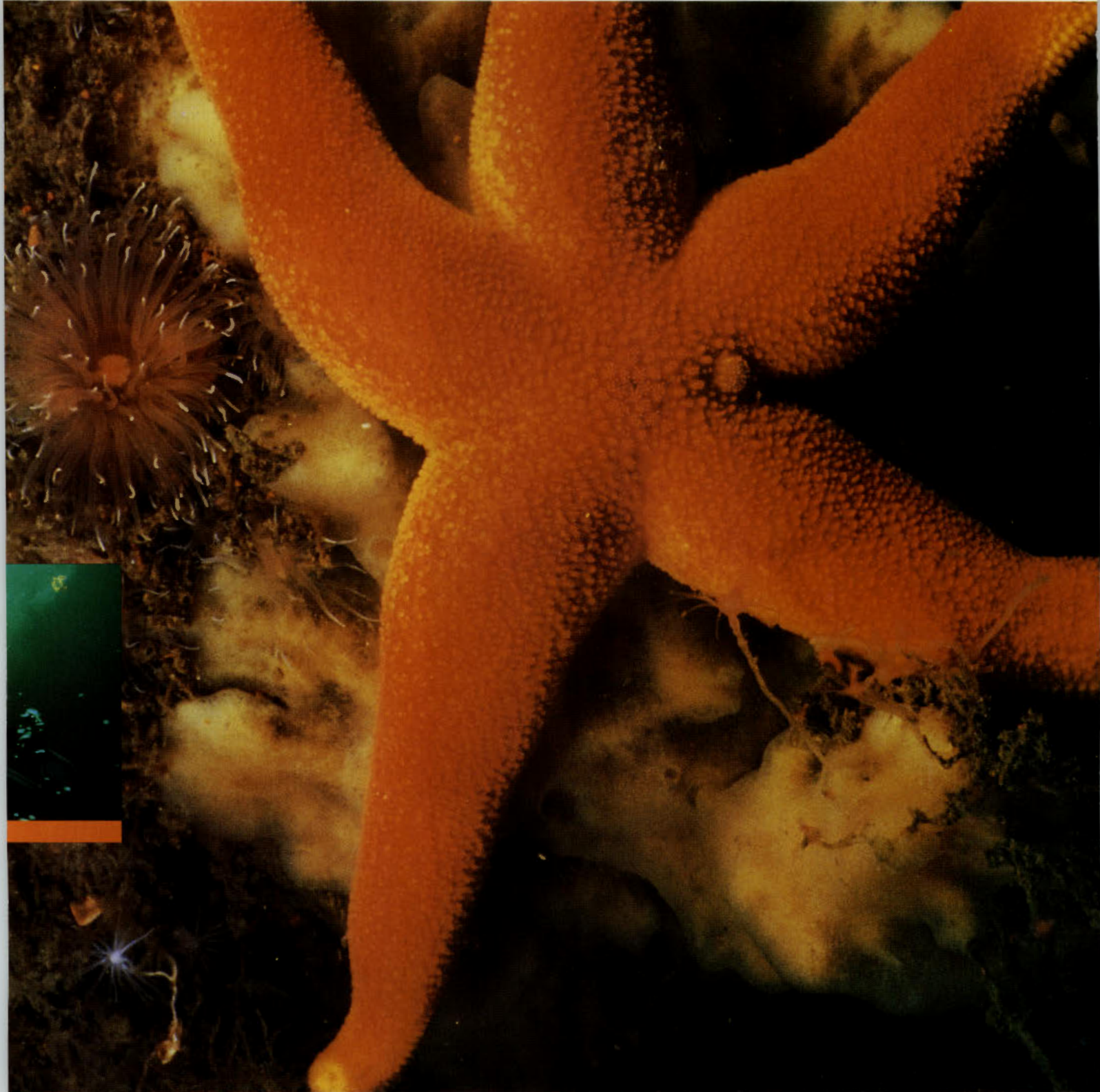
(right) Dave Haines uses a Teckna underwater scooter to begin his exploration on this man-made artificial reef system.

(facing page) Feeding exclusively on sponges, the blood star reaches a length of about two inches and is found as far south as Cape Hatteras.



room. I shine my light into the nooks and crannies until I spot, waving back and forth, a pair of antennae, the early warning system of the North American lobster, the New Jersey diver's favorite quarry.

Today, I am not hunting but thinking about the catching process. The lobster's hole is usually small and deep, its entrance blocked by a pair of formidable claws, the lobster's front line of defense. I must plunge my hand blindly into the hole and try to pin the crustacean, avoid its damaging crusher claw, and extract it from its lair. Quite often,





Diver Joe Pakan explores the Spartan, resting in water 70 feet deep.

the lobster is the victor, leaving the hunter with sore fingers. If caught, the lobster must be gauged underwater to be sure it is of legal size and to check for egg-laden females. Undersized lobsters and egg bearers must be released immediately.

There are doorways in the hold that lead to other portions of the ship. It is very dangerous to penetrate a shipwreck without proper training, so I satisfy myself with exploring more of the easily accessible sections of the engine room. The abundance of marine life that has grown in the engine room in the

three years that Spartan has been on the bottom is a testament to the success of New Jersey's artificial reef program.


I spot a beautiful sea anemone that I must photograph. I take three shots of it, varying the light intensity of each, knowing that one will thrill those who cannot visit this cold-water wonderland. As I move toward the bow of the boat, shafts of sunlight penetrate a dark corner of the engine room. The light creates an eerie mood as the rays dance with every movement of the clouds in front of the sun.

As I get closer, I see that the opening in the upper deck is large enough for a diver to fit through, so I ascend slowly into the open water. Here I am greeted by schools of bergalls (cunner), friendly reef fish that are the most abundant species on the wreck. Pausing to admire the view, the extremely curious bergalls move closer and closer, drawn by their reflections in the lens of my camera. Once they have accepted me, they actually become pests as they dive bomb in front of my lens just as I take a photograph. This might upset some people, but I feel privileged that they have become so at ease.

With a few minutes of air left, I drop off the side of the ship to investigate life in the sand. A four-inch wide trail leads me to a brownish-colored, pancake-shaped sea urchin. It has a name that we all recognize — the sand dollar. After dying, the sand dollar loses its brownish spines and turns white. What does not disappear is its star-shaped insignia, a real attraction as a nautical novelty.

I begin a turn back toward the boat, placing my hand down onto the sand and am startled as the bottom explodes. My initial fright turns quickly to amusement as I watch the winter flounder I so rudely disturbed fade into the far reaches of my visibility. Not far from this camouflaged hiding place a little skate hovers and cruises, looking for tasty morsels in the sand.

Alas, I have reached the limits of my underwater excursion and slowly begin my ascent to the surface. The anchor line becomes my guide, allowing me the luxury of monitoring my computer while the dark green bottom water gives way to the lighter hues of the surface. Five minutes later I am aboard the boat, still entranced with the wonders of the Atlantic sea.

As New Jersey inhabitants, we are fortunate to have at our doorstep an environment as fertile as our farmlands, one I am privileged to visit and bring to you through my writing and photographs. Long live a clean and healthy ocean! 

Photographs by Herb Segars/Undersea Photo



(top, left) The sand dollar, a favorite food of flounder and other bottom-dwelling fish, lives on sandy bottoms from the subtidal zone to depths of more than one-half mile.

(top, right) The rock crab is found from Labrador to South Carolina on all bottoms, also to depths of up to one-half mile.

(left) Doorways on the Spartan lead to greater adventure in this cold water wonderland.

The underwater photography of **Herb Segars** has appeared often in *NJO*. When not on a dive, Herb frequently captures on film the many recreational opportunities and wildlife along the Jersey Shore.

The Johnson

Ferry House





(facing page) The Johnson Ferry House, with its distinctive gambrel roof and scallop shingles, is an outstanding example of 18th-century Dutch architecture.

(far left) The Ferry House before its restoration.

(left) The Nelson House was an addition to the original Johnson ferry tavern.

(below) Hessian soldiers drilling in the snow were part of last December's reenactment activities.

By Nancy Carter

Eight miles north of Trenton, on high ground near the Delaware River, stands the Johnson Ferry House, a unique survivor of New Jersey's colonial period. Located off Route 29 in Washington Crossing State Park, this outstanding example of 18th-century Dutch architecture was more than 30 years old that Christmas night in 1776 when George Washington's Continental Army crossed the river enroute to the first battle of Trenton (see "The Victory at Trenton," *NJO* N/D 1988).

Remember that this was enemy territory at the time, and the Continental Army was only passing through on its way to Trenton. General Washington and his entourage of officers quite probably discussed tactics in this house on that cold night as they waited for the 2,400 Continental soldiers to complete the crossing.

It's a probability that I often tell visitors about, for in my duties as interpreter-care-taker I spend more time in the Johnson Ferry House than anyone else. Unless, of course, you count the early, long-gone inhabitants — for starters, Garrett and Judith Johnson and their 13 children.

Garrett was the son of Rutger Janse, who came from Holland to Staten Island, New York, in the late 1600s. Janse moved to New Jersey, purchasing large tracts of land on the Stony Brook in Princeton and 490 acres on the River Delaware.

Garrett anglicized the family name from Janse to Johnson, took over the Delaware River Plantation, and established a ferry boat service, tavern and farmstead. The ferry and the tavern were the primary sources of income for his family.

By the standard of the day the Johnsons were moderately well-to-do. Along with the spacious, two-story frame farmhouse, the prosperous plantation also included several





Items grown in the garden are used for the living-history demonstrations.

outbuildings, grain fields and fruit orchards. Like Samuel McKonkey across the river in Pennsylvania, Garrett eventually had a field-stone tavern built, sometime between 1748 and 1766, on the riverfront at the ferry landing.

The farmhouse, which is roughly one-quarter of a mile from the river, probably served temporarily as a small inn before the completion of the tavern near the ferry landing. Colonial taverns were the social hub of rural communities. But they were taverns, nevertheless — frequently rowdy, chaotic and drunkenly out-of-control!

Garrett Johnson died March 8, 1766, 10 years before Washington's stopover. He left the northern part of his plantation to his son Robert and the southern half, which included the ferry and the farm house, to Rut Johnson, Jr. Both sons eventually had to sell their inheritance to cover debts and to pay off dowries owed to their seven younger brothers and sisters.

In 1769 the ferry house was advertised for sale in *The Pennsylvania Chronicle* and was purchased a year later by Abraham Harvey. At the time of the Revolution it was rented, lived in and operated by James and Sarah Slack, owned by Mr. Harvey, yet still known and referred to as John's or Johnson's Ferry. It usually took about a decade or so for the new ferryman's name to catch on. When Abraham Harvey finally ran his ferry, it was known as Slack's Ferry for several years until it became Harvey's Ferry.

The ferry house is a unique example of an early 18th-century Dutch farmhouse. The characteristic gambrel roof and scallop shingles are a giveaway as to the cultural origin of the first family. The house lends itself to demonstrating "living history" — such as cooking a four-course dinner on the open hearth.

What was life really like in the 1740s on a river plantation? The sights, sounds, smells, tastes and appearance of the period leave a lasting impression on visitors long after names and dates are forgotten. While preserving old furniture and artifacts, the ferry house also is being developed into a living, active dwelling of the mid-1700s. Traditionally a house museum, visitors can view a fine collection of local period country furnishings and tap-room accouterments.

Surrounding the house are gardens of herbs, vegetables, flax and perennials, the original stone springhouse and a livestock barn dating to 1783. The kitchen, flax and herb gardens are used in open-hearth cooking and demonstrations showing how flax

was made into linen cloth. Spinning, dyeing, medicine making, butter churning, sewing and other varied domestic activities can be seen from time to time. Tavern life, musical events and period reenactments are occasional special events. The most notable reenactment at the park is the Christmas Day crossing of the Delaware by General Washington and his troops.

A small, early 19th-century portion added to the original 18th-century Johnson ferry tavern still stands. Known as the Nelson House, it's the structure where the reenactment troops land each Christmas. It served, perhaps, as a kitchen, servants' quarters and icehouse for the Alexander Nelson Hotel, a popular resort spot during the Victorian Era.

