

\$2.50
November/December 1988

NJPS

New Jersey Outdoors

STATE OF NEW JERSEY
FISH & WILDLIFE
JAN 10 1989
FISH & WILDLIFE



New Jersey Outdoors

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Front: Sussex County "Tom" sporting green trap and transfer tag from DEP's turkey restoration program. Photograph by Roy Decker.

Inside Back: American Kestrel. Original acrylic painting by Carol Decker.

Back: Red-coated Continental at Princeton Battlefield State Park. Photograph provided by Princeton Battlefield Area Preservation Society.

New Jersey Outdoors (USPS 380-520) is a bi-monthly publication of the N.J. Department of Environmental Protection. Second-class postage is paid at Trenton, N.J., and additional mailing offices. Subscriptions are \$8.50 for one year, \$15.00 for two years, and \$21.00 for three years payable by check or money order to: *New Jersey Outdoors*, NJDEP, Trenton, NJ 08625-0402. Single or back issues, if available, cost \$2.50. POSTMASTER: Send address changes to *New Jersey Outdoors* mailing office. Send old and new addresses and the zip code numbers. The Post Office will not forward copies unless forwarding postage is provided by the subscriber. Allow eight weeks for new subscriptions and change of address to take effect. *New Jersey Outdoors* welcomes photographs and articles but will not be responsible for loss or damage. Permission granted to reprint with credit to *New Jersey Outdoors*. Telephone: Circulation (609) 530-5772; Editor's Office, (609) 292-2477; Subscription Information, 1-800-345-8112.

Costs of publishing the magazine not covered by subscriptions are met from general revenues available to the Department of Environmental Protection. The views and opinions of authors do not necessarily represent the opinion or policies of the Department of Environmental Protection or the State of New Jersey.

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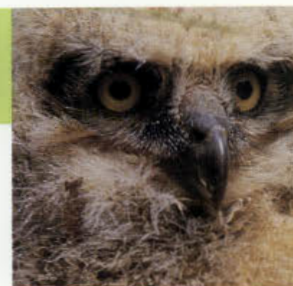
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Story Locator



Editorial



In this, my first editorial for *New Jersey Outdoors*, I would like to share with you my concerns about the urgent need to acquire, within the next five years, additional open space and to link that acquisition with watershed preservation. Increasing the amount of acreage left undeveloped in the most densely populated state is vital for many reasons, and the implications for watershed management and protection are great. Both are integral in habitat protection, recreational values, flood control and as buffers to environmental degradation caused by development.

The potential to sell and develop privately or municipally-owned watershed lands concerns me. In New Jersey, an estimated 80,000 acres are classified as watershed lands. For years these lands have provided open space or recreational opportunities and have been used to protect water quality. They are also unique and productive plant and animal habitats, provide flood protection by allowing water retention and slow percolation rather than flash run-offs, and serve to reduce non-point source pollution associated with increased development.

Many recreational values are associated with these critical watershed areas. Walking, bicycling, hiking, camping, picnicking, sailing, hunting, canoeing, fishing and ice skating are only a few of the popular activities that are provided in an environmentally compatible manner. Pressure on public lands for "breathing space" and recreation is increasing dramatically, as evidenced by attendance in our state parks and forests rising from four million visitors a decade ago to over ten million this year. Indirect impacts from development in the upland areas of watersheds will not only influence the quality and functioning of wetlands, floodplains and stream corridors, but also determine the shape of outdoor life for New Jersey residents in the future.

Because many watersheds are situated in pristine natural areas and have been well protected in the past from developmental impacts, they harbor high quality populations of the state's threatened or endangered species and some of the best examples of entire ecosystems. Red-tailed hawks, barred owls and bald eagles are a few of these species frequenting watershed areas.

Current regulatory authority can assist in preserving vitally important watershed lands. However, we need to develop immediate long-term solutions involving acquisitions and easements.

There is probably no more pressing problem in New Jersey than protecting existing open space. We need to acquire an additional minimum of 400,000 acres and have a window of only five years to accomplish it. Our success or failure in this endeavor will forever influence the beauty and recreational values of New Jersey, as well as its overall quality of life. I urge all who care about this great state to assist us in our efforts. NJ



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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.

North Jersey Spruce Bog.

Pale Laurel.



It's Now or Never

Saving the Land

Nature Conservancy Style

By Jean Walat

What do the piping plover, Hirsts' panic grass, the small whorled pogonia and the awned meadow beauty have in common with more than 13,000 New Jerseyans? In a sense, they're all members of the New Jersey Nature Conservancy. The non-human species are among the rare, unique or threatened residents of the Conservancy's wildlife refuges throughout the state, while the 13,700 humans are helping to foot the bill, through donations ranging from a \$10 membership fee to hundreds of thousands of dollars.

With the help of those funds, the Conservancy has acquired statewide approximately 9,500 acres of land identified as ecologically significant, from a botanically rich vernal (spring) pond, to the virgin Hutcheson Memorial Forest in Somerset County, to portions of the pristine Manumuskin River in Cumberland County.

The Nature Conservancy has 430,000 members nationally and an astounding half-billion dollars in assets. In recent years, the non-profit group has been acquiring land for wildlife preservation at a rate greater than that of the federal government, making it now the largest private holder of wildlife refuges in the country.

If you haven't heard of the Conservancy, it's not because they're trying to stay underground. Nor is it that they don't want you to know that they've bought up more than three million acres throughout the country. They don't make a big fuss about what they do nor often get into news-making disagreements with anyone, including developers, industrial polluters or politicians. With a toolbox of approaches for preserving land, they work at their goal aggressively but with personable smiles and cash in hand. If buying a desired parcel proves impossible, they may arrange with the owner to preserve voluntarily the

ecologically significant portions, sometimes buying development rights or otherwise negotiating restrictions on future uses of the land.

The Conservancy generally does not try to buy an entire habitat. Rather, they identify the minimum area necessary to maintain an endangered species or the best example of a threatened ecosystem; then they try to acquire that land and a buffer zone around it, even if the whole parcel amounts to only a few acres.

While the organization has achieved notable results with their "cooperation, not confrontation policy," other conservationists fret that the Conservancy ought to take a more activist role in environmental politics. Bruce Runnels, New Jersey State Director, defends their approach, comparing their role to that of one species in an ecosystem.

"Our organization fills one particular niche in the environmental community. What we do best is preserve ecologically unique lands and habitat of rare species. It's not that we aren't concerned about pollution or acid rain, but that's not part of our mission. We have great respect for groups that are working on those issues, and we cooperate closely with them, but we don't try to do their work. We believe that being so focused on our own role while maintaining good relationships with all sides is responsible for our success."

Altruism, of course, is only one motive for companies and individuals to sell or donate land and money. The Conservancy pays market price for many properties, and unlike many other potential buyers, they're there with ready cash. When a company finds itself the owner of undevelopable land, it's often advantageous to dispose of the land in a way that provides a tax advantage and good publicity in the bargain.

Runnels seems to exemplify the Conservancy image. Part of a national staff thoroughly experienced in law, taxation and real estate, he's the one who sits across the negotiating table from landowners and corporate officials,

Manumuskln River,
Cumberland County.



Nature Conservancy

and it's easy to imagine him convincing a company executive that nothing could make more sense than selling some land for a good cause, or why not just donate it? The Conservancy will gladly accept a donation of any kind of land; if judged to be ecologically significant they'll hold onto it; if not, it is quickly sold, sometimes with development restrictions, and the proceeds used to buy more desirable property.

Although the Conservancy has been active in New Jersey for several years, the state headquarters were opened only a year ago. Located in the quaint village of Pottersville, Hunterdon County, in a complex of historic buildings, the office is as unobtrusive as the organization itself. From Pottersville, Runnels travels all over the state, talking with landowners, state workers, developers and other conservation organizations, with whom he is quick to share the credit for preserving natural areas.

He is enthusiastic about New Jersey and surprisingly optimistic about the opportunities for ecological preservation. "I think we're on the cutting edge in environmental work here," he says. "We're ahead of other states in encountering environmental problems, and so we've got to be ahead on solving them." As positive signs he cites increased protective legislation and the great interest among New Jerseyans in environmental issues. He can also be encouraged by the fact that state Conservancy membership and protected acreage have almost doubled in size in the last three years.

While New Jersey's dense population and increasing development might seem enough reason in themselves to try to save the remaining wildlands, it is really the underlying rich diversity of plants and animals that provides urgency to the preservation work. Because of the state's geology, geography and climate, several northern species reach their southern limit in the northern regions, and, likewise, many southern species reach their northern

limit in South Jersey.

"If birds are good judges of excellent climate, Cape May has the finest climate in the United States, for it has the greatest variety of birds," said Alexander Wilson, the father of American ornithology at the beginning of the 19th century. Nearly 400 species of birds have been recorded there, more than almost any other area of the US. The Delaware Bay shore, the only stopover for thousands of migrating shore birds every year in their long flight from Canada to South America, the Pinelands and the limestone fens of Sussex and Warren counties provide just a few of the other important habitats that are found in New Jersey.

The Conservancy keeps tabs on ecologically significant areas with the help of a computerized data base that shows the locations of rare species and habitats throughout the state. In New Jersey management of the data base system, originally developed by the national organization, has been turned over to the state's Natural Heritage Program in the DEP. The state agency, which organized much of the original habitat data in the early 1980s, is now able to provide information to municipalities, developers and scientists to help ensure that important natural areas are preserved (see "Hunting for Treasure" NJO S/O 1986).

The Conservancy has used the data base to lay out a blueprint for future acquisitions consisting of 300 sites around the state. Although all the sites are critical, protection of the first 12 to 15 is considered extremely urgent because of the threatened extinction of globally endangered species.

With those sites drawing the focus of the organization's immediate attention and since it may be years before funds are available to protect all the critical lands on the list, a new citizen-based program is being instituted to help protect some of the lower priority sites. Called the Land Owner Contact program, it has already been used successfully in other

*Sensitive Joint-vetch.**Pine Barren Gentian.*

states to try and catch as many of the rare habitats as possible before they are lost to development. Notifying private landowners that something special is living on their property provides a measure of protection.

"About 75 percent of environmentally sensitive lands are lost inadvertently, because landowners don't realize what they've got on their land," Runnels claims. "We've found that people are usually pleased to learn that a rare species or unique habitat is present on their property. Nationally, about 80 percent of people contacted have agreed to protect critical areas of their land. That not only buys us time to arrange more permanent protection, but it's also a good educational tool to make people aware of their environment and the work that we and others are doing to help protect it."


Once the Conservancy has bought property, they face the prospect of how to manage it. Statewide, they directly manage just over 50 percent of their purchased lands. Otherwise they may manage a project jointly with groups like the NJ Conservation Foundation and the Audubon Society or transfer the land to government, especially if it is adjacent to a state or federal preserve. Even when land is turned over to another agency, however, the Conservancy puts restrictions on the land's use and continues to monitor the site. Because there is only one staff person to oversee all the Conservancy acreage in the state, they depend on local volunteers to help look out for some of the sites. These people clear rubbish, assist with biological monitoring or watch out for over-eager plant collectors.

While most of the sites are open to the public, the majority of them are not set up with nature walks and other amenities, since the primary purpose is preservation rather than education or recreation. However, hiking, bird watching and photography are possible in most areas, and a new guide to all the New Jersey preserves is available from the Nature Conservancy State office for a modest fee.

It's a narrow fence to walk, both making the areas available to the public while protecting them from the public. If you want to visit the Manumuskin River site in Cumberland County, for instance, it's suggested that you call the Conservancy office first. The place is not a city park, but nature lovers are welcome. Dirt bikes and ATVs are not.

The Manumuskin is a good example of how the Conservancy works to create a preserve. The river, possibly the cleanest in the state, supports wetlands habitat that is home to at least 15 endangered or threatened species, including five globally endangered species. The Pine Barrens tree frog, sensitive joint-vetch, corn snake, eastern tiger salamander, bald eagle and barred owl are among the species making their homes there.

To begin protecting this area, over a four year period the Conservancy bought six separate parcels of land, ranging in size from under two acres to the most recent acquisition, 700 acres purchased from the J & M Land Company. The DEP, which is also involved in preservation of the Manumuskin, significantly added to the protected area with the purchase of 3,765 acres from J & M. The Conservancy also has a management agreement for 643 more acres on the Manumuskin, which means that they can monitor activities on the land and that the owner has agreed to provide notice of any future plans for the site.

This kind of individualized approach to each parcel of land and the Conservancy's willingness to investigate all sorts of protective arrangements have helped make the organization successful. And while passing out the credit, let's not forget the more than 13,000 New Jersey members. 

For information on the Conservancy, write: Nature Conservancy, 17 Fairmount Road, PO Box 181, Pottersville, NJ 07979 or call 201/439-3007.

Gloucester County resident **Jean Walat** is making her first appearance in *New Jersey Outdoors*.

