



New Jersey

Summer 1998 • \$4.25

Outdoors

Saltwater Tournaments

Fish for Fun and Prizes

Recycled Railroads

Explore New Jersey's Rail-Trails

History and Natural Beauty

Bike the Old Mine Road



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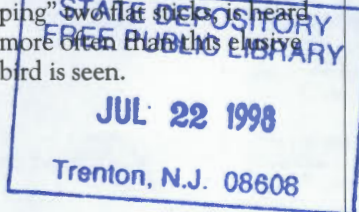
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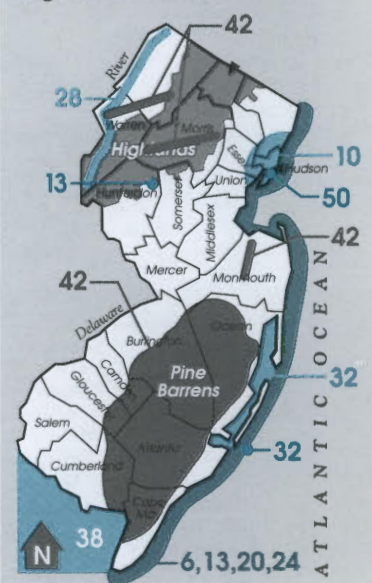
by Lee Widjeskog

The rail's call, which sounds like someone rapidly "clapping" wings, is heard more often than the elusive bird is seen.



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Front Cover

Fishing by the Shimmer brought Alyce Parseghian top honors in the Enjoying Our Natural Resources category of *New Jersey Outdoors'* photo contest. Other winners are pictured on pages 16-19.

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Professional sculptors created this castle for Atlantic City's Sandtennial in 1997. See story on page 24. © 1997 by Reginald Wickham

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The northern clapper rail also is known as the mud hen or marsh hen. © 1998 by Neal MacDonald

Back Cover

A skein of Canada geese passes high above a rank of phragmites. Read about the artist in the story on page 10. Taken with permission from *Fields of Sun and Grass*. © 1997 by John R. Quinn

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New Jersey *Outdoors*

Summer 1998, Vol. 25, No. 3

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.

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Mailbox

Tall Tales?

In the article **Jersey Green Giants** (Winter 1998), the author states that "since the 1970s healthy stands of American chestnut have all but disappeared across the eastern United States."

I can remember as a camper at the New Jersey School of Conservation in Stokes State Forest, during the mid 1950s, learning about the chestnut blight and seeing evidence of the remains of the great trees. The blight had long before devastated the stands of these trees.

The fungus first arrived in this part of the world by the early 1900s and caused the loss of trees by mid century — not, as implied by the author, in the 1970s.

Richard S. Cantor
Mahwah



The Author Responds

In my article **Jersey Green Giants**, I stated that the American chestnut population had disappeared, due to a devastating blight, by the 1970s. However, as Mr. Cantor pointed out, the Asian fungus had spread throughout the range of the species by 1950.

Today, the chestnut survives mainly as an understory shrub sprouting from the root systems of declining or dead trees that once grew as tall as 100 feet. The loss of this valuable tree, which grew in forests stretching from Maine to Georgia, is immeasurable.

A second reader voiced concern that the article did not list all of the factors that adversely affect the health and biodiversity of New Jersey's trees. While I mentioned only a few — loss of habitat, urban development, invasive species, insect infestation and disease epidemics — there are indeed many environmental and social contributors to tree decline. Vandalism, air pollution, acid rain and many others can readily be added to the list.

If you need additional information about New Jersey's forests, or if you have a concern or finding you would like to report, write to the New Jersey Forest Service at PO Box 404, Trenton, NJ 08625 or call 609/292-2531.

Amy Cradic

Back issues of **New Jersey Outdoors**,
when available, may be obtained
at a discounted price of \$3.
To order copies, call 1 (800) 645-0038.



