

New Jersey

Outdoors

Spring 1998 • \$4.25

Building for the Birds

Pinelands Paddling

Restored Barns

Home Sweet Home





Table of Contents

STATE DEPOSITORY
FREE PUBLIC LIBRARY
MAY 12 1998
TRENTON, N.J. 08608

6 Talkin' Turkey

by *Oliver Shapiro*

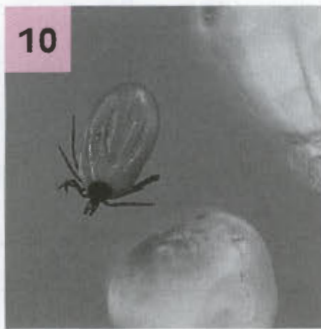
Meet Wayne resident Larry Scartozzi, New Jersey's champion turkey caller.

9 The Battle Against Lyme Disease

by *James L. Occi*

Ixodes scapularis is, unfortunately, alive and well in New Jersey. Find out what's being done to combat the disease caused by this tick.

10



12 Summer Camps

by *Cheryl O'Brien*

They're not just for kids anymore — and many of them focus on New Jersey's natural resources. Check out some of them and consider camping in 1998.

17 Big Time Striper Action On the Delaware

by *J. B. Kasper*

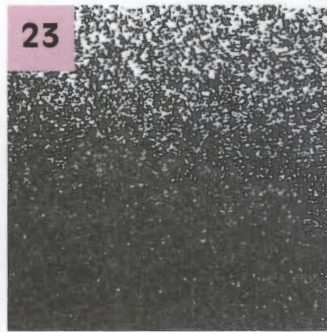
They're back and they're biting! A cleaner Delaware once again is home to a nice striped bass fishery.

22 The Herald

by *David W. Oster*

When the song of the red-winged blackbird fills the air, can spring be far behind?

23



24 Preserving the Past, One Barn at a Time

by *J. Wandres*

Once used to shelter live-stock, store hay and more, some of these historic structures are getting a new lease on life as homes.

30 The Making of a Bald Eagle Nest

by *Kathleen Clark and Larry Niles*

New Jersey's bald eagle population is on the rebound, and some of the credit goes to human nest-constructors. Take a look at the process, captured on film.

35 Paddlin' In the Pines

by *Andrée Jannette*

The tea-colored waters of the Pinelands offer a host of opportunities for communing with nature from your canoe or kayak.

39



42 The Amazing Barn Raising Maze

by *Kenneth Waida*

Americanize the formal English maze and what do you have? A unique, fun-filled fund-raiser.

46 Reaping What Others Sow

by *Cheryl Baisden*

Most of the work — tilling, planting, weeding, watering and feeding — is done by others, but pick-your-own devotees enjoy a day in the sun and the taste of field-fresh produce.

48



51 Lessons & Laughs for an Outdoors Woman

by *Arline Zatz*

A Becoming an Outdoors-Woman participant takes a lighthearted look at her learning experience.

56 More Than Corn and Chickens

by *Bob Bembridge*

Though it often identifies plants and analyzes soil, it's not just for farmers — Rutgers Cooperative Extension provides assistance and advice on everything from financial management to fishing.

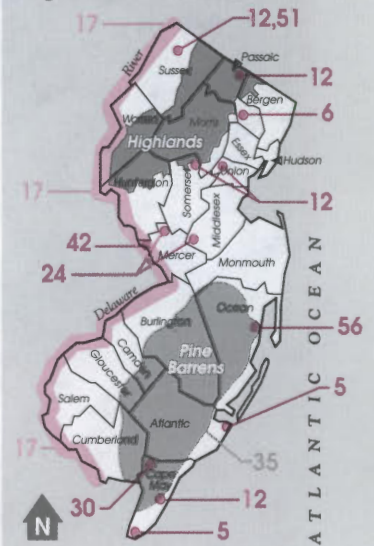
64 Eastern Milk Snake

by *Joe Leskie*

Despite its name, the milk snake has never been known to milk a cow. It is, however, a farmer's friend, since it helps rid barns of rodents.

Story Locator

Page numbers indicated



Departments

2 Messages

3 Mailbox

5 NJO People

59 Calendar of Events

Front Cover

A kayak waits by Quaker Bridge to resume its Batsto River journey. © Paul Hollerbach

Inside Front Cover

Jennifer Kirk, of Annandale, proudly displays the brook trout she caught. It weighed in at almost three pounds. © Tom Pagliaroli

Inside Back Cover

Depicted here in acrylic on canvas, the milk snake is a beneficial species in New Jersey. © Andy Cialone

Back Cover

The spring sun seems to shine right through these gorgeous tulips in Tenafly's Davis-Johnson Park. © Dotty Waxman

New Jersey State Library

From the Governor



Christine Todd Whitman,
Governor

Congratulations to *New Jersey Outdoors* on marking its milestone 25th anniversary with the development of a web site. In doing so, it joins the growing number of sites created by New Jersey's government agencies to better serve the public.

For an overview of what state government has to offer on the web, start at www.state.nj.us. This page helps you find the information you need quickly and easily by providing links to the various branches of state government and to popular state sites — such as Travel and Tourism's — as well as a site search option. The index of state services (www.state.nj.us/deptserv.html) provides an alphabetical list of links to sites developed by the state's various agencies, where you'll be able to check on the latest weather and traffic reports, find out where to pick strawberries, learn about the state's tourist attractions, catch up on the latest hunting and fishing regulations and much more.

You may even choose to "visit" my office, where you'll find my fiscal year 1999 budget message and my annual State of the State report, which is illustrated with the winning photos from *New Jersey Outdoors*' 1997 contest. This site also includes the latest news releases and provides an opportunity for you to contact my office via electronic mail.

More state agency sites are being developed all the time, so bookmark the state's home page and return frequently to check out additions and changes.

Using the World Wide Web to provide information and assistance is both challenging and exciting. It challenges government agencies to truly become "user-friendly." And it's exciting in that it allows us to serve you more efficiently and effectively than ever.

From the Commissioner



Robert C. Shinn, Jr.,
Commissioner

Just three years ago, we celebrated the 25th anniversary of Earth Day and the creation of the New Jersey Department of Environmental Protection. This year, we are marking another milestone — the silver anniversary of the publication of *New Jersey Outdoors* in large format.

New Jersey Outdoors has grown over the years. Initially a 6- by 9-inch black and white publication which carried articles primarily of interest to hunters and anglers (regulations, a listing of fish and game law violators and the like), its content gradually was broadened to cover environmental issues, historic sites, an abundance of outdoor activities and more.

As the content changed, so did the format. Color was added and issues grew — literally — to the dimensions of 8 1/2- by 11-inches and 64 pages plus covers. Technological advances, in concert with contributions from noted writers, photographers and artists, now ensure that each issue brings readers interesting information, beautiful photos and frameable artwork. The comments received in recent months from our readers indicate that our magazine is fulfilling its mission of fostering a greater appreciation of our state's natural, cultural and historic resources.

As commissioner, I am especially proud of DEP's magazine and I congratulate all those who have had a hand in its formation and evolution. A special thanks to you, our valued subscribers and readers, without whose loyalty, interest, suggestions and support, *New Jersey Outdoors* would not be what it is today.

State of New Jersey
Christine Todd Whitman
Governor



Department of Environmental Protection

Robert C. Shinn, Jr.
Commissioner

Peter Page
Director of Communications

Hope Gruzlovic
Chief, Office of Publications

New Jersey *Outdoors*

Spring 1998, Vol. 25, No. 2

This publication is dedicated to promoting and encouraging the wise management and conservation of our natural, cultural and recreational resources by fostering a greater appreciation of those resources, and providing our residents with the information necessary to help the Department protect, preserve and enhance them.

Editor
Denise Damiano Mikics

Design and Production
Paul J. Kraml

Circulation
Sandra Pearson

New Jersey Outdoors (USPS 380-520) is a subscriber-supported magazine published by the New Jersey Department of Environmental Protection on a quarterly basis (Spring, Summer, Fall, Winter). Periodical postage is paid at Trenton, N.J. Subscriptions are \$15 for one year and \$26 for two years payable by check or money order to: **New Jersey Outdoors**, NJDEP, Bureau of Revenue, P.O. Box 417, Trenton, N.J. 08625-0417. Single issues, if available, cost \$4.25. **New Jersey Outdoors** welcomes photographs and articles but will not be responsible for loss or damage. No part of the contents of this magazine may be reproduced by any means without the consent of **New Jersey Outdoors**. Telephone: Circulation and Editorial: 609-984-0364; Subscriptions: 1-800-645-0038.

POSTMASTER: Send address changes to Editorial Office, **New Jersey Outdoors**, NJDEP, P.O. Box 402, Trenton, N.J. 08625-0402. 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.

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.

New Jersey Outdoors is printed with soy ink on recycled paper that includes at least 10 percent post-consumer waste.

Mailbox

More on Indian King

As a Haddonfield local historian, the author of a definitive history of the Indian King Tavern commissioned by the State of New Jersey, Department of Environmental Protection, and executive director of the Haddonfield Preservation Society, I wish to commend *New Jersey Outdoors* for its major feature story on the Indian King (Winter 1998). However, there are a few additions and corrections I feel should be made so as not to mislead readers.

An important episode in its history occurred in 1873, when the sale of liquor was prohibited within Haddonfield's boundaries. The lively tavern days were over and the Indian King became the American Temperance House, opened by its new owner, George W. Stillwell, as a boarding house and ice cream parlor. So it continued until 1901, when the property was sold by his heir.

In 1903, at the behest of the Daughters of the American Revolution, the State of New Jersey paid \$6,500 for the historic property, which had stood unoccupied for almost a year and was falling into noticeable disrepair. In 1931, the state appropriated \$12,000 for the purposes of purchasing adjoining property, restoring the Old Tavern (as it was called) to its former condition and maintaining the same.

The façade of the Indian King seen today is not the original façade. The original building was brick and, at the time of the state purchase, it had been badly altered. In restoring the building, the local restoration committee added a few non-authentic embellishments, copying the Philadelphia tavern style.

The King's Highway, on which the Indian King is situated, is of recent designation. In 1713 it was called Queen's Road; in 1760, it was known as King's Road; in 1776, it was Salem Road; and in 1820, it was the Road from Haddonfield to Mount Ephraim. As late as 1910, it was called Main Street.

The Europeans who were Haddonfield's earliest settlers were Quakers from England and, from 1721 to 1818, the Quaker Meeting was the only place of worship. There is no evidence that the first settlers were associates of William Penn.

Totally incorrect is the statement that Haddonfield is "now a major legal center of the southern half of the State." Many lawyers chose to live in this pleasant town, but many of them have practices and offices elsewhere. Projecting this erroneous image of a "legal center" is not only wrong, but blurs the true Haddonfield.

Joan L. Aiken
Haddonfield

Author Hoag Levins responds:

The information about prohibition and the DAR are correct. I did not include details from these time periods (or a number of others of note) because of the scope of the article, which focused on two relatively narrow periods: the Colonial era up to and encompassing the American Revolution, and the last half of the 1990s.

There is a debate about what "original" means in the case of the Indian King. It is generally admitted that some exterior details added during the restoration earlier in the century would have been done differently today. For this reason, I consulted and quoted William D. Brookover, who is nationally recognized as one of the authorities in the field of Colonial architecture. His feeling is that while some exterior details of the Indian King are not accurate, given what is now known, they are not significant in terms of the building's overall historic value. Various architectural commissions in recent decades have studied and debated the Indian King's condition and recommended changes and further restorations. The subject is a complicated, technical and political one that would require its own long article to fully explore.

Publications of the American Revolution Bicentennial Commission (*The King's Road*,

Mailbox

(continued from previous page)

by Harry T. Kaufman), the New Jersey Department of Environmental Protection (*Indian King Tavern*) and the Historical Society of Haddonfield (*This is Haddonfield*) all substantiate the early designation of the road on which the Indian King is located as The King's Highway. So, too, does the historical marker, pictured at right, which is located at the intersection of King's Highway and Haddon Avenue, just a few dozen yards from the Indian King Tavern.

The Haddonfield Historic Society's *This is Haddonfield* reference book, in sections detailing the Haddon family life and lifestyle, note that Elizabeth Haddon's father, John, was a personal friend of William Penn and that he "quite probably" also knew Penn's father, Sir William Penn.

In 1682, Penn set up the settlement of Philadelphia. In 1698, Elizabeth Haddon sailed there. The point of my article was that Elizabeth Haddon was, from her earliest days, an associate of William Penn as well as a member of the same Quaker community.

Ms. Aiken's disagreement with my reference to Haddonfield as a legal center is one point on which we must "agree to disagree." A check in the computerized files of the Yellow Pages finds that more than 390 individual attorneys list their professional offices in Haddonfield — that's an extraordinarily dense collection of attorneys in a borough that is only 2.8 square miles. Attorneys also are a major element of the town's social personality, and I believe my description reasonably and accurately captures the true essence of Haddonfield as I have personally experienced it as a life-long area resident and career journalist.



© HOAG LEVINS

I enjoyed this winter issue very much! In particular, I liked your articles on Whitesbog and Indian King Tavern. I meant to write to you so many times and never did. Now, thanks to email I finally have. I read your magazine regularly and always enjoy it and, more importantly, learn something from it.

Patricia Cunningham
Fourth Grade N.J. Studies
Program Editor
Afton Publishing Co.
Andover

I enjoyed your article on trappers. My father was a trapper in the Hackensack Meadowlands and I wish you would do an article on this area as it is vanishing very quickly. I grew up here, have heard many stories about it and love the area. A book about the Hackensack Meadows, *Fields of Sun and Grass* by John R. Quinn, came out last year. It has excellent sketches and gives an excellent account of the area from the past to the future.

Steven Royka
Little Ferry

Editor's Note: The summer issue of *New Jersey Outdoors* will contain an article about John Quinn and his book.

We Loved It, But . . .

Your fall issue maintains the high standard you have been setting for as long as I have been subscribing. It just may be even a little bit better.

I liked the variety of contents (except for **Pheasant Hunter Class**; sorry, I'm against hunting.) Your writers do a clear, lively presentation of their subjects. The photography is something special. Granted, fall foliage is well nigh foolproof, but I think your **Technicolor Trails** pictures are superb.

Congratulations on a most appealing publication. Continued success.

Eugene G. Clayton
Lincroft

We enjoyed the **Technicolor Trails** article (Fall 1997) in particular, as we like to walk and are always looking for new places to go. The entire issue was beautiful and informative, as always — I liked the listing of outdoor-related web sites. (Have to admit I was put off by the hunting photos, though.)

Alma Nygren
Middletown

On the Other Hand...

The article on children hunting is encouraging for young people to enjoy with their parents. How lucky they are! I wish as an eleven-year-old, I would have had it too.

New Jersey biologists have done an excellent job in bringing back deer, turkey, geese and ducks, with hunters' license money.

The biologists also have done a good job in bringing back the fish. There are dedicated groups putting in big fish in the lakes, and they deserve a lot of credit too.

Joseph Primiano
Toms River

Good Job

I enjoyed your new Web site. I also enjoyed your most recent issue, especially the articles on trout fishing and trapping, and the artwork of Carol Decker. I have been subscribing to *New Jersey Outdoors* for almost 40 years and still look forward to getting the next issue in the mail.

Keep up the good work.

George Kirschbaum
Shamong

New Jersey Outdoors People

Cape May Spring Weekend

The following was submitted by **Michael Givant**, an associate professor of sociology at Adelphi University in Garden City, New York.

I bird to experience birds and their setting, not to add them to a life list. I was able to do that last May during the New Jersey Audubon Society's Cape May Weekend. There were four places that I particularly enjoyed: the Brigantine Wildlife Refuge, the Cape May Wildlife Refuge, Higbee Beach and a large field called Hidden Valley. In each place I discovered something about what the birds ate, how they chirped or was dazzled by the beauty of birds I'd never before seen. What added immeasurably to the experience was being with group leaders steeped in knowledge and self-confident enough not to bury you with it. The Cape May weekend was more like a series of birding seminars from which you took home something memorable.

Friday afternoon at Brigantine, the tidal flats were wet and gleaming. A single black bellied plover, its underparts looking like a coat of black paint, walked across them, leaving its footprints in the mud. Silently, stealthily, it stalked its invisible prey. With a sewing machine motion, its head moved up and down. Each time it came up, the bird swallowed the long fat worm it had harvested.

A semipalmated plover, dazzling in the sunlight, also plucked up a worm. Unable to swallow its catch, the bird segmented it and ate it in pieces. Barn swallows, their rust colored underbellies showing for a split second, flew out of an abandoned boathouse. They swooped down toward the water and quickly were out of sight.

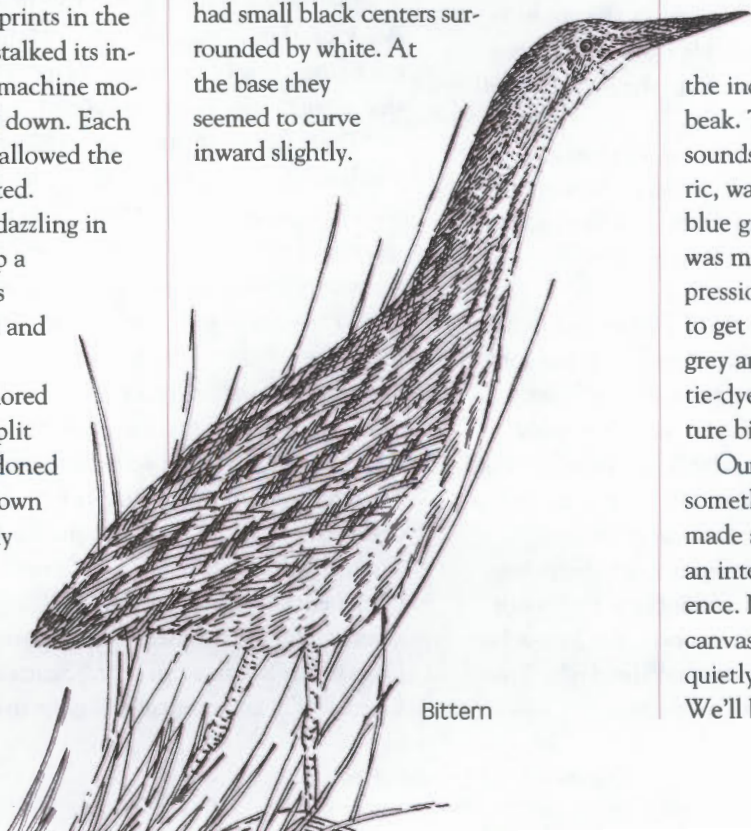
The next morning at the Cape May Migratory Bird Refuge, I saw a lone snowy egret in a pond. I paid it no

attention until our group leader pointed out that it was "fishing," using its foot to stir up the water and flush its prey to the surface.

The refuge was filled with red-winged blackbirds, so much so that my wife called it "blackbird heaven." I get a small thrill when I see the coal black males with the red and yellow side patches. They remind me of an early Judy Collins song called *Coal Tattoo*, which seems to symbolize the bird's striking colors.

One of our trip leaders explained that when the male was high on a branch, in the open, it was advertising its territory. This caused me to look more closely. One that was perched on a reed offered a full side view. The beak was a glossy, dark gray and looked like a sharp pencil tip. When it opened the bird emitted three high sharp, short sounds. It did this a few times, and after a while you could recognize the sound. I left feeling that I knew something about that bird.

We saw at least two bitterns — the first I'd ever seen — that morning. One was camouflaged in some reeds. I was able to get my scope on it and literally look it right in the eye. The eyes had small black centers surrounded by white. At the base they seemed to curve inward slightly.



Bittern

New Jersey Outdoors (NJO) Is Now on the Internet

New Jersey Outdoors' Web site is up and running! Check it out at <http://www.state.nj.us/dep/njo>.

Also surf over to:
Wildcat Ridge Hawkwatch
<http://pw2.netcom.com/~billy/>.

The second, perhaps a juvenile, courted watchers on the far path for well over an hour. Several photographers with long lenses got close enough to get prize pictures. The bittern was a small explosion of color on a cloudy morning. It was black on top and multicolored — a mix of tan, rust, yellow and white — on the bottom. When it perched on a reed, it was mirrored in the dark water below. The bittern slowly crept along the reeds at the water's edge, no more than 10 feet away from us. Green/yellow legs lifted claws revealing tiny toes that slowly wrapped themselves around the reeds as if they were made of rubber.

Sunday morning, as the temperature climbed to 90 degrees, we went to Higbee Beach and Hidden Valley.

There we got to see two more birds I'd never before seen — the indigo bunting and the blue grosbeak. The indigo bunting, whose name sounds to me like an exotic Eastern fabric, was a startling shade of blue. The blue grosbeak, which I found in a tree, was more like a 19th century French impressionist painting. I got close enough to get my scope on it; the breast was blue grey and had light splotches like those on tie-dyed jeans. It was probably an immature bird.

Our trip leaders really made this weekend something special. Their commentary made all the difference between having an interesting time and having an experience. Like artists, they sighted birds on a canvas that otherwise appeared empty and quietly wove each outing into a tapestry. We'll be back in the fall to see more.

Talkin' Turkey

by Oliver Shapiro

The Masters Invitational, the U.S. Open, the Grand Nationals. Yelps, clucks, purrs, cackles, ki-kis, whistles.

What's that, you say? What could these golf tournament titles and bird sounds possibly have in common?

Well, these aren't golf tournaments at all. They just happen to be the names of some of the most prestigious turkey calling contests in the world. And to those who spend time in the spring woods looking for that most American game bird — the wild turkey — they represent the ultimate pinnacle of accomplishment.

Wayne resident Larry Scartozzi is no stranger to this strangely noisy, yet soothing, world of varied sounds. Scartozzi, lifelong outdoorsman and hunter, has made an in-depth study of the turkey's calls as a natural outgrowth of his love of the outdoors sports. The results have been impressive. He claims no fewer than 80 titles in various calling contests, from the local level all the way to national invitational contests.

This unassuming young man got his start more than twenty years ago, when he would accompany his father on turkey hunts. After finally reaching a ripe enough age (14), he started going out on his own in 1983. Calling for fun — and competition — began for him soon thereafter.

"I got started through the National Wild Turkey Federation," recalls Scartozzi. "I just felt like getting involved — it was something to do. Something to pass the time between the seasons."

Not surprisingly, his initial performances weren't terribly spectacular, but he progressed very quickly. "I liked the first contest," he says. "I got extremely nervous, but after I got up there a couple of times and called, it started to become more fun."

Besides taking top places in New Jersey contests (including the state championship held this past September at the South Jersey Sportsmen's Jamboree), Scartozzi has been the Massachusetts state champ, the Yankee Open champion (held near Boston), the Eastern Open winner, and many others.



Scartozzi shows off just one of the many trophies he has won.

© OLIVER SHAPIRO

Not Exactly Chicken Feed

Some of the truly large competitions, like the Realtree Grand America, the Grand Nationals and the Masters Invitational, attract large crowds, large sums of money and large companies that manufacture outdoors-related goods.

"There are about six or seven big, major contests, but the two absolute biggest are the World's (Haas Outdoors World Championship), sponsored by Mossy Oak, and the Grand Nationals, sponsored by Wild Turkey bourbon," Scartozzi says. "The Grand Nationals, overall, is probably the biggest — there were about four or five thousand people I had to call in front of, at that contest." It was big enough, in fact, for the CBS-TV network to cover and broadcast the event.

But to play with the big boys at the big contests, you have to earn your place. To get to invitational contests or the Grand Nationals, a caller must qualify by taking a first-place win in an open or state championship, sanctioned by the National Wild Turkey Federation (NWTf). Wannabe yelpers must also cough up the entrance fee — a cool \$200. Special consideration also is given to the top finishers from the previous year's event. "Since I was in the top five this year," Scartozzi observes (he placed fourth), "I'm automatically eligible to call in it next year. But



© COURTESY OF LARRY SCARTOZZI

Scartozzi demonstrates one of his winning calls at the Grand Nationals.

"I've won three contests anyway this past year."

The three to which he refers (not including our own state title) are two from Massachusetts, and the Lehigh Valley Open. The Bay State championships are held as two divisions. The first is called the "open," meaning that contestants may use any type of calling device they prefer, and the second is "friction." Friction calls are those that utilize a mechanism where two materials are rubbed against each other, producing a scraping noise. The two best-known versions of these are the box call, in which a wooden paddle is passed over a wooden box (the whole thing is the size of a person's hand), and the slate call. Here, a caller holds a peg in a manner similar to a pen or pencil, and scrapes it against a circular slate.

In the hands of an accomplished practitioner, either of these can produce uncannily realistic sounds of a turkey's yelp, cluck and more.

The most familiar of the non-friction calls is the diaphragm. This is a small device in the overall shape of a half-circle, with two or more overlapping layers of thin rubber mounted in the center. It is placed in the caller's mouth and he or she blows air past it so that the two rubber layers vibrate against each other, producing the desired sounds.

Scartozzi won in both divisions.

Where to Go for More Information

People who'd like to learn more about turkeys and turkey calling have many options. Each spring before the turkey season, the New Jersey Division of Fish, Game and Wildlife gives free seminars on bird calling and hunting techniques. Call 609/292-9450 for more details.

The National Wild Turkey Federation is another excellent source of information. Its address is: NWTF, PO Box 530, 770 August Road, Edgefield, SC 29824.

Finally, local chapters of the NWTF are always open to visits from interested parties at their meetings. The Highlands Chapter meets at Ruppert's

Restaurant, 92 State Highway North in Riverdale (Passaic County), on the second Wednesday of each month at 8 p.m. Other chapters are: the Jersey Longbeards Chapter (Freehold area), Anthony Vispiano, 732/462-8235; the Spruce Run Chapter (Clinton area), Mark Denecat, 732/968-4598; and the South Jersey Chapter (Millville area), Emedio DeMarco, 609/561-0717.

Another chapter, along the Jersey coast, is in the preliminary stages of formation as this is written. Contact Jerry Zimmerman, the NWTF's regional director, at 610/395-7467 for information on this or any other aspect of the organization.

Are the rewards worth it? That depends on your perspective. From a monetary point of view, a gold medal winner at the major contests can expect to take home a nice haul: \$5,000 for the Grand Nationals competition; Scartozzi cashed a \$1,000 check for his fourth-place finish. And if the players are backed or sponsored by any of the manufacturers — as Scartozzi has been by Quaker Boy Game Calls for the past twelve years — then there can be additional cash incentives for them to attain the upper tiers of accomplishment.

Win or Lose, Ya Gotta Love It

"But when you start adding up your gas money, your entrance fees and stuff like that, you really have to be doing it for the enjoyment of doing it," Scartozzi says. "It's not like golf; you're not going to make a living out of it — unless you're promoting your own line of product and it's helping you boost your sales."

Anybody interested in trying these contests for themselves is advised by Scartozzi to go to a couple as an observer. See how it's done — and ask questions.

When you get there, a typical scenario might go like this one, which Scartozzi describes from the Grand Nationals. There are seven judges behind a curtain, and they ask you for a particular call — say, a cluck and purr (sounds typical of turkeys feeding

and in a contented mood). After giving it your best shot, each judge will rate your efforts from 1 (worst) to 20 (perfect). Of the seven scores, the highest and lowest are discarded, and the remaining five are totaled. The highest possible is 100. This repeats for five more calls, giving a grand maximum potential of 600.