The Works Progress Administration, a federally funded public-works program of the 1930s, simultaneously tore down the large Nelson Hotel, which included the original ferry tavern, while restoring the "Nelson House" portion and the farmhouse, referred to throughout this article as the Johnson Ferry House. Not knowing that it was the Johnson's Dutch farmhouse and believing it was, instead, a part of the New Jersey side of McKonkey's Ferry, the house was restored as a New England-style tavern.

Elaborate, handcarved wainscot paneling would not have been present in the kitchen. The bar and grill, likewise, would never have been in the parlour of a country dwelling and were hardly what Judith Johnson would have wanted in her parlour. It made far better sense to put the tavern right where the ferry landed, and a section of the original stone foundation is now incorporated into the embankment wall for the Delaware and Raritan Canal, built long after the original inhabitants were gone.

Did generals Washington, Sullivan, Mercer, Greene, Knox, Stevens, De Fermoy and Lord Sterling stop in the Dutch farmhouse? Top officers were of the gentry class and accustomed to claiming the very best accommodations for themselves wherever they went. Treated as gentlemen, they were probably drinking grog or toddy, refining battle strategies and keeping themselves warm and dry while waiting for the enlisted men and junior officers to finish crossing the river.

On that fateful day, James Slack, his wife Sarah and their eight children were living in the house and operating the ferry. They probably would have helped in hosting Washington and his men. Washington never mentioned Johnson's Ferry in his writings, but it seems likely that he and his generals



NJO newcomer **Nancy Carter** has been the interpreter/caretaker at the Johnson Ferry House for three years. She interprets the house for visitors, does research on the historic site, organizes activities and events, and cares for the house and gardens.

The Johnson Ferry House contains a fine collection of period country furnishings.

would have waited in this house.


Actually, it was the Hessians who verified the existence of "John's Ferry," as they called it. The ferry was mentioned by Major Justus Matthaues in a report to Colonel Rall, the commander of the Trenton Barracks killed by the patriots when they attacked Trenton, that it was "necessary for Pennington to be held by a detachment from which scouts could be detailed to John's (Johnson's) Ferry, and in this manner they could watch the movement of the enemy." Lt. Weiderholt reported that from his post "in front of the woods on the road to John's Ferry" he sent out patrol after patrol trying to prevent a surprise attack.

This was British occupied territory at the time of the crossing. Bands of Hessians passed through or camped out on the surrounding woodland of Johnson's plantation, but we do not know if the Hessians used the buildings or were aided at all by the Slacks. Whether one was a Patriot or a Tory made little difference when 10 or 2,000 soldiers with muskets and bayonets showed up at

your door. Their imposing appearance usually prompted cooperation.

The Ferry House will be hosting two special events this winter. On Sunday, December 17, a reenactment of the December 24, 1776, skirmish between Continental Troops and the Hessian Jaegers will occur between the Ferry House, the Nelson House and the bank of the Delaware. Living history demonstrations of colonial drills and period fashions will take place near the visitors' center from 11 a.m. to 4 p.m. These activities complement the "Hessian Occupation Day" celebration at the Old Barracks Museum in Trenton.

The annual "Washington's Birthday Celebration" takes place February 17-18 and features open hearth baking, spinning, music and games.

The Johnson Ferry House, a state historic site administered by the DEP Division of Parks and Forestry, is open Wednesday to Sunday from 11 a.m. until 4 p.m. For information or group tour reservations, call 609/737-2515. 

New Jersey State Library

Just Before Christmas



The Barnegat Railroad's High Point Station was located in what is now Harvey Cedars. (circa 1900)

Isabelle Smith

By Edward Brown

The dark December solstice of 1917 was coming on, with half of Europe mired in the mud of French battlefields. A revolution which would shake the world was brewing in Russia, and American troops were "over there" helping the Allies win the war to end all wars.

A world away, cold nor'easters began to ride the Jersey Shore down, fierce winds tumbling the smoke rise from the bays, forcing a stinging whiteout on the beaches. The Shore was bracing itself for the battering gales and massive green seas of winter.

For William Johnson this dark 15th of December was a time of joy. He was bringing his wife and newborn baby from the hospital back to their home on the north end of Long Beach Island, just in time to get ready for Christmas. His new daughter was beautiful and healthy; his wife, tired but well. Johnson felt the most fortunate of men as he carefully shepherded his small family onto the Jersey Central Line train in Lakewood.

Over her swaddling clothes, the baby was wrapped in a sheepskin, one the stationmaster's wife had given them. Both Johnsons were well clad in thick woolen coats, mufflers and wraps, and with good

reason. Section hand Johnson, a trackman on the Barnegat Railroad, knew that the last part of their journey home was going to be in an open hand car. With the wind beginning to pipe up as it was, this could mean a cold trip.

Johnson, an islander well versed in the ways of the weather on this coast, didn't like the look of the sky either. The trip from Lakewood had started in sunshine, but half-way to Barnegat great masses of northeast clouds shut out the weak December sun. Still, sitting here by the stove in the parlor car, talking and laughing, the Johnsons couldn't have been cozier.

The Johnsons were in high good spirits as they transferred to a Tuckerton-bound train at Barnegat and got off soon after at "Mud City" (Manahawkin), the end of the line as far as rail service to Long Beach Island went on this off-season weekend. From here on, Johnson and his wife and baby were on their own. The burly section hand bulldogged a handcar from the nearest spur onto the tracks, got his wife and child aboard, and began pumping the five miles across Manahawkin Bay. As if by request, the threatening sky made good its bad promise and let loose sleet and then snow. A wind as merci-



John Wozar

(top) After leaving Manahawkin, the train passed over several islands and the Cedar Bonnet drawbridge before reaching Long Beach Island.



John Brinkmann

(center) From the top of the lighthouse, this view of Barnegat City shows the Oceanic Hotel.

(below) The Pennsylvania Railroad retained its own trains to Beach Haven, and the M&LBT Company linked northern Long Beach Island with the mainland.

less as any from a dark Viking saga built up and roared across the open water.

The doughty Johnson kept the pump handles going and the car moving as fast as he could, trying to reassure his wife between strokes, a wife beginning to show signs of alarm. On one upswing he shot a look out over the bay. Baleful and grey it was, and something colder than the icy wind made it way through to his marrow: a quick frisson of fear.

Johnson fought it down and continued. Twenty minutes later, the handcar was coasting into the junction on Long Beach Island. The section hand sighed with relief; the family could shelter and warm itself here in the station house before making the turn north for the final run up-island to Barnegat City. Maybe it might be a good idea to hire a closed wagon and team for the trip, Johnson was thinking as the car stopped. Then he noticed the usual hustle and bustle of the junction was missing. There was no one to be seen — no roustabouts, dispatchers or porters. Johnson tried the station door. It was locked. He backed up and looked at the roof. No smoke was coming out of the chimney on this winter-struck day. Johnson walked all over the junction, trying doors and calling

James M. Jones

Manahawken and Long Beach Transportation Company

Operating Barnegat R. R.

TIME TABLE No. 50

In effect 12.01 A. M. Tuesday, September 29th, 1908.