Christine Todd Whitman,
Governor

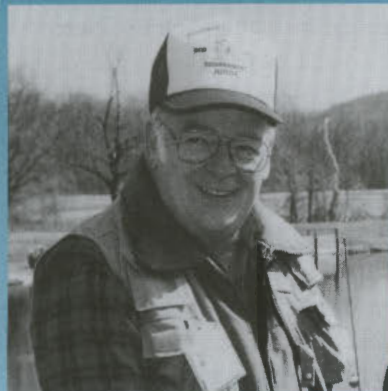
From the Governor

New Jersey is blessed with an abundance of natural riches. Our beaches provide recreation and relaxation for millions of residents and visitors. Our farmland provides berries, tomatoes, corn and so many other bountiful harvests. And our wetlands and forests shelter and sustain rare and endangered native species and attract millions of migratory birds.

If we were to continue to blindly encroach on these natural and rural areas we would, in the long run, devastate both our economy and our environment. That is why it is so important that we act now to protect as much of our open space as possible.

Earlier this year I set a new goal of preserving 300,000 acres of open space and farmland over my second term of office, with the ultimate goal of preserving a million acres over the next decade. These are ambitious goals, but I am confident they can be met if we establish a permanent, stable source of funding. My Council on New Jersey Outdoors has recommended several alternatives, and I will work with the Legislature to see that we establish that funding source this year.

Since *New Jersey Outdoors* readers know well the value of open space, I would appreciate your participation and support.



Robert C. Shinn, Jr.,
Commissioner

From the Commissioner

Many of our routine activities harm our environment, a phenomenon known as non-point source pollution. We have enjoyed great success curbing pollution from factories and sewage plants, and this insidious form of pollution poses the most serious threat to our watersheds and atmosphere today.

Rainfall or snowmelt, moving over and through the ground, causes non-point source pollution. As the runoff moves, it picks up and carries away natural and human-made pollutants, such as excess fertilizers, herbicides and insecticides from agricultural lands and residential areas; oil, grease and toxic chemicals from urban runoff; and bacteria and nutrients from livestock, pet wastes and faulty septic systems. The runoff deposits these pollutants into lakes, rivers, wetlands, coastal waters and aquifers, where they can ultimately have harmful effects on drinking water supplies, recreation, fisheries, plants and wildlife.

What can be done to minimize non-point source pollution? We already know that household chemicals, motor oil and pet wastes should be disposed of properly; that litter, leaves and debris should be kept out of street gutters and storm drains; and that we should conserve water. But there are hundreds of other ideas, many of which may save you money or increase the value of your property.

To help runoff soak into the ground where it can be cleansed naturally, use decking, brick or other permeable surfaces, rather than concrete or asphalt paving, for patios and walkways. Plant trees, shrubs and ground cover; they help prevent erosion and absorb far more rainwater than grass.

There are far too many possibilities for this limited space, but newspapers, magazines, books and the Internet — as well as your local Soil Conservation District or Rutgers Cooperative Extension — can provide a wealth of ideas.

Each of us has a stake in the future. It's up to each of us to increase our awareness and to act responsibly. In that way, we can ensure the viability of our natural resources for generations to come.

New Jersey Outdoors **People**

Skillful Anglers

Since the New Jersey Division of Fish, Game and Wildlife began the program in 1983, "skillful angler" status has been conferred on 1,362 individuals. Ninety applications were processed for 1997 catches; 24 won the skillful angler designation, and 3 of the catches — a white crappie, muskellunge and bluefish — turned out to be state records.

Freshwater catch winners are: **Dominick Bizzari**, of Randolph — 6 lb., 2 oz. largemouth bass; **Russ Van Duzer**, of Dover — 9 lb., 6 oz. striped bass hybrid; **Bobby Hall**, of Bridgeton — 15 lb., 4 oz. channel catfish; **Bobby Bernard**, of Salem — 2 lb., 10 oz. crappie (state record); **Robert Neals**, of Hopatcong — 42 lb., 13 oz. muskellunge (state record); **Walter Sedor**, of Trenton — 6 lb., 10 oz. chain pickerel; **Forrest Black**, of Dunellen — 17 lb., 10 oz. Northern pike; **Randy Menken**, of Lakewood — 6 lb. brook trout; **David J. Dickinson**, of Edison — 8 lb., 5 oz. brown trout; **Bill Wackermann**, of Stewartsville — 15 lb. lake trout; **Andrea Totten**, of Wharton — 9 lb., 6 oz. rainbow trout; and **Wayne T. Dege**, of Bridgewater — 9 lb., 8 oz. walleye.