The judges will typically represent principals from game call manufacturers, wildlife biologists and similarly accomplished pros. The panel awarded Scartozzi a total of 539; the first place finisher earned 556 — a mere 3 percent higher.

Looking for that perfect 20 is comparable to an Olympic gymnast's 10. But, like in the Olympics, it can happen occasionally. "One judge gave a 20 on my cackle," Scartozzi says with only the slightest trace of pride.

"My cluck and purr usually score," he adds. "The fifth call asked for was the cluck and purr. The sixth call was 'caller's best call,' and they give you the option to do any call you feel. So I did a cluck and purr, and I got straight 19's from every judge (on both calls). That boosted up my 17's and 18's from my hen calls."

They Can Call *and* They Can Hunt

Unbelievers, perhaps with a tinge of envy, often gainsay the accomplishments of competitive callers, accusing them of being good callers but not necessarily good hunters. Pleasing the judges, they claim, isn't the same as convincing a gobbler to come within range of a shotgun.

Not so, says Scartozzi. "Most of the guys that I know, that are

good callers and win a lot of competitions, are really good hunters," he asserts. "They're doing the turkey calling during the off-season, just to help satisfy their appetite for turkey season."

Scartozzi is free with his advice for newcomers to the pastime: contact the NWTf, attend some competitions, listen to the birds — and practice.

"The thing about turkey hunting is that it's not so much being able to make the calls; it's being able to put feeling into your calling. For instance, if in the fall you're calling home a bunch of scattered birds and they're lost, listen to the way they call. They want to get back together; there's desperation in their calls." (He demonstrates some sounds, free-style and without any calling devices, which immediately transport us to the autumn woods.)

"There are times to be real aggressive in your calling, and there're times when you need to be real subtle and laid-back," he continues. "Those are the most important aspects of calling that you learn. When you're calling a spring gobbler, or maybe a tom in the fall, you can almost feel the mood of the bird you're talking to by the way he responds to your calls. If you call real hard and he doesn't answer right away, he's really not interested. If you tone your calling down and he answers that better, you get a feel."

"That's just the stuff you learn from spending more time in the woods," he concludes. "You learn something every time you go."

Oliver Shapiro, who makes his home in Passaic, is a frequent contributor to New Jersey Outdoors.



Surrounding a gobbler shaker are other tools of the turkey-caller's trade including, (clockwise from bottom left) a diaphragm call, slate call, push-bottom friction call, aluminum slate call and call box. (Products courtesy of Quaker Boy Game Calls, Inc.)

© OLIVER SHAPIRO

Shown is a close-up of a female black-legged, or deer, tick (*Ixodes scapularis*). The structure at the center with "teeth" (denticles) is the hypostome, which penetrates the host to help draw blood.

The Battle Against Lyme Disease

Story and photos by James L. Occi

It all started in the mid 1970s in and around a Connecticut town called Old Lyme. Originally described as an arthritic condition in children, it was later thought to be contracted by a tick bite. Prior to this, physicians on portions of Long Island, New York, reported a local phenomenon called "Montauk spider bite" which, as it turns out, may not have been a spider bite at all but rather a tick bite. This bite was subsequently found to be associated with a swelling of the knees called "Montauk knee," the arthritic manifestation of what is now known as Lyme disease.

This ailment was soon recognized in other areas on the East Coast, especially in suburban areas where humans, white-tailed deer and the now infamous deer tick, *Ixodes scapularis*, cohabitate. In the United States, the deer tick, officially known as the black-legged tick, is the Eastern and Midwestern carrier of *Borrelia burgdorferi*, the spirochete bacterium responsible for Lyme disease. In the western portion of the country another tick, *I. pacificus*, transmits the bacterium.

In 1996, 90 percent of all reported U.S. cases were from Connecticut,



Rhode Island, New York, New Jersey, Delaware, Pennsylvania and Maryland. Not surprisingly, New Jersey has one of the highest incidences of this tick-transmitted bacterial infection in the United States (13 percent of the country's cases in 1996). This article will concentrate on Lyme disease in New Jersey, but it should be remembered that this tick-borne infection also is prevalent in other parts of the world. The natural history of Lyme borreliosis, as it is sometimes called in these latter areas, can vary.

The initial discovery of Lyme disease in New Jersey took place in a residential area of Monmouth County in 1978, when four cases were identified in Colts Neck. Shortly thereafter, additional cases were reported at nearby Naval Weapons Station Earle. From 1978 to 1982, there were 57 cases in Monmouth County alone and 60 cases in the rest of the state.

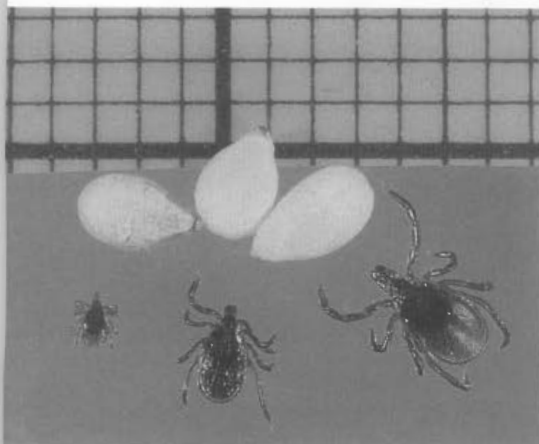
In 1993, there were 785 cases of Lyme disease in New Jersey. The following

year, 1,531 cases were reported. This dramatic increase was attributed to heightened awareness of the disease and the snow cover of the 1993-94 winter that may have protected dormant ticks.

Figures from the New Jersey Department of Health and Senior Services indicate that the four counties with the highest number of Lyme disease cases in 1996 were Hunterdon (610), Morris (270), Somerset (173) and Ocean (147). Of special note is Hunterdon County where, in 1993, 204 cases were reported and 470 cases were seen in 1994. This may be the result of a growing human population in this county as well as a growing tick population.

The total number of cases for New Jersey in 1996 was 2,190.

In the Northeast and Midwest, the deer tick has four stages (egg, larva, nymph and adult) in its life cycle, which usually encompasses two years. Throughout the cycle, various hosts are parasitized, but the tick feeds only once during each stage.



Shown here, in descending size order, are female, male and nymphal black-legged ticks. The sesame seeds and ruler (each box is one millimeter square) help put the ticks' sizes into perspective.

Life Cycle of the Deer Tick

Eggs are fertilized in the fall, deposited in the leaf litter in the spring, and emerge as larvae in July. The larvae must first find a blood meal. They crawl onto low-lying vegetation or search around the forest floor for their first victim. This victim is commonly, but not exclusively, the white-footed mouse, *Peromyscus leucopus*. This small mammal is the source of the Lyme disease bacterium for the tick population. Once attached to their host, the larvae embed their mouthparts into the animal and feed off the blood for three to five days. This feeding period is crucial because if a larva feeds on a mouse that is infected with the Lyme disease bacterium, it will probably become infected itself. After becoming sated, the larvae feeding on the mice drop off into the leaf litter and become dormant until the following spring.

The larvae are very small and usually go undetected. This should not be a problem in terms of humans contracting the disease, since only 1 percent of deer tick larvae are infected at hatching.

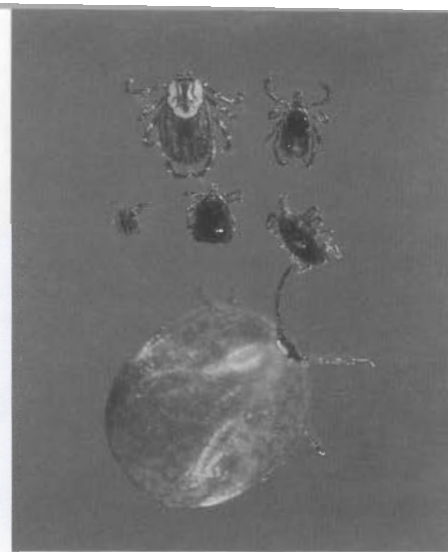
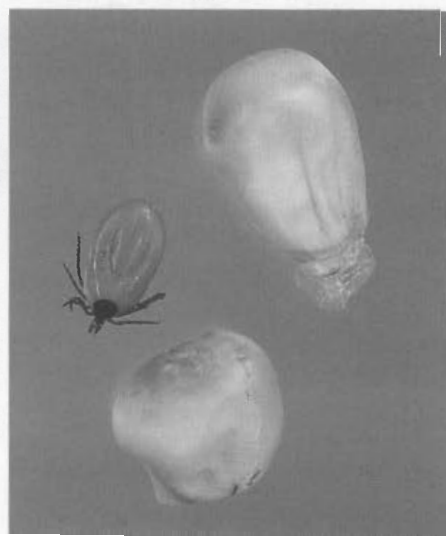
During the spring and into the early summer, the larvae of the previous year molt into nymphs and emerge to find a new host. As in the previous year, a white-footed mouse often serves the pur-

pose, but other mammals — deer, birds and, unfortunately, humans — can be the victims. It should be noted that nymphs infected as larvae the previous year can infect the new host with the Lyme disease bacterium. In areas where Lyme disease is endemic, up to 70% of the white-footed mice carry the spirochete. Nymphs are commonly found on the forest floor, inhabiting the leaf litter. Most deer tick bites reported by people are from nymphs.

Fortunately, successful transmission of the bacterium by the tick usually takes at least 24 to 48 hours of feeding. Most medical entomologists have agreed that it takes this long for a victim to become infected because the tick must first ingest some blood. Some tick biologists believe that infection occurs by salivation of spirochetes; others believe it occurs by regurgitation. Regardless of how the bacterium is introduced, the feeding tick must salivate in order to successfully feed for this extended period of time, because the saliva prevents the blood from clotting.

When examined under a microscope, the tick is shown to be quite complex. First, the mouth parts are intricately designed to suck blood. The most prominent part of the blood-drawing apparatus is the hypostome. It consists of a tapered lance with evenly spaced recurved ridges that act as barbs to maintain a good hold on its host. Second, ticks have their own version of an advanced warning system consisting

Here, an engorged black-legged tick is shown with two kernels of corn.



Age, sex and type are among the factors that affect tick size. Shown from left to right, are: (top) a female American dog tick (*Dermacentor variabilis*), also known as a dog tick or wood tick, and a female black-legged tick; (middle) nymph, male and female lone-star ticks (*Amblyomma americanum*); and (bottom) an engorged female lone-star tick. Neither the dog tick nor the lone-star tick transmits the Lyme disease bacterium, *Borrelia burgdorferi*.

of carbon dioxide sensors on their front legs that can detect the breath of a potential victim. A questing tick, as it is called, just hangs around on some low-lying vegetation with its two front appendages waiting to clasp on to a warm, moving object that is exuding carbon dioxide.

Overall, the greatest host-seeking activity of nymphal black-legged ticks takes place in spring and summer. This time period coincides with the highest incidence of Lyme disease cases, which occur between the months of May and August, although they may be reported well into the fall season. After feeding for a few days in the summer, the nymphs fall off of their hosts and molt into adults, usually emerging in the autumn.

The adult black-legged tick now climbs upon some vegetation, approximately one meter above the ground, and waits for another host. In the East, this is usually a white-tailed deer. Fortunately, adult ticks are larger than the nymphs and larvae and thus are easier to see.

Adults feed on the blood of their host for 5 to 7 days, but sometimes for as long as 11 days. The goal of the female tick is to feed and mate, as opposed to the male tick, which — most experts believe — only mates and does not feed. The female will engorge with blood in

order to nourish the developing eggs.

The peak of adult host-seeking activity takes place in October and November. After mating it is thought that the male drops off of the host and dies. The female drops off into the leaf litter, becomes dormant for the winter and lays her eggs — between 1,000 and 3,000 of them — the following spring.

The white-footed mouse and the white-tailed deer have been implicated as primary hosts of the immature and mature ticks respectively. Many other mammals and birds have been regularly parasitized by the black-legged tick. Migrating birds seem to play an important role in the spread of the ticks — and perhaps the spirochete as well. A 1988 study found that 49 species of birds and 29 species of mammals harbor larval and nymphal ticks in Connecticut.

It seems that there is some correlation between the number of deer and black-legged ticks. In addition, it appears that the majority of adult ticks feed on deer. But if an infected tick transmits the spirochete to the deer, chances are that the deer will not maintain the bacterium in its system for long. There is some evidence to show that the deer's immune system keeps *B. burgdorferi* in check and may even suppress the growth of the bacterium. Therefore, deer may not contribute to increased transmission of the bacterium, but rather only to the life cycle of the tick.

An Ounce of Prevention . . .

When in the woods, wear light colored clothing — long pants and a long-sleeved shirt — and tuck your pants into your socks to reduce the chances of being bitten by a tick. Ticks will usually crawl upwards once on a host. When pants are tucked into socks, ticks are prevented from crawling up the inside of the pants. You can spray both your skin and your clothing with the prescribed amount of an insect repellent containing DEET. There also is an insecticide called permethrin, but it should be applied only to clothing. It is worth noting that permethrin stays on clothing even after

a few cycles in the washing machine.

This insecticide will actually kill ticks.

If you are bitten by a tick, take a small forceps or tweezers, grasp the tick as close to the skin as possible and pull gently backwards. Wash the site with antibacterial soap and examine it closely for indications of inflammation or the characteristic bull's-eye rash. Although this rash — called erythema migrans — appears in the majority of cases, it does not always do so; you might want to save the tick to have it identified.

Do not put petroleum jelly or fingernail polish on the tick. These applications are ineffective and may cause the tick to regurgitate and introduce some spirochetes into the bite. Some suggest using a lit match, but this may cause the tick to burst, spraying infected tick parts everywhere.

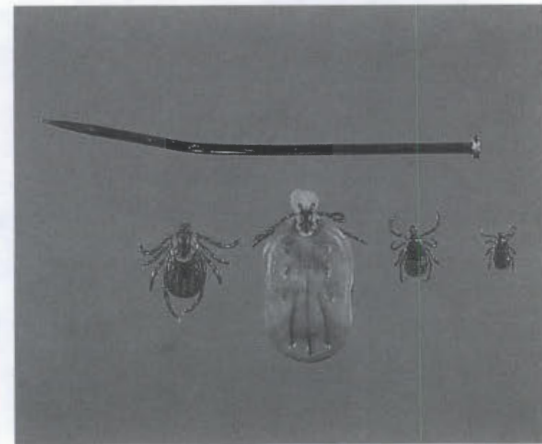
If you find a tick walking around on your skin, there probably is no need to see a physician. And even if you do remove a feeding tick, it does not necessarily mean that you are infected. Considering the amount of time it takes to feed and the percentage of infected ticks in your particular locale, your chance of infection — even after being bitten — may be lower than previously believed.

If you do contract Lyme disease, antibiotics can usually eliminate the infection. The longer the delay in recognizing the symptoms (which do not always present), the more difficult it is to eradicate the bacterium.

Vaccine on the Horizon

An experimental Lyme disease vaccine for humans now is undergoing clinical trials. (I served as a volunteer in one vaccine trial.) This vaccine has been made using recombinant DNA technology so it is not made from dead or weakened Lyme disease spirochetes. It is simply a synthetic version of one of the surface proteins found on the bacterium.

Preliminary results of vaccine trials recently were published. Three doses of either the vaccine or a fake vaccine (placebo) were administered to 10,936 sub-



Shown below a pin are (left to right) unengorged and engorged American dog ticks and female and male black-legged ticks.

jects. Of the actual vaccine recipients, there were 13 laboratory-confirmed cases of Lyme disease, while the placebo-inoculated group tallied 61 cases. As stated by the researchers, this translates to a vaccine efficacy rate of approximately 80 percent.

Once the vaccine is approved, one should take the above precautions anyway, since the vaccine may not be 100 percent effective.

Different vaccines, including one that is a recombinant vaccine like the human version, are either currently in use or will be marketed soon for dogs.

Although our state is well-known as one of the hotbeds of Lyme disease, being observant and taking a few precautions can ensure a tick-free trek in the woods. Perhaps in the future, with increased awareness and precaution, New Jersey can establish a lower profile on the Lyme disease list.

Author's Note: I would like to thank Dr. Thomas Ombrello of Union County College and Dr. Peter Guidon of Seton Hall University for their helpful editorial comments.

Jim Occi, whose thesis for his master's degree in microbiology involved studying techniques for revealing ticks infected with the Lyme disease bacterium, is a microbiologist conducting antibiotic research in the pharmaceutical industry. He lives with his wife, Beth, their children, Sarah, Tom and Jimmy, and dog, Sasha, in Cranford.

SUMMER CAMPS SUMMER CAMPS SUMMER CAMPS

Participants in Brookdale Community College's Ocean Adventures Summer Camp (right) proudly show off their catches of the day.

Fishing in Lake Shawanii (opposite page) is just one of the activities enjoyed by Lindley G. Cook Camp attendees.



COURTESY OF DAVE GRANT

A Natural Choice for Children and Adults

by Cheryl O'Brien

Now that the days are growing longer and winter's chilly winds will soon be but a memory, your thoughts may turn to summertime fun. And it's not too soon to begin checking out camps — for your children *and* yourself!

Many New Jersey summer camps are designed specifically for children and adults who want to learn more about nature and our natural resources. They are run or sponsored by entities such as colleges, universities, nature organizations (e.g., New Jersey Audubon Society), the New Jersey Department of Environmental Protection, county park commissions and private organizations.

Some camps have specific themes, such as fly fishing or ocean studies, while others involve more general nature activities. Some offer day camp sessions only and others have residential facilities. Participant ages vary depending on the programs offered.

Fly Fishing Fun Featured

The six-day Junior Fly Fishing School, held each August, is co-sponsored by Montclair State University's New Jersey School of Conservation and the Federation of Fly Fishers, in cooperation with the North Jersey Chapter of Trout Unlimited. The school is located on a 240-acre parcel of land within Stokes

State Forest, approximately 9 miles north of Branchville in Sussex County. Lake Wapalanne, a 12-acre, spring-fed lake, provides the perfect site for this program, where girls and boys, ages 11 to 14, gain hands-on experience in basic fly casting, fly tying and caring for fly fishing equipment. They also learn about basic entomology, stream ecology, knot tying and rod building. A visit to the nearby Pequest Fish Hatchery is included in the program to teach the children about raising trout.

The fly fishing school is run by Dr. John Kirk, who has been director of the New Jersey School of Conservation for 34 years. Two lead instructors, Bob Ewald, casting instructor, and Bill Skilton, fly tying instructor, head a group of 15 volunteer instructors. They make sure that the children get enough individual attention to develop their fly casting and fly tying skills. In addition to teaching children about fly fishing, the instructors strive to give them an appreciation of the outdoors and to keep the learning experience fun.

Ewald has taught at the Junior Fly Fishing School for five years. "I consider the fly fishing school to be the best school/camp of its kind in the United States. The ratio of instructors to students is one to two," he says. "The ability to work closely and bond with each student helps us to teach them not only about casting techniques but also about sportsmanship and values."

According to Ewald, the children pick up casting techniques more quickly than adults because a beginner has no old habits to overcome or correct. They learn not only how to catch fish but also the proper way to release one. Last summer, the 27 children at the fly fishing school caught and released more than 220 rainbow trout.

The fly fishing school is a success with the children. Fourteen-year-old Mary Kay Dranzo, of Boiling Springs, Pennsylvania, has attended for three years. Although she has been fishing since she was 5 years old, she was formally introduced to fly fishing at the school. "Fly fishing is more refined and graceful than regular fishing," according to Mary Kay. She uses the flies that she makes — especially the Honeybug, a fly made of cotton chenille, which brings her the most luck. The Honeybug imitates bread, which she says the fish really like in addition to natural foods.

Megan O'Brien, an 11-year-old from Hyde Park, New York, enjoyed her first camp experience at the Fly Fishing School. According to Megan, there was one particular night at the fly fishing camp that she will never forget. "All of the groups had gotten together at the lodge to listen to the instructors give a talk on fly fishing equipment," Megan remembered. "I looked out the door and saw a big black bear walking down the road! I jumped up and pointed at it. All of the kids and instructors raced out onto the porch to look at the bear. That was one very special night." Dr. Kirk, the director of the New Jersey School of Conservation, agreed, noting that his classes have been interrupted by many things over the years but never before by a bear.

Children and adults can learn more about fly fishing from local sportsmen and fishing organizations, by reading the many books written about fly fishing and by getting outdoors and wetting a fly. The New Jersey Department of Environmental Protection (DEP) Division of Fish, Game and Wildlife (609/292-2965) can provide information on required licenses and the best places to fish.

The New Jersey School of Conservation also offers a Music Ecology Camp for children during a two-week period in July. The children attend sessions of intense and varied music making combined with environmental studies and camp recreational activities.

Kids Have No Corner on Outdoor Learning

Courses held at the New Jersey School of Conservation for adults include Fly Fishing Clinics and Environmental Education Workshops for teachers and naturalists. The Environmental Education Workshops involve field studies in humanities, natural sciences, social sciences and outdoor pursuits, such as orienteering and survival. The clinics and workshops are held on weekends during the spring, fall and summer.

The DEP Division of Fish, Game and Wildlife sponsors two three-day Becoming an Outdoors-Woman workshops annually (see related story on page 51). These workshops are part



COURTESY OF TRICIA BLACK

of a nationwide program held throughout the United States to provide hands-on experience for women interested in developing outdoor skills.

The Becoming an Outdoors-Woman (north) workshop is held at the New Jersey School of Conservation in Branchville in June. Courses include backpacking, camping, canoeing, kayaking, orienteering, bird watching, fishing, hunting, archery, firearms shooting and outdoor survival.

The Becoming an Outdoors-Woman (coastal) workshop is held at Avalon in September. The courses focus on the marine environment and include sea kayaking, photography, bird watching, salt marsh ecology, surf and deep sea fishing, small boat handling, waterfowl hunting and clamming and crabbing. Partial scholarships are available for both workshops.

Carol Colao, a communications operator with the division's Bureau of Law, teaches the most popular course at the Becoming an Outdoors-Woman workshops — Basic Firearms. She and her associates teach three to four sessions during each workshop with about 20 women per class ranging in age from 18 to 60 plus.

"I focus on safety, because safety is imperative in handling firearms," Colao says. The women are given an introduction to firearms with an emphasis on the basic terms involved in firearms and shooting.

"Knowing the proper terms is important so that the women can feel comfortable when they go into a sporting goods shop and ask for the proper equipment and information they need," Colao adds. All of the women have an opportunity to shoot a rifle, shotgun and handgun at the firing range and are given de-

Photographer Robert Ahl catches biology teacher Tracy Peterson examining a mussel in the intertidal zone during a marine ecology lesson at last summer's Audubon Ecology Workshop for Educators.



COURTESY OF TRACY PETERSON

tailed instructions on each type of firearm provided.

Janet Bruner, from Indian Mills in Burlington County, was a student at both the north and coastal Becoming an Outdoors-Woman workshops. She attended the orienteering, outdoor survival and wilderness camping programs at the workshop held at Branchville. At the Avalon workshop, she took courses in sea kayaking and deep sea fishing. She enjoyed the half-day fishing trip on a charter boat and caught a few flounder.

"The Becoming an Outdoors-Woman workshops provide an opportunity to do things you normally wouldn't do. The workshop programs are very well organized. It makes it easy to learn because all the information and equipment is provided," Bruner says. She plans to do more kayaking and fishing, and she hopes that the Becoming an Outdoors-Woman workshop program will continue to grow and attract more people from a variety of backgrounds.

Marianne Pontillo, who lives in Elizabeth, has attended the Becoming an Outdoors-Woman workshops since the program started in New Jersey three years ago. She has taken many courses, including deer hunting and archery. After she attended the workshops, Pontillo continued to learn more about hunting. She took the N.J. Hunter Safety courses for hunting (gun) and archery. She enjoys small game and deer hunting in the fall.

"The Becoming an Outdoors-Woman workshops are the best thing the Division of Fish, Game and Wildlife has done. The workshops have opened a lot of doors for me and others to get involved in the outdoors," Pontillo says. She plans to continue her interest in hunting and eventually become an instructor for the N.J. Hunter Safety Program.

Respect for Nature Taught Here

The Lindley G. Cook 4-H Camp offers a summer camp program for children ages 8-13. The camp is operated by Rutgers Cooperative Extension, Cook College, Rutgers University. Situated on 100 acres within Stokes State Forest, the camp features an 8-acre lake. The children sleep in cabins during their week-long camp session, which begins on a Monday morning and runs through Saturday morning. Programs are offered in nature, fishing, pond study, hiking and camping, in addition to traditional camp activities of crafts, archery, swimming and boating.

Tricia Black has worked as a nature instructor at the camp for four summers. The nature programs include learning about basic ecology and the importance of water quality. The children spend most of their time outdoors and learn about the plants and animals that live in the woods, swamps and lake.

"The kids love to go out into the woods and catch frogs, turtles, salamanders and crayfish from the stream," Black says. "They learn to identify the animals they find and learn about them in their natural habitat."

Black stresses a respect for nature throughout her programs by teaching the children such things as the importance of releasing the animals they find and of staying on the hiking trails. The children enjoy the nature programs, and many of them return to her classes year after year.

The National Audubon Society offers residential ecology camps, workshops and field study programs for adults and children. The field studies include geology, marine life, birds, mam-

mals, insects, weather and astronomy. The ecology workshops for adults are held weekly throughout the summer at Muscongus Bay, Maine; Greenwich, Connecticut; and Whiskey Mountain Wildlife Conservation Camp, Wyoming.

Sessions for children, ages 10-14, are held in Maine and Vermont. A conservation and natural history program for teens, ages 15-18, is held in Vermont. An introductory field ecology course for educators is held in Connecticut, and an advanced field ornithology program is held in Maine. The conservation and natural history program for teens provides the opportunity for students to assist scientists in ongoing conservation research on rare species, natural communities or historic sites.

According to Rick Dutko, president of the Washington Crossing Audubon Society, the central New Jersey Chapter of the National Audubon Society offers a scholarship (covering workshop fee, room and board) for an educator to take part in the Audubon Introductory Field Ecology Workshop for Educators held in Greenwich, Connecticut, this summer. If you are an educator and live or teach within the central New Jersey area, you are invited to apply for this scholarship by writing a letter about yourself, your teaching, your interest in the workshop and the anticipated benefits to you as a teacher and citizen.

Tracy Peterson won the scholarship and attended the Audubon Ecology Workshop for Educators in Connecticut last summer. She is a biology teacher at Hamilton East-Steinert High School in Hamilton Township, Mercer County.

"It was definitely a workshop where you get hands-on experience," Peterson says. She learned about basic ecology and plant and bird identification on nature walks, and took part in a wetlands program, during which she ventured out into the marsh to learn about wetlands and to participate in teaching activities. Peterson also enjoyed the recycling workshop, which included a trip to the local grocery store to select products available in recyclable cans, bottles and paper packaging. The workshop also focused on marine ecology and the identification of marine life and tidal organisms. In addition, she attended a school-yard ecology and habitat program. Since then, she has taken her students to a park located next to her school to teach them more about local ecology.

"It was wonderful having the opportunity to speak with other educators from throughout the country and share teaching ideas," Peterson says.

More Kids' Programs

■ Brookdale Community College offers summer camp opportunities at the Ocean Institute, located at Fort Hancock in Sandy Hook. A two-week Ocean Adventures day camp is offered for children in grades 4 to 6. Participants learn about the coastal environment through a variety of activities. They examine the geological history and the plant and animal life of the bay.