EASTWARD				WESTWARD			
Pass ^y	Mixed	AM	PM	Pass ^y	Mixed	AM	PM
PRR	PRR	PRR	PRR	PRR	PRR	PRR	PRR
k1.00	k6.10	k11.43	k7.28	k10.08	k5.38	k9.47	k5.47
k2.55	k7.54	k1.09	k9.47	k9.47	k5.38	k9.47	k5.47
k4.00	k8.30	k2.00	k10.48	k7.55	k7.41	k3.22	k3.08
k6.13	k10.48	k10.30	k10.30	k7.25	k7.30	k3.08	k3.08
k8.28	k11.04	k10.45	k10.45	k7.20	k7.14	k2.50	k2.50
k10.41	k11.04	k11.05	k11.05	k7.03	k6.58	k2.40	k2.40
k12.56	k11.18	k11.18	k11.18	k6.58	k6.51	k2.31	k2.31
k15.11	k11.20	k11.20	k11.20	k6.45	k6.45	k2.15	k2.15
k17.26	k11.26	k11.26	k11.26	k6.45	k6.45	k2.15	k2.15
k19.41	k11.35	k11.35	k11.35	k6.45	k6.45	k2.15	k2.15
k21.56	k11.35	k11.35	k11.35	k6.45	k6.45	k2.15	k2.15
k24.11	k11.35	k11.35	k11.35	k6.45	k6.45	k2.15	k2.15
k26.26	k11.35	k11.35	k11.35	k6.45	k6.45	k2.15	k2.15
k28.41	k11.35	k11.35	k11.35	k6.45	k6.45	k2.15	k2.15
k30.56	k11.35	k11.35	k11.35	k6.45	k6.45	k2.15	k2.15
k33.11	k11.35	k11.35	k11.35	k6.45	k6.45	k2.15	k2.15
k35.26	k11.35	k11.35	k11.35	k6.45	k6.45	k2.15	k2.15
k37.41	k11.35	k11.35	k11.35	k6.45	k6.45	k2.15	k2.15
k39.56	k11.35	k11.35	k11.35	k6.45	k6.45	k2.15	k2.15
k42.11	k11.35	k11.35	k11.35	k6.45	k6.45	k2.15	k2.15
k44.26	k11.35	k11.35	k11.35	k6.45	k6.45	k2.15	k2.15
k46.41	k11.35	k11.35	k11.35	k6.45	k6.45	k2.15	k2.15
k48.56	k11.35	k11.35	k11.35	k6.45	k6.45	k2.15	k2.15
k51.11	k11.35	k11.35	k11.35	k6.45	k6.45	k2.15	k2.15
k53.26	k11.35	k11.35	k11.35	k6.45	k6.45	k2.15	k2.15
k55.41	k11.35	k11.35	k11.35	k6.45	k6.45	k2.15	k2.15
k57.56	k11.35	k11.35	k11.35	k6.45	k6.45	k2.15	k2.15
k60.11	k11.35	k11.35	k11.35	k6.45	k6.45	k2.15	k2.15
k62.26	k11.35	k11.35	k11.35	k6.45	k6.45	k2.15	k2.15
k64.41	k11.35	k11.35	k11.35	k6.45	k6.45	k2.15	k2.15
k66.56	k11.35	k11.35	k11.35	k6.45	k6.45	k2.15	k2.15
k69.11	k11.35	k11.35	k11.35	k6.45	k6.45	k2.15	k2.15
k71.26	k11.35	k11.35	k11.35	k6.45	k6.45	k2.15	k2.15
k73.41	k11.35	k11.35	k11.35	k6.45	k6.45	k2.15	k2.15
k75.56	k11.35	k11.35	k11.35	k6.45	k6.45	k2.15	k2.15
k78.11	k11.35	k11.35	k11.35	k6.45	k6.45	k2.15	k2.15
k80.26	k11.35	k11.35	k11.35	k6.45	k6.45	k2.15	k2.15
k82.41	k11.35	k11.35	k11.35	k6.45	k6.45	k2.15	k2.15
k84.56	k11.35	k11.35	k11.35	k6.45	k6.45	k2.15	k2.15
k87.11	k11.35	k11.35	k11.35	k6.45	k6.45	k2.15	k2.15
k89.26	k11.35	k11.35	k11.35	k6.45	k6.45	k2.15	k2.15
k91.41	k11.35	k11.35	k11.35	k6.45	k6.45	k2.15	k2.15
k93.56	k11.35	k11.35	k11.35	k6.45	k6.45	k2.15	k2.15
k96.11	k11.35	k11.35	k11.35	k6.45	k6.45	k2.15	k2.15
k98.26	k11.35	k11.35	k11.35	k6.45	k6.45	k2.15	k2.15
k100.41	k11.35	k11.35	k11.35	k6.45	k6.45	k2.15	k2.15
k102.56	k11.35	k11.35	k11.35	k6.45	k6.45	k2.15	k2.15
k105.11	k11.35	k11.35	k11.35	k6.45	k6.45	k2.15	k2.15
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k109.41	k11.35	k11.35	k11.35	k6.45	k6.45	k2.15	k2.15
k111.56	k11.35	k11.35	k11.35	k6.45	k6.45	k2.15	k2.15
k114.11	k11.35	k11.35	k11.35	k6.45	k6.45	k2.15	k2.15
k116.26	k11.35	k11.35	k11.35	k6.45	k6.45	k2.15	k2.15
k118.41	k11.35	k11.35	k11.35	k6.45	k6.45	k2.15	k2.15
k120.56	k11.35	k11.35	k11.35	k6.45	k6.45	k2.15	k2.15
k123.11	k11.35	k11.35	k11.35	k6.45	k6.45	k2.15	k2.15
k125.26	k11.35	k11.35	k11.35	k6.45	k6.45	k2.15	k2.15
k127.41	k11.35	k11.35	k11.35	k6.45	k6.45	k2.15	k2.15
k129.56	k11.35	k11.35	k11.35	k6.45	k6.45	k2.15	k2.15
k132.11	k11.35	k11.35	k11.35	k6.45	k6.45	k2.15	k2.15
k134.26	k11.35	k11.35	k11.35	k6.45	k6.45	k2.15	k2.15
k136.41	k11.35	k11.35	k11.35	k6.45	k6.45	k2.15	k2.15
k138.56	k11.35	k11.35	k11.35	k6.45	k6.45	k2.15	k2.15
k141.11	k11.35	k11.35	k11.35	k6.45	k6.45	k2.15	k2.15
k143.26	k11.35	k11.35	k11.35	k6.45	k6.45	k2.15	k2.15
k145.41	k11.35	k11.35	k11.35	k6.45	k6.45	k2.15	k2.15
k147.56	k11.35	k11.35	k11.35	k6.45	k6.45	k2.15	k2.15
k150.11	k11.35	k11.35	k11.35	k6.45	k6.45	k2.15	k2.15
k152.26	k11.35	k11.35	k11.35	k6.45	k6.45	k2.15	k2.15
k154.41	k11.35	k11.35	k11.35	k6.45	k6.45	k2.15	k2.15
k156.56	k11.35	k11.35	k11.35	k6.45	k6.45	k2.15	k2.15
k159.11	k11.35	k11.35	k11.35	k6.45	k6.45	k2.15	k2.15
k161.26	k11.35	k11.35	k11.35	k6.45	k6.45	k2.15	k2.15
k163.41	k11.35	k11.35	k11.35	k6.45	k6.45	k2.15	k2.15
k165.56	k11.35	k11.35	k11.35	k6.45	k6.45	k2.15	k2.15
k168.11	k11.35	k11.35	k11.35	k6.45	k6.45	k2.15	k2.15
k170.26	k11.35	k11.35	k11.35	k6.45	k6.45	k2.15	k2.15
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k179.26	k11.35	k11.35	k11.35	k6.45	k6.45	k2.15	k2.15
k181.41	k11.35	k11.35	k11.35	k6.45	k6.45	k2.15	k2.15
k183.56	k11.35	k11.35	k11.35	k6.45	k6.45	k2.15	k2.15
k186.11	k11.35	k11.35	k11.35	k6.45	k6.45	k2.15	k2.15
k188.26	k11.35	k11.35	k11.35	k6.45	k6.45	k2.15	k2.15
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k208.41	k11.35	k11.35	k11.35	k6.45	k6.45	k2.15	k2.15
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k217.41	k11.35	k11.35	k11.35	k6.45	k6.45	k2.15	k2.15
k219.56	k11.35	k11.35	k11.35	k6.45	k6.45	k2.15	k2.15
k222.11	k11.35	k11.35	k11.35	k6.45	k6.45	k2.15	k2.15
k224.26	k11.35	k11.35	k11.35	k6.45	k6.45	k2.15	k2.15
k226.41	k11.35	k11.35	k11.35	k6.45	k6.45	k2.15	k2.15
k228.56	k11.35	k11.35	k11.35	k6.45	k6.45	k2.15	k2.15
k231.11	k11.35	k11.35	k11.35	k6.45	k6.45	k2.15	k2.15
k233.26	k11.35	k11.35	k11.35	k6.45	k6.45	k2.15	k2.15
k235.41	k11.35	k11.35	k11.35	k6.45	k6.45	k2.15	k2.15
k237.56	k11.35	k11.35	k11.35	k6.45	k6.45	k2.15	k2.15
k240.11	k11.35	k11.35	k11.35	k6.45	k6.45	k2.15	k2.15
k242.26	k11.35	k11.35	k11.35	k6.45	k6.45	k2.15	k2.15
k244.41	k11.35	k11.35	k11.35	k6.45	k6.45	k2.15	k2.15
k246.56	k11.35	k11.35	k11.35	k6.45	k6.45	k2.15	k2.15
k249.11	k11.35	k11.35	k11.35	k6.45	k6.45	k2.15	k2.15
k251.26	k11.35	k11.35	k11.35	k6.45	k6.45	k2.15	k2.15
k253.41	k11.35	k11.35	k11.35	k6.45	k6.45	k2.15	k2.15
k255.56	k11.35	k11.35	k11.35	k6.45	k6.45	k2.15	k2.15
k258.11	k11.35	k11.35	k11.35	k6.45	k6.45	k2.15	k2.15
k260.26	k11.35	k11.35	k11.35	k6.45	k6.45	k2.15	k2.15
k262.41	k11.35	k11.35	k11.35	k6.45	k6.45	k2.15	k2.15
k264.56	k11.35	k11.35	k11.35	k6.45	k6.45	k2.15	k2.15
k267.11	k11.35	k11.35	k11.35	k6.45	k6.45	k2.15	k2.15
k269.26	k11.35	k11.35	k11.35	k6.45	k6.45	k2.15	k2.15
k271.41	k11.35	k11.35	k11.35	k6.45	k6.4		

Last featured on our pages in 1987, **Edward Brown** writes a weekly column on outdoor recreation and travel for *The Central Record* of Medford, Burlington County.

Our story about William and Rebecca Johnson's memorable trip to their Long Beach Island home did, indeed, happen. It was researched by and appeared in John Brinckmann's *The Tuckerton Railroad*. This chronicle of transport to the New Jersey seashore is currently out of print. *Editor.*

out. Nothing. It was all up to him now.

They came out of the lee of the junction buildings to a deepening storm. Johnson's handcar was now heading almost directly into the howling wind, and it was a punishing task to move the "muscle builder" through it at any kind of speed. But the trackman was beginning to realize that speed was just what was required. He had to get his family to shelter before this storm proved too much for them. His wife's face was blue and pinched with cold. Johnson read his own fear in her eyes. He stole a look at their daughter. She was sleeping peacefully in her stout sheepskin, a tiny cloud of white breath coming from her face buried in the folds of the covering. She was all right so far.

As he frantically stroked the handcar over rails grown slippery with ice, the dreadful feeling that they were somehow alone in the entire world began to work at Johnson. The snow-covered sand and frozen cedar swamps on this part of Long Beach Island spread out and away from the thin ribbon of track, as if to the very ends of the earth. What few vacation houses they passed were shuttered and aloof, grimly upright against the cruel wind . . . alone . . . Alone . . .

Now, even the hot work at the handles was failing to warm the section hand. Perhaps it was that cold wash of fear which kept going through him, the realization that perhaps they could not come through the maelstrom of snow and wind bent seemingly on destroy-

ing them. Another half hour passed. A strong man has limits, though pushed beyond himself as never before. Johnson's weary arms slackened at the pump as the last of his energies gave out. If he could just rest.

He was muzzy from cold and exhaustion, and it seemed he'd been pumping the handcar for hours, days even. It was eight miles from the junction to Barnegat City, but he knew now they would never make it. His wife, clearly almost done in and close to giving up, huddled over the baby. They were going to die here, on this empty track, in this dreadful storm.

"Oh God, help us," Johnson gasped out. Almost at once a tiny finger of light showed to the north. A sign? He didn't know, but this was good enough for Johnson. Somehow he found the will to work the handles, moving the car forward by force of spirit as well as body. He saw the light again through the snow, brighter this time. Johnson's heart leaped in his chest as he realized what the light was — the platform beacon at Conrad's in Harvey Cedars. The crew at the Coast Guard Station here would help them. They were saved!

Johnson pumped the last 200 yards to the platform, rousing his wife with the good news of their delivery. Warmth, safety, human kindness and smiling faces — all these were only a few minutes away now. There would be a Christmas for the Johnson family in 1917 and a life for them after that. **NJ**

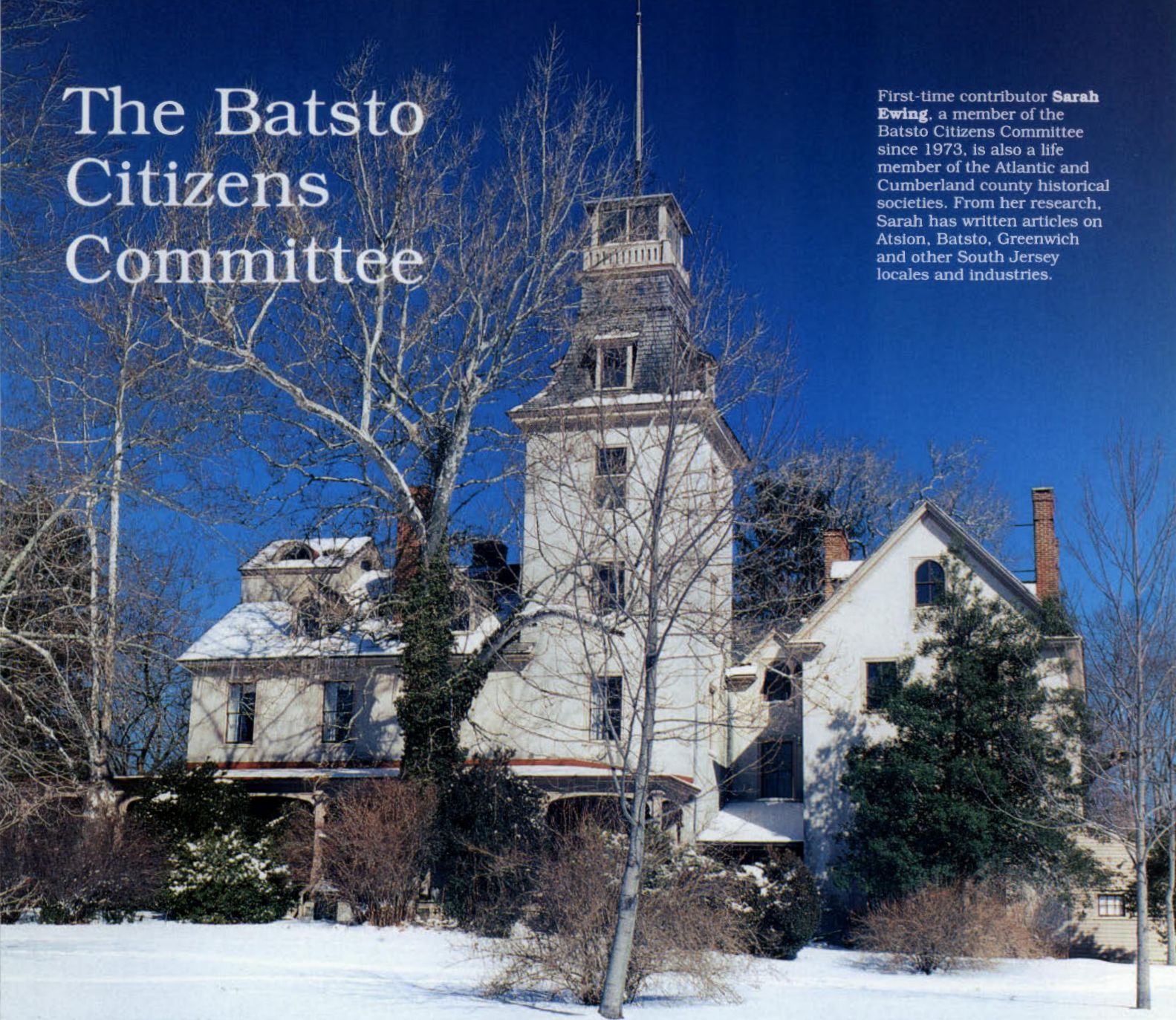
John Wozar



A long trestle over Manahawkin Bay was taken out by ice movement. (circa 1919)

The Batsto Citizens Committee

First-time contributor **Sarah Ewing**, a member of the Batsto Citizens Committee since 1973, is also a life member of the Atlantic and Cumberland county historical societies. From her research, Sarah has written articles on Atsion, Batsto, Greenwich and other South Jersey locales and industries.