Saltwater anglers who earned the designation are: **Jim Gallo**, of North Bergen — 5 lb., 1 oz. black sea bass; **Charles Griner**, of Port Norris — 60 lb. striped bass; **Roger Kastorsky**, of Buena — 27 lb., 8 oz. bluefish (state record); **Stanley Klimek**, of Sayreville, who caught both a 32 lb., 8 oz. cod and a 10 lb. weakfish; **Michael Kuda**, of Westville — 78 lb. black drum; **Alfio Leone, Jr.**, of Mickleton — 6 lb., 2 oz. winter flounder; **Paul O'Neil**, of Lawrenceville — 11 lb., 4 oz. fluke; **George Klawitter, Jr.**, of Millville, and **Andrew Vazquez**, of Lenni (PA), both of whom snagged a 16 lb., 2 oz. tautog; **Tom Walsh**, of Toms River — 72 lb., 12 oz. albacore tuna; and **Peter Ryon**, of Pottsville (PA) — 252 lb. big eye tuna.

Hot Off the Press

The New York-New Jersey Trail Conference has just published a newly-revised, professional quality, two-map set to guide you on the trail systems of the North Jersey Highlands. This glaciated terrain of rugged ridges and gentle valleys dotted with reservoirs is rich in both wild, scenic beauty and history.

The map set covers primarily Bergen County, with adjoining areas of Bergen and Sussex counties. It includes the trail systems in the Ramapo Range and the Highlands: Ringwood, Wawayanda, and Long Pond Ironworks state parks; Ramapo Mountain, Norvin Green and Abram S. Hewitt state forests; and Greenwood Lake, the Ramapo County Reservation, the Pequannock Watershed and the New Jersey portion of Sterling Forest. Also covered are the Appalachian and NY-NJ Highlands trails.

The two contour maps detail viewpoints, lakes, parking, historical notes and more on tear-resistant and waterproof paper.

To order, send a check for \$8.90 (\$7.95 plus \$.95 postage) to: New York-New Jersey Trail Conference, 232 Madison Avenue, #802, New York, NY 10016.



More Web Sites to Watch

Anglers, take note: If you're looking for information on fishing clubs, nautical events, what's biting and more, visit www.nauticalnet.com today.

Do you enjoy visiting beautiful old homes and fabulous gardens? Check out Skylands' new Web site at www.njskylandsgarden.org for a healthy dose of history and beauty. Gardeners also will enjoy the New Jersey Garden Network (www2.njgarden.com).

If you're looking for places to visit this summer, check out Lucy the Elephant Building (www.levins.com/lucy.html) and Waterloo Village (www.waterloovillage.org).

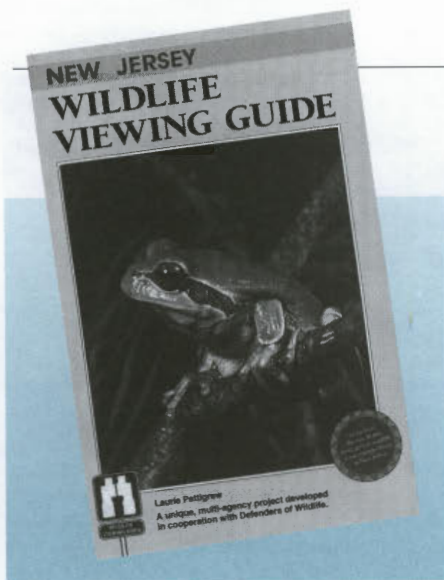
Finally, to learn all about Teaming With Wildlife, go to www.teaming.com.