According to director Dave Grant, the children have several opportunities to go out into the bay on a 50-foot charter boat.

For Information About . . .

The Junior Fly Fishing School, the Music Ecology Camp, the fly fishing clinics and environmental education workshops for adults held at the New Jersey School of Conservation, call 973/948-4646 or write to:

■ **New Jersey School of Conservation**
Montclair State University
1 Wapalanne Road
Branchville, N.J. 07826

Becoming an Outdoors-Woman workshops, call 609/629-7214 or write to:

■ **Becoming an Outdoors-Woman**
New Jersey Division of Fish, Game and Wildlife
220 Blue Anchor Road
Sicklerville, N.J. 08081

Lindley G. Cook 4-H Camp (Rutgers 4-H Youth Center for Outdoor Education, 100 A Struble Road, Branchville, N.J. 07826). Five county 4-H programs are involved in the organizing and training for their week of summer camps. Please call the county 4-H office directly for specific information about the programs.

■ **Mercer County 4-H Program** 609/989-6833
■ **Sussex County 4-H Program** 973/579-0985
■ **Middlesex County 4-H Program** 732/745-3478
■ **Union County 4-H Program** 908/654-9854
■ **Ocean County 4-H Program** 732/349-1227

Audubon Ecology Camps and Workshops or the scholarship program, call 609/730-8200, check out the Washington Crossing Audubon Society's Web site www.audubon.org/chapter/nj/washingtoncrossing or write to:

■ **Washington Crossing Audubon Society**
P.O. Box 112
Pennington, N.J. 08534

Ocean Adventures camp or scholarships to attend the camp, call 732/872-2284 or write to:

■ **Brookdale College's Ocean Institute**
Box 533
Sandy Hook, N.J. 07732

Weis Ecology Center programs, call 973/835-2160 or write to:

■ **Weis Ecology Nature Center**
New Jersey Audubon Society
150 Snake Den Road
Ringwood, N.J. 07456

Somerset County Environmental Education Center programs, call 908/766-2489 or write to:

■ **Somerset County Park Commission**
Environmental Education Center
190 Lord Stirling Road
Basking Ridge, N.J. 07920

Union County Trailside Nature and Science Center programs, call 908/789-3670 or write to:

■ **Trailside Nature and Science Center**
Union County Division of Parks and Recreation
452 New Providence Road

Fly-tying skills are learned and honed at the Junior Fly Fishing School.



© CHERYL O'BRIEN

They learn how to make and use plankton nets to sample the small organisms in the water. They also use benthic trawls to scrape and sample the ocean bottom. In addition, they learn how to tag and release fish in order to do fish research studies.

"The children like to go out on the boat, which involves about one-third science, one-third sightseeing and one-third hook-and-line fishing. They all have the opportunity to fish. Recently they even caught and released a shark!" Grant says. "The children enjoy snorkeling the most. They explore the tidal marshes, which are swarming with life. They find shrimp, crabs and sometimes sponges."

Other activities in the Ocean Adventures program include nature walks, swimming, canoeing, use of a weather satellite station, creating crafts and taking part in nature games. Some scholarships are available.

■ The New Jersey Audubon Society's Weis Ecology Center offers a summer day camp for children in grades 1 to 6. "Our camp programs are well suited for all age groups," says education coordinator Wendy Rhoads. "The younger children get involved in many hands-on activities, including nature games and crafts. We go out into the woods to explore and learn what different plants and animals live there. The older children get involved in interpretive hikes and learn to compare different habitats."

A field trip to Sandy Hook to learn about the ocean habitat is included. The camp is held at the 150-acre sanctuary adjacent to 4,000 acres of state forest in Ringwood.

■ The Somerset County Park Commission Environmental Education Center offers a variety of one- to three-week environmental science day camp programs for children ages 10-14. The summer program is called "AWESIM KIDS" which stands for Animals, Wetlands, Environment, Science, Incredible, Machines, Knowledge, Interdependence, Discovery, Solutions. The program provides an opportunity for kids to be with other children who are

interested in science and technology. According to park naturalist Rich Hoffman, the children learn about science and nature through outdoor activities and by research in the computer lab. The use of computers offers a different dimension in learning.

"The children like the physical part of our sessions. They want to get out there and learn something," Hoffman says. "They love to canoe. They love to get in the water with their waders on to test the speed of the current, take water samples and net fish and aquatic insects. They bring some of the animals they catch back to the lab to identify them and re-create their environment. They learn the importance of releasing what they catch."

Other programs include learning about archeology, weather, solar energy, river study and zoology. The center is located in a 432-acre section of Lord Stirling Park in Basking Ridge.

Variety Spices Trailside's Venue

Union County's environmental education facility, Trailside Nature and Science Center, offers a five-day summer day camp program for children in grades 1 to 4. The center is located on a 2,000-acre wooded preserve in Mountainside. The first and second graders have a choice of two programs, Nature Discovery and Earth & Sky Wonders. The third and fourth graders have three camp options, Junior Naturalists, Eco-Kids and Astro Nuts/Back to Basics.

The Nature Discovery program focuses on the exploration of the forest, field, stream and ponds. Children also learn about the life and ways of the Native Americans who lived in harmony with nature. The Earth & Sky Wonders program focuses on the Earth, its soil and its inhabitants. By exploring daytime and nighttime skies, participants learn about clouds, weather, stars and planets.

The Junior Naturalists program involves the kids in investigating pond and stream habitats, conducting plant and animal surveys. They also go on an insect safari. Eco-Kids discover some of nature's hidden secrets by learning about wildlife's food, homes and basic needs. Children who select the third option (Astro Nuts/Back to Basics), visit the planetarium, cook snacks using solar energy, learn about everyday uses of nature's products, do experiments and make crafts using natural resources.

According to Holly Hoffman, director, the nature center offers a variety of nature theme day programs for preschool children and older children (through grade 9) in addition to the camp programs. Many family nature programs are also offered so that the entire family can learn more about the outdoors together.

These camps are examples of some of the varied nature camp opportunities in New Jersey. Many nature centers also offer day programs, special events and outings for children and adults. So this summer, make sure you and your family get out to discover and enjoy the wonders of nature in the New Jersey outdoors.

Freelance writer Cheryl O'Brien, who teaches courses in taking children outdoors and waterfowl identification for New York's Becoming an Outdoors-Woman program, is an environmental analyst with the New York State Department of Environmental Conservation.

Big Time Striper Action On the Delaware



Story and photos by J. B. Kasper

One of the most valuable natural assets New Jersey has is the Delaware River, and in recent years the river has become not only one of the cleanest rivers along the East Coast, but a favorite of the state's fishing fraternity as well. Topping the list of angling delights found in the river are the world's top shad fishery and a world class smallmouth fishery. In the last decade, however, the one fishery that has really courted the interest of increasing numbers of anglers is the reborn striped bass population.

This renaissance has come about, in part, because of the cleaner water that now flows in the Delaware and the increase in the forage fish populations, such as herring and shad, that have resulted from the better quality water. Many also believe that the size and bag limit changes effected in 1987 had a major impact on the fishery. Striped bass can now be found in the river system from Delaware Bay to some two hundred miles north, in the river's upper regions in New York. The largest part of this fishery still is found in the tidewater river, from Trenton south, where fish as large as 60 pounds have been taken in the last ten years.

River Not Always the Paradise It Is Now

There was a time when striped bass were a rarity in the Delaware. By the end of World War II, the effects of the industrial revolution began to take their toll on the Delaware. For over a century, man had used and abused the river, and the residue from factories, mills and sewers had almost destroyed her once pure waters. Until the mid 1950s, regulations on discharges into, and usage of, the river's waters were virtually unheard of, and the Philadelphia/Camden area became known as the Dead Zone, a section of river so polluted and oxygen deprived that migrating fish such as stripers could not traverse it to their spawning grounds upstream.

By the late fifties, Delaware Valley lawmakers began to pass laws that cracked down on those who showed a disregard for the Delaware's waters. As a result, she is now one

Pennington angler Ed Cervone caught a nice size striper while trolling swimming plugs in the Delaware.



A fisherman admires a nice striper taken at night from the Delaware River.

of the cleanest rivers along the East Coast. Just as fish populations had foreshadowed the river's problems, so do they verify her resurgence.

Much of the industry that once flourished in an unregulated environment has disappeared. What industry is left is tightly regulated, and water discharged from municipalities is returned to the river in a condition as good as — or better than — when it was taken. That doesn't mean that there aren't those who would circumvent the laws if they could or that there no longer are any problems. However, it's a far cry from what it once was.

River Now Considered a Major Striped Bass Producer

Recent biological information released by the Mid Atlantic States Fisheries Commission shows that the river's striped bass population is in excellent shape. The 1993 and 1996 year classes were record spawns and the Delaware River is now considered a major producer of striped bass along the Atlantic coast. Likewise, information compiled by New Jersey's Bureau of Marine Fisheries, in the Department of Environmental Protection's Division of Fish, Game and Wildlife, shows a bright future for the striped bass population in the Delaware.

In recent years, much controversy has developed over the reinstatement of striped bass netting in Delaware Bay by the state of Delaware. Delaware allows a commercial harvest of striped bass of 20 or more inches. The striped bass is a game fish in New Jersey and Pennsylvania with a size limit in both states of 28 inches and a bag limit of 2 fish per day.

Many anglers feel that the size limit for both commercial and recreational fishing should be the same and believe that they are only returning bass to the water upstream so commercial fishermen can turn a buck on them downstream.

Under the current striped bass management plan, Delaware is slated to triple its catch of stripers in the next few years. Many biologists, environmentalists and sportsmen (myself included) feel that this is too many fish too soon and that it will have a detrimental effect on the river's striped bass population.

Trolling for Tidewater Stripers

Most of the stripers haunt the main river and very seldom are found in the numerous coves that abound in the tidal section of the river. They do, however, migrate in and out of the tidal streams that flow into the river. Schools of stripers will remain in the deeper waters of the main river and then move into shallower water, such as flats and bars, with the tides to feed. When they are found in the deeper water of the main river they often will be suspended in the warm water sandwiched between the colder layers above and below, and during certain times of the year they will feed on the schools of shad and herring. As you can see, since the majority of the stripers are found in the main river, you'll have plenty of water to cover when fishing for them.

One of the best ways of not only locating these linesiders but taking them as well is by trolling — flat line trolling to be specific. Because of the contrasting depths that are found in the tidal Delaware, trolling takes on two different looks — one of shallow water trolling and the other deep water trolling.

Some of the stripers that move into the Delaware River during the spring do so to

The Delaware is now
one of the cleanest
rivers along the
East Coast.

spawn, while others follow the herring as they move upriver to spawn. In either case, the bass will school up and often are found suspended in certain layers of water while the water remains on the cool side. It's for this reason that trolling is a prime means of taking them.

Quite often, when stripers are found suspended, casting and retrieving lures and baits simply won't be as effective as trolling. This is because casting and retrieving your lures will put them in the strike zone for only a short period of time. This cuts way down on your chances of taking them.

Speed control also is an important factor. Suspended stripers often will hit a lure only when it is retrieved at a certain speed, and trolling is the best way of maintaining this speed for any length of time. Proper speed and depth control can be crucial to your success even when the fish are not suspended.

Conventional rod and reel combinations are better suited for trolling. Their drag systems are a direct pull system as opposed to the offset system employed by spinning gear. Even at slow speeds, a hit from a striper can put plenty of stress on a rod and reel, since the hit is amplified by the speed of the moving boat. Conventional tackle also will give you less line twist problems. Medium heavy action rods in five- to seven-foot lengths are best suited for this type of fishing. They're stiff enough to give you a good hook set and still limber enough to provide you with good action once the fish is on. If you intend to use rod holders, you will want to vary the size of your rods. This will allow you to use the longer ones for the outside lines, and the shorter ones for the inside lines.

Swimming plugs, such as Bombers, Redfins, Hellcats and Rebels, are ideal for trolling in shallow water. Rattle Traps and other plugs with rattles are very effective, especially when the water is on the murky side. In deeper water, jig/twister combinations and deep diving plugs make excellent choices.

Sonar gear, although not an absolute necessity when trolling, sure can make things a lot easier. Being able to see the fish and knowing at what depth they are sitting, as well as having a picture of the bottom you are fishing, takes the guesswork out of this type of fishing. It can be a valuable aid in telling you if the fish have moved from the area you are fishing, thus saving you from fishing dead water.

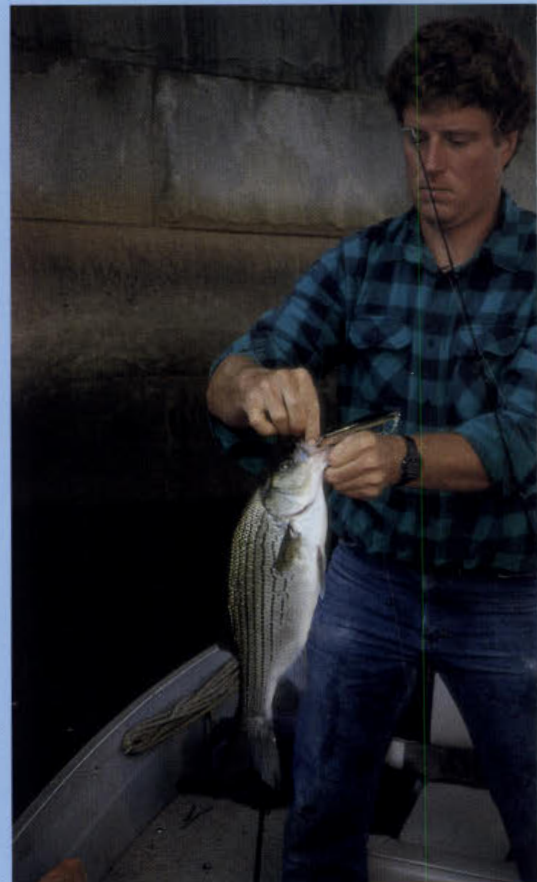
Jigging

Jigs are one of the most versatile lures that the angler has at his command, and they allow the angler to cover a variety of conditions and structures. They can be used painted or unpainted, dressed with bucktail, in combination with rubber baits or dressed with different types of live bait. Some anglers put plenty of stock in fancy paint jobs; I have found that the plain variety will usually score just as many fish. Jigs, with the exception of the bucktail, are nothing more than tools to get rubber baits, live bait and other dressings to the fish. Spoons, such as the Kastmaster, Hopkins and diamond jigs, also are commonly used to jig stripers.

One of the most prominent times for the use of jigs is during the early season. They give the angler good speed and depth control which is crucial to success in cool waters. Slow and precise are the watchwords, and a jig dressed with live bait can be used to fish the deep waters where the stripers lay over. When fishing the river below Philadelphia, a good way of fishing a jig is to dress it with bloodworms and bounce it off the bottom.

Another place that jigs — in particular jig/rubber bait combinations such as twister tails and large sassy shads — will work is the channel edges where the stripers will lie at low water. Stripers often are found suspended just off or alongside the channels, and vertical fishing jig/rubber bait combinations are just what the doctor ordered.

As the stripers make their way upriver into the non-tidal waters that begin at Trenton, many of them will move into the swift eddies found here. When water temperatures are down in the 50s or low 60s, a jig/twister combination will give you good action. The most



This nice size Delaware River striper was caught on plugs during June.

River anglers began
to discover —
quite by accident —
that the surface lure
was a deadly tool.

common size lead heads that are used are 3/8- and -ounce, and 4- to 6-inch twister tails are the favorite sizes for rubber baits. When using them in the eddies, cast them across the eddy up into the top of the opposite current line; keep your rod tip high to keep as much line off the water as possible and work them with the current with an up-and-down motion of your rod tip. As the jig gradually moves downstream with the current, slowly lower your rod tip; once the jig is all the way downstream, reel it back to your position with a stop-and-go motion. Reel only fast enough to keep it from getting hung up on the bottom.

Another situation suited for jig use occurs during the late summer and early fall in the tidal river around Philadelphia and south. Stripers school up in places like the mouth of the Schuylkill River and other tributary streams. They feed on schools of herring, shad and other bait fish that are making their way back downriver after being born and reared in the upper river. In this case, some of the spoons previously mentioned will work well. Once you have spotted these fish on your sonar unit or feeding on the surface, position your boat up tide from the fish and allow it to drift over the fish. Just lower the spoon down to the depth the fish are at and then commence jiggling it up and down.

Bridge pilings are another good structure for the jig angler. Here, the turbulent water located around the pilings is much to the liking of the stripers. In most cases, these waters are on the deep side and plugs simply will not get down to the fish. The jig, on the other hand, can be cast into these eddies and allowed to sink into the depths and then worked, with an up-and-down motion, right in among the fish. In the live bait category, jigs dressed with eels, bloodworms, herring and minnows are tops. Rubber baits, such as twister tails and minnow-type rubber baits, are another good choice. Here most anglers will agree that live bait combinations will work better in cool water and plastic baits will do better in warmer water.

Surface Fishing

As the striper population began to explode in the big "D" some years back, river anglers began to discover — quite by accident — that the surface lure was a deadly tool. Those fishing the tidal river commonly used surface lures for largemouth, and when they began taking stripers on them, they learned how hard a striper can hammer a surface lure.

In the non-tidal regions of the river, the smallmouth fisherman had a similar experience; line peeling hits and chopped off lures he blamed on muskies were actually being hit by good sized stripers that had traveled upriver, many as far as the Water Gap.

One of the things that stripers have in common with smallmouth bass is that they herd the baitfish into the shallow water and blitz through them, feeding. Unlike smallmouth, stripers have a habit of smacking herring and other baitfish with their tails, stunning them, and then making off with them.

Once the water warms, stripers will seek out areas that are rich in oxygen and have good food supplies. Both these factors are necessary for the stripers' survival in a river environment during the summer season. Likewise, stripers are a lazy fish, and an easy meal ticket is much to their liking. Forage fish found in the previously mentioned places often become trapped in the eddies and become disoriented, offering the striper an easy meal. This makes white water areas prime places for stripers during the summer season, and surface lures are an excellent way of digging them out.

Stripers have a definite preference for larger surface lures. The more commotion a lure makes on the surface of the water, the better it will produce. Four- to six-inch plugs will serve you best. Since stripers prefer to feed on herring in the Delaware, silver and black is the most popular color scheme. Much of the better action will turn to night fishing during the dead of the summer, and this is when dark color plugs will come into their own. Some of the best producers on the Delaware are constant motion surface lures such as Striper Swipers, Boy Howdy's, Zerra Spooks, Pencil Poppers, large

popping plugs and good sized buzz baits.

Whether you fish from a boat or by wading, the most important element that will govern the use of surface lures is the water temperature. Water temperatures will rise into the 70s sometime in late May or early June, and this is when the bulk of the surface action will begin. When surface water temps are below these levels, surface action will be sporadic at best. During mid summer, water temperatures can stretch well up into the 80s and light penetration will be at its maximum. This is when the best action will take place after dark.

When it comes to rod and reel combinations for throwing surface lures, medium action graphite rods with a soft tip, such as a popping stick, will make the surface lures dance nicely. Choose a suitable weight reel, preferably with a large spool, to get the most out of each cast. The one time this will not apply is when you are using a buzz bait. Here, you will want a stiffer action rod for its hook setting power.

The best way of retrieving your surface lures is to hold your rod tip up high to keep as much line out of the water as possible. This gives you better hooking power by reducing the belly in your line caused by the current or the wind, thus giving you a more direct hook set.

Seeing a good sized striper smashing at a surface lure and missing it can often cause an angler to slow up his retrieve in order to give the striper a better chance at taking it. This may work well with largemouth in a lake, but when it comes to a striper in a river the reverse is often true. Speeding up your retrieve gives a striper the impression of a baitfish trying to get away and often will trigger a more violent hit.

The numerous flats that are found along the river are among the top spots for surface feeding stripers. They are often found near islands, points of land, river bends and the confluence of the small streams. Prime time in these areas will be early morning, late afternoon and throughout the dark hours of the night.

The key to taking the stripers when they are found in the more turbulent areas is to cast at the less turbulent pockets of water where the fish hole up away from the faster current. It's here that the stripers reside, waiting for a meal to come past in the current. Cast your surface lures past these areas and work the lures through them. Most of your hits will come right on the current line where it meets the eddy.

Buzz baits are another lure that can be worked very effectively in white water areas. With them, you have the choice of casting across the current and slowly working them back to your position, keeping your tip high, or of casting them downstream and slowly reeling them back. One tip for getting some of the short hits is to add a stinger to the buzz bait. A triple hook will work best for this purpose.

The 1997 striper fishing in the Delaware River was a record season and the outlook for the coming seasons is very good. Striper fishing has revitalized the Delaware River and the revenues to both businesses and municipalities far exceed the commercial value of the bass. The one shadow that hangs over the striped bass fishery in the Delaware River is the proposed increase in commercial fishing quotas in the Delaware Bay by the state of Delaware. If allowed to take place, these increases could negatively impact this super fishery. Hopefully, this will not happen.



Small stripers are commonplace in the non-tidal Delaware north of Trenton

New Jersey State Library

In addition to being a freelance writer and photographer, J. B. Kasper is a freshwater fishing instructor and professional Delaware River fishing guide.

The Herald



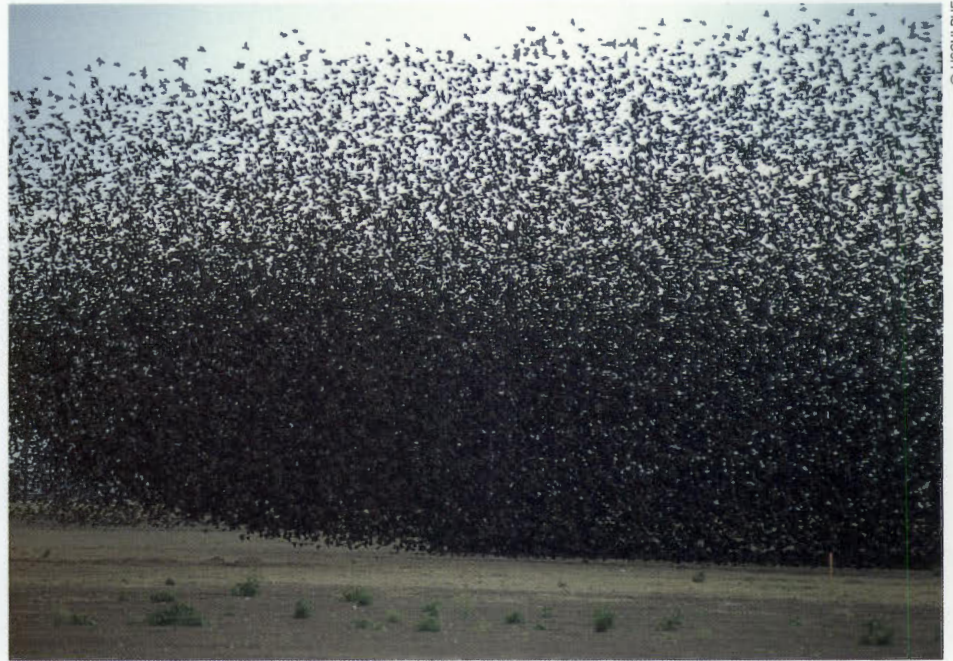
by David W. Oster

He arrives on a southwest wind, usually in late February, as winter's grip begins to falter. In some years the herald appears earlier in the month; in other more tenacious winters, not until March. He wings north from the bayous, sloughs and grain fields of the South, where, at certain favored locations, his species has wintered in staggering flocks of a million or more birds. And now he has come to New Jersey's Great Swamp, on a February morning of promise, to fulfill a tryst. The red-winged blackbird is spring's truest herald.

Although some redwings winter in New Jersey and even farther north, most take leave for the colder months to seek more abundant food sources in our southern states. But given the first crack in winter's armor, the first sweet, springlike breeze from the Carolinas, male redwings rush north, driven by the exigencies of natural selection to lay claim to favored nesting sites in swamps and wet fields. There they stake out territories with flashing displays of scarlet and yellow shoulder patches, and rich, gurgling gushes of song which fill the swampy places and ring out an affirmation that the vernal equinox is near. When the herald sings, the earth listens.

The song of the red-winged blackbird sounds like an energetic "conk-la-reeee," with a tight trill on the sharp, drawn out "reeee." The song is typically repeated from perches in and around prospective nesting territories, each male throwing back his head and quivering with exaltation as the notes reverberate through his body. Close by, the bold song of the redwing can stop an unsuspecting hiker in his tracks; from afar, the notes float in on the wind, stirring the subconscious before the ear perceives the audible sound.

The singer is a handsome fellow in a group of birds — the blackbirds — generally not appreciated for their looks. He arrives on the nesting grounds glossy black, a medium sized bird a bit smaller than a robin, showing the dazzling epau-



© USCHI RUE

A huge flock of red-winged blackbirds descends, bringing the promise of nature's reawakening. Splashes of scarlet through yellow against glossy black mark this harbinger of spring (opposite page).

lets for which he is named. Ornithologists know the red-winged blackbird as *Agelaius phoeniceus*; *Agelaius* from a Greek word for belonging to a flock (which generally congregates after the nesting season), *phoeniceus* meaning deep red, a reference to the male's colorful shoulder patches. The redwing's breeding range cuts a wide swath across North America, including all of New Jersey, so the herald is never hard to find. Just go to the nearest swamp, pond or sluggish, overgrown stream from late winter through spring and you, too, can hear redwing music.