By Sarah W. R. Ewing

Former Governor Robert B. Meyner and Joseph E. McLean, then Commissioner of the Department of Conservation and Economic Development, founded the Batsto Citizens Committee in 1956 to aid and promote the region's rich historical heritage and to advise and assist in the restoration of Historic Batsto Village.

The village, a thriving industrial community until the mid-19th century, grew around the bog iron furnace built near the mouth of the Batsto River in 1766. When a better grade iron ore and fuel were discovered in Pennsylvania in the 1840s, the bog iron market declined and Batsto's owners turned to the manufacture of window glass. After the

glassworks closed, Philadelphia financier Joseph Wharton became its new owner. New Jersey bought Wharton's land in the Pines in 1954, and two years later the Batsto Citizens Committee was formed.

Permitted 36 members by its constitution, the committee has raised over a quarter of a million dollars in its 33 years of service. Fund-raising projects include special Batsto Post Office cancellations and cachets; the Friends of Batsto; publication of books concerning Batsto and the Wharton State Forest, as well as the *Batsto Citizens Gazette*, a quarterly newspaper; and the sale of commemorative plates and Clevenger-made bottles.

Popular annual events sponsored by the committee of volunteers include

June's Decoy and Woodcarver Show, an Historic Art Festival in September (the 22nd show was held this year); the Country Living Fair in October; and the Friends of Batsto Christmas Tea in December. History came alive this summer when Civil War buffs reenacted the Battle of the Wilderness and the Battle of Spotsylvania Court House (see "Betwixt and Between" *NJO M/J* 1989). Batsto was chosen because of the village's distinctive period architecture and the surrounding terrain closely resembled that of the Wilderness area. In June 1990, Batsto will host another major Civil War reenactment, the 125th Anniversary of the Appomattox Campaign.

Batsto's tiny post office, established on June 28, 1852, honored these events,

New Jersey's Historic



Batsto Village



Batsto Village is the site of one of four southern New Jersey iron works that cast cannons and cannon balls for the Revolutionary Army and munitions for the War of 1812. Water pipe for eastern cities was also made there, as was the cylinder for John Fitch's fourth steamboat.

The furnace fires went out in 1848, but for nearly 20 years a glass furnace produced Batsto glass, widely used for the gas lamp globes which lit the streets of New York and Philadelphia.

Once a thriving industrial community of nearly a thousand people, the ironmaster's mansion now overlooks a gristmill, sawmill, the sites of the former furnace and glassworks, the workers' houses and a 350-acre natural area. Administered by the DEP Division of Parks and Forestry, Historic Batsto lies within the Wharton State Forest.



Batsto Citizens Committee member Robert Griffith explains the grist mill's history.

as well as the nation's birthday on July 4th, with special commemorative, pictorial postmarks which were used for one day only and then destroyed. All mail is stamped by hand, and on special cancellation days committee members help Connie Birdsall, a state employee who has been postmistress since the office was re-opened in 1966. The Batsto Post Office also sells engraved cachet covers.

This unique, little post office, the oldest known, fully operating office in the United States still in business in its original location, is open five days a week. It has annual cancellations of more than 30,000 pieces of mail, all stamped by hand. The post office has the original postmaster's desk and sorting racks. Off to one side a fire-proof, walk-in vault, protected by two heavy cast iron doors made from local bog ore, is still used.

The agriculture subcommittee maintains an exhibit of special fowl and small farm animals to the delight of youngsters. Several years ago the committee bought two four-year-old husky, sorrel draft horses to haul an original stage for sightseers. It also buys calves for exhibition in a pasture.

Archaeologists find answers by "digging." Archivists care for original manuscripts and do research. The *Batsto Citizens Gazette* editor searches for

material relating to Batsto and the Pines; and the busy mansion subcommittee constantly works to update furnishings and displays, or cleans a winter's accumulation of dust in the spring, or weeds the herb garden. The 36-room mansion, furnished as a wealthy ironmaster's home circa 1800, includes many valuable antiques which belonged to the ironmaster and were used in the mansion that year.

The annual Country Living Fair has something for everyone who enjoys country. Last fall over 22,000 interested people came to look and enjoy. The Friends of Batsto boasts over 600 members, each of whom receives the *Batsto Citizens Gazette* and is invited to the annual Christmas Tea in the mansion. Nine books pertaining to Batsto or the Wharton State Forest have been published and are on sale in the visitors' center.

There are frequent one-time events such as the Wharton Homecoming in 1980 when descendants of Joseph Wharton gathered to reminisce. Wharton acquired the property in 1876 and engaged in livestock breeding, lumbering and crop experimentation. His land acquisitions totaled nearly 100,000 acres when the Wharton Tract was purchased by the state in 1954. In 1984, descendants of the Richards family, a dynasty of ironmasters from

"We call them lots of different names, there are lots of cute acronyms to identify their programs, we tend to count their hours of work and calculate how much money they've saved us, but that's not what volunteers are all about.

From Batsto Village to the Natural Lands Trust programs, our volunteers are spread throughout our areas, including campground hosts and volunteer docents at historic sites. As numerous and diversified as our volunteers are in the Division of Parks and Forestry, there is always one consistent attribute our volunteers possess — **caring**.

People that **care** about the resources we have stewardship over are indeed very special contributors to the division. It is very heartening to recognize that our citizens are willing to give of their own resources and time to enhance our services to 10 million guests each year. We could not come close to providing the services and **caring** that our volunteers contribute to the Division of Parks and Forestry."


Gregory A. Marshall
Director

1784 to 1876, gathered. Much genealogy was gleaned, as well as many family treasures to display in the mansion.

Committee members are hosts to sightseers in the village museum cottages, the gristmill, and the blacksmith shop on summer weekends. On special days the village store is stocked with cider, cookies, bread and cheese which are frequently sold out by noon.

Antiques and memorabilia relating to Batsto are constantly sought, and the committee recently purchased a Batsto stove plate whose intricate scrolls frame an urn and the words "Batsto Furnace."

The committee has received several unusual awards. In 1966, when the post office was re-opened, it was given the enthusiastic endorsement of the Smithsonian Institution, Division of Philately and Postal History. In 1978, the National Awards Committee of the American Association for State and Local History voted "A Certificate of Commendation to Batsto Citizens Committee for the publication of the *Batsto Citizens Gazette*, an imaginative effort in support of an historic site."

The activities and support of the Batsto Citizens Committee and Friends of Batsto enable thousands of visitors, young and old, to find a visit to Historic Batsto interesting and worthwhile. 



Natural Lands Trust

New Jersey Natural Lands Trust

By JoAnne Ruscio

The November day chosen by the Boy Scouts from Long Valley's Troop 436 for a trail maintenance project at Limestone Ridge Marsh Preserve in Blirstown was overcast. By noon, the gray sky gave way to drizzle, but it did not dampen the high spirits of the boys, ages 10 to 16, and their adult supervisors.

Under the direction of 16-year-old Eddie Bruder, the 16 scouts and six adults cleared and reconstructed three trails, repaired the steps and railings that climb the hill from the swamp, and cleared three small areas in the woods so that hikers could use the trails on this New Jersey Natural Lands Trust preserve. The work took about seven hours to complete.

The entire project was organized by Life Scout Eddie Bruder who undertook the proj-

ect to complete the final requirement needed to attain the rank of Eagle Scout. He worked with Leslie DiCola, staff ecologist for the Trust, to locate a preserve near him and design a manageable and needed project for it.

The 21-acre property provides habitat for a diversity of wildlife. Much of the area has been flooded by a beaver dam and is now marsh habitat with a steeply sloped limestone ridge encircling it. With the opening of the trails and views, the preserve is more accessible to hikers.

Why would a 16-year-old take the time to organize a project and clear trails? According to Eddie, "We live in a world where our oceans are so polluted that we cannot swim in them and tropical rain forests are disappearing at a rate of one acre every minute. We only endanger ourselves. When presented

The Eagle scout project included repairing the steps and rails along hiking trails at the Limestone Ridge Marsh Preserve.

(right) During this year's Environmental Education Week, volunteer Dorothy Breen talked with students about the plants at the Crossley Preserve.

(facing page) Watching over their freshwater wetlands, Joseph and Sylvia Taylor enjoy winter's tranquility.



Natural Lands Trust

with these facts, the common question is, "What can I do?" I believe I have taken a step. By organizing this project, I have performed a great service to the Natural Lands Trust, but more importantly I have helped to educate the people about the environment by opening the trails for public use."

The New Jersey Natural Lands Trust is a state-funded, land preservation organization in the Department of Environmental Protection whose policy is set by an 11-member Board of Trustees. The board is comprised of representatives from state government and private sector members appointed by the governor. The Trust was created to find new ways of securing land for the preservation of natural diversity in New Jersey. Currently, the Trust owns and manages over 3,000 acres throughout the state. These lands represent many diverse habitats, each with its own management requirements and responsibilities. Without the help of volunteers like Eddie, the Natural Lands Trust could not manage the preserves and easements under its protection.

Another volunteer who has worked with the Trust for several years is Goyrn Reinhardt. At age 82, he daily walks the 240 acres he and his wife Ruth donated to the Trust 16 years ago. He watches over the wetlands and forested areas that comprise the Reinhardt Preserve adjacent to High Point State Park in Sussex County. Reinhardt has assisted the staff in posting the property and worked with

the DEP Bureau of Forest Management to clear away competitive hardwoods from a stand of red cedars to ensure its continuity.

Senior citizens make up a large part of the Trust's volunteer force. At the Crossley Preserve in Berkeley Township, Ocean County, seniors have helped with projects ranging from conducting educational hikes for school children to painting gates and planting 500 pitch pine seedlings in a field inadvertently cleared by developers. Such projects could not have been undertaken without the help of energetic and enthusiastic volunteers.

Assistance from volunteers is not limited to land management. Citizen groups have helped to protect land through acquisition for the Trust. Citizens Advocating Responsible and Equitable Zoning (CAREZ), a Moorestown citizen group led by Theresa Viola, contacts the owners of the individual, small lots that form a valuable 170-acre natural area surrounded by dense development in this Burlington County municipality. The site is made up of forested, freshwater, and perched wetlands and a mixed hardwood forest. Due to the continuing efforts of CAREZ, 23 parcels have been donated to the Trust to date, with additional acquisitions underway.

Corporations and municipalities also have given a helping hand to the Trust. Illegal dumping has been a problem in the past at the Crossley Preserve. Hovsons, Inc., a major New Jersey developer, has supplied laborers,


Making her first appearance in *NJO* is **JoAnn Ruscio**. Among her duties as a management assistant for the Natural Lands Trust, JoAnn is in charge of the outreach and volunteer programs.