O.W.L. Formed

If you read *Lessons and Laughs for an Outdoor Woman* in the Spring 1998 issue of *New Jersey Outdoors*, it shouldn't surprise you to find out that these ladies don't let the grass grow under their feet. In late 1997, some participants in the Becoming an Outdoors Woman program formed the New Jersey Outdoor Women's League (O.W.L.), which is open to those over 18 years of age who are interested in the pursuit of outdoor recreation related to wildlife.

The nonprofit organization works hand-in-hand with the Becoming an Outdoors Woman program, supporting and enhancing it by providing learning opportunities, outings, networking and information, and by promoting stewardship for New Jersey's natural resources.

Kudos to all those who made O.W.L. a reality, including **Dolores Pierce** (president), **Maria Hypo** (vice president), **Margaret Folgore** (secretary), **Rosemarie Hight** (treasurer), **Jeanne Gorrissen** (legal advisor), **Dorothy Obrata** (finance/budget chair), **Cathy Blumig** and **Michelle Cerami** (outings co-chairs), **Susan Smith** (speakers/meeting chair), **Marianne Pontellio** (public relations chair) and **Arline Zatz** — who wrote the aforementioned article — and **Barbara Garrison** (editor and co-editor, respectively, of the group's newsletter, *The O.W.L.*).



Wildlife Viewing Guide Order Form

Name _____

Address _____

City _____

State _____ Zip _____

Send check or money order for \$10.95 plus \$3.95 S/H payable to:

NJ Division of Fish, Game and Wildlife
Endangered and Nongame Species Program
PO Box 400
Trenton, NJ 08626-0400

Note: *If ordering multiple copies, please call 609/292-9400 for correct shipping and handling fee.*

Wildlife Viewing Guide

The New Jersey Department of Environmental Protection's Division of Fish, Game and Wildlife is proud to announce the publication of the *New Jersey Wildlife Viewing Guide*. The guide beautifully illustrates the rich natural treasures that few people (other than *New Jersey Outdoors* readers, of course) realize exist in our state.

The culmination of a two-year Endangered and Nongame Species Program project to establish a network of wildlife viewing sites throughout New Jersey, the guide is full of beautiful color photos and illustrations. In its 160 pages, you'll find directions to 87 of the state's best wildlife viewing areas, as well as information on site facilities, best viewing seasons and which animals and habitats can be seen.

Unique to New Jersey's guidebook is the inclusion of wildlife diversity tours. Expanded information on five sites in each of four regions allows the planning of 2- to 3-day trips that provide a deeper understanding of the region's ecosystems and wildlife.

The creation of the *New Jersey Wildlife Viewing Guide* and the development of a Watchable Wildlife Program for the state was made possible in part through grants from the U.S. Environmental Protection Agency, U.S. Fish and Wildlife Service, National Park Service and Department of Defense. Major funding has been provided through proceeds from the sale of *Conserve Wildlife* license plates.

To order your copy, complete and mail the form on this page.

Thanks A Million!

Many thanks go to this year's sponsors of the *New Jersey Outdoors* Photo Contest. **Networks Around the World, Inc.**, generously donated three \$50 Cape May Lighthouse phone cards, while **The Camera Shop** contributed a beautiful camera and complimentary film processing. The N.J. Department of Environmental Protection's divisions of **Fish, Game and Wildlife** and **Parks and Forestry** and the **Artificial Reef Program** provided a beautiful variety of prizes, including annual park passes, *Wildlife Profiles*, posters, the *New Jersey Wildlife Viewing Guide*, T-shirts and *The Guide to New Jersey's State Parks and Forests*.

In addition to prizes received, all winners were given a subscription to *New Jersey Outdoors* and a plaque or framed certificate memorializing their achievement.



Tournament Time!