*Fall foliage provides
camouflage for bowhunter.*



Young Hunters

teach them well

William S. Lea

When we arrived at the tree stand in the closing darkness, we heard yet another, almost unbelievable, hunting tale.

The buck had started toward the apple tree at sundown, he said. It circled, as bucks are known to do, caught the boy's scent and, with tail aloft, trotted away, taking with it the hopes and dreams of a young hunter.

This story, itself, was not unbelievable. But the fact that our young son had seen a buck each of the three times he'd been in this stand was. We didn't know what to think. When my husband and I had hunted the stand, we'd seen a lot of does and their young, but no adult bucks. In fact, it wasn't even the kind of habitat where you'd expect to see any mature male deer.

This area, we thought, with thick foliage to ensure against any long shots, would be a good place for a first-time bowhunter to see deer and maybe get his first shot, but we didn't expect bucks.

When we began to have inklings that the stories were made up, we asked very gently, without threatening, if he really had seen any bucks. When he answered "No," we asked why he'd said he had.

His answer was that he did not want to be left out of the kind of story telling he'd heard for years around the dinner table. He wanted to participate. But he'd forgotten the many times he'd heard us say we'd seen nothing or that the deer had passed by too far for a shot.

Once we explained that we always needed to know the truth if we were to put him in a good spot, we were reasonably satisfied that the stories were on-target. But we were amazed at the workings of a 10-year-old's mind. Who would have thought he would have made up stories?

First-time hunters are also usually a bundle of nerves, hoping fervently that they will "make the grade," thus pleasing adults and proving they are capable.

An older son showed how much pressure youngsters can put on themselves when they first start hunting. We found him weeping with frustration when we arrived at his stand to pick him up one evening when he was 10 years old. A doe, on which he was attempting to draw, had run away after he'd "clinked" the arrow against his bow in his excitement. This mistake, common to most new bowhunters, was devastating to a young man who wanted badly to succeed. Who would have guessed that it would have been so important to him?

These were but the first of many learning experiences we went through when we started taking our sons hunting. We found that, even though we knew our children well, this was a whole new ball game.

But, with structured guidance and lots of encouragement, the boys learned with amazing speed and became, in fact, successful bow and arrow and firearm deer hunters earlier in life than most people. Now, at 19 and 21 years of age, they have grown into ethical, safety-conscious sportsmen who take small game, deer and turkey regularly. They seem to derive the same deep sense of joy from their hunting heritage that we feel.

Now we've begun the process again. Our third son, 10-year-old Jason, will be going afield for his first bow season this fall.

What we call a "woods baby," Jason has spent most of his life on the fringes of hunting and fishing, at home in outdoor situations and fulfilling the first requirement on our list of things to do to get kids started right in hunting—start them early.

We believe a child's first experiences with hunting should come well before he or she is old enough for the real thing—like when my husband hoisted our eldest son, when he was about five years old, into a tree for an afternoon of deer watching during the bow season. My husband had already taken his deer and was offering me company.

Although I saw nothing from my stand, they got to take pictures of a nice buck that walked almost directly under their position. Our son's nervous and uncontrollable, although muffled, giggling had the wary deer's ears swiveling like radar detectors. A friend also takes his young hunter and a younger son small game hunting with their dog on warm afternoons. The not-yet-old-enough "hunter" carries a toy rifle and practices safe gun handling while the others actually attempt to take game.

The next step is to get the right kind of equipment for the child. Pat Carr, Administrator of Hunter Education for the Division of Fish, Game and Wildlife, recommends a youth model semi-automatic or pump 20-gauge shotgun for small people because they are safe, can be used in most hunting situations and do not overly intimidate the shooter. It is possible to limit these guns to a single shot, if desired.

The best first hunting bow for a youngster is a quality compound that can be adjusted from a low, practice draw-weight to at least 10 pounds above the minimum for hunting, which is 35 pounds at his or her draw length. By changing the wheels, a compound bow can be adjusted even more to longer draw lengths and stronger bodies as the child grows over several years. New arrows must be obtained to match the bow and growth of the young hunter.

Be certain to sign the youth up for a hunter education class about six months prior to the



Ample target practice and sound coaching are fundamental to safe hunting.

Bowhunter Jesse McGontgle alertly waiting in tree stand.



Jan McDowell

time he or she wants to hunt so last minute hassles are avoided.

Because of the proficiency requirement in the bow and arrow hunter education course, parents should make sure the child gets good coaching and ample time to practice in order to feel confident well before the course begins. The course requires that students hit the vital area of a life-sized deer target with three out of five arrows at a distance between 10 and 20 yards. Practice should also occur from a tree stand, if that is where the deer hunting will be done.

Sufficient shotgun practice at clay birds and stationary targets, remembering to stress safe gun handling, will be invaluable to an already nervous student during the firearms course. Although shooting and safe gun handling are required to pass, proficiency is not a factor to graduate.

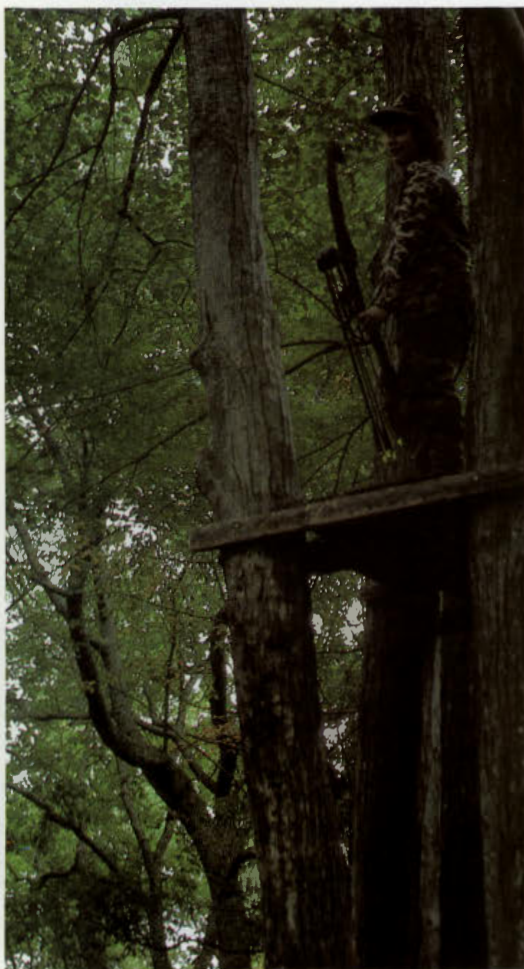
Parents who attend the classes with their youngster will be able to reinforce the lessons and better ensure the metamorphosis of a

safe, ethical hunter.

First outings should be of a reasonable length of time and weather conditions should be mild. Nothing can turn off a youngster more than sitting on a deer stand for long periods while shivering. Having to hike farther and faster than they're used to will also cause a problem. Small game hunters should plan rest and refreshment stops often when youngsters are in the party.

Make sure young hunters have quality clothing that keeps them warm and dry, including hand and/or foot warmers and face masks, for possible bad weather. Children should carry extra layers of clothing in a small day pack.

Don't forget to allow extra time to get started and even to get back home again. Children are notoriously slow and clumsy when dealing with equipment they're not totally at home with, and they like to stop and "smell the roses" along the way (something they might well remind the adults to do).



A book, binoculars, a comfortable place to sit, a safe place for the gun or bow and a snack help time pass safely for a young hunter on a deer stand.

Make sure new hunters know the "rules" if you are to be away from them for any length of time, as when bowhunters are on stand in trees some distance apart (although close enough to supervise). We always dropped our boys off at their stands, waiting to see that they were safely aloft and buckled into their safety harnesses, and told them to stay there until we picked them up at dark. They were not even allowed to go down the tree until we arrived because tree stands are the most dangerous part of hunting.

Parents should take the time to answer all "what if" questions before the first trip out. Children should know exactly what kinds of shots they are permitted to take—how far, with the animal standing a certain way, etc.—and what you want them to do in the event of a hit, or a miss, or a rain shower, or

they get cold, or another hunter comes through, or.... The list can go on and on.

When small game hunting, they should know the only direction to point the gun, where hunting partners are at all times, and that a rabbit isn't worth taking a chance on a shot you're not 100 percent sure is safe. The fewer decisions youngsters have to make on their own while hunting, the better the trip will be for everyone.

Finally, don't lead your child to believe that it is important to you for him or her to succeed right away and don't compare friends' children's hunting successes. Let the child know it is the recreation and family togetherness of hunting that are important, not getting a full bag limit.

Besides, success comes faster when a prepared shooter is relaxed and confident and doesn't feel the need to prove something. Since, many times, children put this kind of pressure on themselves, constantly de-emphasizing the importance of taking game may be necessary.

After a couple of years by Dad's or Mom's side and some game taken and enjoyed at the family table, young hunters will probably want a little more freedom to choose spots and make other decisions. We found that allowing our young teens to scout for deer for a couple of hours alone on Sunday was a good way to let them test their woodsmanship and start them down the road to being independent hunters. For safety's sake, however, they had to tell us exactly where they were going and how long they would be gone. They also had to take a compass with them.

Even though there were some surprises in getting our sons off to a good start in hunting, it was worth it. Our countless hours together in the pursuit of wild game and associated activities have paid off in a closer family and very few problems getting through the teen years.

And now, somehow we're not so anxious about Jason's coming adolescence. It seems that a boy who has spent untold days letting his imagination run wild as he watched ducks and deer, snakes and beavers in the swamps and woods near our home has demonstrated that initial appreciation of nature that we saw in the other boys. Now we just have to patiently guide him while he develops into a hunter who knows how to handle himself in the outdoors and how he fits in the natural system.

Men wishing to introduce their wives or girlfriends to hunting could insert the word "wife" for "child" in this story and come out with a long-time, enthusiastic hunting partner. Most of the suggestions also apply to first-time adult hunters. **N**

Columnist for the *New Jersey Herald* and frequent NJO contributor, **Jan McDowell** will be featured in an upcoming issue of *Bowhunter* magazine.



Santa Claus

MADE IN
NEW JERSEY

By Delight Holt

Yes, Virginia, there is a Santa Claus—and the Santa Claus you know and love can legitimately claim citizenship—even, in a sense, origin—in New Jersey.

Like many New Jerseyans, Santa's roots (a mixture of fact and fancy) go back to Europe. In colonial days, he came to the New World with Dutch settlers in the New York area. The name of the benevolent Christmas symbol (based on St. Nicholas, 4th century Bishop of Myra) was variously spelled, one variant being "Sinterklass," which in the New World eventually and understandably became Santa Claus. Because Santa Claus symbolized so much that is good and instinctive in the human personality at its best, his acceptance and popularity transcended ethnic boundaries to become universal.

Not only the name but also the appearance of Santa Claus underwent change in America. St. Nicholas was originally attired in the majestic robes of his churchly office. As he became increasingly associated with secular

aspects of the season, his attire was modified to a cape or long coat trimmed with fur (his German name "Pelz Nichol" meant "Nicholas in fur"). Perhaps because of his ascetic background, he was depicted as a tall, lean man.

In the 19th century, this concept was altered considerably! Washington Irving, in his *Knickerbocker's History of New York* (1809), describes Santa as jolly, short, tubby; Clement Moore, in his *A Visit From St. Nicholas*, popularly known as "The Night Before Christmas" (1822), amplifies Irving's description with such vivid details as the "little round belly/That shook when he laughed like a bowl full of jelly," "the nose like a cherry," the long white beard, and all the rest we know so well.

But what of the New Jersey connection? In 1846, a boy destined not only to become America's first distinguished political cartoonist but also to create the classic physical image of Santa Claus, arrived in New York City from his native Germany. From his twenties, Thomas Nast's illustrations

for news stories in the *New York Illustrated News*, the *London News* and *Harper's Weekly* did what today's photographers do to make the news live. His outstanding contribution was the development of the editorial cartoon. Lincoln called him the Union's best recruiting sergeant; Grant said he did as much as any one man to preserve the Union and bring the war to an end. He "invented" the Tammany lion, the Democratic donkey and the Republican elephant as political symbols. But the most universally beloved symbol he established was the pictorialization of Santa Claus as we know him today. Nast gave visible, tangible form to legendary and verbal details, in a manner the public found immediately and permanently appealing.

Nast moved to Morristown in 1872, and many of his Santa pictures belong to his New Jersey years. He used his five children and settings from Villa Fontana, his Morristown home—stockings hung by the chimney and a gift-laden Santa emerging from the fireplace—in these pictures, as well as local land-



Thomas Nast illustrations reprinted with permission of Dover Publications, Inc., New York.

Harvesting berried greens at the Holly Farm for shipment to holiday retail locations.

Jersey fresh Christmas trees waiting to be cut and trimmed.

marks in scenes of Santa on the rooftop.

In addition to establishing Santa's physical appearance, Nast's drawings also placed Santa's headquarters at the North Pole, a concept which, according to his grandson, was solely "a product of Nast's imagination."