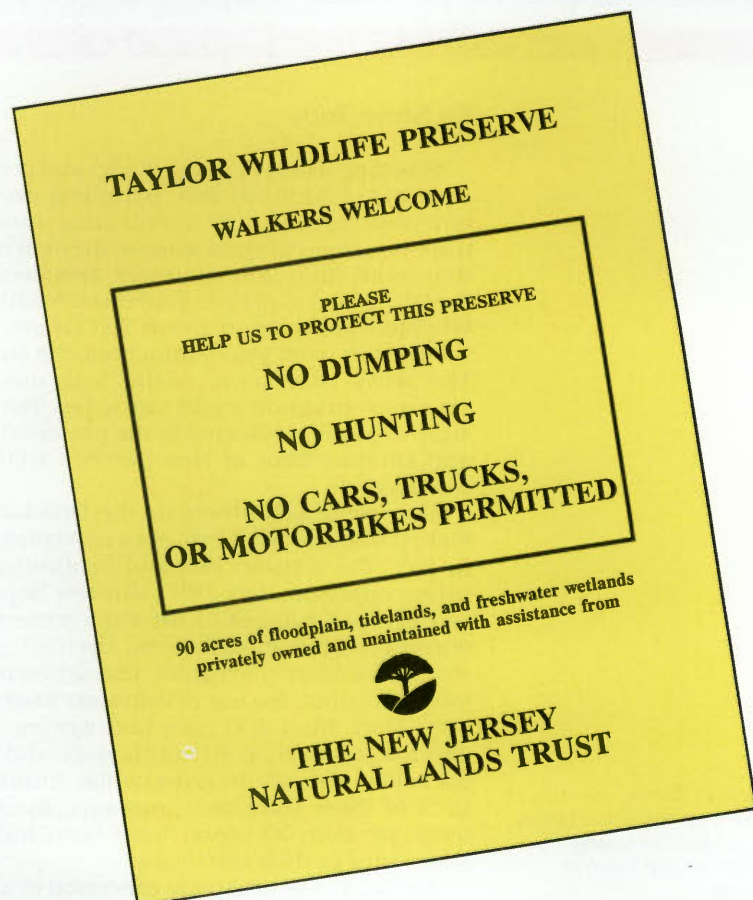


New Jersey Outdoors

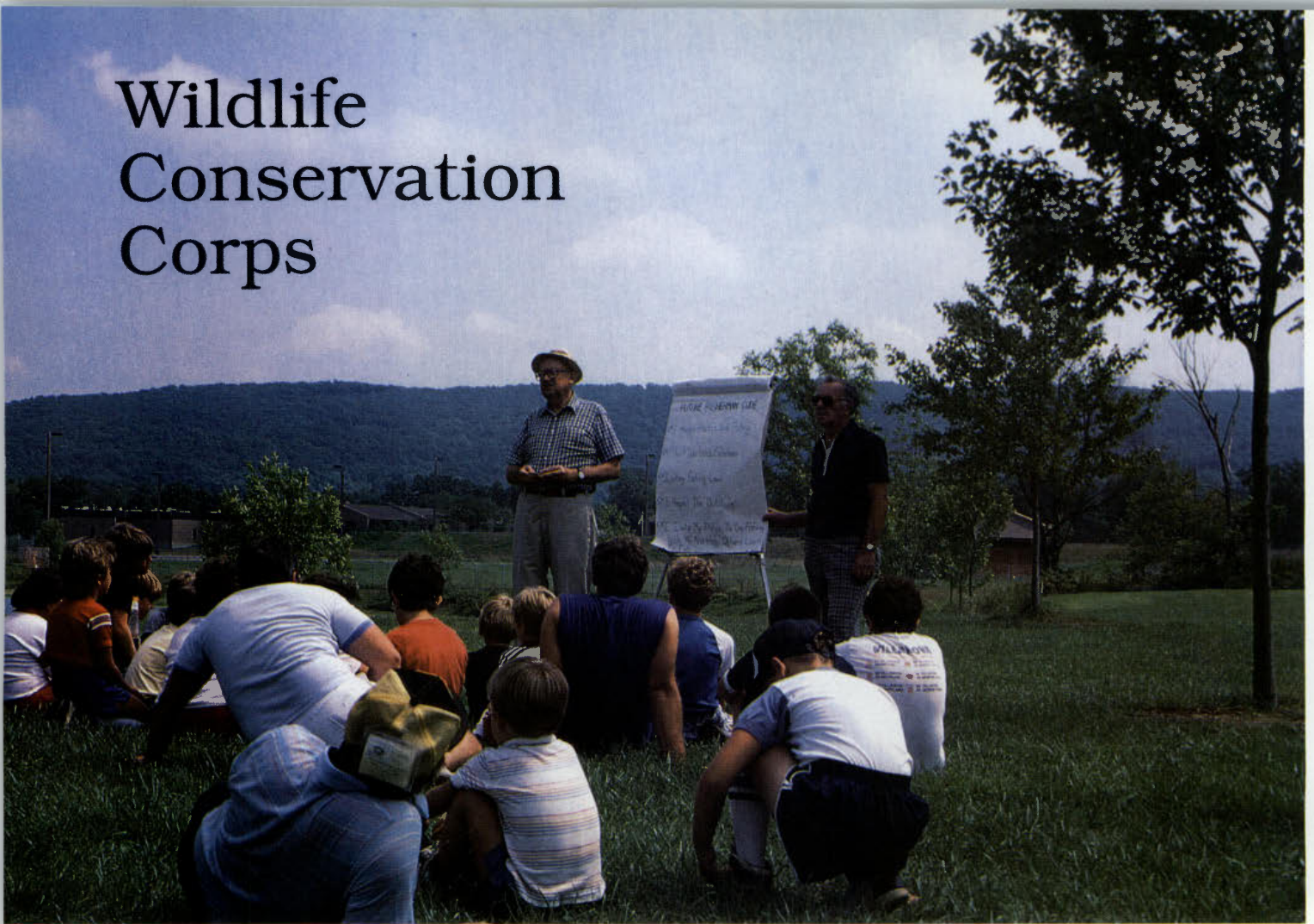
a garbage truck and a front-end loader to clean up the large piles of debris that littered the preserve. Berkeley Township donated a dump truck and an operator to help clean up the area. Working together, Hovsons, the township, and the Trust staff have cleared away the majority of the dumped materials.

The Trust also relies on landowners to oversee property on which they have granted conservation easements to the Trust. Joseph and Sylvia Taylor live on the last farm existing on the Delaware River between Trenton and Camden. In 1975, they granted a 90-acre, open-space conservation easement to the Trust. Known as the Taylor Wildlife Preserve, the easement includes riverfront, wetlands, and farmland open to the public for walking. The Taylors, who live on the adjacent 30 acres that they farm organically, watch over the land, maintain the trails, and keep the easement free of litter and dumping. They also lead nature walks on the preserve.

Volunteers such as these are invaluable to the Trust. As the acreage held by the Trust continues to increase, additional volunteers will be needed to work on projects to supplement land management by the staff. With the help of people like the Eddie Bruders and Goyrn Reinhardts, the land can be better cared for with fewer financial expenditures from the state. In addition to assisting with the management, volunteers open up new possibilities for acquisitions and bring fresh ideas and energy to the Trust. 



Wildlife Conservation Corps



Division of Fish, Game and Wildlife

By Steve Toth

Stocking trout, banding ducks and geese, teaching children to fish, patrolling shorebird nest areas, and maintaining hunter training ranges are just some of the activities that more than 200 volunteer members of the DEP Division of Fish, Game and Wildlife's Wildlife Conservation Corps (WCC) are involved with each year throughout the state. The "whys" and "hows" of this truly unique volunteer program make up a fascinating story of people dedicated to the preservation and enhancement of New Jersey's wildlife resource.

The use of volunteers by the Division of Fish, Game and Wildlife is not a new concept. In fact, the division has and continues to utilize approximately 100 volunteer deputy conservation officers in the enforcement of our state's wildlife regulations. The division's Hunter Education Program also depends in large part upon the use of volunteer instructors. More than 400 men and women are devoted to teaching others the safe and responsible use of firearms while hunting. Both of these volunteer programs, in existence for over 30 years, have been highly successful in their own rights.

The WCC was originally conceived to alle-

viate the numerous requests received over the years from individuals who were interested in donating their time and skills to the Division of Fish, Game and Wildlife in its various research and management programs. Until three years ago, these offers of assistance had to be left unanswered due to the unavailability of proper insurance and coordination of volunteers.

At that time, the division's newly appointed Assistant Director George Howard decided to address the issue of volunteers and develop a program which would provide insurance and statewide coordination, one that would benefit the state's wildlife resource, the volunteers, the division and the citizens of the state. From these initiatives grew the concept for the Wildlife Conservation Corps.

The timing of Assistant Director Howard's initiatives could not have been better, since economic problems were pointing the division in the direction of program cutbacks in much of its management and research activities. Programs such as waterfowl banding, trout stocking and wildlife management area maintenance were being considered for severe reductions and, in some cases, elimination.

In our effort to maintain these existing

Volunteer fishing instructors discuss sportsmen's ethics with a class of young anglers on the lawn at Pequest.



Division of Fish, Game and Wildlife

A hunter education instructor demonstrates safety techniques to a young student.

programs, the division made public the fact that it was seeking volunteers to work in a variety of activities with its regular staff. The original request was made to the New Jersey Federation of Sportsmen's Clubs, a state-wide conservation organization of clubs from the hunting, fishing and trapping communities. Response to this request for volunteers was so overwhelming that other groups and individuals learned of the need for volunteers and also offered their assistance.

A common statement made by these early volunteers and one that continues to arise in those applying for membership in the WCC today centers on enjoyment of the wildlife resource. When asked why they are interested in volunteering, most state that they "have taken pleasure in the state's wildlife over the years and would like a chance to 'repay' the resource for the many hours of enjoyment received." These volunteers want to be sure future generations can continue to delight in the wildlife resource they have treasured so dearly.

The Wildlife Conservation Corps is unique because of its wide scope of activities and the diversity of both individuals and backgrounds involved in the program. WCC volunteers represent the full spectrum of our state's population and come from many varied inter-

ests, age groups and occupations.

One such individual is John Bickunas. A designer for AT&T's Bell Laboratories in Whippany, John is married, has children, and is an avid sportsman. Taking vacation days to stock trout for the division, he also uses flex-time his company offers to help biologists at deer check stations.

Bickunas has spent most of his volunteer time on creel censuses at Budd Lake for the Bureau of Freshwater Fisheries, interviewing anglers to ascertain their catches. Creel information provides the division with current field data on the utilization of fisheries.

Edgar Schuyer of Tuckerton is worlds apart from John Bickunas in age, location and background. However, both share a common interest in Wildlife Conservation Corps activities. Nearing 70 years of age, Ed is a retired factory foreman and pet store owner currently devoting his time to the Bureau of Wildlife Management's Wildlife Control Unit. Schuyer spends most of his volunteer time assisting wildlife control representative George Garbaravage in the live capture and relocation of problem beaver in South Jersey.

Ed's volunteer activities aren't limited to beaver, however. He is also involved in deer check stations, waterfowl banding and pheas-

Volunteer instructor Gerard Richelo looks on as two children fish at the Pequest fishing education pond.



ant stocking. Schuyer's work is more than involvement: it is a commitment to wildlife as shown by his more than 800 hours of volunteer time during a one-year period.

Barbara Wingel, a WCC volunteer from Frenchtown, directs her time to a variety of areas, including shad tagging, deer check station duty, non-game research, Canada goose banding and geese surveys. Barbara is married and works in the field of finance. She finds that her volunteerism, an interesting change of pace from her usual work, is not only educational but provides a personal opportunity to benefit the state's wildlife resource.

Andy Parfume of Rahway is another WCC volunteer. A deputy conservation officer for more than 20 years, he transferred to the Wildlife Conservation Corps in 1987 and directs his volunteer time throughout the year to radio dispatching for the division's northern district law enforcement office every Sunday. Single and retired, Andy sees his volunteer work as a continuation of his service as a deputy conservation officer.

Providing staff assistance for the Endangered and Nongame Species Program (ENSP), Helen Clendening assisted in the release or "hacking" of orphaned bald eagles from a tower at the Tuckahoe Wildlife Management Area. Her volunteer job was to feed the young eagles both before and after they are released from the tower. Most of the work was done at night and often from a canoe.

A Pennsylvania resident, Helen works as a secretary at Ronson Aviation in West Trenton. She has a long-standing interest in endangered species and in their conservation. She saw the volunteer program as an opportunity to be directly involved. During my canoe experiences and in feeding the eagles, Helen explained, "I felt like I was in a scene from 'National Geographic.'" Helen would eventually like to get a job in wildlife conservation and hopes her volunteer experience will help her.