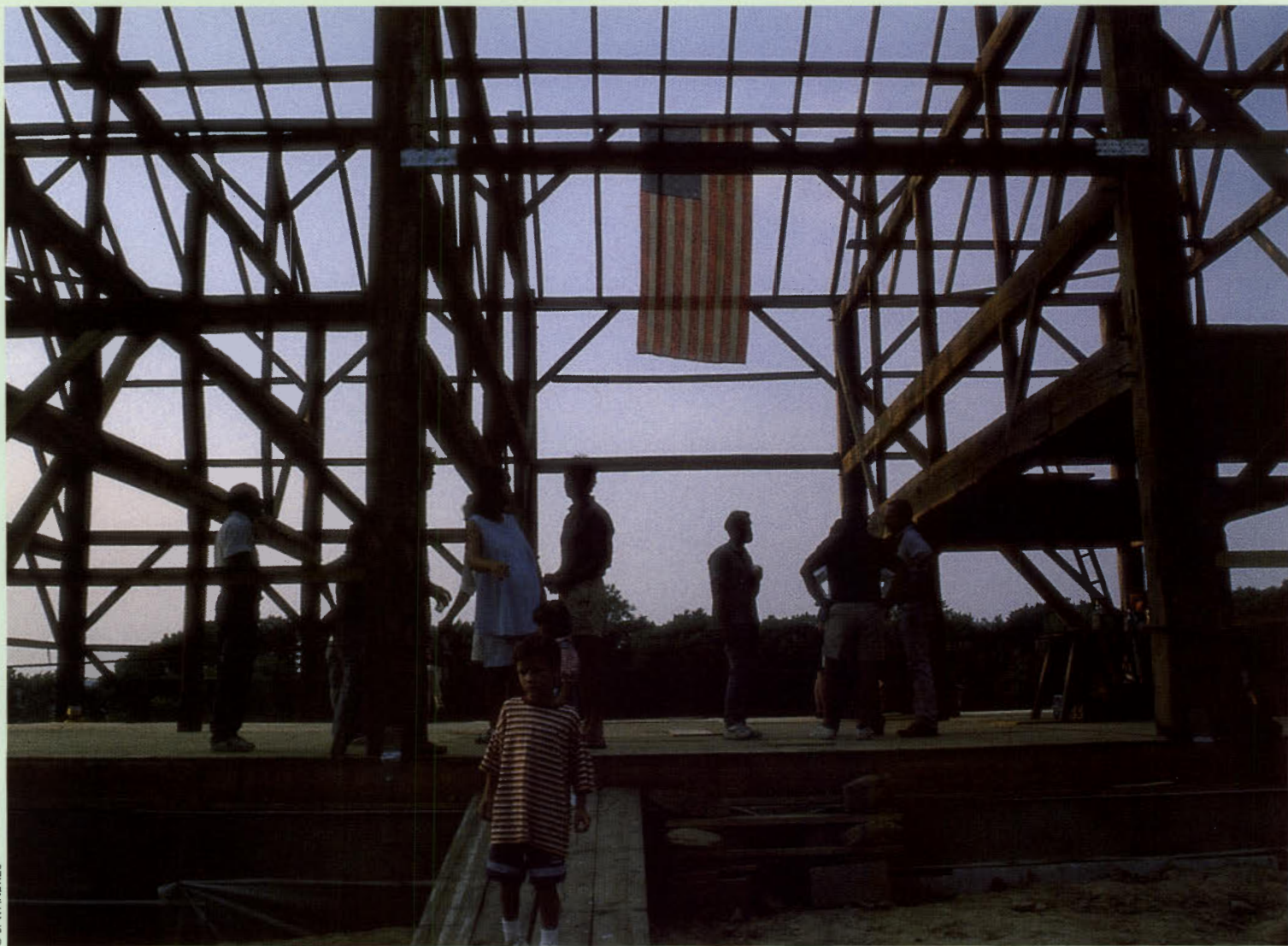
The red-winged blackbird is not the first bird to sing the New Jersey spring. The resident tufted titmouse and cardinal may let loose on a sunny January day, and the redwing often is preceded in song by the aptly named song sparrow. Though I eagerly anticipate the sound of all these harbingers, note for note nothing beats the electrifying cascade of the herald's song. Redwing music charges the late winter swamp with anticipation; it speaks of meltwater, softening earth and the organic fuse lit once again.

Female redwings arrive soon after, streaky

brown companions to the glossy black males. With the best nesting sites already defended by the strongest, most dominant males, the females will fulfill their role in the natural selection process by picking mates which offer the greatest potential for reproductive success (i.e., the strongest, most dominant males). This is not sexism, but the way of nature. After nesting has commenced the males continue to sing, but verve and exuberance diminish once the young of the year have fledged.

By early July redwing music will fade, and vocalization soon is limited to call notes (a deep, often repeated "chenk") and the occasional alarm cry. But the herald will hold the song of his ancestors in genetic memory and, as the seasons pass, the February swamp will ring again with a bold proclamation that the equinox is nigh. I plan on being there — to hear spring and keep tryst with the herald.

Dave Oster is a hazardous site mitigation specialist with the NJDEP Site Remediation Program. He and his wife, Dianne, live in Verona and currently are introducing two young children to the wonders of New Jersey's wildlife.



© J. WANDRES

Preserving the Past, One Barn at a Time

by J. Wandres

It was a warm evening in July 1997; fine weather for a housewarming party, and many of Bill Mathesius' friends had gathered to celebrate the event.

The late afternoon sun was low in the West, its mellow orange light bathing the structure sitting there in the middle of that meadow with sweeping views across the valley. A warm breeze coursed gently through the structure, causing the American flag hanging from the rafters to move in a free-flowing dance of life. There was only one thing missing. Well, two, actually: the walls around the guests and the roof over their heads. But that was okay. The housewarming was to celebrate raising the "bones" of this new country home — an old, English-style barn frame.

Among the people gathered at the barn-raising and housewarming event were the two guys whose love of and passion for saving old barns had brought about the event: Elric Endersby and Alex Greenwood. Only hours before the first guests arrived, they and their crew had finished pegging the last rafters of the 36-by-50-foot oak frame. How Endersby, Greenwood and Mathesius became involved in this barn raising goes back almost two decades. Truth be told, the story goes back a century and a half.

The Cruser barn had stood for over 150 years before being dismantled by the New Jersey Barn Company (opposite page, top).

Each post, beam and brace is tagged before being taken apart. Elric Endersby (rear) tags more sections of the Cruser barn (opposite page, middle).

Cruser used his own set of symbols to tell where each tenon (tongue) fit into its corresponding mortise (hole) in the frame (opposite page, bottom).

Friends gather to celebrate the raising of the 1845 English-style barn (opposite page) that would become the Mathesius residence.

Back in 1845 James McRee Crusier contracted to have a barn built on his farm off The Ridge Road (Route 522) in what is, today, Plainsboro Township. In the mid 19th century the Crusier family was an old, established Middlesex County family, having emigrated from Staten Island in the early 1700s. The family had become prosperous from produce and dairy farming, and the patriarch, John Stryker Crusier, was influential in county affairs. Their main house, set well back from the road at the end of a drive flanked by maple trees, was a magnificent structure. When Crusier died, his land passed to his sons. Son John, however, was not much for farming; he sold his interest in the land to his brother, James, in 1828.

The property changed hands many times over the next century and a half while the character of the landscape changed, too. The old Post Road nearby metamorphosed into U.S. Route 1, with the sound of trucks and cars flying past the fields. The open lands were carved up by huge industrial parks, sleek corporate campuses and luxury residential developments. The massive South Brunswick Regional High School opened in 1997, testimony to the population surge in the area. The farm stopped being productive in the 1970s.

Glencairn: The Catalyst

Since his childhood in Abington, Pennsylvania, Alex Greenwood had been fascinated with the design of the historic stone buildings dotting the countryside. After graduation from Rider College in Lawrenceville, he learned restoration carpentry. Later, at the University of Pennsylvania Graduate School of Fine Arts, he studied historic preservation.

Around 1970, Greenwood was looking at a Georgian-style house in Lawrence Township, Mercer County. "Glencairn" was on the National Register of Historic Places, but was in poor condition. Along with two partners, Greenwood purchased it, and began to bring the house back to its original grandeur.

Elric Endersby grew up in Princeton. He earned a degree in the history of architecture, then went on to do graduate work in preservation and American folklife in Cooperstown, New York. He founded the Princeton History Project and, for more than 12 years, published *The Princeton Recollector*. Through his work, he became aware of the ongoing Glencairn project. His interest grew and, as it did, so did his involvement with the project.

The restoration included replacing a barn that had collapsed. Rather than put up a new building on the old stone foundation, Greenwood — now aided by Endersby — looked for a similar barn from the period, a search that took them a year. The experience of dismantling, then re-erecting the barn on the grounds of Glencairn was profoundly satisfying; another threatened structure had been saved from becoming firewood, and there were people who appreciated such historic structures.

Finding suitable barns was not all that difficult. As they became known for their restoration work, the two started get-



© J. WANDRES



© J. WANDRES

© J. WANDRES





© J. WANDRES

ting calls from realtors, contractors, historical societies and individuals to evaluate the style, history and condition of barns.

"We would try to persuade the owner to restore the structure instead of demolishing it," Greenwood says. "Only if the barn was in imminent threat of being demolished would we consider disassembling it." With the decline of agriculture in New Jersey, thousands of barns were — and still are — becoming victims of the changing environment.

"The problem," Greenwood says, "became not that we couldn't find enough barns. It was having to decide which of several structures offered were worth saving."

By 1980, Greenwood and Endersby established the New Jersey Barn Company (NJBC), which currently is located in a 19th century grist mill in Washington Crossing, New Jersey. Over time, the business evolved into the preservation of other buildings, architectural design and consultation. They collaborated on an illustrated book, *Barn: The Art of a Working Building* (Houghton-Mifflin, 1992).

Building Barns, New Jersey Style

Colonial New Jersey was a pivotal place in the evolution of American barn design. The Garden State's fertile soil drew Dutch and English settlers from New York City and Philadelphia. Vast stands of oak provided the material with which they could build their barns and houses.

Many factors required farm owners to adapt their structures to local conditions and available materials. English barn-builders, who traditionally used thatch for roofing material, found that the harsh winters made thatch unsuitable. The Dutch and later German builders were accustomed to making clay roofing tiles. It became expedient and cheaper for farm owners to use shingles made of white cedar, which grew in limitless stands in coastal swamplands. Instead of using brick and daub between the studs, the barn builders used pit-sawn boards as vertical siding or clapboard.

Harsh winters dictated the barns have stalls where livestock could be protected from the elements. Later, dairy farmers began building their barns into the side of a bank, with a cellar beneath the main threshing floor, so the livestock could enter directly from



© J. WANDRES

the lower level. On the bank side, an earthen ramp was built up to the first floor, to let hay wagons enter directly onto the main, threshing floor. There, the hay could be forked into haylofts above.

"Bilt" to Last

After Cruser completed his barn, he nailed a wooden name plate inset to one of the tie beams. It proclaimed the structure was "Bilt By J. McRee Cruser — 1845."

Responding to the size of his holdings, Cruser expanded the traditional, three-bay type English barn to four bays, each about 12 feet wide. The resulting structure is defined by five "bents." A bent is the basic unit of assembly in a frame barn, in which vertical posts are joined with one or more tie beams and stiffened with diagonal braces. Bents traverse the structure at right angles to its length, and



are connected with horizontal timbers called girts and capped by plates, which support the rafters. The entire frame is fastened with oak pegs called "trunnels," a corruption of "tree nails."

It was a site engineer working for the corporation that bought the old Crusier place who told the NJBC that the barn might be available. In the spring of 1996, Greenwood and Endersby agreed to remove the barn (which, incidentally, saved the corporate owner the considerable cost of demolishing it).

A Painstaking Process

They made drawings to document the timbers, then catalogued them. Then they and their crew removed the tarpaper covering the original siding and took down outbuildings added by later owners. After the frame was exposed, Endersby tacked annotated, colored disks to each beam. Often, the disks were nailed next to markings that looked like Roman numerals chiseled into the beams by the original builder. The tags would assure the accurate location and placement of the beams when the barn was re-erected.

High up in the rafters, Mike Margulies, David McCord and other crew members carefully hammered out the 150-year old pegs securing the beams together, then gently eased the timbers to the ground, using a crane. The weather side of some timbers had suffered from decay, but the central beams were straight and solid after a century and a half, and still gave off the tangy aroma of new-cut oak. After the frame was disassembled, the timbers were stored to await a buyer.

By his own reckoning, Bill Mathesius met up with Alex Green-

wood around 1980, shortly after Greenwood and Endersby had formed the NJBC. Mathesius, an attorney, had become accustomed to the open spaces of loft-living in New York City. In his mind he saw a similar arrangement of living space for his New Jersey home.

"Alex and I looked at properties he thought I might develop," he says. One was a mill in Lambertville; another was a grist mill in Milford. But nothing seemed just right until they found a six-acre parcel in Hopewell Township.

"One day in 1996, I got a call from Alex," Mathesius recalls. "He had a building he wanted me to see. I went out to Plainsboro, took one look at the 36-by-50-foot frame and said, 'this is the one.'"

Greenwood and Endersby were equally pleased. The Crusier barn was special; for one thing, it was one of the largest frames they had acquired. Also, the Mathesius project would allow the Crusier barn to stay in New Jersey. NJBC has trucked and erected barns to owners in Colorado, Montana and Texas. Film producer Steven Spielberg transformed one of their barns into his summer house in East Hampton, N.Y.

All Things Considered

With the site secured, consideration shifted to the design process by which an essentially utilitarian structure would be converted from agricultural stalls and haylofts into a living space as a barn-residence. NJBC enlisted Matthew Millan, a registered architect who works regularly with the company as part of the design team.

"Actually, Alex, Elric and I had considered several hypothetical uses for the Crusier barn, based on how other potential



© J. WANDRES



© J. WANDRES

Most of the wooden pegs, called treenails or "trunnels," could be used again (opposite page, top, left).

Some joints on the Crusier barn still fit as snugly as they did originally. Others had to be forced back together (opposite page, top, right).

The New Jersey Barn Company usually uses a crane to raise a barn frame (far left), although some have been done the old-fashioned way, by a group barn raising.

An exact scale model of the Crusier frame (left) helped Mathesius (in white shirt) gain a visual perspective of its potential.

The Mathesius residence is built into the side of a bank, as the Crusier barn had been. An earthen ramp leading up to the main floor will complete the entryway.



© J. WANDRES

clients envisioned using the frame, given its particular size and configuration of bents,” Millan says.

With a contract signed and site chosen, the NJBC team began a series of discussions with Mathesius to help interpret his needs.

“We did an assessment that includes discovering the client’s priorities for the number and size of rooms and which rooms should be next to which others. It included issues of personal lifestyle,” says Millan.

A crucial factor was integrating the barn on its intended site — a rectangular, gently sloping pasture with spectacular views of the village, and farmlands as far as the distant Sourland Mountains. How would the light wash the structure and brighten up the interior? How could the design take advantage of prevailing winds to generate maximum ventilation? How would the barn, on its site, look from a historical perspective? All of these considerations went into the planning before the modern, cement block foundation, and the sill and floor deck were constructed to receive the massive frame.

Before re-assembling the frame, several of the hundreds of timbers required repair. Generally, the oak members were structurally sound. In some places, decay was cut away and replaced with new oak bolted to the original beams in a way that the new wood could not easily be detected. In addition, the entire frame was fumigated and power-washed before being re-erected.

“At one point we thought of having an old-fashioned barn raising,” Greenwood recalls. “However, the bents are huge and very heavy. We wanted to get the frame up quickly to mesh with the work schedule of the general contractor who would finish the residence.”

The interior sheathing and insulation were designed so that the frame would remain visible from the inside. One-by-ten-inch, ship-lap pine boards were stained a golden color, then nailed to the outside of the frame. Outside of this went a unitary layer of insulation called Stresskin. This is four inches of urethane foam sandwiched between a panel of OSB (oriented strand board) on one side and sheet rock, as a fire barrier, on the other side. Over the Stresskin went a layer of tarpaper and then the exterior siding: one-by-ten-inch ce-

lar boards preserved with an acrylic stain in solid gray. The construction is so tight, says general contractor Dave Murphy, that the insulation factor is R-28, higher than most building codes specify.

French double doors, hung beneath a custom-fabricated transom, filled in the opening originally occupied by barn doors. An earthen ramp, much like the original Crusier barn had, completed the entryway.

On the main floor will be a modern kitchen and laundry room in one side bay. The center bay will remain open to the rafters. A dining area and library will complete the downstairs. On the second level will be a master bedroom suite — bedroom, bath and loft. On the other side will be a guest bedroom. The basement may be turned into a separate studio. An addition on one end of the structure, as a shed might have been added to a barn in the 19th century, will serve as a two-car garage.

Preserving the Charm of Ages Past

Through efforts of preservationists, the permanent loss of historic structures, as in the case of the Eick Homestead in Readington Township, can be prevented. In that instance, a developer was given a site permit, conditional on leaving the 1750 building standing. He took it down, anyway. Though he was fined \$40,000, according to the *Hunterdon County Democrat*, it could not bring back the historic house.

Despite similar tragedies, there are more and more success stories. In Hopewell Township, the 1787 Edmund Burroughs House was in the way of a subdivision access road being put in by a developer. NJBC was called in to dismantle the structure, which was then moved to another location in the township and reassembled to become the core of an expanded private residence with secondary outbuildings.

Municipal planning boards are becoming increasingly aware of the value of very old structures in their midst. They realize that they cannot boast about their “charming historic village” if they let all the charming historic buildings get torn down.

Sensitive relocation offers an attractive option in this effort, and several New Jersey municipalities are beginning to include historic preservation in their planning process for the future.

After the last guests had departed, Bill Mathesius went over to the table where the scale model of the frame had sat. He held it up to eye level and peered in at the meticulous joinery that held it together. Then he walked around the open floor, looking at the massive 12-inch square beams, the ax marks that had hewn them still clear. They were made to last, he knew, and they would last, maybe another century. He nodded, and smiled to himself.

J. Wandres, who once lived in a barn-residence, last contributed an article on bouldering for New Jersey Outdoors.

Though sliding doors give light and ventilation to this barn residence (opposite page), the original wooden barn doors can be closed for protection and heat preservation.



The Making of a Bald Eagle Nest

Story by Kathleen Clark and Larry Niles • Photos by Sherry Meyer



This tree (left), which held a bald eagle nest in Belleplain State Forest since 1991, died. The nest, weighing several hundred pounds, fell during a late May storm.

Remains of the nest were found on the ground and one nestling was found nearby. The other two nestlings, observed weeks before, could not be found. The remaining eaglet (above), about nine weeks old, was thin but healthy.

Bald eagles are riding the crest of a comeback in New Jersey. Decimated by the effects of DDT used in the 1950s and 1960s, their population was down to only one nesting pair by 1970. The single pair continued to fail to produce young each year until 1982, when biologists in the state's Endangered and Nongame Species Program (ENSP) began to artificially incubate the eagle eggs and return young chicks to the nest for parental care. Thanks to their efforts, the single nest, in Bear Swamp Natural Area, fledged one or two young each year between 1982 and 1988.

But eagle production from one nest would take years to restore the state's population so, in 1983, the ENSP initiated an intensive restoration project. Young eaglets were obtained from natural nests in Manitoba, Canada, where bald eagle populations are stable. They were brought into the heart of historic eagle habitat in Cumberland County, where they were held in cages on a hacking tower facing the marsh and fed by biologists who were careful not to be seen by the eagles. The cages were opened when the eaglets were eleven weeks old and ready to take their first flight. Under this method, called

hacking, sixty young eagles were released from 1983 to 1990. They formed the basis for 1997's New Jersey eagle population of 14 pairs.

While there are many wild places remaining, New Jersey's eagles often encounter the effects of living in the most densely populated state. Bald eagles require large areas in which to nest, hunt and live, and tend to have low tolerance for human intrusion near them or their nests. Since eagles build their nests and lay eggs in January and February, at times they choose sites that look good in winter, but are busy "people" places in spring and summer. Often, young eagles building their first nest will choose such a location, then abandon the nest due to human intrusion nearby.

One solution has been to give the eagles a hint of where they might find a better spot by building eagle nests to encourage nesting in more appropriate locations. One reason this works is that the eagles would rather take up residence in a pre-constructed nest than build their own from scratch. Once eagles begin nesting and are successful, however, they are reluctant to move.

In 1990, eagles at Union Lake had built a nest in a sub-optimal location but had not

The ground crew (below, top) cuts the framing lumber.

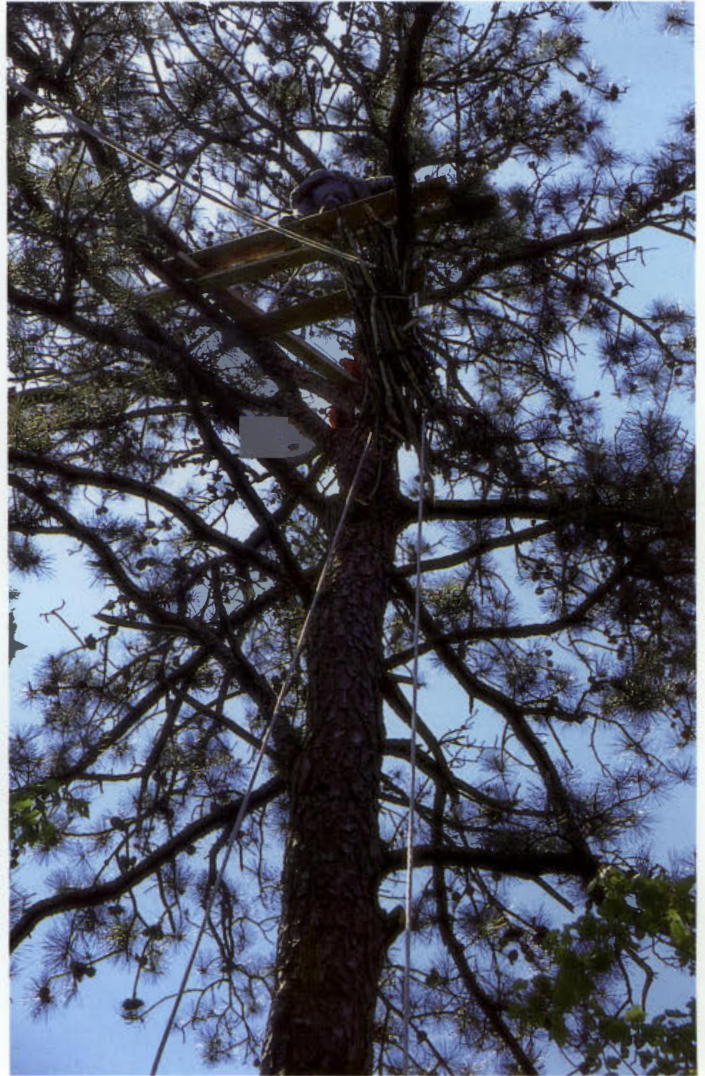
A framing piece (below, bottom) will be raised up into the canopy using ropes and pulleys.



A bird's eye view of the frame under construction. (right)

The sticks are bundled and will be raised up to Niles (below, left).

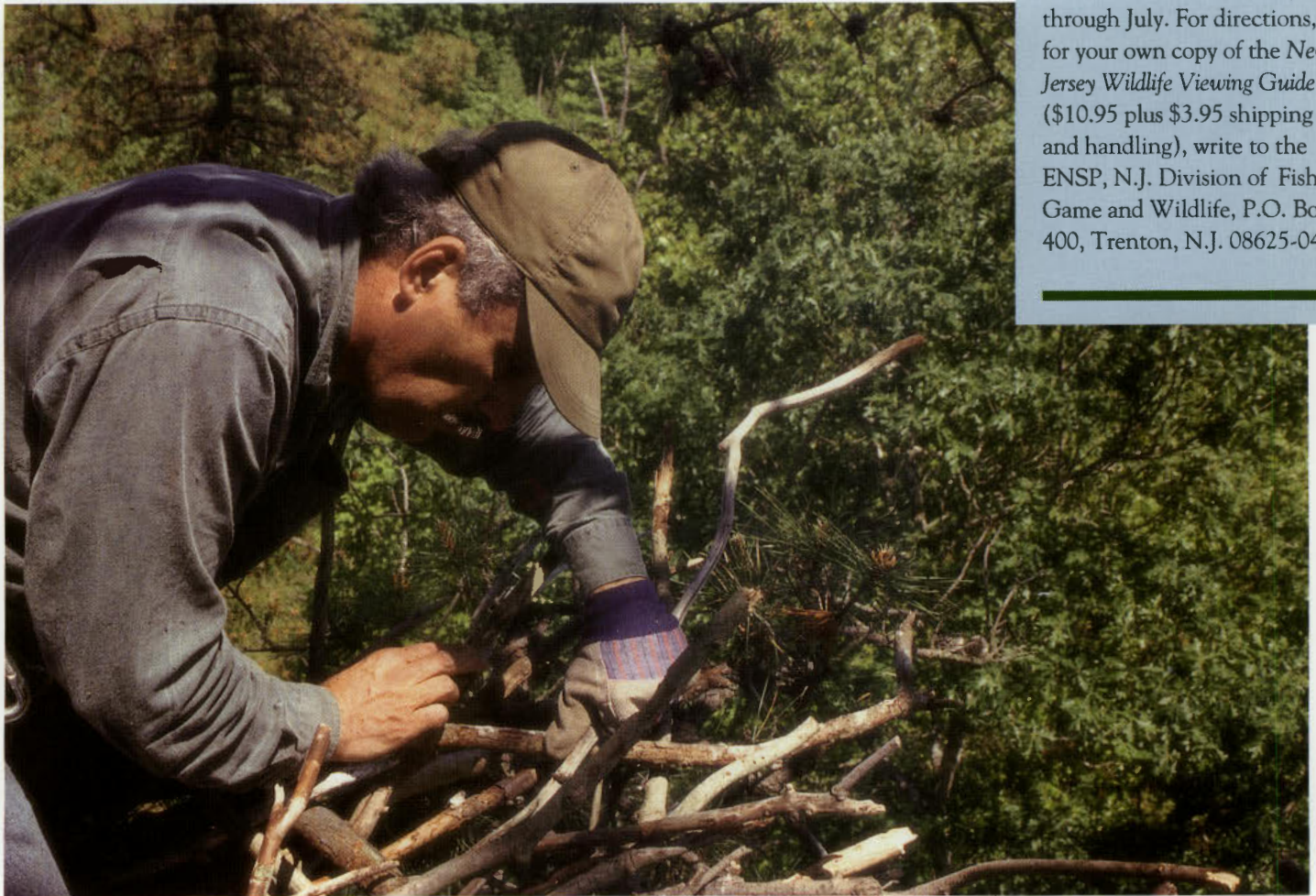
The bundled sticks have almost reached the frame, where they will be woven in by Niles (below, right).



Niles weaves the sticks into the frame, the screen and the limbs of the tree.

Eyeing the Eagles

A safe viewing area has been established at the Stow Creek nest in Canton, on the border of Salem and Cumberland counties. Eagles are active at the nest area from January through July. For directions, or for your own copy of the *New Jersey Wildlife Viewing Guide* (\$10.95 plus \$3.95 shipping and handling), write to the ENSP, N.J. Division of Fish, Game and Wildlife, P.O. Box 400, Trenton, N.J. 08625-0400.



actually laid eggs. Biologists built a nest within 500 yards, away from the disturbance of the shoreline and into the forest. The eagles accepted the new nest immediately and began building it up before the new nesting season.

The first time New Jersey biologists built an eagle nest was in 1987— in Bear Swamp Natural Area, the site of the original remaining

nest. The nest tree, a huge pond pine, had died years before and would not support the nest any longer. Choosing an adjacent pine of similar size and height, ENSP biologists spent a December day building a stick nest three feet deep by four feet wide. Just a week later, the eagle pair was observed at the new nest, adding material to prepare for nesting.

The success of that first nest supported the belief that new nests should be built close to old nests. New nests “work” — get used by eagles — when they are less than 300 yards from existing nests, and perhaps when eagles have a need to move away from disturbance or into forest that may be more secure.

Building nests for bald eagles has become an impor-

tant tool for managing and maintaining eagles in New Jersey. The state’s eagle population continues to grow, and each nest requires an investment of protection and concern by landowners and communities. When eagles nest in a favorable place, biologists work to maintain their habitat and make the nest area secure. Part of that work may in-

The grounded eaglet was finally placed into his new home. The adults were observed on the nest in the weeks afterward, and the nestling fledged successfully about a month later. The new nest will be there to support nesting eagles for many years to come.



clude replacing a nest now and then. Bald eagles represent wilderness, and they need wild places, free from excessive disturbance, where they can nest, hunt and raise young. Eagles also need the protection that people offer: keeping nest areas secure, protecting wetlands, and keeping their distance when they watch eagles.

Kathleen Clark and Larry Niles work for the Endangered and Nongame Species Program; Sherry Meyer has worked with the ENSP as both a consultant and a volunteer.