Dictionaries define Santa Claus as being (a) the ubiquitous, legendary gift-giver and (b) the symbol of all aspects of the holiday season, especially—but not limited to—the secular aspects. In this more general use, Santa Claus can still be said to be "made in New Jersey," since objects grown or manufactured in this state contribute to the universal celebration of Christmas. Here are some examples.

Millville is called "the holly city of America" because of the vast output from the American Holly Farm on the city's edge, the only "farm" of its kind in the eastern United States. The farm wholesales holly trees and boughs, distributing hundreds of thousands of

plants annually throughout the country. Its 4,400 mature trees produce approximately 200,000 offspring each year and thousands of pounds of cut holly boughs.

New Jersey's thriving Christmas tree industry serves a largely local market, not only providing trees to state retailers but also offering opportunities for individuals or families to go to one of more than a 1,000 tree farms in the state and select and cut their own tree. In fact, the expedition to get the family Christmas tree has become a cherished ritual in many homes. New Jersey Christmas tree farms sold nearly 450,000 trees in 1987. This year, 550,000 trees will be available.

Each year, the New Jersey Christmas Tree Growers' Association, in cooperation with the Bureau of Forest Management in DEP's Division of Parks and Forestry, prepares a pamphlet containing the name and location of (and directions to) each state tree farm; information about cutting, setting up

and caring for your tree; and after-the-holiday suggestions. To obtain a copy, write: Forestry Service, NJDEP, CN 404, Trenton, NJ 08625 and request "New Jersey 1988 Choose & Cut Christmas Tree Guide."

Among other things, many trees will be trimmed with strings of cranberries. And cranberries will be served at many holiday feasts throughout the country, whether as juice or in relishes, salads, breads, muffins or desserts. New Jersey is a major producer (third largest in the country) of these Christmassy red berries. The state's multi-million dollar crop is grown on about 3,000 Pine-lands acres in Ocean and Burlington counties. The area's sandy, acid soil is ideal for cranberries and blueberries (and also for the holly mentioned earlier). In the late 1800s, Joseph Josiah ("J.J.") White, for whom Whitesbog is named, revolutionized the cultivation of cranberries. His wife and daughter Elizabeth assisted him. Elizabeth also worked with holly but is especially remembered for "inventing" the cultivated blueberry, which is also



American Holly Products, Inc.



New Jersey Christmas Tree Growers' Association

a multi-million dollar New Jersey crop (see "Blueberries" NJO M/J 1987).

Turning from grown to manufactured items, we are faced with literally an overwhelming array of New Jersey products associated with Christmas. We can suggest only a few, and hope your favorites are among them.

In part due to the fine quality and texture of clay soils in the Trenton area, Walter Scott Lenox set out a century ago to produce in Trenton an American china competitive in quality with European ware. Today, a proud tradition in homes throughout the world is the setting of tables for the holiday feast with holly trimmed Lenox "holiday" china. Two other internationally recognized Trenton producers of fine porcelain, Cybis and Edward Marshall Boehm, Inc., also contribute to the holiday season with nativity sets, biblical figurines, or birds and flowers given as gifts.


Glassboro, Millville and Vineland are all associated with the production of Jersey glass, an industry centered in southern Jersey due to the abundance

of natural resources used in glassmaking. Production of the jewel-colored bottles and flasks, now collectors' and gift items, played a significant part in New Jersey's industrial history (see "South Jersey Glassmaking ..." NJO J/F 1981 and "New Jersey's Glorious Glass Collection" N/D 1985).

Books and toys usually found on holiday lists included Trenton-made Horsman dolls, eagerly welcomed on Christmas morning by generations of little girls. These dolls were internationally famous for their quality and are now sought-after collectibles. An abundance of fiction and non-fiction books for readers of all ages have been produced by New Jersey writers. Some of these, having gained lasting popularity or the status of classics, include: Stephen Crane's *Red Badge of Courage*; Mary Mapes Dodge's *Hans Brinker, or the Silver Skates*; Howard Roger Garriss' "Uncle Wiggily" stories (written over a span of 52 years) and also, with his wife, the "Bobsy Twins" books; Frank Stockton's *The Lady or the Tiger* (written for entertainment at

a party in Nutley); Albert Payson Terhune's *Lad, A Dog; Lassie* and others; Henry Van Dyke's *The Other Wise Man* which, in addition to its literary quality, has a built-in holiday appeal.

In special ways at Christmas time, we owe immeasurable gratitude to Thomas Edison. Although born in Ohio, Edison lived most of his life in New Jersey and even contributed a governor (his son) to the state. His invention of the electric light bulb was pivotal to our illumination and scenic displays during the holiday season. One of his employees later invented electric Christmas tree lights. And the holiday movies, television specials and recorded music of the season are attributable to the genius of Edison, his co-workers and successors which made possible the phonograph, radio tubes, movies and television.

As we search for peace and good will, the ultimate gifts of the holiday season, let us remember some of the many prized holiday treasures that were and still are "made in New Jersey." 



New Jersey State Library

Delight Holt began state service before there was a DEP as an assistant to the Department of Health's Public Information Officer. She works presently in the DEP Press Office and is editor of the "Friends of the Parks Newsletter." This marks her magazine debut.

Calendar

November

- 4-6 **STOCKING STUFFER SALE** at Historic Allaire Village, Allaire State Park, Farmingdale. 10 am to 4 pm. Tickets go on sale for Saint Nicholas Celebration. Call 201/938-2253.
- 5 **DIVE NEW JERSEY**, an afternoon of dive-related movies, equipment displays, UW photography competition and door prizes at Count Basie Theatre, 99 Monmouth St., Redbank. Tickets (\$9) available at door. Noon to 5 pm. Sponsored by NJ Council of Diving Clubs. Call 201/249-5145.
- 5-6 **WILDLIFE ARTS AND CRAFT FESTIVAL** at Pequest Trout Hatchery and Natural Resources Education Center. Display, sale and silent auction of NJ wildlife artists' work. 10 am to 4 pm. Call 201/637-4125.
- 6 **COLLIERS MILL HIKE**, 15-20 miles from Prospertown Lake thru northernmost Pine Barrens to Colliers Mill WMA. 9 am start at lake, Route 537, Jackson Twp. Cosponsored by Outdoor Club of South Jersey (OCSJ) and Sierra Club. Call 609/655-5467.
- 12 **BIRD WALK** at the Hackensack Meadowlands Development Commission (HMDC) Environment Center, DeKorte Park Plaza, Lyndhurst. 8 am. Call 201/460-8300.
- 13 **BACKYARD WILDLIFE**. Learn to read the landscape and track your wild neighbors. Kateri Environmental Education Center, Wickatunk (Marlboro Twp.). 1:30 pm, \$3 fee. Call 201/946-9694.

- 19-20 **212TH ANNIVERSARY OF WASHINGTON'S RETREAT**, 18th century encampment featuring the Brigade of the American Revolution. Fort Lee Historic Park, 11 am to 4 pm. \$2 parking. Call 201/768-1360.
- 20 **NATURE/HISTORY WALK**. Five-mile, three-hour pacer to examine the hardwood/pines environment. 1:30 pm start at Monroe Twp. (Middlesex) municipal bldg., Perrineville Road. Sponsored by OCSJ and Sierra Club. Call 609/655-5467.

December

- 3 **BIRD WALK** when cold NJ is a warm vacation spot for northern visitors. 8 am, HMDC Environment Center. Call 201/460-8300.
- 3-4 **1988 NEW JERSEY STATE FEDERATION OF BEAGLE CLUBS CHAMPIONSHIP FIELD TRAILS**, Central Jersey Beagle Club, Ferry Road, Sergeantsville (Hunterdon). 8 am. Call 201/721-3532.
- 3-4 **ST. NICHOLAS CELEBRATION**, 10 am to 4 pm. Admission by advance ticket reservation only (see Nov. 4-6).
- 3-4 **VICTORIAN CHRISTMAS AT RINGWOOD MANOR HOUSE**. Cosponsored by the Ringwood Manor Citizens' Advisory Committee and Women's Club of West Milford. Noon to 6 pm at Ringwood State Park. For reservations, call 201/962-7031.
- 10-11 **CHRISTMAS EXPRESS WITH SANTA**, sponsored by Pine Creek Railroad at Allaire State Park. Noon to 4 pm. Call 201/938-5524.
- 4 **BATONA TRAIL EASY HIKE**, 6½ miles starting at Pakim Pond, Lebanon State Forest at 10:30 am. Bring lunch. Sponsored by Glassboro Alumni Association. Call 609/267-7052.
- 4 **HOLIDAY HAPPENING** sponsored by Monmouth County Park System at Thompson Park, Newman Springs Road, Lincroft. Noon to 6 pm family day includes old fashioned rides, cross-country skiing demonstration, and arts and crafts show. Call 201/842-4000 X237.
- 4 **BUILDING NEW JERSEY'S ARTIFICIAL REEFS**. Bureau of Marine Fisheries' Bill Figley lectures at 2 pm, NJ State Museum, Trenton. Call 609/292-6330.
- 9-10 **CANDLELIGHT EVENINGS AT NEW BRIDGE**. Dutch Christmas traditions come alive in the Steuben and Campbell-Christie House. Tours at 7:30 and 9 pm sponsored by Bergen County Historical Society. \$4 (\$2 under 12). For reservations, call 201/343-9492.
- 16-18 **DISTILLED DICKENS**, parlor theatre at the Hermitage, North Franklin Turnpike, Ho-Ho-Kus (see NJO N/D 1987). 8 pm (Sat/Sun 2 pm matinee) by reservation only. Charge. Call 201/445-8311.
- 11 **SIGHTS AND SOUNDS OF CHRISTMAS** at Rockingham, a State Historic Site on Route 518, east of Rocky Hill, 1 to 5 pm. Call 609/921-8835.
- 11 **SPOTSWOOD OUTLIER NATURE/HISTORY WALK**. Easy paced 5-mile visit to outlier and Helme snuff mill. Meet opposite Holy Trinity Catholic Church, Route 615, Helmetta, at 1:30 pm. Cosponsored by OCSJ and Sierra Club. Call 609/655-5467.
- 18 **PINE BARRENS CHRISTMAS HIKE**. Annual OCSJ 10-mile event, 10 am start at Carranza Memorial, 7 miles SE of Tabernacle. Call 609/461-5379.
- 25 **WASHINGTON CROSSING THE DELAWARE REENACTMENT** at Washington Crossing State Park, Titusville. Call 609/737-0623.

The Victory at Trenton



Annual December 25th reenactment of Washington crossing the Delaware.

William Morris

By Richard D. L. Fulton

The dawn stillness of the Bergen County woods bordering the Hudson River was shattered with the crackling of leaves and snapping of tree branches. At first, these initial sporadic disturbances this November 20, 1776, could have been attributed to waking wildlife, but the rustling grew more frequent and louder.

Less than six miles away at Fort Lee, a military outpost garrisoned by Continental Army Sergeant Joseph White and 2,000 troops, the dawn silence was likewise about to be shattered.

The sound of an approaching horse grew rapidly into the sound of a horse being frantically driven down the dirt road leading from the Hudson River into Fort Lee. It was a courier bearing bad tidings. Although the troops at Fort Lee could not have heard the shattering of the stillness in the woods along the Hudson six miles to their north, they were certainly informed as to its cause by the frantic courier.

"Turn out! Turn out!" the courier yelled as he rode into the confines of Fort Lee. "We are all surrounded. Leave everything but your blankets. You must fight your way through or be prisoners."

During the night the British Army, consisting of British and German (Hessian) grenadiers and five English brigades totaling about 5,000 troops, had crossed the Hudson River. Under the command of Lt. General (Lord) Cornwallis, the invasion of New Jersey had begun.

The Continental force which had occupied Fort Lee wasted little time in executing an evacuation and in putting as much distance between themselves and the advancing enemy army as possible. By 4 pm the fort was surrounded by British and German troops. Upon entering the fortification, they found "huts and tents for more than 6,000 men and quantities of all sorts of provisions and a large amount of ammunition." However, they found no defenders except for a few drunken soldiers the garrison had left behind.

A trilogy of major defeats—the Battle of Long Island on August 27th, the Battle of White Plains on October 28th, and the Battle of Fort Mifflin on November 20th—had left the Continental Army with little spirit in offering any further resistance to the advancing British forces. If the setbacks had left the army demoralized, the loss of the provisions at Fort Mifflin now left them destitute as well.

The army at large had certainly lost the considerable faith it once had in its commanding officer, General George Washington. Washington's strategy in the Battle of Long Island was to divide his army, placing half of it on an island. "The blunders committed by Washington and his officers," historian E. James Ferguson wrote, "were enough to ensure defeat (regardless of the strategy adopted by the British command)."