AL WANY PHOTO, COURTESY OF THE N.J. DIVISION OF FISH, GAME AND WILDLIFE

Anglers of all ages can be seen casting along Island Beach State Park during the Governor's Surf Fishing Tournament.

by Bob Illes

Summer is here and the opportunity to take home some extra cash and prizes while engaging in a favorite pastime has arrived. Up and down the coast reels are being lubed, hooks are being honed, and plans are being made in anticipation of landing the big one.

The best part of participating in a New Jersey fishing tournament is you don't necessarily have to own a big boat to catch the winner. Some — the Governor's Surf Fishing Tournament, for example — are for beach-bound anglers only, and in others, such as the statewide Jersey Coast Anglers Association (JCAA) fluke tournament, the local contest winners often fish from rental boats.

Also, if your budget can handle it, there are virtually hundreds of charter boats available with experienced captains and crews who can put you on fish in a number of offshore tournaments.

Surf's Up

A favorite among New Jersey's many surf anglers is the **Governor's Annual Surf Fishing Tournament**, held at Island Beach State Park. This year's will be the seventh such event and it has been gaining in popularity every year. The tourna-

ment is sponsored by a consortium made up of the N.J. Beach Buggy Association (NJBBA), N.J. State Federation of Sportsmen's Clubs, JCAA and the New Jersey Department of Environmental Protection's (DEP) divisions of Fish, Game and Wildlife and Parks and Forestry.

The stated aims of this tournament are: to encourage both adults and young people to learn more about the sport of surf fishing and take advantage of this rewarding family activity; to raise money for shore restoration projects and disabled angler access; and to stimulate greater awareness of the need for marine resource conservation.

This close partnership of private non-profit associations and state government agencies is a model of what can happen when a state agency joins with ordinary citizens to further a common interest. According to Dave Chanda of Fish, Game and Wildlife, "We all wanted an event that would promote fishing as a family fun activity. Through our efforts together, the tournament has become a great happening and, over the years, the worst thing that has happened was one year the fish didn't cooperate." Participating anglers numbered some 700 the first year; this year, the sponsors expect almost double that number.

Beach wheelchairs purchased with funds raised by the Governor's Surf Fishing Tournament are put to use by Ed Schaffner (foreground) and Shaun Collins.

The Governor's Surf Fishing Tournament began as an idea kicked around back in 1991 by Tom Fote and Paul Smith, of the JCAA. They bounced it off the NJBBA's Conrad Truce, as well as Ben Glashan and Mark Lanzim of the Ocean County chapter of the N.J. Federation of Sportsmen's Clubs. Once they got Island Beach State Park Superintendent Bill Vibbert's nod of approval, they took the idea to Trenton. Scott Weiner, DEP's commissioner at the time, and Bob McDowell, Fish, Game and Wildlife's director, decided it was a good idea and helped make it happen.

The entrance fee for this tournament is only \$10. There are minimum sizes for all eligible species and catch-and-release fishing is acceptable. A witness is required for released fish, but the sponsors provide volunteer judges who patrol the beach. Winners of this tournament receive a specially engraved Governor's Cup, and prize packages donated by different manufacturers also get distributed.