Your Help Can Make the Difference

The Endangered and Nongame Species Program (ENSP) works to protect and enhance the state's bald eagle population, as well as 61 other state endangered and threatened species. The ENSP receives no state funds, and relies on donations made through the State Income Tax "Check-Off for Wildlife"

and "Conserve Wildlife" license plates. For the ENSP's free quarterly newsletter, *Conserve Wildlife*, please write to: *Conserve Wildlife Newsletter*, P.O. Box 400, Trenton, N.J. 08625-0400.

Nest-Building Efforts by ENSP Biologists

Year	Site	Circumstances	Result
1986	Bear Swamp Natural Area	Original nest tree died. New nest built in adjacent "super canopy" pine within 200 yards	Occupied
1988	Belleplain State Forest #1	Nest built near the forest where eagles were being seen (no existing occupied nest)	Not Used
1989	Cohansey River	Original nest was located close to a residential driveway and barn, subject to disturbance. New nest was built 500 yards distant in similar habitat.	Occupied
1993	Union Lake	Original nest was on an island subject to disturbance. New nest was built inland within 1/4 mile.	Occupied
1997	Belleplain State Forest #2	Original nest tree died and nest with young collapsed in storm. New nest built in an adjacent pine within 50 yards and nestling was placed in it.	Occupied

Paddlin' In the Pines

© PAUL HOLLERBACH



by *Andrée Jannette*

If you don't know how to turn your canoe on a dime when you put in at your first Pinelands river, you will by the time you finish. These are narrow, winding rivers, full of sweeping curves and sharply angled switchbacks. Yet these twists and turns are very much a part of the mystique and the delight of paddling in New Jersey's Pinelands.

Rounding a bend in one of the region's rivers is like opening a gift; you never know what you'll find, whether it's a young fawn standing stock still by river's edge or a dazzling display of wild orchids in bloom. Or yet another glimpse of nature at its most serene — sunshine glinting off the tea-colored water of the river; stately Atlantic white cedars rustling softly in the breeze, their vivid greenness sharply defined against a bright blue sky; a dazzling white, sandy river bank offering the perfect spot for a picnic.

All this and more lies within an easy drive of one of the most populated areas in the world. New Jersey's Pinelands are a priceless recreational treasure for paddlers from throughout the New Jersey/Eastern Pennsylvania/New York region.

"That's a big part of canoeing here — to get away from it all, to still be in New Jersey, to not have to travel for hours and hours," explains Gil Mika, Wharton State Forest naturalist.

"The convenience of the Pine Barrens is what got me started," comments Carl Billerts, a long-time paddler and member of the South Jersey Canoe Club. "The sinuosity of the rivers



and their constantly unveiling nature got me. They're always different around each bend. It's like a motion picture — *better* than a motion picture!"

"We're partial to the Pine Barrens," says Toms River's Ginny Carty, who with her husband, George, has just completed a personal goal of canoeing in all fifty states. "The flora and fauna are just indescribable. We're very lucky to have such beautiful rivers so close to home. We use the Pine Barrens year after year, all year round."

Yet many people remain unaware of this remarkable area, familiar with it only from the signs they see by the side of the road as they speed to and from the Jersey Shore. Those who do turn off onto the smaller roads to explore deeper into the heart of the Pinelands are rewarded with images of striking and unusual beauty, and restored by the serenity of its land and riverscapes.

Anything But Barren

The early settlers called the area the Pine Barrens, believing it to be unfit for traditional agricultural pursuits. Only many years later did they discover the multi-faceted value of the sandy soil that underlies so much of the region and that gave rise to the area's role as a leader in 18th- and 19th-century America glassmaking and iron works and to today's flourishing cranberry and blueberry industries.

The Pinelands consists of approximately 1.1 million acres of land that encompass part of seven southeastern New Jersey counties: Atlantic, Burlington, Camden, Cape May, Cumberland, Gloucester and Ocean — almost one-quarter of the state. It is heavily forested, predominantly with oak, cedar and pine trees. "Atlantic white cedar is probably the most characteristic wetland tree of the Pinelands," says Mika.

There is no industrialization in the region, and little agricultural development other than cranberry and blueberry cultivation. The Pinelands also has a remarkably low population density — only fifteen people per square mile. Those who do make their home in the Pinelands tend to live in or near the area's few small towns and villages.

In 1978, Congress designated the Pinelands as the nation's first National Reserve. The next year, New Jersey passed the Pinelands Protection Act. The United Nations Educational, Scientific and Cultural Organization declared the region an International Biosphere Reserve in 1983, one of only 247 international sites.

What makes the Pinelands such a unique resource? For one thing, it is the largest "wilderness area" on the Mid-Atlantic coast between Boston and Washington, D.C. Secondly, it is home to more than 1,200 plant and animal species, almost 100 of which are threatened or endangered. Finally, and perhaps most importantly, it sits atop one of the continent's largest aquifers or underground reservoirs, the Kirkwood-Cohansey, which is estimated to hold 17 trillion gallons of fresh water — enough to cover all of New Jersey in ten feet of water. It is the source of water for the residents of the small towns and villages that sporadically dot the Pinelands, providing them with some of the purest drinking water in the world. All the rivers, streams, bogs and swamps of the Pinelands originate from this aquifer. No water comes into the Pinelands from rivers or streams outside of the area.

One of the first things you'll notice about the rivers and streams of the Pinelands is the unusual tea color of the water. This is caused by a combination of the high iron content of the soil and the tannin from the Atlantic white cedars that are such a dominant part of the Pinelands landscape. Depending on the season, recent rainfalls and the nature of the individual river, the color can range from slight beige to almost black. Despite its appearance, the water of the Pinelands is pure and unpolluted.

Batsto River

The Batsto River, in Wharton State Forest, is perhaps one of the most beautiful of the Pinelands rivers. Not as easily accessible as some of the other rivers, it is more private, more secluded. Once you are on it, floating peacefully down its narrow main channel with sunlight filtering through the extensive forest of cedar trees that lines its banks, the modern day world with its worries and cares seems a million miles away.

"There are trees along the Batsto that you don't find along the other streams. A lot of white cedar that look whitish. They have a completely different appearance. It's like being in the middle of a lost tribe," says Billerts.

"The Batsto and the Oswego are my two favorite rivers," says John Kraiss, chairman of the canoe advisory committee of the Outdoor Club of South Jersey. "There's the least amount of intrusion. On both rivers you can do an entire trip without a road coming across." It is rare to hear a man-made noise of any sort once you are on the Batsto. Even if there are other canoeists on the river, the twisting turns of the Batsto soon hide them from view, leaving you to enjoy the peace and solitude of the river.

The most common put-in spot for the Batsto is at Quaker Bridge, off Route 206 in Atsion. From here down to the take-out at Batsto Lake, it is about 7 miles or approximately four hours. When planning your trip, figure on an average speed of one and a half miles per hour for a canoe, slightly faster for a kayak.

For the first third of your trip on the Batsto, the river meanders through cedar and pitch pine forests. Blueberry and huckleberry bushes grow among the trees nearest to the river. Cranberries grow at the water's edge. Swaying rushes bend with the slow current, just brushing the surface. At this point you are in the center of Wharton State Forest, the largest single tract of land in the New Jersey State Park System. It is almost impossible to believe you are within 30 miles of both Atlantic City and Philadelphia.

About an hour into the trip, bends in the river reveal sunlit banks of soft, white sand, providing wonderfully quiet places to get out, stretch the legs and have lunch. Two-thirds of the way down the Batsto, the river opens out, growing wider, with more open space. Off to both sides of the main

© PAUL HOLLERBACH



Batsto River grasses

A lily pad (opposite page) on
Batsto Lake

Batsto River (below)



© PAUL HOLLERBACH

Canoe and Kayak Rentals

- **Adams Canoe Rental**
Shamong; 609/268-0189
- **Al & Sam's Canoe and Boat Rentals - Kayaks Too!**
Newfield; 609/692-8440
- **Bel Haven Canoe Rentals**
Green Bank; 609/965-2205 or 1-800-445-0953
- **Belleplain State Forest**
Woodbine; 609/861-2404 or 609/861-5136
- **Cedar Creek Campground**
Bayville; 732/269-1413
- **Kayak King**
New Gretna; 609/296-8002
- **Lenape Park Rec'n Center**
Mays Landing; 609/625-2021
- **Mick's Canoe Rental**
Chatsworth; 609/726-1380
- **Mohawk Canoe Livery**
Farmingdale; 732/938-7755
- **Mullica River Boat Basin**
Green Bank; 609/965-2120 or 609/965-BOAT
- **Pine Barrens Canoe Rental**
Chatsworth; 609/726-1515 or 1-800-732-0793
- **Pineland Canoes, Inc.**
Jackson; 732/364-0389
- **The Jersey Paddler**
Brick; 732/458-5777 or 1-888-22KAYAK
- **Paint Island Canoe and Kayak**
Bordentown; 609/324-8200
- **Triple T Canoe Rentals**
Beachwood; 732/349-9510
- **Winding River Campground**
Mays Landing; 609/625-3191

channel there are now pools and marshes where wild orchids, irises, pitcher plants and lilies can be found in season — late April to May is the best time to catch them in bloom.

"In spring, there are a lot of orchids blooming," says Mika. "Along the rivers, check out some of the stagnant, very shallow water areas. May and June are best for variety's sake in the wetlands area." If you're lucky, perhaps you can spot one of the Pinelands' endangered species, the Pine Barrens tree frog. It's small and brilliantly colored — bright emerald green with a broad band of lavender bordered by white that runs from its head down along its sides.

As you approach Batsto Lake, a man-made lake that's part of historic Batsto Village, the river's main channel becomes hard to identify as it meanders in wide turns through lush growths of grasses and reeds. Follow the moving water that's clear of growth — that's the main channel. The river doubles back on itself again and again as it flows through this area, but regardless of how tempting it looks to take a shortcut and push through across patches of grass and reeds, don't do it. That maneuver often has resulted in people getting stranded and having to walk their canoe out.

The take-out for Batsto is about a half-mile on the right as you're coming down the lake. It is marked by yellow bands painted around two tall pine trees. The lake itself can often be a push, especially at the end of the day. It's shallow, and a brisk headwind can make for a hard paddle to the take-out.

Great Egg Harbor River

The Great Egg Harbor River is a favorite with veteran Pinelands paddlers. "It's like visiting an old friend," jokes Warren Wittman, a long-time member of the South Jersey Canoe Club. "When I die they're going to rename that river after me."

One of the most commonly-used put-ins on the river is at Penny Pot Park on Eighth Street in Folsom. A good take-out spot is in Atlantic County Park at Weymouth Furnace, on Route 559. This makes for about an eight-mile, or five-hour, journey.

Once you put in at Penny Pot, you enter a peaceful, tree-lined world of gently flowing water. The banks of the river are lined with the pines, blueberries and huckleberries so characteristic of the Pinelands. The Great Egg winds its way slowly and gently towards Weymouth. It's an easy river that carries you along, requiring little in the way of paddling. After about an hour, you'll see a number of sandy banks that are ideal for picnicking, including one long, broad spot that's located at a sharp bend in the Great Egg. After you pass through this section, houses along the river become more frequent.

At the end of your journey, the Great Egg rounds a tight turn and ahead are two bridges. Through the first, you can see what's left of the historic Weymouth Furnace and the adjacent parking lot. Within a few yards, as you continue on, there's a very sharp curve in the river where the current can create a short stretch of white water. At this point, you pass under the second bridge and arrive at the take-out point.

The only down side I found to the Great Egg is that at times you do hear traffic noise from nearby roads, in particular Route 322. But even this man-made intrusion seems to fade away as you relax more and more into the experience of going with the flow of the river.

Cedar Creek

Most of this waterway is within the boundaries of Double Trouble State Park, which consists of more than 5,000 acres of Pinelands habitat. There are a number of canoe accesses to Cedar Creek; I used Ore Pond just off of Route 530 in Berkeley Township. The most frequently used take-out point is at a recreational area off South Street in Lanoka Harbor. An old train trestle spans the creek at this point and a pump station can be seen on the other side. From Ore Pond to this take-out is about a four- to five-hour trip.

Cedar Creek offers paddlers a beautiful journey through the Pinelands environment. The creek's waters run deep and clear, with only a faint blush of the characteristic tea color, as it winds its way through small islands and outcroppings of cedar on the first leg of the journey. Blueberry and cranberry bushes are everywhere.

The creek is very open to the sky at this point and sunlight dances off the water. Everything seems

very bright, clear and clean. Grasses and rushes are abundant, providing paddlers with as much to look at below water as above.

"My brother took me for a canoe ride on Cedar Creek in the 1960s," says George Carty. "I fell in love with it. I couldn't wait to introduce my wife to canoeing. We've been paddling ever since."

High-voltage power lines overhead mark the transition from narrow creek to large open pond as Cedar Creek flows into an old reservoir. The pond is one of stark beauty, filled with the bare bones of dead trees jutting against the sky.

"We call it the Petrified Forest," says George Carty. "They use it for the cranberry bogs."

The pond is a shallow one, so it can be a hard paddle on a windy day. At the end of the pond is a dam. You need to portage at this point. Be aware that the dam was constructed of concrete and not of soft sand as it first appears from the distance. The surface is rough and sharp stones jut from it. Watch your boat and your feet during landing and portage.

Downstream from the dam, Cedar Creek narrows and becomes shadier. There's ample evidence of beaver activity, with dams to the left and right of the main channel and plenty of works in progress along the river banks. It's amazing to see 10-inch trees still standing, albeit precariously, after they have been gnawed almost all the way through.

"We've seen beavers and otters on Cedar Creek," says Ginny Carty. "I've come face to face with them. It startles me and it startles them."

At frequent intervals you can spot small wellings of spring water entering the creek, infusing more clear, cold water into the main channel.

A few hours into the journey you'll pass under a wooden footbridge. This is part of the state park's nature trail. Just on the other side of the bridge is a lovely small pond, encircled by cedars, where it's pleasant to drift peacefully for a moment or two before continuing on your way. After this point the creek begins to more closely resemble some of the other rivers and streams in the Pinelands with stands of cedar gracing its banks and shading the water.

During the course of your journey on Cedar Creek, you pass under the Garden State Parkway and Western Boulevard. A sharp turn on the creek brings the pump station and railroad trestle into view. You need to come around through the trestle to take-out.

The only down side to the trip on this lovely creek was the unwelcome presence of beer cans and bottles along the way. There weren't many, but they did show up at fairly frequent intervals, disturbing the appearance and appeal of this otherwise pristine waterway.

Other Pinelands Rivers

The Batsto and Great Egg Harbor rivers and Cedar Creek are only three of the many waterways that offer unique and memorable experiences for paddlers in the Pinelands. "Each river, while it may share certain characteristics with other Pinelands waterways, has its own personality," explains Hartley Tucker, a member of the South Jersey Canoe Club, "though I never met a river I didn't like."

The other principal rivers in the Pinelands are: several branches of the Rancocas Creek in the northwest section of the Pinelands; Maurice River in the south; the Westecunk and Oyster creeks, and the Toms, Metedeconk and Manasquan rivers in the northeast; and the Mullica River and its tributaries (the Wading and Bass rivers, and the Nescochague and Landing creeks) in Wharton State Forest. The Oswego River and Tulpehocken Creek flow in to the Wading River, which is thought of as the "party river" during the height of the season.



© NANCY L. ERICKSON, NEW WAVE PHOTOGRAPHY

Canoeing on Batsto River



© HERB SEGANS

Canoeing on the Mullica River at the Godfrey Bridge Campground near Batsto is a real crowd pleaser.

Tips on Canoeing the Pinelands

The rivers in New Jersey's Pinelands often have as many twists and turns as a corkscrew. Know your paddle strokes before you start out or get someone to teach you. Otherwise you'll be spending most of your time disentangling yourself from riverside bushes and tree branches or — in the worst-case scenario — drying yourself off after an unplanned dunking.

"The streams here, on the whole, are narrow," explains Mike Mangum, chief naturalist of the Ocean County Park System. "They wind around a lot and there are obstacles in the water. It takes some decent canoeing skills to canoe these rivers and have a good time."

"It's not like paddling around a pond," adds Tucker. There's a continuous series of S-turns. There are strainers, low branches over the water, and "alligators" — obstacles in the water. You have to be able to read the river. You have to know how to handle your canoe.

"If you're coming around a tight turn and all of a sudden there's an obstacle and you're on the wrong side of the river to get around it, you better know what you're doing."

According to veteran paddler Kraiss, the typical novice mistake is to paddle too much into a turn. George Carty suggests

staying on the inside of the turn, but he advises paddlers to carry a dry change of clothes.

Blowdowns — downed trees that block a paddler's path — are common occurrences in the Pinelands. The canoe liveries and local canoe clubs try their best to keep the rivers clear, but if you're going out of season or on a little used section of a river, you might want to take a saw with you.

■ Renting A Canoe/Kayak

There are a number of canoe liveries in the area where you can rent a canoe or kayak, and they will transport you to the put-in point. Some of the liveries provide hauling services for people who have their own boats. They also are a great source for information on water and river conditions; call them before you go. For a full list of canoe liveries, contact Ocean County Parks and Recreation, Wells Mills County Park, at 609/971-3085, or the Pinelands Preservation Alliance at 609/894-8000.

■ Water Conditions

Although the Pinelands' waterways are supplied by the Kirkwood-Cohansey aquifer and therefore are not as susceptible to fluctuations in rainfall as flood-plain rivers are, they do become shallower in mid to late summer. The lack of rainfall last summer and fall brought down some of the river levels so much that they were virtually unnavigable by canoe. In particular, the Mullica and Oswego Rivers frequently become too shallow to canoe by the end of summer. Additionally, the Oswego's water often is diverted for the cranberry harvest in October and to flood the plants as protection during the winter months. Always call before you go to check on conditions.

■ Picking the Time

Everyone has their own preference as to the best time to go. The middle of summer and weekends are the worst times if you want a solitary, communing-with-nature experience on one of the rivers in the Pinelands. If you can, go in early morning or on weekdays.

"There's a window of opportunity in April, when the swamp maples come into bloom," says Billerts, noting that they're red like a poinsettia, in striking contrast with the green of their leaves and the marsh grass. "There will be a week when it's absolutely brilliant. The red and green and the sense of light and openness."

Mangum also thinks April is a great time to explore the Pinelands rivers. "If you hit it at the right time, the herons are migrating," he says.

"We don't go in July and August," explains Wittman, "... too many bugs, too many spider webs." But he adds, "Anytime I get in a boat I enjoy myself. Anytime."

Although Joy Kraiss prefers springtime, with its beautiful flowers, her husband casts his vote for the fall, when he enjoys the reflection of fall foliage on the water. "It's so clean, there's so very little of that left. It's like something that's still here for us to enjoy," he muses.

The Cartys love winter paddling. George describes such a day on Cedar Creek: "It was a Sunday, right after 5 to 6 inches of snow fell. It was clear as a bell, with a beautiful blue sky." Ginny adds, "It was like a winter wonderland."

■ **What to Watch Out For**

Ticks, ticks, ticks. The deer tick is abundant in the Pinelands. The prime season runs from April to November, so be sure to take common-sense precautions: Use bug spray, wear light-colored clothing, roll your pant legs inside your socks, and always check for ticks after any outdoors excursion. People think that they're not going to be bothered by ticks when they're out paddling on the water. Wrong. Brushing through overhanging branches, portages and other rest stops can put you in the position of providing livery service to some very unwelcome customers.

"Don't take going into the wilderness lightly," Tucker advises. Be prepared. Never overestimate your own abilities, and never underestimate the potential of things to go wrong." The Pinelands rivers in Wharton State Forest are miles from paved roads. They are truly wilderness areas. There are no quick exits if you get in trouble or get hurt; you'll have to either paddle or hike out. Wittman makes it a point never to go by himself. "What am I going to do if I upset? If you have someone with you, well you've got help of some kind," he says.

Kraiss thinks that one of the biggest mistakes people make in the Pinelands is that they think they don't need to wear a PFD (personal flotation device). "There are some deep spots," he explains. "You can hit your head or get tangled in the branches of a blowdown. Wear your life jacket."

Also, keep in mind that hunting is allowed in New Jersey's state forests, so check with park rangers about what's going on and where so you'll feel and be safer when you're out paddling around.

■ **A Final Word**

Paddling in the Pinelands is an incredible experience — relaxing, peaceful and restorative. Take an afternoon or a day and visit this beautiful and unique area. And when you are out and about exploring the wonderful rivers of New Jersey's Pinelands, Ginny Carty's best recommendation for total enjoyment is to "just go with the flow!"

New Jersey State Library

Andrée Jannette is a freelance writer who lives in Swarthmore, PA.

© WILLIAM C. ERICKSON, NEW WAVE PHOTOGRAPHY



Paddling in the Pinelands is an incredible experience — relaxing, peaceful and restorative.

Fun on — and in — the water.



The Amazing Barn Raising Maze

by Kenneth Wajda

“Are y’all ready to get lost?” the Maze Caller bellows at the top of his lungs.

After a resounding, “Yes!” the Maze Caller leads the corral-full of people to the entrance of the corn maze for their last few introductory words. He quickly loses the kids as he explains the use of the map and the gathering of the puzzle pieces.

They’re busy staring, wide-eyed, at the field behind him — a field of corn at least twice as tall as they are.

The Amazing Barn Raising Maze at Belle Mountain, in Hopewell Township (Mercer County), is a three-acre field of corn cut into a maze the shape of the Henry Phillips Barn. The actual Henry Phillips Barn, which dates from 1835, sits a mile up the

© KENNETH WAJDA



road at Howell Living History Farm.

Acquired by Mercer County in 1974, Howell Farm is truly a “living history” museum, depicting life at the turn of the 20th century. It offers farm programs year-round.

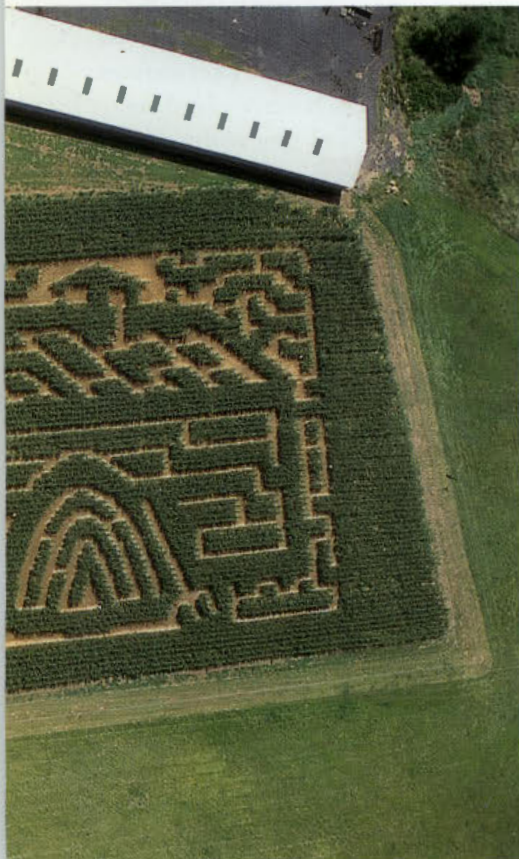
Restoration on the barn is due and the maze is its main fundraiser — and great family fun.

Germinating Seed Money

Pete Watson, Howell Farm Administrator, was introduced to the concept by Don Frantz, of the American Maze Company, located in Harrisburg, PA. Frantz and his staff have been building three-dimensional labyrinths since 1993, starting with a dinosaur maze in Lebanon Valley, PA. Since then, they’ve built mazes in the shape of a ship, a locomotive, Noah’s



© KENNETH WAJDA



JOHN CONN PHOTO PROVIDED COURTESY OF HOWELL LIVING HISTORY FARM

ark, an Amish horse and buggy and — to commemorate the 100th anniversary of the automobile — a quadricycle for Ford Motor Company in Detroit. Several of these mazes have been listed in the Guinness Book of World Records as the largest maze in existence.

“I had visited the farm five years earlier, and kept a souvenir mason jar of Indian corn on my dresser as a token of my trip,” says Frantz. “After building the various mazes and becoming more interested in attracting people to the farm experience, I realized that the Howell Farm would be the perfect location for a maze.”

Watson puts the project in perspective, explaining, “We need to restore this barn and we’d probably never get the money to do it unless we go outside to the private sector. This was a way to get some seed money to start the project.”

He discussed the idea with the Friends of Howell Living History Farm, the staff and the Mercer County Park Commission, the farm’s operator. They loved it.

“They all said, ‘Yeah, we gotta do it, we’re going to get this project off the ground,’” Watson says.

It was a go, but Frantz wasn’t sure it was possible for his company to take on the maze this year, what with the other maze projects he had under construction.

“Maybe next year would be better,” Frantz offered.

Watson told him they couldn’t wait; that they’d just have to figure out how to do a maze and do it themselves. Frantz promised to offer phone advice along the way.

After getting a late start due to the wet spring, the staff plowed the field, planted the corn, and waited. And waited. And waited.

Participants move through a lane of the maze (opposite page).

An aerial view of the maze (left) shows off its clever design.

Participants in the maze (above) attach a missing map piece at a mailbox.



The corn crop failed.

It was now almost the end of June and they had no corn. They quickly replowed the field and replanted. This time, fortunately, it was a successful crop.

Having little idea how to proceed, Watson phoned Frantz for some tips on cutting the maze. With his company's other mazes already under way, and seeing that Pete and his crew were resolved to build a maze, Frantz dedicated three of his staff — maze manager Liz Stanton, maze designer Ian Marshall and music director Rich Schneider — to the Howell Living History Farm project for the rest of the summer.

Putting the Barn Into the Corn

Ian Marshall, a maze fanatic since age three, is the designer. Working with Liz Stanton, the Maze Manager, he started with photos of the actual barn and began creating the maze on paper.

"I drew a simple picture of a barn and shaped it so that it was as similar to the real barn as possible, with the cupola and

the horse — which is a real horse there, named Blaze," Marshall explains. "I set that onto a grid that matches this cornfield exactly. Every horizontal line of the grid matches with a row of corn."

The key elements of the maze became the barn with cupola, a wheat stack, a pitchfork, the sky, the grass and Blaze. Each of these elements was assigned a different color, and the section depicting it in the maze has ribbons corresponding to that color, so that when you're inside the maze, you have an idea of what part of the maze you're crossing through.

All you need to do to make your way through the maze is gather map pieces along the way and reach Blaze, who will lead you out of the barn.

The game board is set up as a map consisting of ten missing pieces. As you walk through the maze, you discover mailboxes, each assigned a number. Inside the mailbox is a pad of map pieces and tape. You tape one of the pieces in place and continue on your way. When

you have collected all ten pieces, you have a complete map of the maze. Now, getting out's a breeze.

Also, scattered throughout the maze are Kernels of Knowledge, fact boards which answer the fifteen farm trivia questions — such as "Why are so many barns painted red?" (because of relatively inexpensive red paint) — that are part of the game as well.

"There's just one entrance and one exit, and several ways to get between the two," explains Marshall.

The shortest route through the maze is a half-mile in length; there are two miles of pathways in all. The maze is rather straightforward and the staff have noted that kids often have the easiest time of finding their way through because they don't seem to overthink what they're doing.