The army had also sustained considerable losses during the three successive defeats. Washington had gone into the Battle of Long Island with 28,500 troops. Four months later, when the "Long Retreat" through New Jersey



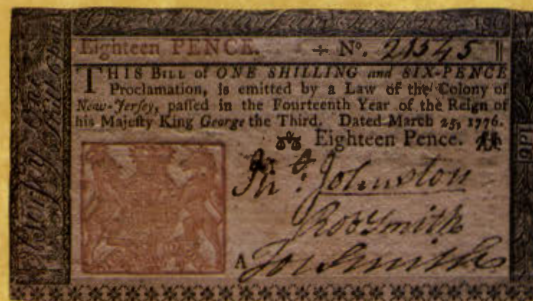
One of about 30 engraved "grand" powder horns extant today depicts forts or protective buildings every 18 miles, a day's march for the colonial soldier.



Poor-grade gun powder necessitated Continental Army to use crude iron powder tester such as this as an essential piece of field equipment.

Congressional resolution in November 1776 allowed the issuance of U.S. lottery tickets to raise additional funds to pay for the Continental Army.

Eighteen-pence (36 cents) note issued by colonial New Jersey.



ended on the banks of the Delaware River, only 3,000 troops remained.

Many of those who had survived or evaded capture during the battles of August, October, and November simply deserted. In their views, they were now engaged in a "lost cause" with little hope of a favorable outcome. Even among those who marched on to the Delaware River there were doubts, but they were determined to see it through to what appeared to be a rapidly approaching conclusion. They were, however, simply enduring "the times that try men's souls."

As the shattered army made its way through New Jersey and with most of the supplies already in British hands, there was little either deserter or patriot could do to survive than to forage. This meant commandeering or simply stealing whatever could be had from the various homesteads and farms lying in their path of desertion or line of march.

On their heels were the British, eager to retaliate against anyone who might aid (or be said to have aided) the shattered remnants of the Continental Army. New Jersey's Royal Governor William Franklin sent a letter to the state Legislature warning the citizenry about supporting the rebel army as it fell back through the countryside.

"Let me exhort you to avoid, above all things, the traps of independency and Republicanism now set for you, however tempting they may be baited. . . . They well know that this has not even a chance of being accomplished, but at the expense of the lives and properties of many thousands of honest people of this country—yet, these, it seems, are nothing in the eyes of such desperate gamblers," the soon to be arrested and exiled son of patriot Ben Franklin wrote.

In order to forestall absolute disaster as long as possible, Washington ordered the army to make a stand at Hackensack, but he soon found there were not even enough troops available to attempt it. Units of the Continental Army were, by this time, scattered from Hackensack to (New) Brunswick. Again, Washington fell back and the Hessians took possession of the town the following day.

Another attempt was made at Newark, but at the first sign that the British were en route to give battle Newark was abandoned. The army continued to fall back, reaching Brunswick on November 29th, prompting one British "Tory" to write, "The arch-rebel Washington is now at Brunswick but how long he will remain the devil only knows, for the Lord won't have anything to do with him."

Washington and his troops would not remain long, however. After an exchange of artillery fire with the enemy on the Raritan River,

Brunswick was evacuated and fell into British hands on December 1st.

For some unexplained reason, which would cause General Cornwallis to come under "fire" from his superiors, the British Army settled down in Brunswick for a week-long stay while the remnants of the Continental Army concentrated around Princeton. "I see," wrote one of Cornwallis' critics about the general and his command, "they don't want to finish the war..." The week-long delay, some feel, cost the British the war. At the least, it bought precious time for the Continental Army.

When the British began to move again on December 7th, Washington had already made progress on getting his troops across the Delaware River into Bucks County, Pennsylvania. On December 2nd, the general left half his men in Princeton as a rear guard. That day and the next two were spent sending all of the supplies of the army over the Delaware into Pennsylvania via Beatty's Ferry and at the Trenton Ferry.

Preparatory to crossing the supplies and eventually the troops, Washington had issued an order on December 1st to have any vessel that could float gathered up and held in reserve for the anticipated retreat across the river. Continental Col. Richard Humpton assigned this duty to the 2nd Militia Regiment of New Jersey under the commands of Capt. Daniel Bray, Capt. Jacob Gearhart and Capt. Thomas Jones. The regiment executed its orders so well that the river was stripped of vessels of any type and shape for 40 miles.

Washington learned early on the morning of December 7th that the enemy was on the march out of Brunswick. He quickly ordered the crossing of the troops to commence, with the result that the bulk of the troops were across the river before the morning of December 8th.

A Pennsylvania militiaman, 2nd Battalion Lt. Charles Wilson Peale, observed the crossing with mixed emotions. As night set in on December 7th, troops built bonfires along the Pennsylvania shore to guide those still executing the crossing. Peale watched as the flames lit up the incoming boats and their occupants. "The sick and half-naked veterans of the long retreat streamed past. I thought it was the most Hellish scene I have ever beheld..."

During the early afternoon of December 8th, the rearguard of the Continental Army was about 300 paces from the Pennsylvania shore when the British troops arrived. A Connecticut officer noted, "The enemy came marching down (to the shore) with all the pomp of war," including a Hessian band playing at the head of the column.

The British were confident that, if the main body of the Continental Army had escaped,

they could at least catch the rearguard in an exposed position on the river. Instead, the reverse occurred and the rearguard, along with 37 cannons under Gen. Henry Knox's command, caught the British in an exposed position on the Jersey shore.

Hessian officer Levin Friedrich summed up the ensuing hail of musket balls and grape shot which greeted the British troops and their Hessian allies. "(The rebel artillery) opened a terrific fire upon us with all their batteries, containing 37 cannon. The light infantry and the jagers were forced to retreat...in the blink of an eye they lost 13 men..."

The rearguard pulled their boats ashore onto Pennsylvania soil. The crossing was over. Even more, so was the "Long Retreat."

Frustrated beyond expression, the British seemed determined during the days following the crossing of the Continental Army to make a crossing of their own and smash the obstinate rebels. To accomplish this, however, necessitated the locating of a sufficient number of boats, not an easy thing to find now within 40 miles.

Lord Cornwallis decided on December 9th that a crossing might be possible at Coryell's Ferry (Lambertville to New Hope, Pennsylvania) and ordered a march to that area to secure a means to cross. With him marched the 42nd British Regiment, three battalions of light infantry, two battalions of grenadiers and two battalions of foot soldiers.

This formidable force arrived in Lambertville at daybreak after marching 16 miles. Of course, the march was for nothing. There were no boats, and jeering militiamen kept taking pot shots at them from the opposite side of the river. The shots did little damage, but it made the British furious. Humiliated, Cornwallis and his troops marched to Pennington and went into winter quarters.

Other British attempts to cross fared no better, and the decision was then made to wait until the river froze over and march the British troops across, especially since it appeared the Continental Army intended to make a "last stand" on the Pennsylvania side of the river.

Besides, the British had other problems to worry about in the interim—mainly the continued activities of partisans along their New Jersey supply lines. On December 10th alone, one enemy militia unit hit a British supply train of eight wagons and its military escort. The next day, an even larger supply train was totally captured behind British lines by partisans.

In the endeavor to stabilize the territory they now occupied, the British command dis-

A Civil War buff making his first appearance in NJO, **Rick Fulton** is a former editor of *The Beacon* newspaper and now writes in the DEP press office, near the site of the first battle of Trenton.

William S. Bowen photographs are of artifacts in the Swan Collection of the American Revolution, on loan to Washington Crossing State Park.

Royal artillery unit drills during reenactment at Old Barracks Museum.



Old Barracks Museum



William Morris

Wrought-iron Jew's (julec) Harp popular with soldiers for entertainment and as a trade item.

Musket captured from the Hessian garrison at Trenton and restamped "U.S." for use by the New Jersey Regiment in 1777 at Morristown.



patched the Hessians under the command of Col. Johann Gottlieb Rall to occupy Trenton. His orders were to remain in Trenton until the river was frozen over and the British Army ready to destroy the Continental Army once and for all.

Someone suggested to Col. Rall the "absurd" postulation that the Continental Army might strike across the river first and make an attack before the river froze. His response was, "Let them come."

Washington was in fact even then contemplating just such a move. By December 20th, it was obvious to Washington that a counterstrike was desirable, not only because, if successful, it might spur recon confidence in the rebel cause but also due to a couple of other reasons that had come to the general's attention. Washington received intelligence from spies on the New Jersey side of the river that the British intended to assail him as soon as the river froze and he was faced with certain mass defection as enlistment periods ran out for most of his demoralized soldiers.

The soldiers needed a victory and, in fact, so did the cause for liberty. That realization prompted Washington to come up with the code words for the crossing—"Liberty or Death."

But to do so required troops, certainly more than the 3,000 battered soldiers under his command on the immediate Pennsylvania shore. There appeared to be some momentary hope to enlarge the existing force with the arrival of troops under the command of Gen. John Sullivan and Gen. Horatio Gates. On paper, these two commands allegedly had 7,000 men. An actual head count produced 3,000.

Of 1,688 Bucks County militiamen supposedly at his disposal, less than two hundred responded to his call to arms. However, there was another small force in Philadelphia under the command of Gen. Israel Putnam which could be brought up for the offensive. After juggling numbers, Washington realized he had to make do with whatever could be had and began to lay out the strategy for the attack.

Washington's plan called for a four-prong attack, with troops under his command hitting Trenton from the north. A body of 600 militiamen under the command of Brig. Gen. James Ewing was to cross the Delaware and capture the Assunpink Bridge, a potential retreat route for the Hessians at the south end of Trenton.

Col. John Cadwalader was to lead his troops across the river at Bristol and assail the Hessian outposts south of Trenton. Gen. Putnam was to leave Philadelphia and join Gen.

Samuel Griffin's soldiers for a strike at enemy troops in the Mount Holly area.

The boats to be used in crossing the river would consist primarily of Durham boats, 40-foot long shallow draft vessels designed to carry iron ore and other heavy goods up and down the waterway. Also to be used were several ferry boats and a variety of other small boats. Most of the boats had been hidden behind Malta Island (south of New Hope) after the initial retreat across the river. Washington assigned the 14th Massachusetts Continental Regiment (Marbleheaders) under the command of Col. John Glover to man the boats during the crossing.

However, on Christmas Eve, Washington's plans began to fall apart almost as soon as the order to implement them was given. His four-prong assault was reduced to three when he received word that Gen. Putnam could not ready his troops in Philadelphia in time to join the attack. By Christmas night, the now three-prong attack would be reduced to a one-prong attack. Ewing and Cadwalader could not get their forces across the ice-choked river, which was a couple of hundred feet wider where they were to cross than the section near McKonkey's Ferry where Washington was to cross.

To frustrate matters further, what had started out as a bright, sunny Christmas day around 32 degrees deteriorated into a snow, sleet, and hail storm as the crossing progressed during the night. The crossing began, more or less officially, at about 4:35 pm on the afternoon of December 25th. It was anticipated that Gen. Washington's troops could be crossed in a few hours but, in the end as inclement weather moved in, the crossing actually took about 11 hours, with the last troops to cross some time before 4 am on December 26th.

As the troops progressed toward Trenton, in itself about a three-hour march, the sleet and snow refused to let up. The word was passed to Washington from Gen. Nathanael Greene, in command of one of the wings of the advancing army, that the guns his men were carrying could not even be fired because of the foul weather. Washington's response was, "Tell your general (Greene) to use the bayonets."

In the meantime, Hessian Col. Rall refused to believe the Continental Army would try to execute a counterstrike at Trenton. He had been warned several times the day prior to the actual crossing and had been further warned that the rebels were on the move on Christmas morning. His response to the Christmas Day warning (allegedly) was, "Fiddlesticks! These clod-hoppers will not attack us, and should they do so we will simply fall on them and rout them."

Col. Rall was engaged in playing checkers around 7:30 am on the morning of December 26th when the first volleys fired in the Trenton-Princeton Campaign reached his ears. The shots he heard were being fired on Hessian pickets in the northwest perimeter of the town.

Soon after the initial shots, a shout filled the streets of Trenton. "Der Feind! Heraus!" (The enemy! On your feet!) One of Washington's aides reported that, "We could see a great commotion ... men running here and there, officers swinging their swords, artillerymen harnessing their horses," as the first two Continental artillery pieces were unlimbered and set up in the intersection of King (now Warren) and Queen (now Broad) streets.


As the Continental soldiers rapidly overwhelmed the 1,400-man Hessian garrison, Col. Rall attempted to organize his confused troops and break out of the evertightening encirclement of rebel forces. His escape path suddenly blocked by troops under the command of Continental Gen. John Sullivan, Rall decided to counterattack and retake the town.

It would be the last decision of his life. As he rallied his remaining troops to assail the Continental forces, the colonel was mortally wounded when a line of rebel soldiers unleashed with deadly accuracy a volley at the reforming ranks of Hessian soldiers.

Continental Sgt. Joseph White looked around him after the last shots were fired. "I took a walk over the field of battle and my blood chilled to see such horrors and distress ... the dying groans and the garments rolled in blood."