Husband-and-wife team Bill and Nan McDermott volunteered their time for two ENSP projects — the orphan eagle hacking program and the sharp-shinned hawk telemetry program. Like Helen, they fed the eagles both before and after release, often bringing Bill's canoe to do the job. They also assisted in the capture and radio-tracking of migratory sharp-shinned hawks equipped with transmitters the size of a lima bean.

Bill is retired from the insurance business, and Nan works as a senior systems consultant for New Jersey Blue Cross. Resid-

ing in Marmora, they are actively involved in the conservation of natural resources in and around Cape May County. They enjoyed their volunteer work because "we felt we were helping save something for our grandchildren to enjoy." Nan and husband Bill plan to continue working on other projects throughout the year.

Each of these WCC volunteers, in addition to his or her direct actions, provides many side benefits to the division and the wildlife resource. John Bickunas' creel census work on Budd Lake fishermen enables the division to obtain important, useful information. At the same time it relieves a wildlife worker who can then direct his or her efforts to the maintenance of one of the many wildlife management areas. Edgar's work with the Wildlife Control Unit in solving beaver damage allows wildlife control representative Garbaravage to complete trap and transfer without burdening another wildlife control representative, thus allowing many other important duties to be covered. Andy Parfume's radio dispatching relieves a field conservation office from dispatching on Sunday and allows that officer to be on patrol enforcing laws. The McDermotts' and Helen Clendening's activities enable a program funded by voluntary contributions to accomplish more with those dollars.

These seven volunteers and the tasks they perform are just a sample of the varied duties WCC members are involved with, all of which directly benefit the state's wildlife resource. Because the needs of the resource and its steward, the Division of Fish, Game and Wildlife, are so great, volunteers are needed in every area, from office duties to field work aiding fisheries and wildlife research biologists.

These varied needs allow WCC volunteers to tailor their duties to suit their own schedules, skills and abilities. Volunteers are always needed, and their assistance provides a tremendous service to the state and the wildlife that inhabit it.

The Division of Fish, Game and Wildlife has always been dedicated to having a positive impact on the fish and wildlife resource and in protecting habitat to provide the maximum benefit to this state resource. Working together, staff and volunteers can make an even greater impact.

Individuals who are interested in learning more about becoming a WCC volunteer should contact: Steve Toth, Volunteer Program Coordinator, DEP Division of Fish, Game and Wildlife, Trenton, NJ 08625-0400. NJ

Steve Toth, a wildlife management supervising biologist, is the Division of Fish, Game and Wildlife's volunteer program coordinator. A familiar name to our magazine family, Steve has been contributing to *NJO* for 15 years.

Garden State Deer Classic

By Kathryn Previte

New Jersey's First Annual Garden State Deer Classic, held September 14-15 at Middlesex County College in Edison, was an overwhelming success. Sponsored by the United Bowhunters of New Jersey, the New Jersey Federation of Sportsmen's Clubs and the DEP Division of Fish, Game and Wildlife, nearly 1,200 hunting and wildlife enthusiasts enjoyed this premier two-day event.

Amidst the magnificent displays of champion trophy deer from the 1988-89 season and past years, guests were invited to view an array of films and videos sure to spark the sportsman's or woman's white-tailed fancy. The subjects focused on the life cycle and habits of white-tailed deer, the art of antler rattling (a simulation of dominance fighting used to attract adult bucks), field dressing, the hunting heritage and hunter's rights.

Even more impressive than the film festival were the massive racks from record white-tailed bucks on display. Hundreds of faces filled with awe and wonder at the realization that everyone of these trophies was harvested on New Jersey soil. The classic added credence to the fact that New Jersey deer are not in any way inferior in size or quality to the deer of other states. New Jersey is a prime contender in the market of trophy deer. Towering above, the classic entries were proof that record-setting white-tailed deer are out there, somewhere in New Jersey.

In addition to the trophy deer display, paintings, posters, photos, lifelike mountings of grizzlies, fox and moose, hats, mugs and T-shirts were offered. To commemorate this first classic, wildlife artist Carol Decker gave the United Bowhunters of New Jersey and the New Jersey Federation of Sportsmen's Clubs one of her highly acclaimed white-tailed deer paintings for use as a special edition poster. The New Jersey artist was on hand to autograph each poster as well. If you missed the classic, the poster may be purchased at the Pequest Trout Hatchery and Natural Resource Education Center in Oxford.

The cool September drizzle kept no one from having a good time. The two-day event also featured a variety of seminars aimed at increasing the chances for bagging a trophy deer this year. Participants were encouraged to sharpen their hunting skills through teach-

ings of advanced and practical techniques. Lectures centered on such topics as the 1989 season outlook, the art of camouflage, the use of scents and lures, tree stand selection and placement, modern bow technology and wildlife conservation. Recognized experts like David Burke, deer project leader for the division, and Peter Fiduccia, host and producer of television's "Woods N' Water" series, were among those contributing their insight and humor to make the event an educational and entertaining experience.

The affair concluded with an awards ceremony that recognized the quality of New Jersey's white-tailed deer population, the division's deer management program, and the outstanding ability of the sportsmen and women who successfully hunt for them. Based on the entries at the classic, New Jersey's herd and management program stands unequalled in quality and beauty. Yet, this program is not managed specifically for trophy bucks, as more than half of last year's harvest of 45,900 deer were antlerless animals. Twenty-six awards were presented in seven different categories including bow, shotgun, muzzleloader, and the 200-Pound Club for animals weighing 200 pounds and over.

Excluding the 200-Pound Club, each of the three categories are broken down into two smaller divisions of typical and non-typical, which refer to the basic structure of the antler rack. Generally, a typical set of antlers is symmetrical on both sides with all antler points upright and found in "normal" locations on the rack. Non-typical refers to any abnormalities the antlers may have, such as no symmetry between the two sides and points occurring randomly or at different angles.

With typical racks, the length of one side is measured first, followed by the length of the matching side using the Boone and Crockett Club official scoring system. If there are differences, that amount is subtracted from the total score at the conclusion of the measuring process. The lengths of and between the second, third, and fourth points are also taken and compared, as are the circumferences of each. Again, any differences here are subtracted from the total score. When measuring a non-typical rack, essentially the same method is applied.

The 200-Pound Club is not broken down into categories, ranks or divisions since it is, as the name implies, a club for those hunters who have skillfully taken animals weighing

First-time contributor **Kathryn Previte** is a recent Rutgers University graduate. Kathy joined the division in August as a media specialist for the Office of Information and Education. Welcome to NJO.

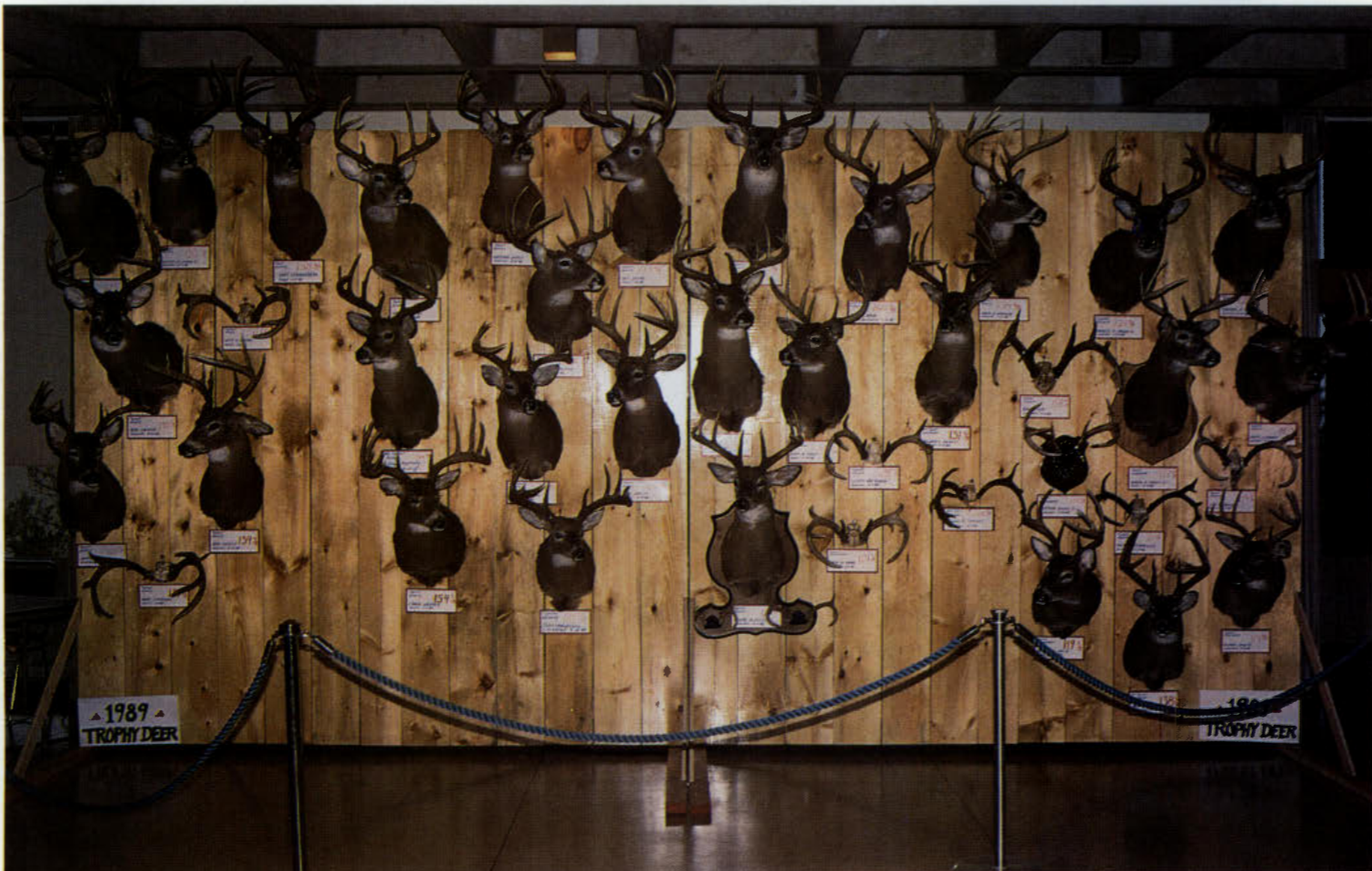
200 pounds or more. This year there were 10 new entries to the club. Skilled bowman Keith Lockwood's entry, which weighed in at 240 pounds, was harvested in Mercer County and ties the all-time record for heaviest deer in New Jersey. The animal, Keith's fourth entry over the last six years, also qualified for the antler competition as well. To finish off this all-around success story, Keith also claims a 1987 entry which stands as eighth largest in the state's all-time antler competition. Among the other record entries displayed at the event, over 20 of the bow-killed deer met the Pope and Young requirements, the nation's leading measurement scale for trophy deer harvested by bow.

Quality, skill, education and fun were by no means lacking at the classic. If you missed this year's premier program, take heart — next year promises to be even **bigger** and **better!** NJ



Keith Lockwood (right) displays his award-winning entries with the help of the Division of Fish, Game and Wildlife Director George Howard.

Massive racks from 1989 New Jersey trophy deer were on display.



Photographs by Division of Fish, Game and Wildlife

Bluebirds are Back

By James C. Sciascia

When February rolls by and winter seems like it will never end, the colorful bluebird makes its early March appearance, reminding us that spring is just around the corner. As they scout out nesting territories, the birds' bright blue back and the male's rusty-red breast stand out vividly against the pale gray background of winter.

Many older residents probably remember when bluebirds were quite common, in fact some say, as common as robins are today. Unfortunately, a combination of habitat alteration, competition from introduced bird species and pesticide use caused bluebird populations to fall to dangerously low levels during the 1970s. The response to the bluebird's dilemma has been overwhelming, and thanks to the efforts of the public this species appears to be on the increase.