"If you know where you are in the picture and you know where it is you want to be, it's not too difficult to go and find it," Marshall points out. "A key element is to trust that you haven't missed anything along the way. One of the major points that makes people stay in the maze a long time is that they start to doubt themselves and they turn around and go back just to make sure they haven't missed a path. Then they get confused and turned around."



This couple looks confident that they've got it all figured out (left).

Maze Master Liz Stanton (opposite page) gives advice to "lost souls" from a platform in the maze.

© KENNETH WAJDA

Preparing to Be (A)Mazed

It's a crisp autumn afternoon and folks are eager to take the challenge of solving the puzzle and finding their way out of the cornfield. They know there's a chance they'll get lost, though they're mostly confident they'll be able to navigate its twists and turns.

That is, until the Maze Caller unleashes the hard facts on them. "The average time is an hour and the quickest time today was by a group of teenage girls who made it through in just about 20 minutes," he announces. There's a collective sigh of relief until he adds, "And the longest time was by an older couple at three hours and five minutes."

The crowd groans.

The Farmers, as the maze walkers are called, have the option of carrying a tall colored flag that makes their whereabouts known. It's not an uncommon sight to see a flag repeatedly going back and forth in the same spot, a sure sign of a lost Farmer.

"There's always help if you need it," the Maze Caller shouts. "Situated up high on a platform in the center of the maze is the Maze Master. He can see you from above and will point you in the right direction if you ask him."

"However, in order to approach him, you must call him by his formal title, which is, 'Oh Mighty Maze Master.' And don't be surprised if he asks for a bit of entertainment — a little song or dance in exchange for the coveted information," the Maze Caller warns.

They're warned, they're ready. They enter the maze.

Each Farmer's Trek is Unique

The time of twenty minutes by the group of teenage girls is considered remarkable, though the record is fifteen minutes. But what about that three-hour and five-minute couple?



© KENNETH WAJDA

Liz Stanton tells the story: "I was working in the maze filling mailboxes. I was coming around to mailbox four, which is really a very difficult piece to find, and I heard this squeal, 'Oh, we found it!' I saw this older couple embracing because they had found their final piece. I mean it was heartwarming; it was really wonderful as they stole a kiss in the cornfield. And I kind of just hung back a little bit, I really didn't want to interrupt this great moment they were having.

"I told them they had made my whole weekend," Stanton explains. "They had just taken in the whole experience without a care about the time. They were truly enjoying the outdoors and each other.

"I later found out they had asked for children's tickets at the box office when they arrived, explaining they were children at heart," she says.

But not everybody works together so well in the maze. Some people actually turn against each other, completely ignoring their partner's suggestions.

Lines like, "I told you we were going the wrong way," and "What were you thinking?" are blurted out. The staff joke around, saying there's a counseling booth set up next to the concession stand.

As participants take on individual strategies, the maze becomes a personal journey. While inside, you cannot be positive about every decision you make — and you live with the consequences of

your turns. (Sort of parallels life, huh?) The exit is achieved through a series of trials and errors.

Some people want help at every turn. "I tell them to just go, keep walking," Stanton explains. "Enjoy the journey. There are some discoveries you have to make on your own."

But a few people just don't like the out-of-control feeling that comes from being deep inside a maze. They're the ones who don't bother to address the Maze Master with the "Oh, Mighty . . ." prefix. They just look up and shout, "Get me out of here."

"When I'm the Maze Master, I immediately tell them left, right, right, left or whatever," Marshall says. "Whatever it takes to get them out."

In contrast, some people like being inside the maze so much they actually volunteer to help after making it through. Altogether, the maze is staffed with about fifteen volunteers per shift, all working for the good of the farm, the camaraderie and a free lunch.

Operating 25 days in total in 1997, (every weekend from late August through October, including a couple of moonlit nights), the maze raised approximately one-quarter of the barn's restoration costs. There are plans for three more mazes — each a different configuration — over the next three years. The 1998 maze is scheduled to open August 1. For more information, call the Howell Living History Farm at 609/737-3299.

Kenneth Wajda is a freelance writer/photographer from Lambertville. He and his wife, Mary, enjoyed their maze experience so much that they were among those who volunteered to work the maze.



© CORNELIUS HOGENBIRK

Peaches . . . sweet . . . juicy . . . yummm.

Reaping What Others Sow

Harvesting the Best From New Jersey's Pick-Your-Own Farms

by Cheryl Baisden

The savory smell of spit-roasting pig wrapped itself around Mary Phillips' taste buds, enticing her away from the sprawling strawberry field and into the barnyard at Johnson's Corner in Medford. After more than an hour spent gathering juicy red strawberries in the hot summer sun, a little nourishment was surely in order. As a matter of fact, the chance to enjoy a "country" afternoon was what drew her to the 120-acre pick-your-own farm in the first place.

"You go out to a pick-your-own farm to enjoy the whole flavor of the place, from picking your own fresh fruit and vegetables to having a sandwich at the annual pig roast," explained the Haddon Township resident, who shared the June experience with her husband and 75-year-old mother.

Johnson's Corner, like many other New Jersey pick-your-own farms, hosts a variety of special events throughout the year, in addition to offering a constantly changing selection of field-fresh produce available for harvesting from mid-spring through fall. Pig roasts, hay rides, pumpkin carving contests, baby animal petting zoos and seasonal cornstalk mazes are among the activities visitors can enjoy.

While the average pick-your-own outing may not include a pig roast, a generous scoop of hand-cranked ice cream or the chance to weave your way through a rustling cornstalk maze, spending a few hours harvesting your own fruit and vegetables has become more and more popular in recent years, according to Ron Good, an agricultural specialist with the New Jersey Department of Agriculture.

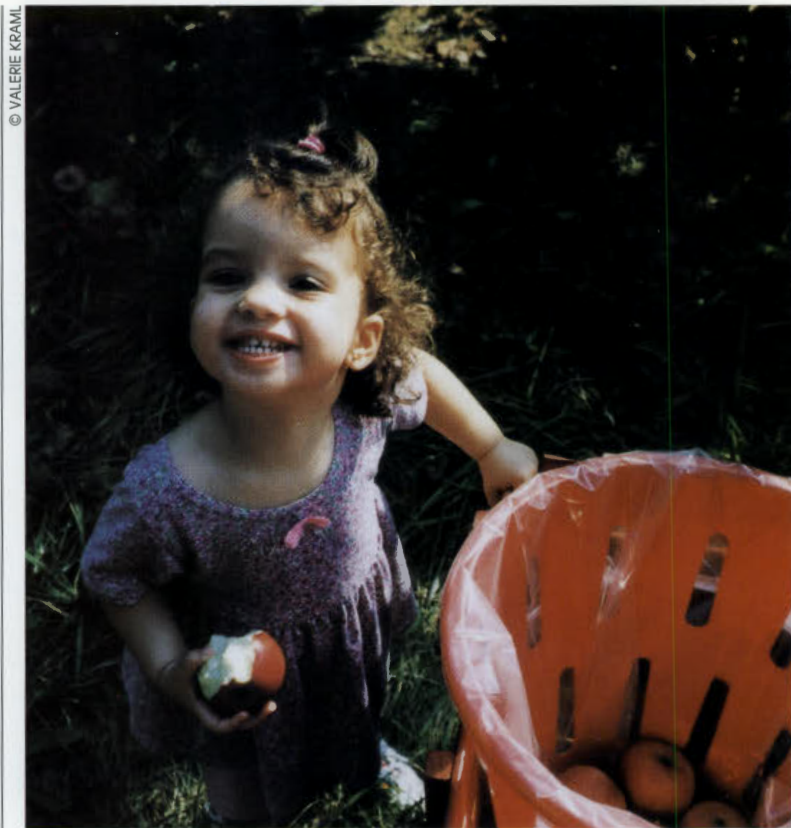
"If you really enjoy fresh fruits and vegetables, and you'd like spending time gardening but you don't have the space, time or energy to grow them yourself, pick-your-own is the way to go," says Terry Viggiano, a Lawrenceville resident who frequents pick-your-own farms. "Why weed and fertilize and water if you don't have to? Why not just head out into someone else's field and pick what you want? Then you don't have any of the hassle. You can be a farmer without any of the headaches of being a farmer."

According to pick-your-own owners, traipsing out to the field for a few hours of harvesting is a way for people to get in touch with nature, share some quality time together and stock up on fresh produce. And, while Jersey tomatoes may be the first crop that pops into the average person's mind when they think of the Garden State, New Jersey's 847,595 acres of farm land offer a surprisingly diverse selection of pick-your-own fruits and vegetables.

A Rich Harvest

Pick-your-own farms are scattered throughout 18 of New Jersey's 21 counties, from the state's sandy southern tip to its rocky northern ridge. Only the cramped quarters of Essex, Hudson and Union counties lack self-harvesting spots, according to Good.

Ranging in size from just a few walkable acres to seemingly endless fields that visitors can traverse only aboard rickety old buses or tractor-pulled wagons piloted by farm hands, the



© VALERIE KRAML

Briana Kraml (daughter of *New Jersey Outdoors'* designer) beams as she savors the taste of the apple she just picked.

state's 142 pick-your-own farms offer eager "weekend harvesters" (named for their casual pace rather than the days when they visit) the opportunity to gather everything from asparagus to zinnias.

Different varieties of old favorites and newly fashionable items are constantly being added to the self-harvest selection, but strawberries remain the prime pick-your-own produce, note workers at J & F Battiato Farms in Salem.

"When you bring it down to actual numbers," says Peter Johnson, of Johnson's Corner, "for every 50 people who come out to pick strawberries, one person shows up to pick peas."

The popularity of New Jersey's pick-your-own strawberries likely stems from the fact that the juicy red berries are a relatively early crop that signals the start of summer to many people, he says. Plus, they are easy to pick (if you don't mind squatting to reach the plants), and easy to eat.

"The best thing about picking strawberries is that you toss a handful in your basket and pop one in your mouth," says Viggiano. "They're hard to resist eating. And before you know it, your basket is full and so are you."

Bursting with flavor, these red, ripe, first fruits of the season are a favorite with pick-your-own devotees.

Benjamin Kraml, Briana's twin, enjoys another aspect of a pick-your-own outing as he chats with his big yellow friend.

U-pickers are hauled out to the field by tractor at Conti's Farm in Tabernacle.



© CORNELIUS HOGENBIRK



© CORNELIUS HOGENBIRK

"The fresh strawberries you pick in the field yourself are a real step above what you end up with from the store," adds Heather Bird, a Yardville resident who looks forward to the strawberry and blueberry harvests each year. "In the store you have no idea how long the berries have been there or where they came from. If you pick your own, you somehow feel connected with them, you know where they came from, how they were handled and how long they've been off the vine."

You also feel confident that no preservatives or colorings have been added to the produce, according to Heidi Nini, a Lawrenceville resident.

The Cream of the Crop

New Jersey's list of possible pick-your-own crops, as well as the places available to pick them, is extensive. The following is just a sampling of what's available for the weekend harvester.

■ **Asparagus** — On hot spring days you literally can watch the asparagus grow, its sturdy stalks poking out of the rich soil. "It's an amazing thing to watch," says Johnson with a chuckle. "On a hot day asparagus can shoot up six inches in just a few hours.

© VALERIE KRAML



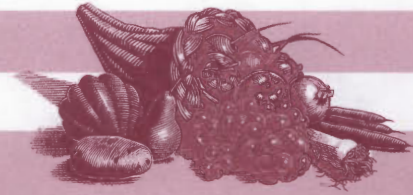
You can just stand there and watch it grow. But on cold days it just sits there and shivers."

As a cash crop, the tasty spears leave a lot to be desired. Highly labor-intensive, each spear must be individually sliced off at ground level with a knife. So rather than head out to the fields themselves, some farm owners offer visitors an opportunity to harvest their own small crop of tender spears for approximately \$1.25 a pound, a bargain compared to regular grocery store prices.

As an added bonus, fresh asparagus, cut in its prime, is always tender and juicy, according to a staff member at Grover Farm in Princeton Junction, which grows asparagus for self-harvesting along with Johnson's Corner, the Whistle Stop Nursery and Farm in Ringoes and Wessex Hill Farm in Stockton.

■ **Blackberries/Gooseberries** — For anyone who has ever harvested either of these little treasures, one warning rings true: Don't touch anything unless you're armed with gloves and long sleeves. Both gooseberries and blackberries are known for their thorny vines, so proper protection is recommended for anyone attempting to carefully pluck them from the vine.

Hard, bitter gooseberries, which are well-suited for pies and



Even though many people don't really know what okra is, there are quite a few pick-your-own farms offering the odd-looking green pods.

jams, can be harvested at Kash Farm in Hackettstown. Blackberry farms are far more prevalent, with pick-your-own groves at Wessex Hill Farm, Gold Seal Farm in Egg Harbor, River Side Homestead Farm in Cinnaminson, Four Winds Farm in Tabernacle, Moods' Farm Market in Mullica Hill, Schaefer Farms in Flemington (which offers a thornless variety), Phillips Farms in Milford, Lee Turkey Farm in Hightstown, The Berry Farm in Colts Neck, Alstede Farms in Chester and DeWolf's Farm in New Egypt.

■ **Eggplant** — Picking a great tasting eggplant isn't quite as simple as selecting ripened berries from the vine, according to Janet Lee, owner of the Lee Turkey Farm. The prime specimens of this purple vegetable are about six inches long and still retain a shiny coat. Once the purple skin begins to dull, Lee says, the meaty vegetable tends to become over-ripe and bitter.

Weekend harvesters can gather eggplants from the prickly shrubs grown at the Whistle Stop Nursery and Farm, River Side Homestead Farm, U-Pick in Mullica Hill, Cali Farms in Repaupo, C and L Farms in Piscataway, Stults Farm in Cranbury, Atlantic Farms in Wall Township, C Bar M Farm in Towaco, Sunhaven Farms in Hillsborough, Healthy Acres Farm in Somerset and Race's Farm in Blairstown.

■ **Flowers** — For those interested in filling their homes with the sweet scent of flowers rather than an assortment of tasty fruits and vegetables, a variety of bouquet-type flowers, from delicate pansies to hardy mums, can be picked at several locations.

Pick-your-own flowers are available from the colorful fields of Atlantic Farms, Whistle Stop Nursery and Farm, Lee Turkey Farm, Mays Landing Florist and Greenhouses in Mays Landing, Ponderosa Farm in Allentown, Country Gentleman Roadside Market in Skillman, Valley View Farms in Augusta and Ideal Farm and Garden Center in Lafayette.

■ **Grapes** — Juicy bunches of sun-ripened grapes can be harvested at Moods' Farm Market, Wondervue Orchards in Lebanon and Hillview Farms in Meyersville.

■ **Herbs** — An assortment of herbs, from heavily fragrant basil to the sweetly aromatic thyme, are raised for pick-your-own purposes at Mays Landing Florist and Greenhouses, Whistle Stop Nursery and Farm and C and L Farms. Regular herb harvesters recommend carrying separate bags to accommodate each selection. This, they say, will prevent the flavors from blending.

Also remember that when dried, a big bag of herbs shrinks down to fit in a small container.

■ **Okra** — Even though many people don't really know what okra is, there are quite a few pick-your-own farms offering visitors the chance to harvest their own supply of the odd-looking green pods. Freshest when harvested at about four inches in length with a crisp feel and a bright green coloring, okra is best when added to soups and stews after being parboiled and then fried, according to staff members at Royal Acres Farm in Williamstown (Gloucester County).

Okra also can be picked at Stults Farm, Giamarese Farm in

East Brunswick, VonThun's Country Farm Market in Monmouth Junction, Casola Farms in Colts Neck, Laurino Farms in Tinton Falls and Hallock's U-Pick Farm in New Egypt.

■ **Onions** — Harvesting a bag full of onions is reminiscent of the delicate task of dividing bulbs in your own garden. At Hallock's U-Pick Farm and Lewis Farm in Indian Mills, mature onions are selected in the field by locating plants with toppled yellow foliage and carefully digging up the onion bulbs below them.

■ **Pears** — Picking perfect pears requires that you ignore the basic agricultural lessons learned as children. While plucking an unripened peach from a tree may well leave you with a hard and tasteless piece of fruit, pears do not ripen well on the tree. As a matter of fact, tree-ripened pears become mushy and develop brown centers. Instead, pears should be picked when their stems begin to swell where they attach to the branch, or when the skin begins to shift from green to yellowish, according to Richard Mood of Moods' Farm Market.

River Side Homestead Farm, Fruitwood Orchards in Monroeville, Pochuck Valley Farm in Glenwood, Stoneyfield Orchards in Belvidere and Tree-Licious Orchards in Port Murray also maintain pick-your-own pear orchards.

■ **Spinach** — Picking spinach, as well as other leafy greens, requires a strong back and a large bag. The low-growing plants should be harvested carefully, using the fingernails to slice the leaves from the main portion of the plant. Ripping or pulling at the leaves, even if it is only a few leaves at a time, can damage the stem and root.

Continual picking is what helps spinach and lettuce thrive, and as much as half the leaves can be stripped from a plant without adversely effecting its health. But be sure to pick the outer, tender, young leaves from each plant rather than the inner core of the plant.

Spinach is available for picking at Lewis Farm, Giamarese Farm and Surf and Turf Farm in Pomona. Many pick-your-own farms offer other selections of leafy greens, from endive to kale.

■ **Turnips** — Patane's Farm in Gibbstown and Eonaitis Farm in Monroe offer weekend harvesters the chance to pick their own turnips, a tasty treat for anyone who thinks this white root veg-



Once you are out in the field, the hardest part of the excursion becomes controlling your urge to overindulge.

etable was meant to taste like the woody, often overgrown specimens frequently available in stores. Lifted from the ground when they are between the size of golf balls and tennis balls, they are surprisingly tender and flavorful.

■ **Watermelon** — Unlike most of the other pick-your-own crops, watermelon picking on its own is a rather brief excursion for the weekend harvester. At Lewis Farm, visitors can wander through the watermelon-lined rows knocking on likely candidates in their search for the perfect melon. But once a selection is made, and the sweet-smelling winner is hauled up to the parking area for payment, there's not much more to the excursion unless you add another crop to your harvesting list.

Fortunately, Lewis Farm also offers string beans, onions, cabbage, spinach, broccoli, corn, tomatoes and potatoes for picking at the same time as the watermelon crop.

Hand Picking a Location

While perusing the Yellow Pages is one way to locate a pick-your-own farm close to home, the somewhat generic listings will not provide you with a clear picture of the pick-your-own crops available in your region. The best way to select a harvesting location is by using the two thorough farm lists compiled by the Department of Agriculture each year, according to Good. And if you have a hankering for a specific fruit or vegetable, he added, there's nothing more enjoyable than taking a leisurely drive to a farm several counties away.

"With our guides you really can pick and chose — sorry about the pun — exactly what you want to pick and then go out (to that farm) and get it," Good says. "Being able to be selective makes the experience all the more enjoyable."

The *Guide to Pick-Your-Own Farms in New Jersey* breaks down pick-your-own farms by county, providing a description of each self-harvesting selection as well as the operating hours and phone numbers for each establishment. The 20-page directory is updated each spring.

The *Apple Guide* is an eight-page listing of fall-related establishments, from roadside stands selling fresh-baked cider donuts and locally-pressed cider to sprawling pick-your-own apple orchards and pumpkin patches.

Both directories are free and can be obtained through the Department of Agriculture's fax-back line, at 609/984-2633. When the phone connection is made, press 251 for the spring farm guide or 252 for the apple directory. The material also is available on the Internet at www.state.nj.us/agriculture/publ.htm, and both directories can be mailed to anyone who calls 609/292-8853 and leaves their address.

No Experience Required

In most cases, there are no special supplies needed to harvest a bag full of broccoli or a carton of cabbage, so a spur of the moment stop by a pick-your-own farm spotted along the roadway is easy. Harvesting baskets are supplied by the farm staff. Once your harvest is brought in from the field, it is weighed and placed in a plastic or paper bag. The baskets are then circulated to new customers.

"The only thing that really requires special equipment is the asparagus," says Johnson. "We give anyone who's picking it a steak-type knife to use out in the field."

Of course, weather conditions should be taken into consideration when planning an excursion, along with any personal comfort matters. For example, you may wish to wear a lightweight hat if the sun is strong or gloves if you are harvesting a prickly vined fruit such as raspberries, noted an employee at Cahill's Farm in Andover, which offers weekend harvesters string beans, yellow wax beans, pumpkins, plum tomatoes, raspberries and blueberries. Other considerations include waterproof shoes in the soggy spring and long sleeves and pants if you will be reaching into shrubs, vines or trees or kneeling frequently.

A Bushel and a Peck

Once you are out in the field, the hardest part of the excursion becomes controlling your urge to overindulge.

"When you're out there and see all of those great blueberries, you just get carried away," says Bird, who has over-picked her share of several different crops over the years. "You keep picking and picking and the next thing you know you have more than you know what to do with. You can't help it, you just get greedy."

The solution for many pick-your-own veterans is to make arrangements with friends, neighbors and family to harvest for them as well.

"The first time you go out to one of these farms you don't really think about how much you have in your baskets. Then you get home and you can't possibly eat everything you brought home," says Phillips with a chuckle. "You end up giving a lot away and in the end it costs you a lot more for those strawberries than it would have in the grocery store. If you find other people who want to chip in for some of your harvest, it works out great. You get to have fun and lots of people get the chance to enjoy perfect fruit and vegetables."

A frequent contributor to New Jersey Outdoors, Cheryl Baisden is a freelance writer who resides in Collingswood.



© ARLINE ZATZ

You might say
the day began
on the
wrong foot.

Kayaking is just one
of the water sport
classes offered.

LESSONS & LAUGHS for an OUTDOORS WOMAN

Story by Arline Zatz

A funny thing happened on the way to my becoming an outdoors woman. You might say the day began on the wrong foot. Shortly after leaving my car, I tripped over a rock and flew — *not* with the greatest of ease — like an arrow through the air! Too late, as I lay in the middle of the road spitting out bits of gravel, I wished I hadn't been distracted by the beauty of the surrounding woods at Stokes State Forest — or busy checking for the black bears known to be in the area.

While trying to assess my wounds, I heard a vehicle stop what seemed to be mere inches from my head; moments later a male voice whispered sympathetically in my ear, "Do you need help?" Of course not, I thought; I always relax in the road on my stomach!

After accepting the offer to help me stand upright again, I mumbled an embarrassed thank you, and limped, bleeding, a half mile down the road to register for the Becoming an Outdoors-Woman (BOW) workshop sponsored by the New Jersey Department of Environmental Protection's Division of Fish, Game and Wildlife, which was being held at the New Jersey School of Conservation.

I couldn't help chuckling along the way as I recalled my husband's suggestion that I reconsider taking the basic firearms course. He had been concerned I "might get shot by another novice." At the time, I thought, what's there to worry about? Wasn't I an experienced canoeist, cyclist and hiker with a great love for the outdoors? From the moment I heard about this award-winning, international outdoor skills program that had been designed specifically for women in 1990 by Dr. Christine Thomas, a professor at the University of Wisconsin, I knew I had to attend. Although it was ironic that I got hurt before I even took the shooting course, I prayed that this incident wasn't a preview of things to come — and that my wounds would heal by the time I returned home.



Above: Participants find out all about the weekend's activities.

Opposite page, right: Taking aim at a (clay) birdie

Opposite page, left: Archery is a popular session.

Check In; Check It Out

Waiting for my turn to sign in, I took inventory of the participants. With surprise, I noted that the average age of the participants was about 45. They came in all different shapes, sizes, ethnic backgrounds and physical conditions, and — whether they were married, divorced, empty-nesters, employed or retired, or had come simply out of curiosity, for the challenge or something new to do — each exhibited the same bright-eyed look of excitement. I imagined that many, like myself, had never been to sleep-away camp as a child or bunked with strangers before.

Although a bit apprehensive, I felt confident this weekend would be terrific and educational, especially since I was an experienced camper. After all, didn't I frequently "rough it" in the woods in a Jayco camper — complete with shower, stereo, air conditioning, toilet and comfy bed?

After receiving a thick packet of information from coordinators Laurie Pettigrew and Mimi Dunne, plus an assortment of bandages for my multiple wounds, I tossed my sleeping bag and other paraphernalia into the truck waiting to whisk our gear up to the dormitory style "rustic" cabin assigned to me a "short" walking distance away. The short walk turned out to

be a long uphill hike along a rocky path. Gratefully, I discovered I had regained the hang of walking without tripping, but all the huffing and puffing I was doing was my first clue that I had better begin an exercise program after the weekend.

As the first person to arrive at the cabin, I had my choice of bunks, but even this lucky break didn't compensate for how truly rustic this cabin was. As the reality of having to walk a distance back downhill to the toilet and shower house struck home, it dawned on me that I'd *really* be roughing it now for the first time in my life.

I was happy to find flush toilets, but wished I had brought a can opener along. The cubicles were so tiny that not only did my knees touch the door when I sat down, but in order to exit from the cubicle, it was necessary to hold my breath and flatten myself against the wall. It could be a lot worse, I figured, like having pit toilets, but there were more surprises ahead in this no-frills rest room.

After searching for paper towels or a drier (since I had left my towel in the cabin), rather than remain dripping in front of one of the sinks, I became innovative and used the t-shirt I was still inside to dry myself. Proud of this brilliant solution, I proceeded to comb my hair, only to discover my entire face had disappeared. No wonder; only a half-dollar sized spot existed in the center of the ancient mirror. Okay, I figured, at least I'd be able to see one tooth as I brushed later that evening! Things were looking up and, besides, I was here to learn new skills, not admire my face.

All the Comforts (and Chores) of Home

Bob McDowell, director of the New Jersey Division of Fish, Game and Wildlife, greeted us warmly at noon, detailing how this workshop was designed to teach women introductory skills in a comfortable, non-threatening atmosphere. He noted that, since the inaugural New Jersey Becoming an Outdoors-Woman workshop was presented in 1995, more than 500 women have sampled the outdoors through a bounty of courses including canoeing, fishing, archery, camp cooking, shooting skills, outdoor photography and others. But as he warned us to be careful not to chew gum or carry food anywhere in the area due to the black bear situation, I remembered where I'd be sleeping and showering that evening, and wondered exactly how "comfortable and non-threatening" this experience would actually be.

Cheered by the lovely interior of the building where picnic benches and tables were set up for family-style service, I eagerly awaited lunch while introducing myself to other participants and think-

ing of how great it felt to be taking a break from making and serving meals at home. An announcement stating that each of us would be taking a turn as “cruiser” immediately shattered this illusion.

Glancing around, I saw looks of dismay and imagined my own face reflected this, hearing that one cruiser, assigned to each table, was responsible for handing out utensils, setting the table, fetching water and extra food, sweeping the floor, scraping leftovers off the plates, and bringing back trays to the kitchen. When my turn came, how would I have time to eat, I wondered.

Thankfully, the all-you-could eat grilled cheese and bacon sandwich and salad lunch was over quickly. For the first time in my life, food didn’t matter; I was eager to begin the first session and the basic shooting course I had opted for.

At Home on the Range

At the shooting range, instructor Carol Colao gave an excellent presentation demonstrating the difference between shotguns and rifles, the proper cartridges for each, and safety rules. I was overwhelmed, excited and scared, all at the same time, but Carol and the other range instructors made us feel safe, brave and competent. When my turn at downing a clay pigeon came, it seemed to take forever before I pulled the trigger of the 20-gauge Browning Gold shotgun. I missed.