The battle was over at 9:30 am. The Continental Army sustained four wounded in the battle. The Hessians had a loss of 1,000 dead, wounded or captured. Only about 500 German troops escaped through the encirclement. In addition, the Continentals captured six brass cannons, 40 horses, 1,000 muskets and rifles, musical instruments and 40 barrels of rum.

Although the War for Independence would continue for several more years, the victory at Trenton restored hope and confidence in the army and the cause. By the standards of the War Between the States fought only 95 years later, the Battle of Trenton would have been written off as a relatively minor skirmish. By the standards of the Revolutionary War, it was a battle of immense consequence.

English historian George Otto Trevelyan expressed the importance of the Battle of Trenton in the context of the Revolutionary War. "It may be doubted whether so small a number of men ever employed so short a space of time with greater and more lasting results upon the history of the world." 

Outlawed by all nations except Germany, this German-Dutch bayonet was the ultimate and most vicious type of Revolutionary War infantry weapon.



*Friends Meetinghouse at
Stony Brook served as
hospital for American and
British wounded.*



William S. Bowen, Swan Collection of the American Revolution

Ten Crucial Days

By John K. Mills

It was a mild afternoon while George Washington waited with his men as the British Army made their advance. January 2, 1777, was to be the second time in eight days that the American Army was to face the King's troops in Trenton. The outcome was in serious doubt.

The days since December 26, 1776, were marked by increased activity in both armies. Washington had abandoned Trenton following the victory there, crossed back to Pennsylvania, and sent the Hessian prisoners to be paraded in Philadelphia to revive the spirits of the population. On December 27th, Gen. John Cadwalader and his Pennsylvanian Associators crossed to New Jersey in the mistaken belief that Washington was still in Trenton. Realizing his mistake he decided to remain and await developments, occupying Burlington and eventually Bordentown and Crosswicks. He did not have long to wait as Washington ordered his troops to again cross the ice strewn Delaware, with Gen. Mifflin joining Cadwalader at Crosswicks and generals Greene and Sullivan to occupy Trenton. Washington recrossed on December 30th with Sullivan, the river so choked with ice that part of the crossing was made by walking.

Now the crisis that had precipitated Washington's attack on Trenton came to a head. The enlistments of a substantial part of his army were to expire on January 1st. Officers

John K. Mills





Pistols from the Swan Collection on display at Washington Crossing State Park.

Members of a Continental Army reenactment group wheeling field artillery at Princeton Battlefield.

called their men out in the cold and exhorted them to remain a few weeks longer. Even Washington, who preferred to work through a chain of command, personally addressed his troops. As one sergeant remembered it, "You have done all I asked you to do, and more than could be reasonably expected; but the country is at stake, your wives, your houses, and all that you hold dear. You have worn yourselves out with fatigues and hardships, but we know not how to spare you. If you will consent to stay only one month longer, you will render that service to the cause of liberty, and to your country, which you probably never can do under any other circumstance."

In spite of the exhortations many troops left, weary of the hunger and cold. Even John Glover's famed Marblehead men left to join privateers raiding British shipping. But many stayed and were joined by militiamen inspired by the victory at Trenton. By January 2nd, with Cadwalader's men marching into Trenton, Washington had between 5,000 and 6,000 men, of varying experience and discipline, to hold off the British.

The British, thrown into a panic by Washington's bold attack at Trenton, pulled all their forces back to Princeton and proceeded to fortify the town. The King's Highway, a strategic post road (Routes 206 and 27) ran through Princeton to Trenton. Rumors of impending attack and frequent clashes between patrols would keep the nervous British and Hessians under arms for hours at a time. The arrival of

additional troops from New Brunswick and New York strengthened the garrison to 8,000 men, relieving some of this tension.

The able field commander, Lt. General (Lord) Charles Cornwallis, arrived late January 1st and at dawn of the 2nd ordered his army to march along the King's Highway to Trenton. The 4th Brigade, approximately 1,000 men under Lt. Col. Charles Mawhood, remained at Princeton as a rear guard. The 2nd Brigade under Lt. Gen. Alexander Leslie (1,000 men also) occupied Maidenhead (Lawrenceville). With 6,000 trained and disciplined men, Cornwallis moved on Washington at Trenton.

As the British moved through Maidenhead they began to pick up sporadic fire. Upon reaching the Shabakunk Creek a deadly volley erupted from the far bank. A strong force of Pennsylvanian riflemen (about 1,000) backed by artillery had been posted at Maidenhead, charged by Washington with delaying the British advance. Under the able command of Col. Edward Hand, the American riflemen would fire from a strong defensive position until the British formed and attacked. The Americans would then retreat to another position, repeating the maneuver throughout the afternoon, giving up ground slowly.

After several hours the British forced their way into the upper part of Trenton. The Hessian troops were given the honor of retaking the town lost by their countrymen the week before. Hessian grenadiers and British Light Infantry charged down King and Queen



Smoke from cannon and musket fire fills the open field as soldiers begin to fall.

streets with Hand's riflemen retreating before them, while under the covering fire of Rhode Island Continentals. Washington had prepared defenses along the Assunpink Creek that runs through Trenton. The retreating American troops poured across the bridge at the bottom of the streets, brushing against Washington himself as he sat in his saddle at the end of the bridge. Among the last across were the New Jersey men coming to join the army.

Having put their cannon in place the British and Hessians assaulted the bridge, directly into the face of American artillery and muskets. The American line replied with a murderous volley, sending the British back with heavy losses. Twice again, the British advanced on the bridge, some driven on by the flat of their officer's swords. Thrown back by the weight of American firepower the British broke off the attack. One American observed, "The bridge looked red as blood, with their killed and wounded and their red coats." British artillery also hit home, killing and wounding a number of Americans.

Due to Col. Hand's successful delay, it was already becoming night. Cornwallis felt that a night attack would be foolhardy. He also felt that Washington was trapped with his back to the Delaware River and his right flank exposed. Although some of his officers warned Washington would flee, he declared he would "bag the fox" in the morning.


Many Americans felt the same way. To stay

and fight against the well disciplined British troops would mean almost certain defeat. A retreat to Philadelphia would not allow enough time to get the army across the river before the British caught them. But Washington had a plan in mind all day, and in a meeting with his officers he proposed they slip out of their positions along the Assunpink and by a circuitous route attack the British rear at Princeton. It would extricate the Americans from their current plight and, as Washington stated, "avoid the appearances of a retreat." It was a difficult maneuver for seasoned troops, let alone untrained American militia. Washington had several things in his favor. He had a spy map of the approaches to Princeton revealing a little used back road; several officers who knew the area; and the weather had changed from mild to frigid, hardening the muddy roads.

After midnight the Americans started slipping away from their lines and marching toward present day Hamilton and Mercerville to get to Quaker Bridge Road. Five-hundred New Jersey militia remained behind at Trenton until dawn to keep the fires going and to sound like an army so as to fool the British into thinking the Americans were still there. The Americans were finding the back roads difficult to travel with slippery ice and even tree stumps in the roadway. With these obstacles delaying the march, some men would fall asleep while standing causing others to run into them. Only the highest ranking officers knew where they were going, and all were enjoined to observe the strictest silence.

The American forces reached Princeton just after dawn. Stopping to reform and take a shot of rum mixed with gunpowder, the troops divided into their two divisions, Greene's and Sullivan's. The road forked near the Quaker Meetinghouse, about one-and-a-half miles out of Princeton (This area, known as Stony Brook, was the original settlement in Princeton). Greene's division was to continue down Quaker Bridge Road to its junction with the King's Highway (Route 206), destroy the bridge at Stony Brook Village, and march on Princeton. In the vanguard of Green's division was Brig. Gen. Hugh Mercer with about 350 men from several regiments. Sullivan's division was to turn at the meetinghouse onto Saw Mill Road, a little used back road which runs 100 yards in front of Thomas Clarke's farmhouse, and attack Princeton from the southeast.

The attack did not go as planned. Two regiments of British infantry, the 17th and 55th of Foot, plus mounted troops of the 16th Light Dragoons had left Princeton thirty minutes earlier under Lt. Col. Mawhood. The British had just crossed the bridge at Stony Brook,



one-and-a-half miles from Princeton, on their way to Trenton when they observed the Americans beyond the Thomas Clarke House. Mawhood reversed march to support the 40th regiment still garrisoning Princeton.

General Mercer, advancing up Quaker Bridge Road, was alerted to the British presence. His troop's marched off the wooded road that ran along the brook and crossed the open fields of Thomas Clarke and the farm of his brother William. Mercer was placing his force between the British on the King's Highway and the Americans on the parallel Saw Mill Road, one-half mile to the east. It was at this point that the British first spied Mercer's column and realized that Americans were not only to their right but now behind as well.

Mawhood ordered the 40th to block Sullivan's advance on Saw Mill Road, part of the 55th to hold high ground near Saw Mill Road, and the rest of the 55th and the 17th to advance over a ridge toward Mercer's position.

The rapid British maneuver surprised Mercer. The fierce fighting that occurred in William Clarke's apple orchard resulted in heavy casualties on both sides. A determined bayonet charge by the British smashed Mercer's command, and the Americans turned and fled toward Thomas Clarke's house, 300 yards away. Several American officers were killed and Mercer, upon refusal to surrender, was bayoneted seven times and left for dead. The two New Jersey cannons with Mercer were captured and turned on the fleeing Americans. Gen. Cadwalader's militia tried to form behind the Thomas Clarke farm but panicked from British musket and cannon fire as Mercer's men raced up the slope toward them. Two Pennsylvania cannons were wheeled into action by Captain Moulder on a slight rise next to Thomas' house. These field pieces were fired point blank into the advancing British lines.

While the British regrouped for an assault against Moulder's artillery, the American forces were able to gain the advantage. Continental troops from Rhode Island and Massachusetts and Col. Hand's steady Pennsylvania rifles formed to the right of the cannon. Washington, riding from the head of Sullivan's column, appeared on the field and personally rallied the demoralized men of Mercer's and Cadwalader's command. Washington formed a line to the left of Moulder's battery and rode at the front of his troops inspiring their courage. The American line let loose a massive volley, which obscured the battlefield with smoke, and then charged. Now severely outnumbered on the field the British (250 to 400 British versus approximately 2,600 Americans) were surrounded but not beaten. They formed ranks, bayoneted their way out and made good their retreat toward the bridge at


Stony Brook. They then broke in a rout down the road. (The 17th listed Princeton as a victory in their regimental records. They saved over half of their men and their regimental colors (flags)).

Sullivan's division followed this victory by pushing into Princeton as the British 40th and part of the 55th regiments withdrew. Many British fled on the roads to New Brunswick. But men from the British 40th barricaded Nassau Hall at the College of New Jersey (Princeton University), later surrendering after several cannon balls were fired into the building by Capt. Moulder and Lt. Alexander Hamilton.

The American Army remained in Princeton approximately two hours. Some collected supplies and destroyed what couldn't be taken; others looted. A few took time to sightsee in town. One Princetonian observed, "though they were both hungry and thirsty, some of them laughing outright, others smiling, and not a man among them but showed joy in his countenance."

Wounded were also to be tended. Twenty-two were taken into William Clarke's house and several into Thomas Clarke's, including Gen. Mercer and British Capt. John MacPherson. Mercer was to die nine days later in Thomas' house and was buried in Philadelphia. (Mercer County was named in his honor in 1838.)

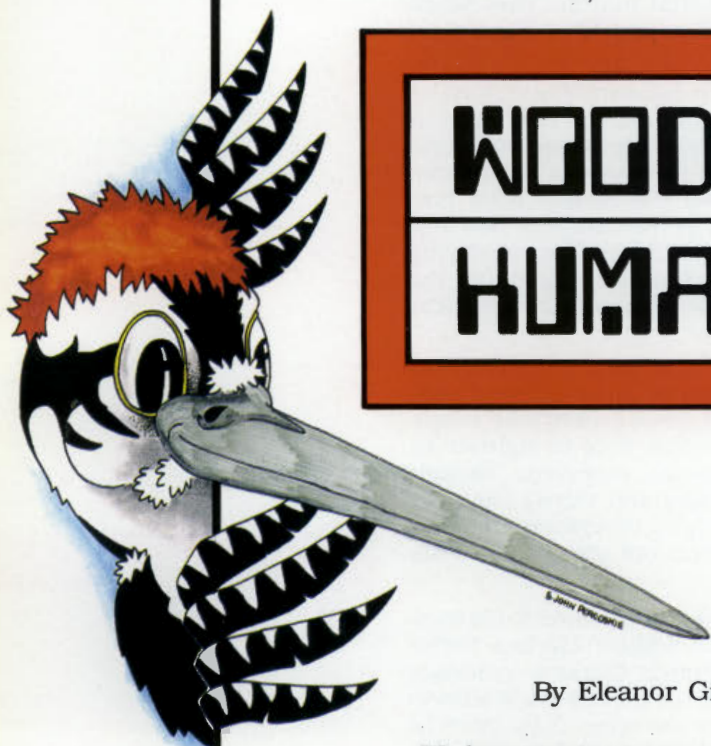
Back in Trenton, Lord Cornwallis learned of his error at dawn as he heard the gun fire from the battle. He immediately set his army in motion back in Princeton. British troops from Maidenhead cannonaded the Americans who were breaking up the bridge at Stony Brook. Forging the stream, the British sent the Americans retreating into town. Washington set his army in motion northward. At Kingston he decided the condition of his troops prevented raiding New Brunswick, a British supply base with £70,000 sterling there. Instead the army moved up the Millstone River and in three days advanced into winter quarters at Morristown. Lord Cornwallis, meanwhile, occupied Princeton for several hours, seeing to the wounded and dead. Then he ordered his army to advance to New Brunswick to protect their post there.