The eastern bluebird is a cavity-nesting species that builds its nests in holes in trees, stumps or wooden fence posts. One of the reasons for its decline has been the replacement of wooden fence posts with metal posts in the pastoral and agricultural habitats the birds prefer. Intensive agriculture has also eliminated many of the hedgerows, snags and scattered trees in open areas attractive to the birds.

In addition, the house sparrow and starling, two prolific European species introduced to North America in the 1800s, are also cavity nesters and aggressively com-

pete with the bluebirds for the remaining natural cavities. The use of pesticides like DDT, another factor in the decline of the bluebird, not only reduced the number and kind of insects that the birds feed on but also affected the bluebird's ability to reproduce.

Much attention was called to the bluebird's nationwide downturn when it was placed on the Audubon Society's Blue List, a list of species whose future is uncertain. In an effort to prevent further decline of the bluebird and to restore its populations, people across the nation erected thousands of nest boxes in suitable bluebird habitats. The North American Bluebird Society and many ambitious individuals have encouraged the establishment and maintenance of series of nest boxes, referred to as bluebird trails.

Thousands of individuals have found a rewarding and enjoyable hobby in the maintenance of nest box trails while making a significant contribution to cavity-nesting bird conservation. In many areas where bluebird trails have been established, bluebird populations have increased significantly. Other native cavity-nesting species, like the tree swallow and titmouse, that faced the same problems as the bluebird have also benefited from the establishment of nest box trails.

New Jersey's champion of bluebird conservation is the late Junius Birchard. A Warren County resident and retired school teacher, Junius devoted the last 10 years of his life to bringing the bluebird back in New Jersey. Over the years through his slide shows and presentations, Junius entertained and educated more than 20,000 Garden State residents about bluebird conservation. In addition, he provided over 14,000 bluebird nest boxes to New Jersey residents, schools and organizations since 1977. His dedication to bluebird conservation in New Jersey will, most likely, never be matched.

In 1988, the DEP Division of Fish, Game and Wildlife's Endangered and Nongame Species Program (ENSP) awarded Junius a "Wild-life



Check-Off Conservation Grant" for the distribution of bluebird nest boxes. Unfortunately, Junius passed away before he received the grant. In his honor, the Endangered and Nongame Species Program used the money to purchase 240 nest box kits from his family and awarded 140 nest boxes to winners of a special drawing. The remaining 100 boxes will be awarded this winter to the 10 schools that submit the best plans for establishing and maintaining a nest box trail.

Shortly before his death, Junius had made arrangements with the Highlands Workshop in Franklin to take over the production and distribution of bluebird nest boxes in New Jersey. The Highlands Workshop is a New Jersey Easter Seal community service center for handicapped people.

The workshop is a rehabilitation and extended employment service for the handicapped in Sussex, Passaic and Warren counties. Its primary objective is to help handicapped individuals become productive members of the community through supervised work experiences and vocational rehabilitation services. The construction and distribution of bluebird nest boxes has become a popular project at the workshop, helping the handicapped as well as the bluebird.

The Highlands Workshop was also a recent recipient of a Wildlife Check-Off Conservation Grant from the ENSP for the purchase of equipment for the construction of bluebird nest boxes. The workshop supplies the North American Bluebird Society with nest boxes ordered by society members. The general public may obtain nest boxes by writing: Jim Hanak, Highlands Workshop, 133 Main Street, Franklin, NJ 07416.

In 1988 the ENSP announced a project aimed at monitoring the impact of bluebird nest box placement and to determine the status of the bluebird population, along with some of the state's other cavity-nesting birds that use bluebird boxes. The ENSP encouraged bird enthusiasts to assist in gathering information on these cavity-nesting birds by participating in New Jersey's Nest Box Record Program. Through the Nest Box Record Program, the ENSP hopes to draw attention to the plight of the bluebird and other cavity nesters and provide an opportunity for Garden State citizens to become actively involved in a wildlife conservation project.

The Nest Box Record Program depends on bird enthusiasts who watch their nest boxes throughout the breeding season and record information on species' use, productivity and

Les Rudnick



Division of Fish, Game and Wildlife



(top) Bluebird nest boxes successfully replace the disappearing natural cavities.

(left) Junius Birchard did more for bluebird conservation than any other New Jersey resident.

Jim Sciascia, a principal zoologist for the Endangered and Nongame Species Program, supervises exotic animal regulation, serves as the Interior Nesting Osprey Program project leader, and is frequently featured in *NJO*.

success. Information is recorded on standardized forms sent, along with other bluebird information, to individuals interested in participating in the program. Data from each of the participants throughout the state is compiled and analyzed at the end of each year, and a copy of the report is mailed to each of the cooperators.

Seventy-six cooperators participated during the program's first year. Records were submitted from 16 of New Jersey's 21 counties. The number of boxes maintained by each cooperator ranged from one to 119. Most boxes were placed in lawns or open fields with varying amounts of trees and shrubs. Areas such as pastures, orchards, golf courses and parks with closely cropped ground vegetation and scattered trees and shrubs provide ideal bluebird habitat.

During the 1988 nesting season, 363 boxes were maintained by the 76 cooperators. Two hundred and fifty-seven (70.8%) of the boxes were occupied by some species of bird. Ninety-five of the boxes (26.2%) were used by bluebirds, a pleasant surprise since the percentage of boxes used by bluebirds is usually lower. The center of bluebird activity appeared to be the central part of the state, but bluebirds were reported from as far south as Atlantic County and as far north as Sussex. Ninety-two (25.3%) boxes were used by tree swallows, 53 (14.6%) by wrens, eight (2.2%)

by titmice, seven (1.9%) by house sparrows and two (0.5%) by chickadees.

The ENSP hopes to enlist more cooperators from all areas of the state. If you currently maintain nest boxes and would like to participate in the Nest Box Record Program or would like to start your own trail, contact the ENSP for more information by writing: Nest Box Record Program, Clinton WMA, Box 409, RD 3, Hampton, NJ 08827.

Since the bluebird is one of our earliest nesting songbirds, arriving at its nesting territory in March, now is the time to plan and prepare for the upcoming breeding season. Winter is the perfect time to build or order nest boxes so they are ready for placement in late February.

The comeback of the bluebird is a perfect example of how our wildlife resource can benefit from the collective effort of many, each making his or her own contribution.

(below left) In areas where a series of nest boxes have been established, bluebird populations have increased significantly.

(below) Building nest boxes has benefitted not only the handicapped at the workshop but the bluebird as well.



Highlands Workshop



Highlands Workshop



Division of Fish, Game and Wildlife

Explorer

November / December 1989 Issue Number Two

It's The Season For Nor'easters
It's The Season For Nor'easters
It's The Season For Nor'easters

It is the middle of winter and the wind is howling out of the northeast. The sky is the darkest you have ever seen at one o'clock in the afternoon. A nor'easter has arrived.

It doesn't matter how old or big you are, a nor'easter can be scary. Read "**Just Before Christmas**" on page 14 to see what happened to a family in 1913 when they were caught in one.

Nor'easter usually means a major winter storm whose winds come from a northeasterly direction. Feared by all those who live or make their living along the coast, a nor'easter can pack hurricane force winds, sometimes

faster than 75 miles per hour. These winds and the waves they mold into avalanches can erase dunes and homes and even create inlets, or openings, in coastal islands.

Meteorologists are scientists who study the weather and storms like nor'easters. They understand how air moves, changes temperature and interacts with the land and bodies of water... and so can you! Just try the following experiments:

A Balancing Act

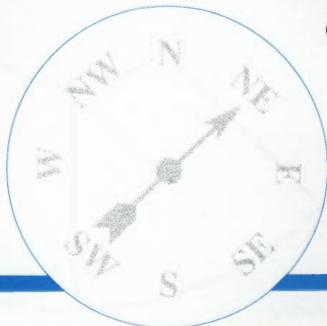
Like all things, air is made of moving atoms. When atoms are cold they **contract**, or slow down and take up little space. Many atoms of cold air can fit into one spot. Scientists

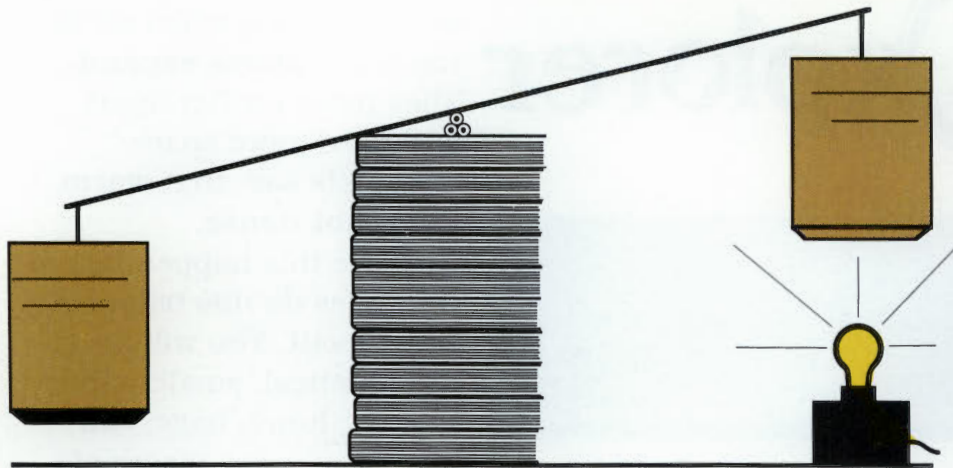
say that **cold air is dense, or heavy**. But when air is warm the atoms **expand**. They move farther apart and need more space. Scientists say that **warm air is not dense**.

To see this happen before your eyes do this balancing experiment. You will need two identical, small, paper lunch bags; two pieces of string 15 cm long; a meter stick; a small lamp or a large flash light; and three pencils taped together. You also need something to balance the meter stick on. This could be a stack of books, a step stool or a stack of boxes.

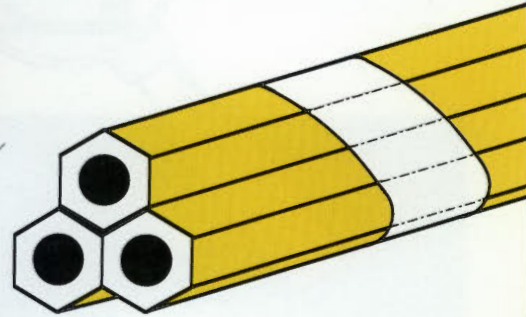
Punch a small hole in the center of the bottom of the open bags. Tie a knot at one end of each piece of string. Thread the string through the holes in the bags with the knot on the inside of the bag. Tie the strings to each end of the meter stick. Now balance the meter stick on the pencils that are on your stack of things so the bags hang evenly, with their open ends facing downward. Place the lamp or the flash-light under one of the bags and turn on the light.

What happened to the balance as the air in the bag above the light became warm? Which bag has the most air in it? Which weighs more, warm air or cool air?





Your three pencils should be taped together like shown below.



Because warm air is less dense it exerts less pressure. Cold air is dense and, therefore exerts more pressure.

Changing Temperatures

As winter approaches, the land cools faster than the water so the temperature of the ocean is usually warmer than the temperature of the air on land. To understand this you will need two thermometers, a five gallon bucket of water and a pencil. Set the bucket of water outdoors in a shady spot. Measure its temperature as well as the temperature of the air. (Remember- to measure air temperature the thermometer has to be placed off the ground and in the shade.) Write the temperatures in the chart. Continue taking these temperatures every two hours. Which temperature changed the greatest, the water or the air?