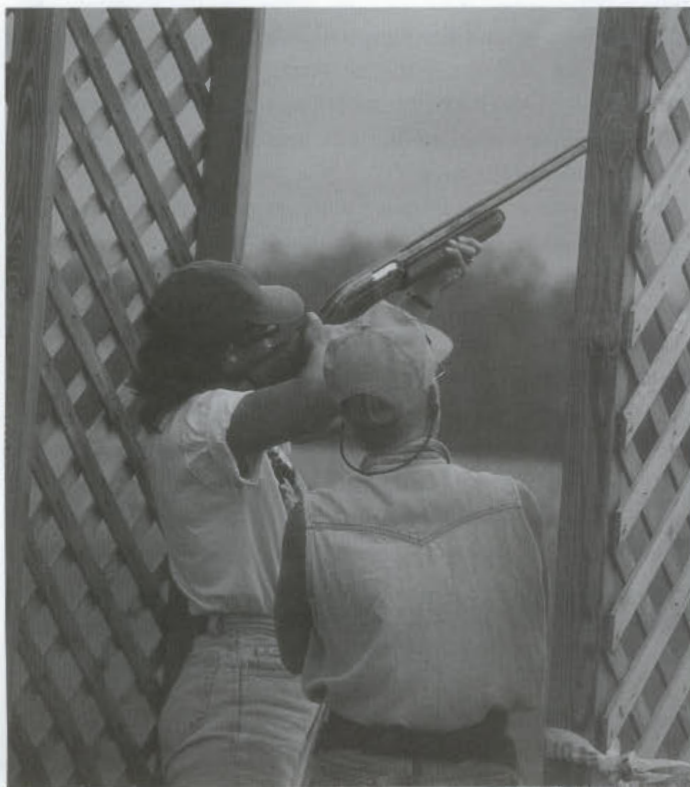
In a non-embarrassing way, Carol pointed out that closing my eyes and lifting my cheek off the stock when firing wasn’t the proper shooting method. Nevertheless, it was a fantastic moment when, with Carol’s encouragement, instruction and no-rush attitude, I finally hit a clay and became hooked on this sport.

Later, at the handgun course, where the male instructors were just as patient and caring, I waited my turn to fire a .22 caliber revolver with a laser sight — quickly learning to keep steady and control my breath despite my heartbeat, rapid from the thrill of being out in the field. It felt wonderful conquering my fear and thinking of nothing else at the moment but hitting the bull’s-eye.

By dinner time, as we discussed how cheerful and enthusiastic the instructors were and how much fun it was learning new outdoor skills, a feeling of camaraderie had developed. Family and work-related problems were forgotten and, whether we had opted to take orienteering, kayaking, fly tying or one of the many other courses offered, each of us was quickly gaining confidence. Instead of a sense of competition, those of us who had taken the firearms course showed strong support for each other, whether her shot reached the target or missed. We agreed that guns aren’t

It was
a fantastic
moment
when . . .
I finally hit
a clay and
became hooked
on this sport.

AL IVANY PHOTO, COURTESY OF THE N.J. DIV. OF FISH, GAME AND WILDLIFE



© ARLINE ZATZ



I probably became the first fishing drop-out in the history of the program.

about testosterone or feeling powerful, but about enjoying the sport and acting in a safe manner. Cruising, which at first had bothered most of us, turned out not to be a problem at all because everyone worked as a team anyway, pitching in to help.

Some Enchanted (?) Evening

That evening, free to attend a slide presentation, star gaze, take a night hike, enjoy snacks or curl up with a good book at the cabin, I opted for a good hot shower and early bedtime. On the way to the cabin — spotting two deer, several squirrels, a bear and two cubs along the way — I was beginning to unwind and get into the swing of things. That is, until I got to the shower house and found out I'd have to share my shower with a variety of insects and tiny snake-like creatures!

Deciding to forego my nightly shower, I headed back to the rec hall to try the Firearms Training System (FATS), an interactive shooting game designed to improve individual shooting skills. It was nice to meet new people and learn that, although the majority were New Jerseyans, several of the 76 women attending came from as far away as Pennsylvania, Virginia, New York, Delaware and Maryland. Many had also attended previous workshops.

When I returned to the cabin at ten, I wished I had brought a tent so I could sleep beneath the stars. Even the threat of a roaming bear might be better, I thought, than sleeping on the bunk I had chosen — for it was next to the heating furnace which constantly went on and off with a huge BOOM. I vowed never to be bothered by my husband's low snoring again, not when six of the eight ladies in my cabin buzzed and snorted all night!

When my alarm rang at 6 a.m., reminding me to get to the optional bird walk, I decided to stroll instead through the woods until breakfast. Before long, several women joined me and, as we listened to the sounds of the birds and the rustling of leaves, and absorbed the beauty surrounding us, I felt completely satisfied and fortunate to be participating in such an unusual hands-on workshop.

Ya Can't Win 'Em All

After breakfast, we separated into smaller groups to attend various workshops. I felt thrilled each time I brought the shotgun up to my shoulder and successfully fired at one of the clay birds during the Advanced Firearms course. Between turns, we compared notes on which shotgun we liked best, and joked about our instructor's advice to always put the gun butt where our bra strap was for proper placement.

While we were laughing about how someone who didn't wear a bra would manage, one gal proudly displayed a huge black and blue bruise on her shoulder front that had developed from the previous day's lesson. Even though she could choose from several shotguns that didn't have much recoil, she explained that she fell in love with the one that did because she hit almost every clay with it.

During the afternoon session, I opted to take On-Shore Fishing because I had visions of visiting pretty lakes in the future — places where I'd sit and relax, hook a fish, and take home a tasty, freshly-caught dinner. Admittedly, this was wishful thinking.

Despite excellent instruction by Patricia Hamilton and Debbie Elmire on proper equipment selection, use of bait and lures, knot tying and fish biology, when they demonstrated how to bait a hook with a fat, juicy, wiggly worm, I found myself on the verge of heaving lunch. Being complimented on my expertise in casting during our dry land practice session didn't help; nothing could tempt me to even try.

One of the instructors kindly offered to bait the hook for me, but when I said I felt I had to learn to do it myself or quit fishing forever, she offered bottled fish ball bait. Thinking this would do the trick, I happily made my way to the banks of picturesque Lake Wapalanne where the other women were shouting for joy reeling in one fish after another.

Obviously the fish loved worms, but when I realized I couldn't bear to even remove a fish from my hook if I succeeded in catching one, I probably became the first fishing drop-out in the history of the program. I also realized, with regret, that I'd have to continue getting my fish dinners from the fish market.

As the instructors and participants enjoyed a delicious all-you-can-eat barbecue round a campfire at Piney Point that night, "Mountain Man" Keith Hopley entertained us. He demonstrated how men of yesteryear started fires by rubbing two sticks together, described how they made clothing like his

Fishing lessons pay off.



© ARLINE ZATZ

Workshop Information

from animal skins, and told great stories. Later, during a lively Chinese Auction with top-notch sporting goods items provided by well-known companies, I won gun lubricant. The way I was aching from muscles I'd never used before, I was tempted to rub some onto my body right then and there!

Instead, I ended the evening on a high after more practice at FATS, star gazing and the realization that the way back to the cabin was getting easier and easier. I felt stronger than I had in a long time. Even sleeping was better that night, thanks to ear plugs one of the instructors lent me.

Cupid in Training

Awakening at 5:45 a.m. on my own the next morning was a first for me. With a view of beautiful woods and clear, blue sky, I dressed, no longer worried about the bears, and was rewarded by a hushed forest except for the sound of an owl in the distance. Fog rolled off the lake, swans swam by, Canada geese began honking, and I felt like the luckiest woman alive to experience such peace and quiet in these beautiful surroundings. Soon, another woman joined me and together we marveled at how great the workshop was. Even though she had previously been afraid of the water, she had taken the kayaking course and was determined to buy her own boat as a means of getting away from daily stress. By the time we walked back for breakfast at 7:30, everyone was eager to dig into the fresh juice, oatmeal and French toast so we'd be ready for another workshop at 8:30.

I had chosen Archery, taught by several avid hunters and archers who presented the course in a really fun way. I could have sat in that wooded area all day just admiring the scenery, but immediately became absorbed listening to the history of archery, necessary equipment, the selection and use of bows, arrows and accessories, and the importance of safety and shooting techniques. As was my experience with other instructors, these were extremely patient. When I expressed fear in letting go of the bow, afraid its twanging action would chop off half my face, without causing any embarrassment, one of them taught me the proper stance, how to hold the bow, and helped me with the first shot. From there on in, I was taken with archery. I found myself hitting the three-dimensional deer in the kill spot over and over again, and it all ended too soon — not only the archery session, but the entire weekend workshop.

After a light lunch of muffins and assorted goodies, I filled out my evaluation sheet, received a lovely Becoming an Outdoors-Woman T-shirt I'll never part with, and began saying good-bye and exchanging phone numbers with several of the women.

Focus on the Future

On the way home, feeling happy and fulfilled with greater self-confidence, a sense of self-esteem, and my competency to take on new levels of challenges, I began thinking about what I'd sign up for in future Becoming an Outdoors-Woman workshops.

Let's see . . . I think I'll take Basic Orientation so I can find my way around a rock; Rock Climbing, so I will go up, not fall on my face; Outdoor Survival, so I'll know what to do if a bear shows up; and Reading Wildlife Signs, so I know where they are in the first place! Or, I may even take Bird Watching, since I now feel free as a bird in the outdoors.

Until the next course, I'll be content going through the goodie bag that was handed out, for it contains dozens of catalogs specializing in clothing and equipment made just for women; information on shotgun and archery manufacturers; how-to books; a bunch of game calls; and lots of hooks I'll pass on to one of my new outdoors-woman friends who became hooked on fishing. Since I have, indeed, become a true outdoors woman, no skill is impossible to learn. Well, okay, maybe fishing is an exception.



In addition to appearing in *New Jersey Outdoors*, Metuchen's Arline Zatz (left) is the award-winning author of *Best Hikes With Children in New Jersey* (The Mountaineers Books); *30 Bicycle Tours in New Jersey* (Countryman Press); and *100 Years of Volunteer Wildlife Law Enforcement* (NJ Division of Fish, Game & Wildlife). Her writing and photography appear in magazines and newspapers nationwide.

The Becoming an Outdoors-Woman workshop fee, which includes instruction in all sessions, program materials, use of all equipment, meals and lodging, is less than \$200. Limited scholarships, based on need, are available to qualified first-time participants.

The Northern Upland Workshop is held in Stokes State Forest at the New Jersey School of Conservation, the largest university-operated resident center for environmental education in the western hemisphere. Accommodations are rustic dormitory-style cabins. The Southern Coastal Workshop is held on the beachfront, with accommodations at the Golden Inn in Avalon (with spacious rooms featuring a double bed and individual bath).

The weekend workshops, open to anyone 18 years or older, start at noon on Friday. For more information on Becoming an Outdoors-Woman, call Laurie Pettigrew (609/629-7214) or Mimi Dunne (908/637-4125), or write to them at NJDFG&W, 220 Blue Anchor Road, Sicklerville, NJ 08081. The national Becoming an Outdoors-Woman web site is www.uwsp.edu/general/commun/bow/bowpage.htm; you may also e-mail blueck@uniontel.net or phone 715/228-2070 for more information on the national program.

Rutgers Cooperative Extension More Than Corn and Chickens



by Bob Bembridge

If you think Rutgers Cooperative Extension just gives help and advice to New Jersey's farmers, think again.

Rutgers Cooperative Extension (RCE) agents in New Jersey's 21 counties also provide free assistance and education to home gardeners, sport and commercial fishermen, homemakers, seniors, local officials and youth groups. Extension staffers offer technical advice on environmental issues, recreational fishing, lawn and garden care, nutrition, health, youth development, and even financial planning. And Ocean County's office is a leading example of the variety of services RCE offers.

"The biggest misconception is that we deal only with farmers, but we're really the link between the public and the research faculty at Rutgers," says agricultural agent Deborah Smith-Fiola.

If Rutgers Cooperative Extension were a football team, it would "have a

very deep bench," says marine agent Gef Flimlin, who for the past 20 years has used his expertise in marine and environmental science to help New Jersey's commercial fishermen. "We're backed up by all the knowledge and expertise of the people at Cook College (Rutgers University), and we can find out all kinds of information for you."

Finding out information is no small job for Smith-Fiola and horticulture consultant Al Clericuzio, who handle many of the 12,000 telephone calls, office visits, and plant and soil identification requests received each year by the RCE of Ocean County's agricultural department.

"People call to ask why they have a brown spot in their lawn or what type of insect they found in their house or garden," says Clericuzio. The agricultural department helps county residents diagnose and treat plant diseases and pest problems, tells them how to seed lawns, what to plant in their gardens, and iden-

tifies deer ticks, the most common carrier of Lyme disease in New Jersey.

Volunteers Lend a Hand

The Ocean County office identified nearly 4,000 ticks during 1996, according to "Master Gardener" George Scardena. Master Gardener volunteers, after completing a special Rutgers course in horticulture and entomology, help RCE's agricultural agent analyze plant and soil samples and field questions about lawns, gardens, insect pests and ticks.

Local residents who have been bitten by ticks often are distressed when they visit the Extension office to have their ticks identified, says Scardena, a retired school administrator and one of 800 Master Gardener volunteers in New Jersey. In Ocean County, live deer ticks are sent to the county health department, which determines whether the tick could have transmitted the disease. Rutgers Cooperative Extension provides

Master Gardeners
(opposite page),
having a "Field Day."

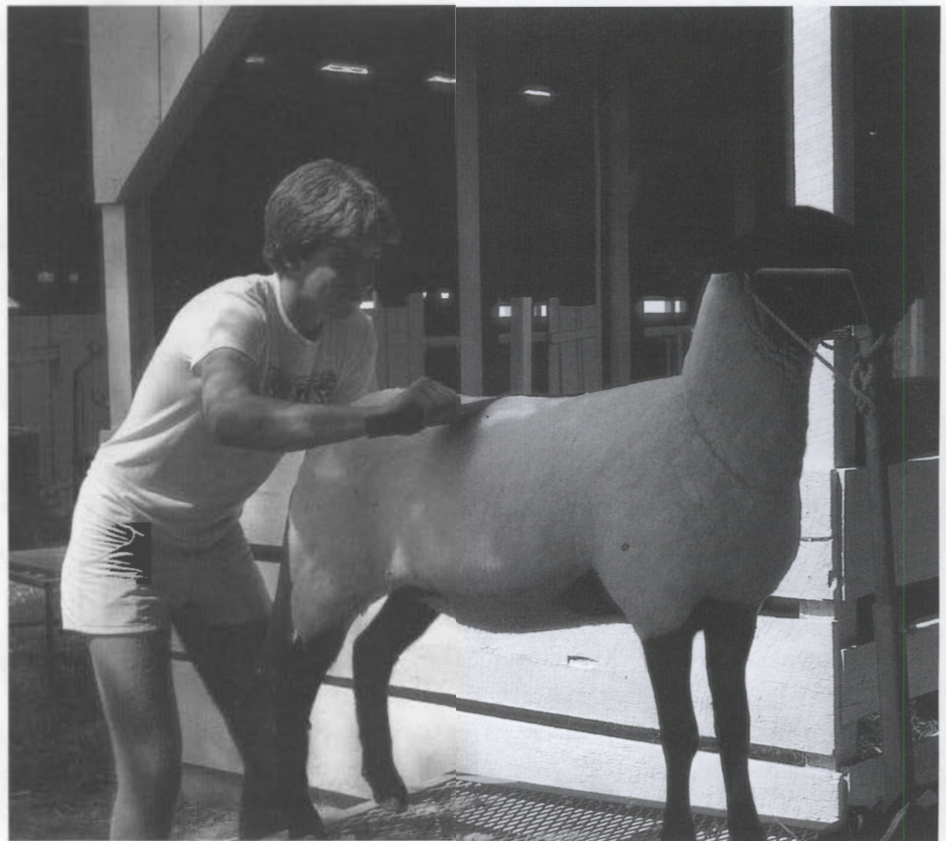
county residents with detailed information on tick habits, effective controls and ways to prevent tick bites.

In addition to assisting county agricultural agents, Master Gardeners present free talks and slide shows about horticultural topics in the 10 New Jersey counties that have Master Gardener programs — Bergen, Camden, Essex, Hunterdon, Mercer, Middlesex, Ocean, Passaic, Somerset and Union. Master Gardeners also give free horticultural demonstrations at senior citizen centers and convalescent homes, conduct soil tests, create horticultural exhibits, and provide lawn care and gardening advice at county fairs.

Smith-Fiola, like her counterparts in New Jersey's other counties, offers technical advice and assistance to farmers, landscapers, turfgrass managers and other commercial growers. She also teaches commercial landscapers about Integrated Pest Management (IPM) — the use of "environment friendly" techniques to control plant diseases and pests. Smith-Fiola's Landscape IPM Program, funded by the Geraldine R. Dodge Foundation, has trained over 2,500 New Jersey landscapers in IPM alternatives to pesticides. New Jersey landscapers who have adopted IPM methods have reduced their pesticide use by an average of 42 percent, she says.

Smith-Fiola also helps landowners who want to try their hand at part-time farming, assists entrepreneurs who want to start tree nurseries and landscaping businesses, counsels landowners who wish to obtain farmland assessment, and advises farmers and other major water users on how to obtain state water allocation permits. Smith-Fiola notes that she and other county agricultural agents will always "dip everything" they are doing in order to inspect a pest outbreak in a grower's field, help a landscaper resolve a plant or pest problem at the work site, or provide safety information to workers in those industries.

Rutgers Cooperative Extension's biggest asset is its ability to provide current



A Shropshire sheep being shorn the old-fashioned way.

and accurate information, says Smith-Fiola. "We're not selling anything. We offer the latest, non-biased, research-based information available." For example, she writes a newsletter on IPM, prepares fact sheets, conducts research, and recently authored a book on pest-resistant landscape plants.

Providing scientifically-sound advice on environmental issues is the job of Janet Larson, who oversees the resource management program at the Ocean County Extension office. She describes herself as the "go-between" for the scientific community and Ocean County residents and officials concerned about environmental issues.

Larson fields numerous questions related to solid waste, water quality and the Barnegat Bay estuary protection program. She advises county residents who want to dispose of their old paint cans and pesticides, use their grass clippings as compost, and learn how to get their water

tested. Larson also helps provide technical advice and assistance to the Ocean County Environmental Agency and municipal environmental commissions.

A Resource for Anglers, Too

New Jersey's 600,000 saltwater anglers are the focus of recreational marine agent Eleanor Bochenek. "We educate anglers and boat owners about fishing regulations and how they can reduce ocean pollution," says Bochenek. She and program assistant Sid Hooper work closely with the charter boat industry and the Jersey Coast Anglers Association, an amalgam of 70 saltwater fishing clubs. Bochenek and New Jersey State Department of Environmental Protection staffers recently organized a recreational fishing program for urban youngsters. Dr. Bochenek has also published a "Young People's Guide to Saltwater/Freshwater Fishing," which is available through RCE.

"Marine recreation is very important to

PHOTOS COURTESY OF RUTGERS COOPERATIVE EXTENSION

IPM Speakers Bureau Offers Lawn and Garden Advice

Rutgers Cooperative Extension can show your environmental commission or homeowner association how to control lawn and garden pests with minimal pesticides.

The IPM Speakers Bureau offers free presentations on Integrated Pest Management — the use of “environment friendly” methods to treat plant insects and disease. IPM stresses the early detection and prevention of insect infestation and plant disease, according to Deborah Smith-Fiola, director of Rutgers Cooperative Extension’s Landscape IPM Program. Speaking arrangements can be made by calling 732/349-1246.

Rutgers Cooperative Extension also provides free brochures on how homeowners can use IPM techniques and a list of commercial landscapers who use IPM methods. This information can be obtained by calling the Rutgers Cooperative Extension office listed in the county government “blue pages” of your telephone directory.

A fair is a perfect opportunity for Master Gardeners to display their talents



New Jersey’s economy,” says Bochenek. Saltwater anglers pump millions of dollars each year into shore area businesses such as marinas, motels, and restaurants, she notes.

One of RCE’s oldest and most popular programs is 4-H. Still, Ocean County 4-H director Karen Mansue says the major misconception about 4-H is that it’s “just for kids who live on farms.”

“4-H is really a youth development program for elementary and high school children,” says Mansue. “We help children learn responsibility through activities like taking care of animals. We also teach citizenship by having the kids participate in community service.”

Typical 4-H activities offered by Mansue and assistant Helen Ferraro include animal husbandry, horticulture, conservation, home economics, and raising Seeing-Eye dogs for the blind.

Another popular Extension program is Family and Consumer Sciences, run by RCE educator Sonia Butler. This program offers county residents free information and instruction in nutrition, food safety and parenting. A new program offers residents education in family financial management.

“We teach people how to reduce their debt and maintain their credit,” says Butler. Rutgers Cooperative Extension recently created a “Money 2000” program designed to help New Jersey residents save or reduce their debt by \$2,000.

For more information on RCE’s free services, call the number listed under “Cooperative” or “Rutgers Cooperative” in the county government “blue pages” of your telephone directory. A list of all RCE publications can be obtained by calling your county extension office or the Cook College publications office, 732/932-9762. Additional information about RCE and on-line copies of RCE publications can be obtained from the Rutgers University, Cook College Web Page — www.rce.rutgers.edu/index.htm.

Bob Bembridge is a professional writer whose articles have appeared in both regional and national publications.

Events Events Events

Complete name and location information is provided here for frequently mentioned event sponsors. The bold-faced name is all that will appear in an event's description.

Albert — Albert Music Hall, 125 Wells Mill Road (Route 532), 1/4 mile west of Route 9, Waretown

Carter — Annie M. Carter Nature Center, Batsto Village, Wharton State Forest, Route 542, approx. 9 miles east of Hammonton

Great Swamp — Great Swamp Outdoor Education Center, 247 Southern Boulevard, Chatham

HMDC — Hackensack Meadowlands Development Commission (HMDC) Environment Center, 2 DeKorte Park Plaza, Lyndhurst

Howell — Howell Living History Farm, Valley Road (just off Route 29, two miles south of Lambertville), Hopewell Township (Mercer County)

Pequest — Pequest Trout Hatchery & Natural Resource Education Center, 650 Pequest Road, Oxford

Skylands — Skylands Manor and N.J. State Botanical Garden, Morris Road, Ringwood State Park, Ringwood

Trailside — Trailside Nature & Science Center, 452 New Providence Road, Mountainside

Wetlands — Wetlands Institute, 1075 Stone Harbor Boulevard, Stone Harbor (3 miles east of the Garden State Parkway exit 10B)

Whitesbog — Whitesbog Village, mile marker 13 on Route 530, Browns Mills

Events • Ongoing / April

Ongoing

Pequest Trout Hatchery Tour the hatchery, which raises trout for stocking in New Jersey's waters; **Pequest**; open seven days a week, 10 a.m. to 4 p.m.; from April 18 to 26 (while supplies last), visitors will receive a seedling, grown in the N.J. Bureau of Forest Management's nursery, so they can celebrate Earth Day and Arbor Day by planting a tree for wildlife; 908/637-4125

Spring/Summer

Nature Classes Fun-filled learning activities centered on farm life and wildlife rehabilitation; PAWS Farm Nature Center, 1105 Hainesport-Mt. Laurel Road, Mt. Laurel; call for details; reservations requested for large groups; \$3.50/class; 609/778-8795

Through April 26

Wheaton Village Artists-in-Residence Woodwork, lampwork, ceramics and glass produced by current resident artists will be exhibited and sold; 10 a.m. to 5 p.m.; Gallery of American Craft at Wheaton Village; free except during special events; 609/825-6800 or 800/998-4552, ext. 2756

April 4 through October 25

Folk Art in Glass Annual exhibition; 10 a.m. to 5 p.m.; Museum of American Glass at Wheaton Village; \$6.50/adults, \$5.50/seniors, \$3.50/students, free/children 5 and under; 800/998-4552

May through September (selected dates)

Delaware Bay Lighthouse Adventures Board the *Cape May Whale Watcher* for a four-hour cruise to view six Delaware Bay lighthouses, some visible only from the water; 1 to 5 p.m.; Miss Chris Fishing Center, Third Avenue & Wilson Drive, Cape May; \$40/person; 609/884-5404 or 800/275-4278

May 23 through June 21

9th Annual Cape May Music Festival Symphonies, songs and straight-ahead jazz; concert times, costs and locations vary; 609/884-5404 or 800/275-4278

June 6 through July 2

Crafts in Nature: A Garden Show Exhibition and sale of hand-crafted items for the patio, garden and outdoors; 10 a.m. to 5 p.m.; The Gallery of American Craft at Wheaton Village; free; 800/998-4552, ext. 2756

June 24 through August 26 (Wednesdays only)

Union County Summer Arts Festival Family concerts; 7:30 p.m.; Echo Lake Park, Mountainside; 908/527-4900

April

4

Wolf Vision Learn about wolves in the wild; 10 a.m., noon and 3 p.m.; **Great Swamp**; \$5/adults, \$3/ages 7 to 18, free/ages 6 and under; preregistration required; 973/635-6629

Frogging the Bayshores Join The Nature Conservancy on a nocturnal adventure in search of early amphibians; 5 p.m. to dark; families with children welcome; \$5/member adults, \$2/member children, \$8/non-member adults, \$3/non-member children; 609/785-1735

4 & 5

Pequest Open House Hatchery tours, displays, encampment, archery and BB gun ranges, nature trail hikes and more; **Pequest**; 10 a.m. to 4 p.m.; 908/637-4125

Puppet Show The Tales of Beatrix Potter; 7:30 p.m. Sat., 1 & 3 p.m. Sun.; **Wetlands**; \$7/non-members, \$5/members; 609/368-1211

5

Manor House Tour (also on June 7) A guided tour of historic Skylands; 1 to 4 p.m.; **Skylands**; \$3/general, \$2/seniors, \$1/ages 6-12, free/under 6; 973/962-9534

Wildlife Sunday Exhibits, demonstrations and other activities, including bird banding and kids' crafts; 1 to 5 p.m.; **Trailside**; \$1 donation; 908/789-3670

New Jersey State Library

Events • April / May

Hike the Manumuskin River Preserve Enjoy The Nature Conservancy's 5-mile hike on this 4,000-acre preserve; 10 a.m. to 2 p.m.; bring water and lunch; \$5/member adults, \$2/member children, \$8/non-member adults, \$3/non-member children; 609/785-1735

Weapons and Tactics Demonstration Learn about the life of a Continental soldier; 1 to 4 p.m.; Dey Mansion, 199 Totowa Road, Wayne; free, but there's a \$1 fee for museum tours for visitors older than 10; 973/696-1776

8

Fishing and the Environment A short film and talk presented by world-class fly-fisher Joan Wulff; 7:30 p.m.; Town Hall, South Street, Morristown; \$5; preregistration required; 973/993-1292

11

Trout Season Opens

Whitesbog Full Moon Hike Take a 4- to 6-mile hike on sand roads; 7 p.m.; Whitesbog; \$4/person, \$9/family, free/members; preregistration required; 609/893-4646

Breakfast with the Easter Bunny Food, games, and fun with the Easter Bunny; 9 a.m. to noon; Wetlands; \$7/non-members, \$5/members; 609/368-1211