"The Ten Crucial Days" from the Christmas crossing of the Delaware River to the victory at Princeton saved the Revolution! Without this remarkable turnaround the American army would have faded, the French would have dropped all support for the new United States, and the British would have regained her lost colonies. With these victories the American Army was able to hold together for the next seven years until the final peace. 

John K. Mills brings new life to history as curator at the Princeton Battlefield. This marks his first appearance on the pages of NJO.



WOODPECKER HUMAN



By Eleanor Gilman

We humans, in our never ending battle to conquer or at least coexist with nature, expect that our superior intellect will enable us to be the victors. This isn't always the case as you will see. The sixth season of my battle with a persistent woodpecker has just ended and the bird—for now—has won.

Although we hardly equate the suburbs with wilderness, wildlife seems to be steadily encroaching on us. Raccoons, for example, are more apparent, not because they are increasing in number but because their natural habitats are being destroyed by development. Every homeowner has his own solution for these nocturnal raiders of garbage pails: ingenious locks, red pepper, even a plate of food. Whether the human outsmarts or compromises with the raccoon, it is a battle of wits, creating a challenge for both man and beast. Our resident raccoon climbs in and out of the sewer in front of our house, and occasionally we drop in bits of food. She no longer raids the garbage pails, though, because we now keep them inside until the morning the garbage is collected.

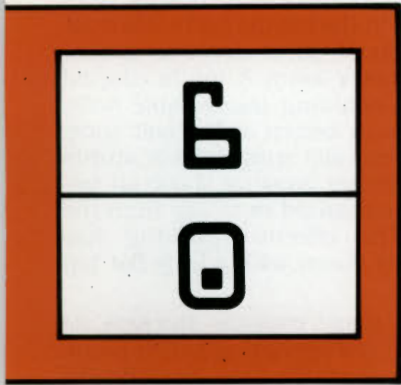
We've learned to coexist with the resident skunk, too. We smell him more than we see him, but one evening at dusk my husband met him face to face. It was a toss-up as to who was more startled, the skunk or my husband. After staring at each other for a couple of seconds, they fled in different directions.

Squirrels aren't too much of a problem. The only annoyance they create is burying their acorns in places we would rather they didn't. When I plant flowers in the spring, I have to sift through the acorns the squirrels have hidden (and probably forgotten) in the planters. The lawn too is scattered with acorn holes. But these are minor nuisances, and besides the squirrels provide great amusement for the cats.

The woodpecker, though, has defeated us. This crested creature, his size measured only in inches, is driving us crazy. It seems that he has mistaken our cedar shake house for a tree. (Well, he is a bird-brain.) I can remember clearly the afternoon I first heard his distinctive tap-tap on the wall. A group was meeting in my living room, and it sounded as if his tapping was punctuating the speakers' sentences. At the time, I wasn't sure what was making the sound, but I found out a few days later when I heard the tapping, looked out, and saw the small striped bird pecking furiously at the corner of the house. He flew away quickly.

Later, I surveyed the damage. To my dismay, there were holes in the cedar shakes. These holes were to become larger and more numerous as the weeks and months went by. He, or his cousins, have been back every fall since then, pecking only at the corners of the house, and every winter we plug up the holes.

In case you think I have been watching idly while this feathered foe devours my house, let



me assure you that I have not neglected to arm myself for the battle. I sought expert advice from the state environmental protection department, wildlife centers, zoos and professors at Rutgers University.

Their explanations for the bizzare bird behavior were many. One thought it was a misguided mating instinct, but the autumn activity ruled this out; others thought the bird might be going after insects in the wood; still others thought that unlikely and suggested that he just liked the sound of the pecking on the shakes. Another expert thought that the woodpecker had mistaken the house for a tree (my theory, too, since his home seems to be a tree next to the house).

The suggested solutions to the problem were just as varied. They included hanging tin pie plates from the windows to scare the bird or letting sheets flap in the breeze for a scarecrow effect. I don't know if either of these ideas would work; I'm reluctant to try them because the thought of pie plates and sheets suspended from my windows seems worse than the bird's pecking.

Another suggestion was to spray him with a hose. A second expert agreed, adding that soaking him so he couldn't fly might enable me to catch him in a net and transport him to some faraway wooded area. This seemed practical, so I was eager to give it a try. But the bird, frightened by the sound of the door and footsteps, flew away to the tree, only to return later. I was outsmarted again.

I was getting desperate. The next expert heard me say, "If you don't help me, I'm going to shoot the bird."

"Don't do that," he said quietly.

Of course, I wasn't going to shoot the bird, although I was having terrible thoughts about him. Besides, I discovered that woodpeckers are a protected species, and, therefore, I couldn't even call in a licensed trapper to catch him. (There was some question, at this point, as to whether he could be caught, anyway.)

This year, the bird has become more brazen. Instead of limiting his peckings to one corner of the house, he is attacking three corners. And, knowing that he is pretty secure around here, doors opening and shouts don't scare him away quite so readily. The holes have been filled once this season and will have to be filled again. The painter says that he's never seen such damage. I recently read an article in my local paper about another family that's been plagued with a woodpecker, but they've been stymied, too.

Winter is coming, and the woodpecker will soon be going South. If he weren't so destructive, I could probably like him. He's a cute little fellow, and I really enjoy seeing wildlife. It's one of the reasons I'm not living in a city. But I won't miss this creature. And when he returns next fall for the seventh year, somehow I'll be ready. It's Woodpecker 6, Human 0. But the war isn't over yet.

Illustrations by Steve Percoskie.

The work of **Eleanor Gilman**, a freelance writer and photographer with special nature and environmental interests, has appeared previously in *NJO*.



Sandy Hook Holly Forest

By Bill Boyle

There's an unusual seashore community situated between the silent cannons on the northern tip and the kaleidoscopic beach umbrellas on the southern base of Sandy Hook. Like most others along the New Jersey coast, it's populous, dynamic, and host to throngs of seasonal visitors. At the same time it's verdant, tranquil, and ancient. The Sandy Hook Holly Forest is a maritime plant community.

A community of maritime plants in lieu of a bikini embellished beach may seem like a ho-hum experience, but dull generic titles can be deceptive. The Holly Forest is an attention grabber in its own right. Here is a bustling wildlife metropolis within a burgeoning interweave of plant societies dominated by what is considered to be possibly the best stand of *Ilex opaca*—American holly—on the east coast of the United States. Of course forests are not exactly alien to our state. However, this one at the edge of the sea rooted in what is virtually beach sand is distinctive.

Sandy Hook, along with the rest of our barrier beach system, was born little more than a sandbar when New Jersey emerged from the Wisconsin Ice Sheet deep freeze about 11,000 years ago. An invasion of hardy marran grass stabilized the tenuous seabank, then began a process of plant succession in which the floral life, death, decomposition cycle slowly added nutrients to the sterile strand. Birds, in the natural course of events, contributed a variety of seeds from inland regions, and as the sand became modestly enriched, the volume and stature of vegetation increased contributing still more enrichment. Although the inevitable introduction of civilization terminated that process along most of our shoreline, Sandy Hook lucked out to a degree. The process of natural barrier beach evolution endured on portions of the aquiline peninsula which were spared from assorted utilitarian intrusions.

When the Hook was a New Jersey state park, Dick Cole, then a state park naturalist, recognized the value of a region which had grown to become mature maritime forest. He selected, researched, and named a 65-acre bayshore tract endowed with a quintessential holly woodland to be preserved as a wildlife sanctuary. In 1973 the state park was turned over to the National Park Service which continues to maintain the sanctuary. Two years later all of Sandy Hook became a unit of the Gateway National Recreation Area under the National Park Service.

The Holly Forest is a microcosm of native New Jersey seashore. Shiny-leaved, salt spray resistant *Ilex* commands the region of high and low salt marshes, fresh water ponds, compact thickets, and braided vines. Eastern red cedar, once dominant in the succession pro-

cess, is abundant where it can escape encroaching holly shade, and wild black cherry is plentiful. Scattered oak and hickory trees labor for survival in the hostile saline environment. A few make it, most don't as nature gives but often takes away. A toll is exacted from all foliage, including the durable holly, with a phenomenon known as the salt spray horizon. Wind borne salt spray kills or stunts the growth of any tree growing above an imaginary 15° line measured vertically from the water's edge. The effective pruning has provided the Holly Forest with a leafy flat top roof.

In the lower tiers, copious thickets of scented bayberry, low spreading beach plum, and dwarf sumac share the high ground with ubiquitous poison ivy, an effective enforcer of the strict park rule of "look but don't touch." High climbing vines of Virginia creeper cling to stately hosts; here and there isolated throw carpets of prickly pear cactus decorate the forest floor with bright yellow blossoms in early summer and lavender fruit later in the season. The mucky marshes support a proliferation of saltwort, cord grass, sea rocket, and colonies of minute marine organisms essential in the food chain.

This bountiful neighborhood does not go unnoticed by wildlife—the Holly Forest draws a crowd. Sandy Hook's location on the Atlantic Flyway make it an ideal layover or, in many instances, a destination for seasonally commuting waterfowl as well as home for a diversity of permanent settlers. It's not unusual to see Canada geese, marsh hawks, mallards, clapper rails, American widgeons, mute swans or assorted herons. Even the threatened osprey is becoming less of a stranger with an assist from the Park Service. Sharing airspace with the widebodies are red-wing black birds, grackles, gold finches, warblers, and mourning doves.

Of course with the mix of resident and itinerant populations, not all are present at the same time. Spring and fall are busy periods for migrating waterfowl while the osprey and heron families are happy to enjoy most of the balmy summer months. Many of the small woodland birds tough it out summer and winter along with earthbound cotton tail rabbits, meadow mice, and tiny white-footed deer mice. The freshwater ponds provide year-round habitat for muskrats and snapping turtles.

Perhaps the most distinguishing feature of the Holly Forest is its testimonial to the patience of nature. It has taken nearly a dozen millennia for transformation of the sandy beach, and the process still goes on. In his book, "Barrier Island Botany," Dr. Richard Salter suggests that it may have taken 200 to

The holly forest in winter.

Fruited prickly pear cactus.

Garden State native and first-time contributor **Bill Boyle** writes of a special attraction for the Hook due to the nature of its seashore.

500 years for holly, the newcomer, to become dominant in the Sandy Hook environment. At least one holly in the Forest was a seedling when Andrew Jackson was President and the United States extended all the way west to the Mississippi River. The 1977 core boring of a large holly tree showed its age to be about 143 years at that time, so by now the venerable senior has persevered for over a century-and-a-half.

Dave Grant

The Hook did not completely escape all pressure from the incursions of humanity. It was a summer haven for nearby Lenni Lenape Indians, then later became an important United States Military establishment guarding the entrance to New York harbor. According to legend, Captain William Kidd buried some ill-gained treasure "... under a lone pine tree" on Sandy Hook during one of his occasional visits to the Bayshore area. Spoilsport authorities declare he did not.

The abundance of cedar provided a rich source of raw material for early Bayshore region builders, and Park Historian Tom Hoffman speculates it can still be found in many older neighboring homes. Trunks of the coniferous evergreens were also used for fence posts at the Twin Lights on the Highlands. The U.S. Life Saving Service didn't fare particularly well, however, when the Army denied them permission to harvest timber on Sandy Hook in 1838.

When holly boughs were a popular Christmas decoration around the turn of the century, Sandy Hook trees suffered from unnatural selection and even decapitation. In 1900 the Army once again rode to the rescue by posting guards at the southern approaches of the military reservation to intercept intruders seeking Christmas greenery. By 1941 the Asbury Park Press reported "... it would take an act of Congress for even the President to have Sandy Hook holly in the White House for Christmas." Now the Forest is protected, with only its benefactor nature as an occasional adversary. But when nature takes away, it ultimately replaces. At least it has been doing that quite well for the past 11,000 years on the Sandy Hook.

Although the Forest is a vibrant ecosystem, it is extremely fragile and necessarily closed to all unsupervised public use. Ranger directed visitation for small groups may be arranged, and rules essential for protection are stringently observed. Further information about the Forest and Sandy Hook in general is available at the Visitors Center north of parking Area D.