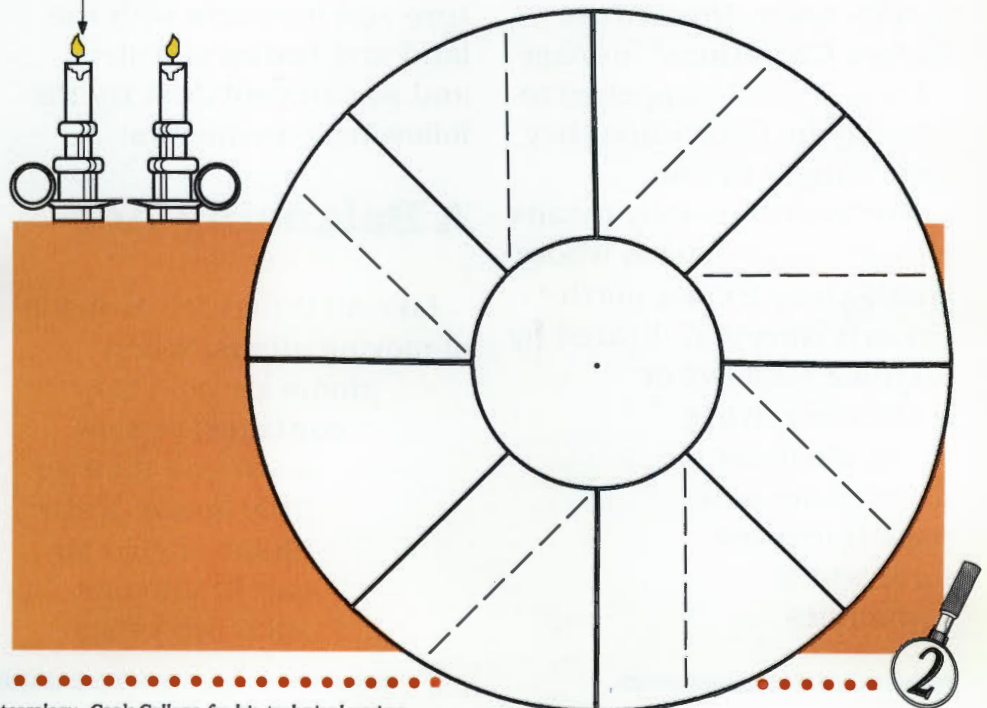
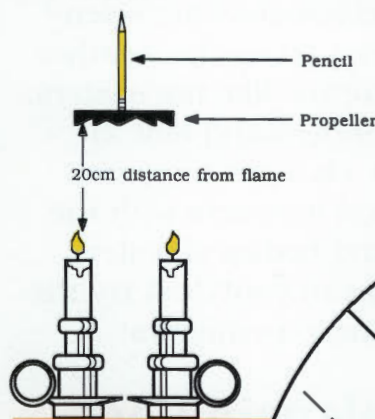
Time	Temperatures	
	Water	Air

Wind Wise

Winds are formed when there is a change in air temperature. To see this for yourself you will need two tapered candles, two candle stick holders, matches, a cut out of the propeller pattern below, a pencil with an eraser and a tack. **(Please ask an adult to help you with this experiment.)**

Make a copy of the pattern below onto construction paper or

oaktag. Cut along the solid lines and fold along the dotted lines. Using the tack, fasten the propeller to the eraser on the pencil. Place the candles in the holders and light the candles. Hold the pencil so the propeller is about 20 centimeters above the flames. The propeller should begin to spin as the atoms of air above the candles 1) warm up, 2) expand, 3) become less dense, and 4) are pushed upward by the denser, cold air below them.



New Jersey Wildlife Profiles is beautiful. The 112-page volume one features reproductions of 50 wildlife paintings created for the pages of *New Jersey Outdoors* by New Jersey wildlife artist Carol Decker. An original black bear painting appears on the jacket.

Species write-ups have been updated and New Jersey distribution maps added. The wildlife habitat information is excellent reference material for educators, wildlife enthusiasts or that special outdoors individual.

To order, send a \$28.00 (postpaid) check payable to "Division of Fish, Game and Wildlife" to: *Wildlife Profiles*, Division of Fish, Game and Wildlife, NJDEP, Trenton, NJ 08625-0400.

Copies may be purchased for \$23.95 at the Pequest Trout Hatchery and Natural Resource Education Center in Oxford.

More Blue Ribbons

Carol Suplee, author of "More Than Laying Plank to Hull" in the September/October issue, has updated us on how several of the sneakbox builders did at the Barnegat Bay Decoy and Gunning Show in September.

John Chadwick again won first place for his sailing sneakbox, making it now five years in a row. And the Heinrichs brothers, George and Gus, were also winners. For four years in a row, Gus has won first place for his feather-edged sneakbox. As Carol stated in her feature, these men are, indeed, master sneakbox builders.

Rabies Threatens New Jersey

These quick facts about rabies were made available by the New Jersey Veterinary Medical Association following the detection of rabies in wild animals in Hunterdon and Warren counties. The problem could easily spread throughout the state and threaten horses, livestock and pets.

All warm-blooded animals are susceptible to and can transmit rabies. The only sure protection against this dis-

ease of the nervous system is vaccination. Pets, livestock and horses should be vaccinated. Cats are at particular risk because they are more likely to come in contact with the affected wild animals. Rabies is now killing more cats than dogs because vaccination of cats is low.

Common carriers of rabies include bats, foxes, raccoons and skunks. People should avoid wild animals or strays and report any that are behaving abnormally to animal control authorities. Parents should teach young children not to touch or chase strange animals.

Earth Day 1990

April 22, 1990, will mark the 20th anniversary of Earth Day and of the creation of the New Jersey Department of Environmental Protection (DEP). Then, demonstrations, classes, concerts and festivals about earlier environmental concerns captured the nation's attention. The intent of Earth Day 1990, an international celebration, is to renew an awareness of the environmental concerns confronting us and to call for positive actions in preparing for the future.

Present concerns facing New Jersey, to name a few, include solid waste disposal, contaminated drinking water, nonpoint source pollution, atmospheric pollutants and diminishing open space. New solutions are needed for meeting these challenges, and the critical issues that remain to be resolved require an even greater commitment from all levels of government and from concerned and dedicated individuals.

The DEP is working cooperatively with other interested groups in celebrating Earth Day on Sunday, April 22, 1990 and New Jersey's Environmental Education Week from April 22 through April 29, 1990.

A coordinating committee of representatives from education, environmental and public interest groups, businesses and state agencies will be promoting and implementing projects and events and supporting existing efforts. Organized groups and individuals interested in participating in Earth



Day 1990 and Environmental Education Week who wish to be placed on the Earth Day 1990 mailing list may do so by writing: Earth Day 1990, Office of Communications and Public Education, NJDEP, Trenton, NJ 08625-0402.

From Our Readers

I note that the last issue of *New Jersey Outdoors* that we have on hand is the July/August issue. I have enclosed a copy of the address label from that issue.

This magazine is much used and enjoyed by the editorial staff of *The Record*, and we do hate to be missing any issues.

Is it possible for us to receive your calendar for December by return mail? Thank you for your consideration of this request.

Mollie Franklin
Reference Librarian
Hackensack

Mollie's letter is representative of the many letters and telephone inquiries we have received regarding the Calendar of Events and the magazine being late. Lothar Wichmann of Union Beach stated that NJO "is a fine magazine, and I enjoy reading it."

And we were asked to investigate his missing issues.

As we stated in the May/June issue, the late delivery of NJO is not the fault of the post office or our subscription service. The time lost in the production schedule happened in this office. We are taking steps to pick up lost weeks, including producing the magazine by desktop publishing.

We will list calendar activities as far in advance as we can. But if we receive them late, we cannot share that information with you. We thank you for all the expressions of concern and your patience awaiting the receipt of the magazine.

Screech Owl

Senior wildlife biologist **Mimi Dunne** is a frequent contributor to *New Jersey Outdoors*. She is editor of the *New Jersey Fish and Wildlife Digest* and the division's Project WILD coordinator.

Carol Decker

By Mimi Dunne

The call of the screech owl evokes images of a forest draped in darkness, the moon obscured by clouds, and a chill to the night air. Its sound is not really a screech but a low, throaty trill, a whistle that rises in pitch, becomes tremulous, and then slides down the scale to a lower pitch than at its start.

This is the screech owl's signature, its most distinguishing feature although the sound better suits an amphibian or an insect than an owl. The supernatural or unearthly nature of the call may explain the screech's "demon owl" nickname.

The screech owl's plaintive trill is heard most often in late winter and early spring during the breeding season. The screech is mostly silent during summer, but come late summer and early fall the evening stillness is pierced by juveniles locating their parents. The cry of the young owls is startling and eerie, a sharpness that makes one leave the darkening woods as though walking on eggshells.

The seven- to 10-inch tall screech owl is our smallest eared owl. The great horned owl and long-eared owl also have ear tufts but are more than twice its size. If the great horned owl is known as the "flying tiger," then the screech is a "flying wildcat." It has the nerve and ability to take on animals larger than itself.

An opportunistic predator, the screech owl consumes a wide variety of animal matter. Rodents and other small mammals are the staple of its diet, but lizards, fish, insects, crayfish, earthworms, frogs, birds, spiders, snails, flying squirrels, bats, domestic pigeons and quail have also been recorded as food items.

To capture prey, it swoops and pounces on its quarry. In flight the owl has a bat-like appearance, and its maneuverability in the forest has earned it another nickname of "ghost owl." Like

all owls, the feathers are superbly adapted for silent flight, and the keen eyesight and acute hearing work in tandem to locate prey. When late fall and winter weather conditions reduce rodent populations, the owl often hunts along roadsides where rodents concentrate in the brush. Here the chances of being struck by automobiles are greater, and screech owls frequently turn up at wildlife rehabilitator facilities.

Besides man, the screech owl has few natural enemies. Great horned owls are probably its greatest foe. If a screech owl is struggling with prey on the ground, cats, mink, weasels, otters, raccoons, skunks or dogs might overtake it. Cannibalism has been recorded during winter when food is scarce.

Screech owls are resident birds with variable home ranges. Virginia researchers found home ranges vary from 135 acres to close to 1,000 acres. The forest haunts of the screech owl consist of early successional woodlands, orchards and mature forests. It tends to be a species of the edge, found in forests that have a diversity of stands interspersed with openings. Streams may also be important feeding areas. It is often found in suburban areas that have mature shade trees or in agricultural areas, especially orchards.

Significant losses of screech owls were documented in Virginia when their home range included orchards treated with a rodenticide used primarily in the fall and winter to control voles. Owls who ingested treated voles died immediately and continued to be killed nearly two months following treatment. Farmers, homeowners and others using chemical poisons should be cognizant of the food chain they're impacting.

Tree cavities are widely used by screech owls for breeding and for winter food caches. Snags are an important component of screech owl habitat since they provide nesting, feeding and roosting sites as well as perches. In the absence of tree cavities, nest boxes can

be provided. A 20 x 20 x 30-inch box with an eight-inch hole should be located five to 30 feet off the ground. Wood shavings or excelsior in the bottom of the box help simulate a natural cavity.

Breeding takes place in early spring. The courtship displays are performed by the male for a normally aloof female. He'll call from various perches, drawing closer and gesturing with his wings and head. If she likes his mating act, they'll pair for life. Egg-laying commences in mid-March, and by mid-May the clutch is typically completed. The incubation period for the three to seven eggs is 21 to 30 days. The oval eggs are pure white (cavity nesters tend to have plain colored eggs). Only one clutch is laid per year.

Both parents feed the growing owlets, with the young birds remaining in the nest for about four weeks. After fledging, the parents continue to take care of the juveniles for an additional five or six weeks.

The screech owl's red and gray color phases, known as dichromatism, seem to be independent of age, sex or season. Dichromatism in this owl also seems unrelated to temperature, humidity or forest growth. It's simply an expression of genetics. Red and gray parents can produce all red, all gray or both color phases in their offspring, but two gray parents never produce offspring with a trace of red. The two colors are not really phases since the owls hold the color for life.

The screech owl enjoys a wide distribution throughout North America. In New Jersey, it is found statewide in a variety of habitats and is listed as a stable population. The numbers of screech owls throughout the country, however, indicate an apparent decline, and the bird is on the National Audubon Society's Blue List 1981 and Special Concern List 1982 and 1986. It's speculated that the loss of nesting cavities is contributing to its decline. NJ



New Jersey State Library

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