15

Talkin' Turkey Learn all about this large, smart, game bird and pick up some hunting tips; Pequest; 7:30 p.m.; 908/637-4125

17

The Art of Early Spring Hike and sketch during this 3-hour outing; 11 a.m.; Kay Environmental Center, 200 Pottersville Road, Chester; bring small sketchbook, pencil and lunch; \$5/members of The Nature Conservancy, \$8/non-members; 908/879-7262

17 to 19

9th Cape May Jazz Festival Workshops, jam sessions and concerts featuring some of the greatest names in jazz; times, sites and costs vary for jam sessions and concerts, but a pass to all 15 events is \$60; 609/884-7277

17 to 26

Water Snapshot '98 Join the Delaware River Basin Commission in collecting and analyzing water from anywhere in the Delaware Basin to develop a truly "wide-angle" picture of its water quality; training will be offered in early April; previous participants who left addresses will be sent information and data sheets, but new volunteers must call to register; 609/883-9500, ext. 252

Cape May Spring Festival Special events include a tulip and garden crafts show, workshops on finishing techniques, a concert, golf and tennis tournaments, glass blowing demonstration and tours of Victorian Cape May; events and tours vary in price; 800/275-4278, 609/884-5404 or 609/884-5508

18

Spring Cleanup Day (also April 25) Help spruce up New Jersey's State Botanical Gardens; 9:30 a.m. to 1 p.m.; Skylands; coffee provided, but bring gloves, pruners, a rake and, if desired, a bag lunch; 973/962-9534

March for Parks - Earth Day Walk to raise funds and awareness for both The Hermitage and Skylands; 10 a.m. to 1 p.m.; Skylands; 973/962-9534

Hug-A-Tree & Hike Children will learn safety procedures for hiking in the woods, then put them into practice during an actual hike; 10:30 a.m. to 1:30 p.m.; Skylands; registration required; \$5/child (parents should attend with children); bring a bag lunch; 973/962-9534

Wildflowers and Wildlife of the Pinelands Hike A guided, easy-paced, 2- to 3-mile walk through a variety of Pinelands habitats; 10 a.m.; Carter; insect and tick repellent recommended; preregistration required; free; 609/567-4559

Horse-drawn Wagon Tours of Spring Tillage Operations Ride a horse-drawn wagon to see farmers till fields using horse-drawn equipment; 10 a.m. to 4 p.m. (tours run from 10:30 a.m. to 3:30 p.m.); Howell; handicapped-accessible wagon available; free; a 20-minute children's craft program will be offered from 11 a.m. to 3 p.m. for \$3; 609/737-3299

Spring Stream Clean-up Help collect trash from sites along streams in the South Branch Raritan River watershed area; 9 a.m. to noon; Califon Park; 908/782-0422

18 & 19

Garden Trolley Rides (also April 25 & 26) Step aboard a trolley for a tour of Cape May's lovely gardens; \$5; 800/275-4278 or 609/884-5404

19

Water Gardening A slide lecture covering techniques and plants suitable for water gardening; 3 p.m.; Skylands; free; 973/962-9534

Earth Day at Wharton State Forest Guided walks, nature talks and nature crafts; 11 a.m. to 4 p.m.; Carter; volunteers needed; free; 609/567-4559

Spin Casting for Beginners Learn about spin casting, then try your hand at it; 1:30 p.m.; Pequest; ages 8 and up; registration required; 908/637-4125

Earth Day Celebration Nature walks, games, snake shows and more; 1 to 5 p.m.; Huber Woods, Browns Dock Road, Locust (Middletown Township); free; 908/872-2670

Leather Crafts Demonstration Learn how the colonists used leather; 1 to 4 p.m.; Dey Mansion, 199 Totowa Road, Wayne; free, but museum tours cost \$1/person over age 10; 973/696-1776

24

Celebrate Arbor Day! Participate in the "Plant a Tree" ceremony and garden walk at 3 p.m., then see the new trees dedicated at 4 p.m.; Skylands; free; refreshments provided; 973/962-9534

Muskies and Muskie Fishing Learn about muskellunge myths, tackle and more; 7:30 p.m.; Pequest; 908/637-4125

25

Nature Walk/Bird Walk Explore the salt marsh for migratory songbirds, waterfowl and raptors; 8:30 a.m.; HMDC; \$4/person; 201/460-4640

Marsh Meander Kids will enjoy exploring the estuary and dip netting for fish, shrimp, crabs and other aquatic animals; 11 a.m.; HMDC; \$4/person; 201/460-4640

Moth Adventure Take a unique look at nightlife in a Cumberland County Bayshores preserve; 6 p.m. to dark; \$5/members of The Nature Conservancy, \$8/non-members; 609/785-1735

Whitesbog Earth Day Village Cleanup Help beautify Whitesbog Village, then enjoy a guided tour; 1:30 p.m.; Whitesbog; groups encouraged; bring gloves; free; preregistration required; 609/893-4646

Whitesbog Pickerel Catching Contest Hook the longest pickerel for your category and win a prize; 8 a.m. to 1 p.m.; Whitesbog; preregistration required; call for entry fee and registration information; 609/893-4646

Fly Fishing with Streamers A seminar for fly fishers with some experience; 10 a.m.; Pequest; equipment and preregistration required; 908/637-4125

1998 Earth Day Celebration Exhibits, demonstrations, nature walks and workshops; 10 a.m. to 4 p.m.; Washington Lake Park, Greentree Road (between Chapel Heights Road and Hurffville Cross Keys Road), Turnersville; free; 609/589-6427

Collectors' Showcase Browse displays of interesting and unique collections ranging from old toys to World War II memorabilia; 9:30 a.m. to 4 p.m.; Franklin Township School, Route 579, Quakertown; \$4/adults, \$2/children under 12; items may be sold or swapped on a limited basis; 908/735-6607

Spring Cleanup Day (see April 18)

25 & 26

Garden Trolley Rides (see April 18 & 19)

26

Family Fun Day Games on horseback, free pony rides, children's games, petting zoo and more; 8:30 a.m. to approximately 4:30 p.m.; Lord Stirling Stable, 256 South Maple Avenue, Basking Ridge; free admission and parking, \$3 to \$5 entry fee for horseback games; 908/766-5955, ext. 23

Container Gardening Learn the right techniques and plants for container gardening; 2 to 4 p.m.; Skylands; \$10/members, \$12/non-members; containers, soil and plants will be provided; 973/962-9534

Farm Day Learn through living history about farm chores and industries of the 18th and 19th centuries; 1 to 5 p.m.; Gibbon House Yard, Ye Grete Street, Greenwich (Cumberland County); \$1/adults, free/children accompanied by an adult; 609/455-4055 or 609/451-8454

Earth Day: Life Under the Ground

Walk through a maze depicting the dark underground while learning what inhabits the world beneath the earth's surface; 11 a.m. to 4 p.m.; Great Swamp; free; 973/635-6629

Fly Fishing for Beginners A five-hour fly fishing workshop on equipment, knot tying, entomology, stream tactics and casting techniques; Pequest; ages 12 and up; preregistration required; 908/637-4125

Deep Cut Garden Festival Perennials, herbs and small trees will be on sale, and horticulturists will be on hand for questions and advice; 10 a.m. to 5 p.m.; Deep Cut Gardens, Red Hill Road, Middletown Township; free; 732/842-4000

Outdoor Adventure Expo Learn more about camping, canoeing, rock-climbing, mountain biking, kayaking, caving and other outdoor activities; 10 a.m. to 4 p.m.; Turkey Swamp Park, Georgia Road, Freehold Township; free; 732/842-4000

Earth Day Celebration (rain date: May 3) Exhibits, guided nature walks, "eco" hayrides, arts and crafts, games and more, including a 5K race and 1-mile fun run; 10 a.m. to 4 p.m.; Haneman Environmental Park, 6700 Delilah Road, Egg Harbor Township; free; 609/646-5500

26th Annual Atsion Antique and Flea

10 a.m. to 4 p.m.; Route 206 (across from Wharton Lake), Atsion; free; 609/268-0327

28

Creative Writing (also May 26) Explore your talents; 7 p.m.; Wetlands; 609/266-7610

May

2

Moon & Star Watch Willingboro Astronomical Society members will set up their telescopes so participants can get a close-up view of the moon and stars; sundown till 10 p.m.; Batsto Historic Village (adjacent to parking area); free; 609/561-0024

Pine Barrens Festival Enjoy a live stage concert of country music, Pinelands style, presented by leading bands from the tri-state area; 8 to 11:30 p.m. (doors open at 7 p.m.); Albert; \$4/adults, \$1/children under 12; 609/971-1593

Deer Management in New Jersey Slide presentation and discussion on the status of white-tailed deer; 2 p.m.; Great Swamp; free; 973/635-6629

23rd Annual Fishing Contest Freshwater fishing contest; 8 a.m. to 3:30 p.m.; Lake Shenandoah Ocean County Park, Rt. 88, Lakewood; ages 14 and up; must have a valid N.J. freshwater fishing license; \$3/adults, \$1/children; 609/971-3085

Mayfair Games, crafts, hikes, dancing and music; 1 to 5 p.m.; Kateri Environmental Center, Wickatunk (Marlboro Township); \$4/person; 732/946-9694

Estuary Enhancement Exploration Hike a 2-mile trail and learn about the resources of a healthy estuary system; 10 a.m. to noon; Commercial Township; \$5/members of The Nature Conservancy, \$8/non-members; 609/785-1735

Salem County House and Garden Tour

Three centuries of architecture are featured in this driving tour of 14 homes and gardens and 4 houses of worship; 10 a.m. to 5 p.m.; \$10/advance purchase, \$12/day of tour; groups welcome; 609/935-5004

Kids' Fest Enjoy entertainment and children's activities; 11 a.m. to 3 p.m.; Cohanzick Zoo, Mayor Aitken Drive, Bridgeton; free; 800/319-3379 or 609/451-9208

2 & 3

Spring Plant Sale Unusual perennials, annuals, small woody trees and shrubs; 10 a.m. to 3:30 p.m.; Skylands; free; 973/962-9534

3

Pet Fair Exhibits, demonstrations, activities, stray pet contest, pet adoption information; 1 p.m. to 5 p.m.; Trailside; \$1 donation; 908/789-3670

1998 Sunrise Run-Bike-Run A 4-mile run, 16-mile bike ride and 4-mile run along the seacoast; 1 to 5 p.m.; Seven Presidents Park, Ocean Boulevard, Long Branch; 732/842-4000

Kids' Fishing Derby Free fishing contest for 5- to 12-year-olds; 8 a.m. to 1 p.m.; Mary Elmer Lake, Bridgeton; \$350 in prizes; free hat to first 100 sign-ups; 609/455-0328

7

Limestone Forest at Johnsonburg Enjoy a 3-hour tour of this stunning limestone forest, hidden near the border of Sussex and Warren counties; 10 a.m.; bring a lunch or snack; hike is moderately strenuous; \$5/members of The Nature Conservancy, \$8/non-members; 908/879-7262

9

29th Annual Manasquan River Canoe Race Paddle an 8-mile section of the Manasquan River with competitors of all ages and abilities in categories including kayak, solo canoe, men's tandem, women's tandem and family tandem; 8 a.m.; Howell Park Golf Course, Preventorium Road, Howell Township; 732/842-4000

Flight of the Raptor See live birds of prey and learn about raptor ecology, habitats and more; 11 a.m.; HMDC; \$4.50/person; 201/460-4640

Events • May / June

Rocks and Minerals Learn about rocks and minerals; 11 a.m.; **Great Swamp**; free; 973/635-6629

9 & 10

15th Annual World Series of Birding The Cape May Bird Observatory's bird-a-thon; midnight May 9 to midnight May 10; statewide; 609/884-2736 or 609/861-0700

18th Annual Carving and Wildlife Art Show and Sale Demonstrations, exhibition and sale of artwork depicting North American plants and animals; 10 a.m. to 5:30 p.m.; Somerset County Park Commission's Environmental Education Center, 190 Lord Stirling Road, Basking Ridge; 908/766-2489

Spring Flower Festival Garden and manor house tours, kids' walk, art show & sale and Mother's Day brunch; noon to 5 p.m.; **Skylands**; manor & art show: \$5/general admission, \$4/seniors, \$2/ages 6-12, free/under 6; reservation required for brunch, for which there is a fee; 973/962-9534

10

Watershed Wings Birding Competition Spend the day traveling the state to sight the largest number of bird species; 908/782-0422

15 to 17

Seeds of Peace Powwow Native American dancers, crafters, storytellers, traditional drums and music; 9 a.m. to 5 p.m. Fri., 11 a.m. to 6 p.m. Sat. & Sun.; Matarazzo Farms, Rt. 519, Belvidere; \$6/adults, \$4/ages 12 and under; 908/475-3671

Cape May Bird Observatory Spring Weekend Three days of birding, butterfly watching and boat trips with expert leaders; Cape May Bird Observatory, 701 East Lake Drive, Cape May Point; 609/884-2736 or 609/861-0700

Native American Indian Powwow & Festival Songs, dancers, drumming, flute playing, crafts and more; 9 a.m. to 6 p.m. Fri., 10 a.m. to 8 p.m. Sat., 10 a.m. to 6 p.m. Sun.; Boro Hall Athletic Field, McArthur Ave., Sayreville; \$5/adults, \$4/seniors, \$3/ages 5 to 12; 732/525-0066

If My Quilt Could Talk Quilt exhibit, antique sewing machine display and more; 10 a.m. to 5 p.m. Fri. and Sat., 10 a.m. to 4 p.m. Sun.; Poricy Park, Oak Hill Road, Middletown; \$5/adults, \$4/seniors/students; no strollers; 732/842-5966

Coastal Workshop for Teachers Learn all about shore ecosystems; 9 a.m. to 8 p.m. on Fri., 7:30 a.m. to 8 p.m. on Sat., 8 a.m. to 3 p.m. on Sun.; **Wetlands**; pre-registration required; 609/748-2031

16

Fishing Derby for People with Disabilities (rain date: May 17) Instruction, contests, fun; 10 a.m. to 2 p.m.; Echo Lake Park, Mountainside; free; preregistration required; 908/527-4900

Things That Hop in the Night Join The Nature Conservancy's search in the Pinelands for the emerald- and chocolate-striped Pine Barrens tree frog; 6 p.m. to dark; \$5/member adults, \$2/member children, \$8/non-member adults, \$3/non-member children; 609/785-1735

Shorebirds in the Marsh Join The Nature Conservancy in exploring salt marshes in Dennis Township and Maurice River for migratory shorebirds; \$5/member adults, \$8/non-member adults; 609/785-1735

Spring Planting and Plant Sale See how corn was planted when horses supplied the horse power on farms, and pick up some seeds to plant in your own garden; 10 a.m. to 4 p.m.; **Howell**; free; a children's craft program will be offered in the farmhouse from 11 a.m. to 3 p.m. for \$1; 609/737-3299

17

Garden Fair Plant show and workshops; noon to 5 p.m.; **Trailside**; 908/789-3670

Spring Renaissance for Young Artists Children of age 7 and up will learn to sketch nature (adults may hike while the kids sketch); 2 to 3 p.m.; Commercial Township; \$15/members of The Nature Conservancy, \$18/non-members; limit 20 children; materials provided; 609/785-1735

Thompson Park Day Entertainment, arts and crafts, pony and wagon rides, climbing wall demonstrations and more; 11 a.m. to 5 p.m.; Newman Springs Rd., Lincroft (Middletown Township); free; 732/842-4000

Bird Identification Learn about the birds of the area; 3 p.m.; **Skylands**; free; 973/962-9534

Helmetta Mill District Walking Tour A guided tour through the 19th century George W. Helme Snuff Mill District; 1 to 5 p.m.; meet at 100 Main Street (Route 615), Helmetta; donation requested; free beverages; 609/655-5467

23

Sail on a Delaware Bay Schooner Learn about the natural and cultural history of the Delaware Bay on an afternoon cruise aboard the A. J. Meerwald; 1 to 4 p.m.; depart from Bivalve; \$24/members of The Nature Conservancy, \$30/non-members; 609/785-1735

Shorebirds Galore (also on May 30) The annual spring migration of shorebirds; 9 a.m. to noon; Hand's Landing Preserve; \$5/members of The Nature Conservancy, \$8/non-members; 609/785-1735

Don't Dally Duathlon A 2.2-mile run, 15-mile bike ride and 2.2-mile run; 8 a.m. start; Estell Manor Park Nature Center, Route 50, Estell Manor; \$35/registration at least 2 weeks prior to race, \$50/on-site registration; trophies to winners; T-shirt and refreshments for all registrants; 609/441-0252

23 & 24

Crafts & Antiques At Memorial Day Saturday features country crafts, folk art, custom designed jewelry and Victorian items, while Sunday features antique and collectible furniture, accessories in silver, porcelain, crystal and glass, and estate and antique jewelry; 10 a.m. to 5 p.m.; Cape May Convention Hall, Beach Drive at Stockton Place, Cape May; \$1/person on Sat., \$3.50/person on Sun.

Spring is Blooming Wine and Jazz Festival Taste wine and enjoy food and music; noon to 5 p.m.; Four Sisters Winery, Route 519, Belvidere; \$10/person; 908/475-3671

23 to 25

Annual Spring Juried American Indian Arts Festival American Indian arts, crafts, music, dancers, food and more; 11 a.m. to 6 p.m.; Rankokus Indian Reservation, Rancocas Road, Westampton Township (Exit 45A off Route 295 or Exit 5 off N.J. Turnpike); handicapped accessible; \$8/adults, \$4/seniors and children ages 6 to 11, free/under 6; 609/261-4747

26

Creative Writing (see April 28)

30

Shorebirds Galore (see May 23)

31

Tenaflly Nature Center Day Guided trail walks, canoe rides, children's activities, wild-life presentations; 11 a.m. to 5 p.m.; Tenaflly Nature Center, 313 Hudson Ave., Tenaflly; \$2/members and seniors, \$3/non-members, free/children under 5; limited seating for some programs, so arrive early; 201/568-6093

June

2

The Magic of the Illusion Maker Learn about the environment through magic; 6:30 p.m.; HMDC; \$5/person; 201/460-4640

5

Concert on the Patio The Amar Chamber Ensemble; 7:15 p.m.; Skylands; bring lawn chair; free; 973/962-9534

6

National Trails Day Help build or maintain Monmouth County's Henry Hudson Trail or a trail in Hartshorne Wood Park (Middletown Township), Shark River Park (Neptune Township) or Clayton Park (Upper Freehold Township); 9 a.m.; free; 732/842-4000

1998 South Jersey Canoe and Kayak Classic Bring a picnic, take a test paddle, attend clinics and play games; 10 a.m. to 4 p.m.; Lakewood Ocean County Park, Route 88, Lakewood; free; 609/971-3085

Carriage Tours of the Pleasant Valley Rural Historic District Visitors ride by horse-drawn carriage or wagon through a 14-point narrated tour; 11 a.m. to 4 p.m. with tours from 10:30 a.m. to 3:30 p.m.; Howell; free; a children's program and \$3 craft project also will be offered; 609/737-3299

Wetlands Institute Open House Come see what the Wetlands Institute is all about; 10 a.m. to 4 p.m.; Wetlands; free; 609/368-1211

6 & 7

Fine Arts and Crafts Fair A juried show and more than 100 artists and crafters; 10 a.m. to 5 p.m.; Nomahegan Park, Springfield Avenue, Cranford; 908/527-4900

Everyone Can Grow Spring Botanical Exposition Learn about the uses of herbs, organic gardening and plant conservation and see native and exotic plant exhibits; 10 a.m. to 4 p.m.; Herb and Botanical Alliance, 5916 Duerer Street, Egg Harbor; handicapped access; free; 609/965-0337

Summer Blues & Wine Festival Enjoy blues bands, wine tastings, great food and tours of Waterloo Village, and stock up on New Jersey wines; noon to 5 p.m.; Waterloo Village, exit 25 off Route 80, Stanhope; \$12/adults, \$9/ages 15 to 20, free/children 14 and under; 908/475-4460

7

Storytelling on the Patio Enjoy tales of nature and folklore; 3 p.m.; Skylands; free; 973/962-9534

Folk Lore and Biology of Spiders Learn about arachnids, then participate in a spider catching, identification and release session; 2 p.m.; Great Swamp; \$3/adults; \$1/ages 7-18; free/6 and under; 973/635-6629

Manor House Tour (see April 5)

13

Victorian Fair Experience a traditional Victorian fair; 10 a.m. to 4 p.m.; Emlen Physick Estate, 1048 Washington Street, Cape May; free; 609/884-5404

12th Annual Delaware Bay Weakfish Tournament; \$15,000 cash and prizes for largest weakfish plus prizes for bluefish and flounder; 8 a.m. to 4 p.m.; leave from any marina in Fortescue or Port Norris; \$100/boat (5 people/boat max); preregistration required; 609/455-0328

14

The Friends "5" Run to raise money for Monmouth County's economically disadvantaged youngsters; 8:30 a.m. (children's race), 9 a.m. (5-mile run); Holmdel Park, Longstreet Road, Holmdel; \$15/preregistration, \$20/registration on day of race; 732/842-4000

20

1998 South Jersey Traditional Small Boat Festival and Sneakbox Rendezvous Bring fixin's for a barbecue or picnic and celebrate the wooden boats of yesterday; 10 a.m. to 4 p.m.; Berkeley Island County Park, off Route 9, Bayville; free; 609/971-3085

Grand Lighthouse Ferry Cruise Enjoy a cruise aboard the Cape May-Lewes ferry and help raise funds for the Cape May Lighthouse; 5 to 7 p.m.; North Cape May Terminal of the Cape May-Lewes Ferry; \$22/adults, \$11/children ages 3-12; admission includes hors d'oeuvres and one drink per person; 609/884-5404 or 800/275-4278

Wings and Petals An audio/slide show on New Jersey's flora and fauna; 2 p.m.; Great Swamp; free; 973/635-6629

Quilting Bee An antique quilt display, quilting bee and demonstration; 10 a.m. to 4 p.m.; Howell; free; a children's workshop will be offered at 1:30 p.m. and a \$2 children's craft project will be offered from 11 a.m. to 3 p.m.; 609/737-3299

Bridgeton Folk Festival Celebrate the event's 15th anniversary with music, crafts, swimming and refreshments; noon to 8 p.m.; Donald Rainear Amphitheater at Sunset Lake, Park Drive, Bridgeton City Park; \$8/seniors; \$12/adults (in advance); \$15/adults (day of event); free/children 10 and under; 800/319-3379; 609/451-9208

20 & 21

Ship Bottom Day at the Bay Festival A bike race, surfing race, band competition and a large selection of food and crafts; 10 a.m.; 10th and Bay, Ship Bottom; \$2; 609/494-6909 or 609/494-0558 (evenings)

21

Father's Day Celebration Enjoy the zoo and museum, and register at the main building for a free drawing for a season's family pass; 9 a.m. to 6 p.m.; Space Farms Zoo & Museum, 218 Route 519, Sussex; 973/875-5800

26

First Swing Golf for People with Physical Disabilities Learn adaptive golfing techniques; 1:30 p.m.; Ash Brook Golf Course, Scotch Plains; nominal registration fee; preregistration required; 908/527-4900

27

Ladies of Acoustic Music Show This live stage concert showcases ladies of country and bluegrass music; 8 to 11:30 p.m. (doors open at 7 p.m.); Albert; \$4/adults, \$1/children under 12; 609/971-1593

28

Gloucester County Water Festival Learn all about watersheds; 11 a.m. to 4 p.m.; Scotland Run Park, 980 Academy Street, Franklinville; 609/881-0845



Eastern Milk Snake

by Joe Leskie

In many religions, snakes are viewed as beings with mystical powers. However, no other creature in the world has been so misrepresented and frowned upon as the snake. Although snakes are often immensely feared, most are not harmful to humans. In fact, many snakes serve a useful purpose, both ecologically and commercially. Snakes eat animals that may be considered nuisances, and many farmers recognize that snakes have an uncanny knack of catching more mice than cats and dogs do.

Like other reptiles, snakes are cold-blooded, air-breathing animals with scales and backbones. They are the most successful of all living reptiles and, considering their limitations, have amazing capabilities.

The absence of developed limbs has not affected their ability to thrive, as they can move rapidly both on the ground and in the water; some even excel at climbing trees. An ability to sense vibrations through the ground compensates for the absence of ears and

The milk snake got its name from the superstitious belief that it would enter a barn to milk the cows. Actually, a snake cannot retain even a small quantity of milk, let alone milk a cow.

helps these creatures to avoid danger and sense their prey.

Contrary to popular belief, the skin of the snake is not slimy, but smooth and dry. The outside skin is derived from thin, transparent, dead cells, which are shed, or molted, in one piece as the snake grows.

One of the most beautiful and beneficial snakes in New Jersey is the Eastern milk snake. This constrictor belongs to a group of snakes known as king snakes, with the "king" referring to its ability to eat other snakes.

The milk snake got its name from the superstitious belief that it would enter a barn to milk the cows. Actually, a snake cannot retain even a small quantity of milk, let alone milk a cow. In fact, the reason milk snakes enter barns is to pursue their prey, namely rodents. Another misconception surrounding the milk snake is the notion that if one is killed, its mate will return to avenge the death.

Varied and wide in range, the milk snake is found from Maine to Wisconsin and south through most of the United States east of the Rocky Mountains. It inhabits most of New Jersey and may be found in various habitats, such as open fields, deciduous woodlands, rocky hillsides, river bottoms, suburban areas and farmlands. The milk snake often is found hiding under rotting logs, stones, stumps and other protective structures. It is secretive and usually not seen in the open except at night.

Eastern milk snakes are gray or tan with black-bordered, reddish-brown blotches down their backs and sides, with a Y or V-shaped patch on the nape of the neck. Many are killed, unfortunately mistaken for the venomous copperhead snake. However, this superficial resemblance also enables them to escape from predators who may identify them as dangerous. The milk snake can grow to a length of 78 inches, although 24 to 36 inches is the average size of an adult.

Springtime brings the arrival of warmer temperatures and the end of hibernation for the milk snake, which has occupied its den since late October. Breeding occurs in the spring, with the female depositing 4 to 15 elongated eggs in June and July. After an incubation period of 6 to 9 weeks, providing they are not eaten by raccoons, skunks and other predators, the 5- to 10-inch young hatch as miniature replicas of the adult and are ready to begin life.

Milk snakes constrict and suffocate their prey, mainly rats and mice. They also feed on birds, lizards, worms, insects and other snakes, including the venomous ones. For this, the Eastern milk snake is among our most beneficial species.

They are chiefly nocturnal; however, they may feed during the day when temperatures are cooler. Elastic muscles in the head and specially hinged jaws allow the snake to open its mouth extremely wide to accommodate food that is larger than the snake's own body.

Though the Eastern milk snake population in New Jersey is stable, it is decreasing due to increased habitat destruction and urbanization of rural areas. Therefore, the beneficial milk snake may be at a critical point in its history, testing its ability to adapt to an ever-changing environment.

With the proper management of critical habitat and increased public education efforts, the Eastern milk snake should continue to thrive in New Jersey, playing a significant role in our ecosystem for generations to come.

Joe Leskie is a natural resource interpretive technician at the Division of Fish, Game and Wildlife's Pequest Trout Hatchery and Natural Resource Education Center.