If your predilection is still inclined toward bikinis, they're just across the road (subject to seasonal dictates), and you are on your own.

Al Nunes-Vais



Horse Tradin'

By Bob Eriksen

What does a red phase New Jersey ruffed grouse have in common with an Ouchita Mountain Arkansas wild turkey? Other than being members of the same family of birds, both are very attractive to sportsmen. Unfortunately, Arkansas hunters have not been able to pursue grouse since the early 1900s. Similarly, the turkey season in some parts of New Jersey has been closed for 80 years.

New Jersey embarked on a wild turkey restoration program in the 1970s. Since that time, turkey populations have increased tremendously in much of the state. More than 4,000 birds are now found in 15 counties. The original turkeys for the reintroduction came from Vermont and New York and have done very well in our northern counties.

Restoring wild turkey populations to southern New Jersey began in 1980 with the release of 19 turkeys captured in north Jersey. In the past five years more than 200 wild turkeys from Sussex and Warren counties have made the move to six south Jersey counties. The number of wild turkeys transferred to the southern region is sufficient to have resulted in substantial population growth.

While the birds seem to have established themselves, the rate of population growth has not been comparable to that seen in the northern counties. Reasons for the slower growth are not known at this time but wildlife biologists have a few ideas. It is possible that wild turkeys originating in the hardwood forests of the north cannot make the transition to the oak-pine woods and sandy soil of the south. Wild turkeys from another source could be the solution to the problem.

For the past two years, division biologists have been looking for a source of eastern wild turkeys from a southeastern state with oak-pine forests and sandy soil. Coincidentally, Arkansas Game and Fish Commission biologists were looking for ruffed grouse to reestablish populations which disappeared earlier this century.

Trades and outright gifts of wildlife are common among states and Canadian provinces. New Jersey, for instance, has received wild turkeys, bobcats, white-tailed deer, beaver, osprey and bald eagles from other states. In some cases, the animals were paid for; in others they were gifts or trades. New Jersey in turn has given away wild turkeys, Canada geese and river otters. Arkansas offered to trade a fish or wildlife species for New Jersey's ruffed grouse.



Lloyd B. Hill

Two-week old Eastern wild turkey.

Mature gobbler.

Bob Eriksen, a principal wildlife biologist with the New Jersey Division of Fish, Game and Wildlife, is Project Head of the Upland Game Program.

Roy Decker



They would supply the manpower and pay the bills if New Jersey agreed to a trade.

After deliberation, the Division of Fish, Game and Wildlife decided to allow Arkansas biologists to capture up to 100 ruffed grouse per year. Live-trapping was to take place on private property or on lands closed to public hunting in northern Jersey. Arrangements for the trade were finalized, though offers (made in jest) of alligators and feuding Ozark Mountain families were turned down in favor of wild turkeys. New Jersey was to obtain 14 to 16 wild turkeys in exchange for the grouse that first year.

Arriving in mid-September, a team of wildlife biologists made themselves at home in Yankee country. Up to 60 lily-pad traps were set up in Sussex, Warren and Morris counties. An outstanding soft mast crop in the form of wild grapes, gray and flowering dogwood and wild raisin combined with a good grouse hatch set the stage for successful trapping. In 1984, the Arkansas team captured 94 grouse. A smaller crew returned in 1985 and caught 71 grouse.

Ideal trapping conditions unfortunately did not exist for New Jersey turkey trappers in Arkansas. Mild weather coupled with abundant natural food during the last two years have made capturing wild turkeys very difficult. But 21 hen turkeys and six Dixie gobblers have been received from this trade. All the Arkansas turkeys along with three New Jersey gobblers were released near the Barnegat National Wildlife Refuge in southeastern Ocean County.

Recently a second trade was engineered with the State of Illinois. Sportsmen in the Garden State have asked the Division of Fish, Game and Wildlife to attempt reintroducing bobwhite quail to north Jersey. Twenty New Jersey wild turkeys will be exchanged for 200 wild-trapped Illinois quail. The quail are to be released in Hunterdon and Sussex counties. Fifteen hen turkeys and five gobblers captured in New Jersey have already been shipped to Illinois. We await the arrival of the bobwhites.

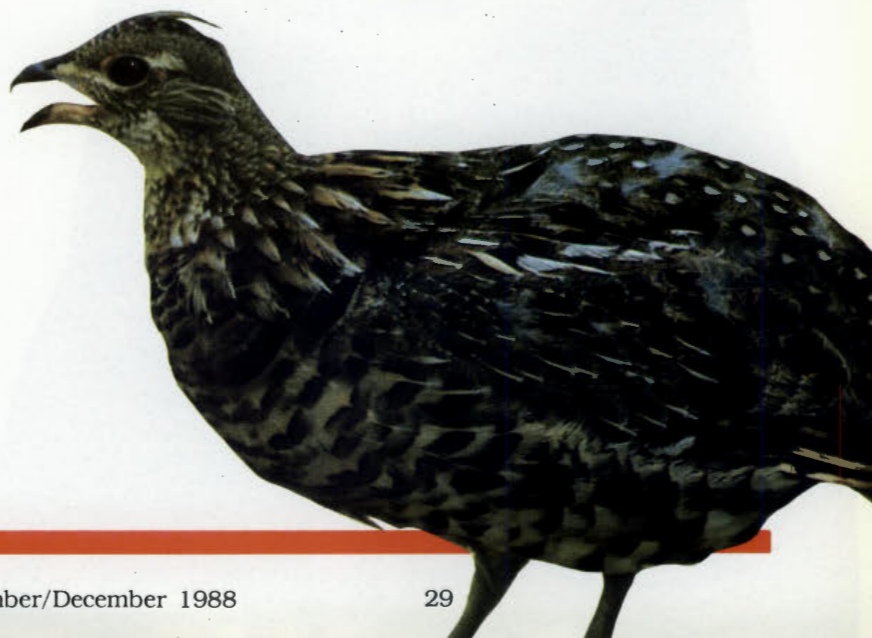
Trades of wildlife species benefit all those involved. Thanks to the efforts of a number of states New Jersey has successfully restored white-tailed deer, beaver, bobcat and wild turkey populations. Wildlife enthusiasts and hunters in Delaware, Arkansas, Illinois and the Carolinas will benefit if Canada geese, ruffed grouse and wild turkeys become more numerous in their states. The cost in wildlife is small in these trades; the rewards are great.



Lloyd B. Hill

Male bobwhite quail.

Ruffed grouse.
Roy Decker



Back to the Wild

Cedar Run Wildlife Refuge Restoring Wildlife To Its Natural Habitat

By Georgla Wurster and Joseph A. Patenaude



Ray Fisk



Ray Fisk

Few people understand what a tract of woods means like Betty and Jim Woodford, who operate a wildlife rehabilitation and education center on the western edge of the Pine Barrens in Medford Township, Burlington County. The refuge and its lake bear the old deed name of "Little Cedar Run" when it was part of the original Taunton holdings. Over the last thirty years, countless wild animals have gained freedom in these woods after being nursed back to health by the Woodfords.

Most of these wild animals require a good measure of tender, loving care when they arrive at Cedar Run. They have been hit by cars, abused by humans, abandoned by their mothers, found in chimneys, you name it!

And, TLC is just what they get: shelter, appropriate food, medical attention and genuine concern. Most of them get well, and most of them are turned loose when it is safe and lawful to release them. The 150 acres which make up the private refuge are posted so that all wildlife residents are fully protected.

The injured, homeless or abandoned wild animals brought to the refuge are placed in large, comfortable cages during rehabilitation. This provides freedom so that the adolescents can learn to adjust to life in the wild. Ducks, opossums, skunks, squirrels, rabbits, hawks, owls, fox and deer are kept in conditions that are as natural as possible. Woodford Cedar Run Wildlife Refuge is not a zoo; it is a half-way house.



Ray Fisk



Caring for abandoned or abused wild animals is only part of the story. Betty Woodford has lived in Burlington County all her life and as a youngster developed her love for the woods and its flora and fauna so abundant in the Pine Barrens. The man who sold the land to Betty was delighted to hear that she intended to keep it in its natural state.

At first the family "camped out" while they dammed the stream and built a rustic cabin. Betty was always generous in sharing the "woods" with her friends, and many present residents of the Medford area were introduced to its unique charm by her. As time went by, more and more visitors came to swim and take hikes into the Pinelands where they were shown plants and animals that they would never have seen otherwise. During this period, Betty found time to attend the Barnes Horticultural School in Merion, Pennsylvania, thereby adding "book learning" to her already extensive practical knowledge.

Word of Betty's knowledge of the Pinelands continued to spread. She became a professional lecturer and was asked to speak to all kinds of groups. She led field trips and canoe trips into the more remote parts of the Pine Barrens. Over twenty-five years ago she taught her first of the continuing series of evening school classes on the Pine Barrens. In these as in her lectures, Betty utilizes outstanding slides which testify to her ability as a naturalist photographer.

In addition to all other activities, Betty has written a weekly newspaper column for more than fifteen years about the woods, the living things which inhabit them, the "happenings" at the wildlife refuge, and the recreational and educational activities that can be pursued in the Pine Barrens. Her column "The Ways of the Wild" currently appears in *The Central Record*.

It is understandable why the Woodfords have become lifelong devotees to the welfare of animals and the preservation of the Pinelands. Jim is a native of West Virginia who settled in New Jersey as Supervisor of the Agricultural Education Youth Program at Campbell Soup Company. He is also a retired vocational agriculture teacher.

Jim provides much of the labor that takes place in the background at the refuge. There are always cages and pens to build, repair, move, and of course clean! Not all the animals can return to the wild. There are permanent residents such as Sassafra, a white-tailed deer injured when harassed by wild dogs, the great horned owl with a broken wing, the red-tailed hawk with one wing and another with flight feathers cruelly removed and raccoons that were pets. They become educational adjuncts for the field trips that the Woodfords or one of their volunteers conduct. Visitors range from nursery school age all the way through college to senior citizens. In this special learning center students are urged to "discover" the

Great horned owl.

Bushy-tailed red fox.

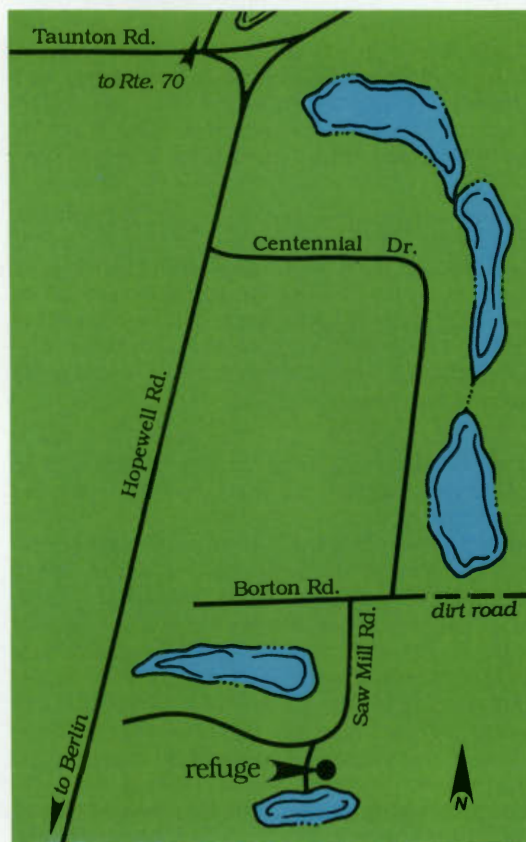
Young barred owl.

Joseph A. Patenaude, a professional communicator, is a fund raiser and animal rights activist for causes benefiting animals that have been used and abused. **Georgia Wurster** is a full-time business writer, a part-time volunteer at the refuge and a free-time poet. We welcome both to *New Jersey Outdoors*.



Ray Fisk

The Woodfords sharing in their chores and love for the refuge.




wonders of the New Jersey Pine Barrens ecology for themselves.

Betty, 72, and Jim, 76, seem to absorb the vitality of the animals and the nature that surrounds them. They both have that twinkle in the eye that is the visible sign of inner contentment and happiness.

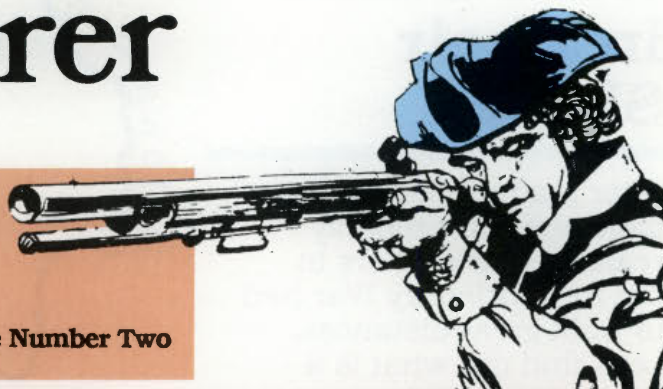
Recently, a group of nine exchange students from France staying with host families in Moorestown visited the refuge. They had never seen a skunk or a raccoon. What impressed them most was the hard work and expertise that go into the nonprofit, state-licensed private refuge. "We didn't know that there were people like the Woodfords anywhere and certainly not in the United States, a country we consider materialistic," said one of the students.

And, the tradition goes on. Daughter Jeanne, a Moorestown Public School teacher, is right there, too—nursing, rescuing, feeding, cleaning up—doing the hard work that such a benevolent venture entails.

The refuge is certainly worth a visit. It is a truly rewarding, educational experience for young and old alike. If you can come, bring along some food for the animals. If you can't visit, send a check; there are always more needs than money available. The address is: Woodford Cedar Wildlife Refuge, Inc., 6 Sawmill Road, Medford, NJ 08055. 

Explorer

November / December 1988 Issue Number Two



The Long Retreat to an AMERICAN Victory

By the autumn of 1776 the British had defeated the Continental Army in several battles. The American soldiers, poorly clothed, hungry and discouraged, began retreating from New York to Pennsylvania to defend Philadelphia. After nearly four months this retreat ended on December 8, 1776. It is known as the "Long Retreat."

The British were always close behind until the Continental Army left Brunswick (now called New Brunswick) on December 1st. After a brief period of "fire," or skirmish (skur-mish), between the British and the American soldiers, General Washington commanded his troops to move on. For some unknown reason, General Cornwallis, the British commander, ordered his troops to remain in Brunswick for a week. This gave the Continental Army time to increase their distance from the British.

On December 2nd General Washington left half of his men in Princeton as a rear guard. The remaining Continental troops continued on and arrived that same day on the banks on the Delaware River. They immediately began to send their supplies over to the Pennsylvania side of the river. By

December 8th all of the Continental Army had crossed the River. The Long Retreat was over.

The British were frustrated but not ready to give up. General Cornwallis decided he and his troops would cross the river north of where the American troops did because it would be easier to find boats. But after marching 16 miles they found no boats and were met by militiamen, or part-time soldiers, who were shooting at them from the Pennsylvania side of the river. *

Very angry, General Cornwallis marched his troops to Pennington and set up winter quarters. Now they focused their attention on stopping partisans from capturing the people or supplies being brought to the British. Partisans were American citizens who carried guns and assisted the Continental Army.

To do this the British ordered the Hessians to occupy Trenton. Hessians were German soldiers paid to fight by the British. They were to stay in Trenton until the Delaware River was frozen over and the British Army could advance on the Americans.

On December 20th General Washington began to plan an attack on the Hessians in Trenton. The Hessians would not be expecting this

because they knew the Continental Army had lost many men and was discouraged after the Long Retreat.

Originally, General Washington planned to attack Trenton from the north and south. Due to ice clogging the river and not enough time to prepare other troops, General Washington and his troops had to attack alone.

Continental soldiers began crossing the Delaware late in the afternoon on Christmas Day. All the troops were on New Jersey's shore by four o'clock the following morning. By 7:30 A.M. the Americans were at the northwest boundary of Trenton. By 9:30 A.M. the battle was over. Nearly one thousand Hessians were captured, wounded or dead. The Americans also captured 6 cannons, 40 horses, 1,000 muskets and rifles, all of which they badly needed.

This victory brought hope to all Americans and is now seen as a major battle of the Revolutionary War.

*** Why do you think the British could not find boats to cross the Delaware River?**

To find the answer turn to page 17.



Could You Walk a Mile in Their Shoes?

After reading the story on page one you probably realized that soldiers in the Revolutionary War had to walk great distances. Let's find out what is a "great distance."

To do this activity you will need a ruler and a pencil. You also need to read **Time Marches On**. Look at the map and the map's scale. Answer the questions below to learn how long a "great distance" was to an American soldier during the winter of 1776.



1. How many miles did the Continental Army walk from November 20th to December 8th, 1776?

2. How many days did it take the Continental Army to walk from Fort Lee to where Washington crossed the Delaware River?

3. How many miles did they average walking in one day?
(Divide the number of days into the number of miles)

4. How many miles can you walk before you become tired?

5. How many miles do you think you could walk if...
 - a) you had not eaten a good meal in months?

 - b) it was winter and you had no winter coat?

 - c) the soles of your shoes were thin and had holes in them?

Time Marches On . . .

August 1776

Beginning of the retreat.

November 20, 1776

The Continental Army flees Fort Lee.

December 1, 1776

The Brunswick skirmish.

December 2, 1776

Some Continental Troops were left behind in Princeton as a rear guard. Others go onto the crossing of the Delaware River.

December 8, 1776

All Continental Troops had crossed the Delaware River to Pennsylvania. The Long Retreat ends.

December 10, 1776

British are unable to cross the Delaware River. Retreat to winter quarters in Pennington.

December 26, 1776

Battle of Trenton

Revolutionary Sites

Fort Lee Historic Park is located just off Hudson Terrace (River Road) in Fort Lee. The 33-acre historic park, administered by the Palisades Interstate Park Commission, has a visitors' center and museum, picnic area and reconstructed historic section for outdoors interpretive programs. Call 201/461-3956.

Steuben House, a gift to Major General Baron von Steuben in appreciation of his services in training and organizing the Continental troops, is located on Main Street in River Edge. The large mansion house is located next to New Bridge over which Washington led the fleeing Fort Lee garrison. The old wooden span, having saved the Continentals from entrapment on the peninsula between the Hackensack and Hudson rivers, was later dubbed "the bridge that saved a nation." Call 201/487-1739.

On the banks of the Delaware River in Titusville, Washington Crossing State Park features a 20-minute film in the Visitors' Center depicting a reenactment of the Battles of Trenton and Princeton. Two museum galleries contain an extensive collection of nearly 900 Revolutionary War artifacts. Within the park's more than 800 acres are Continental Lane, the route over which the troops marched that Christmas night, and the Johnson Ferry House and Tavern which served as command post for General Washington and staff during the crossing of his 2,400 troops. A reenactment of Washington Crossing the Delaware is held annually on December 25. Call 609/737-0623.

Eight miles south in downtown Trenton are the Old Barracks and the Battle Monument which commemorates the Continentals' success at the first battle of Trenton. The 150-foot granite column was built on the spot where the American artillery was placed and the "first shot" fired during the surprise attack. The Old Barracks Museum was occupied by many of the Hessian troops whom Washington fought that December morning. Located adjacent to the State Capitol, the Old Barracks is open daily; nominal admission charge. Call 609/396-1776. The Trenton Battle Monument is open Wed. to Sun. with elevator service to the observation platform. Call 609/737-0623.

Princeton Battlefield State Park, 85 acres virtually unchanged since the Revolution, lies 1½ miles south of Princeton. The grounds include a grave site of American and British dead, the Mercer Oak, and the original farmhouse of Thomas Clark. The restored Quaker home and hospital is open Wed. to Sun. til 5 pm. The next battle reenactment will be January 1990. Call 609/921-0074.

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Revolutionary Readings

The following books are recommended to learn more about Washington's band of determined men and the ten days that kept alive a dying revolution.

- Dwyer, William M. *The Day Is Ours*. Viking Press, 1983.
- Ferguson, E. James. *The American Revolution: A General History, 1763-1790*. Dorsey Press, 1974.
- Lawrence, Robert. *A Brief Narrative of the Ravages of the British and Hessians at Princeton in 1776-77*. Arnold Press, 1968 (reprint of 1906 Princeton University Library edition).
- Smith, Samuel S. *The Battle of Princeton*. Philip Freneau Press, 1967.
- Stryker, William S. *The Battles of Trenton and Princeton*. Houghton Mifflin and Co., 1898.
- Wertenbaker, Thomas J., ed. *The Princeton Battle Monument*. Princeton University Press, 1922.

A Calendar for Eight Seasons

A beautiful 1989 and 1990 calendar is now available from the Natural and Historic Resources Group. Priced at \$4, the full-color calendar depicts some of the many special New Jersey places found in each of the 21 counties.

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Carol Decker

American Kestrel

By Mimi Dunne

The kestrel hovers in mid-air, inches from a busy roadway, in search of a meal in the weeds along the shoulder. When the small falcon spies a mouse or insect, it plummets from the sky to capture its prey. Unlike other falcons, the American kestrel often kills its prey on the ground rather than in the air. The praying mantis or other food is often concealed from other predators in a behavior called "mantling." The kestrel, in its pursuit of mice and insects, has evolved into an efficient and opportunistic predator with a wide distribution in the Garden State.

Kestrels are found in every county and in places where one might not expect to find a bird of prey. Kestrels are seen in city outskirts and countryside alike. They do not seem to mind being in proximity to people and will nest in occupied buildings and perch near dwellings. They are our most common falcon, to be enjoyed by virtually every resident of city and suburb. If their habitat requirements of food (insects, small rodents and occasional birds), cover and open space are met, kestrels will be found.

Nail kegs and nest boxes can be put up to attract this cavity nester. No other hawk or falcon will use a bird house as a nest site. Saw dust or wood chips are helpful in the bottom of the structure to prevent the eggs from rolling around and breaking. The exposure of the box is critical: it should face southeast to avoid harsh winds and receive the maximum amount of sunlight. Boxes should be located 10-12 feet off the ground, preferably on a utility pole or other sturdy structure. Boxes located in open country free from tree branches and out of the way of a lot of human activity seem to produce the best broods. A 3-inch entry hole in the box or keg is needed.

Attracting and monitoring the activity of kestrels is a passion of Roger Jones and a few hundred people nationwide who receive his "Kestrel Karetakers News." Some 40 of

those people have active nest boxes and report their findings to Jones. A ski trip outfitter, Jones has 50 boxes at Dulles Airport in Washington, D.C., which have had a near 90-percent use rate over the last several years. Jones has seen an increase in kestrel use of nest boxes in recent years. Competition from starlings is one of the bigger obstacles the "Karetakers" face in attracting kestrels. Jones says the only way to discourage starlings is to remove their nest material from the boxes constantly. With vigilance, starlings will eventually be evicted.

Males and females are easily distinguished by plumage. The adult male has pale blue-gray wings in contrast to the rusty wings of the female. Both sexes have a rusty brown tail and back with black "sideburns" on either side of the head. Females are generally larger than their mates. This robin-sized raptor averages 9-12 inches in length and has a wingspread of 24 inches.

Besides plumage, other physical attributes and behavioral clues distinguish the kestrel from other raptors. Its voice has been described as a shrill "killy killy killy." Kestrels are heard primarily during the nesting season when they're calling to young birds or mates. Like other falcons, the kestrel has sharply pointed wings. But the Kestrel's flight pattern differs from other falcons in that it soars in between rapid wing beats. No other falcon will hover in search of prey. Rarely will you see merlins or peregrine falcons perched on telephone poles along busy highways on rodent patrol. The kestrel's small size is a dead giveaway.


Though kestrels are seen in New Jersey throughout the year, the birds you see in summer may not be the same ones you see in winter. The southerly migration of kestrels which begins in mid August peaks in late September. Though most migrants are through by November, some still come through in December.

Island Beach and Cape May Point state parks provide good cover and vantage points for observing migrating kestrels and other falcons which use the coastline as a migratory reference point. (see NJO S/O 1988).

Paul Kerlinger of New Jersey Audubon's Cape May Bird Observatory reported 16,532 kestrels counted at the Hawk Watch in the park during 1987. Good flights of kestrels occur with strong northwest winds. The peak week at Cape May last year was October 1-7 when 6,212 birds were counted—as many as 1,600 on one day. Females precede males in the migration in a 9:1 ratio so that by late November, only male kestrels are counted.

The northward migration in spring is much more dispersed. The Hawk Watch at Sandy Hook yielded 1,100 kestrels in the 1987 count. The spring migration begins in early March, and by mid-May kestrels are back on their nesting grounds.

Courtship proceeds with noisy aerial displays for the benefit of the female. She lays three to six eggs, incubating as each one is laid. Eggs vary in color from entirely creamy white to white speckled with brown. Incubation takes from 28 to 30 days. The downy chicks may hatch several days apart. Both parents feed the helpless chicks for four or five weeks until they can fend for themselves. Families tend to stay together for several weeks after the young leave the nest in order to hone the hunting skills of the fledglings.

Through the placement of nest boxes kestrel population may be buoyed, but some observers are concerned about the status of the kestrel and other birds of prey. The Hawk Watches in Cape May and at Hawk Mountain, Pennsylvania, have reported a steady decline in the number of kestrels counted. Pete Dunne of the New Jersey Audubon Society feels that there may be something more than habitat loss threatening kestrels, but in his estimation they are a dynamic species, able to rebound from such perils as DDT. The world may be a safer place for field mice and grasshoppers without the kestrel, but it would be a lot less interesting. 

(For information on nest boxes for kestrels, write Roger Jones, Kestrel Karetakers, 3549 Devon Drive, Falls Church, VA 22042. Include a self-addressed, stamped envelope.)



New Jersey State Library

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