More Suds

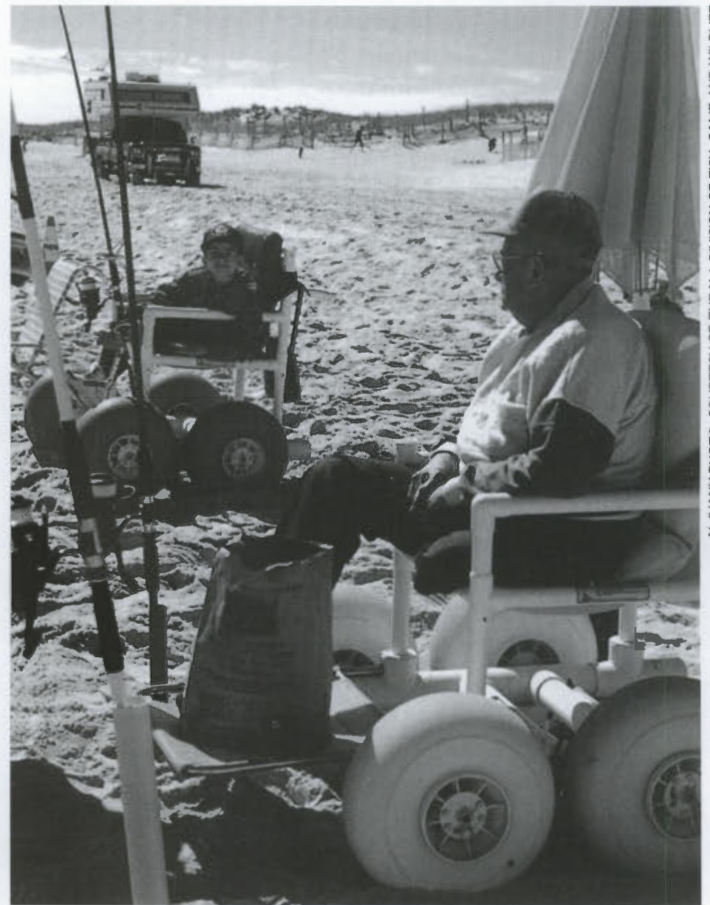
The **Annual LBI Surf Fishing Tournament** is sponsored by the Southern Ocean County Chamber of Commerce. This tournament began as a way to promote activities on Long Beach Island in the fall season and runs from the first weekend in October to the middle of November. Weigh-in stations are at local tackle shops like Fisherman's Headquarters and Bruce and Pat's. There are two divisions — striped bass and bluefish — and, besides the \$1,000 grand prize for each, there are \$400 prizes for the biggest fish for each two-week segment and \$125 prizes for the weekly winner.

In addition to these annual surf fishing tournaments, there are weekly tournaments hosted by the different clubs that comprise the N.J. Association of Surf Anglers. Each club runs at least one weekend tournament that takes place on its home beach. There are different awards for fluke, weakfish, bluefish and stripers.

One of the clubs that has hosted a contest for the past 14 years is the Women's Surf Fishing Club, out of Sea Isle City. Founded in 1955 by a group of fishing ladies that included Myra Fuller, current treasurer Sara Worth, and current president and tournament chair Flo Pancoast, this club has done a lot over the years to involve more women in surf fishing. "The club," says Pancoast, "gets along fine with all the rest of the clubs made up mostly of men. Though we're just one women's club among many men, we give them a run for their money."

Away All Boats

Besides being a sponsor of the Governor's Surf Fishing Tournament, the JCAA also sponsors its **Annual Fluke Fishing Tournament**. In addition to raising funds for the JCAA, which advocates for anglers at both the national and state level, the awards ceremony features conservation exhibits and seminars for junior fishers. The seminars are conducted by the



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

JCAA Youth Education Program, headed by Greg Kucharewski.

Traditionally, this contest was scheduled for Memorial Day weekend as a kick-off for the season. However, due to bad weather the last few springs, this year's tournament will be held a week later, on June 6. Early in the season, big fluke move into the warmer rivers and bays to feed on grass shrimp, small crabs, and bait fish. Because of this, the winning fish in the JCAA tournament often are caught from small boats, even by people on rental boats. This tournament is different from most in that there are regional port prizes for the biggest fish weighed in at ports all along the New Jersey coast. Also, in addition to adults' prizes, each port has a junior division for anglers 13 and younger.

According to Tom Fote, a past president of the JCAA, "The tournament is statewide because the JCAA is a statewide organization. Also, we have port prizes so that anglers in South Jersey, where the fluke are usually smaller early on, won't be competing with anglers in North Jersey, where the fish run bigger."

The winner of each port receives a prize package and a check for \$1,000. The grand prize for the last few years has been a Cobia center console fishing boat with a Yamaha power plant. The winner of this prize, valued at \$25,000, is picked by

The crew of the *Kingfisher* pose with their winning white marlin.

a drawing conducted at the awards ceremony. The JCCA uses this method to pick the winner to avoid the advantage held by northern anglers. Along with the port prizes for children and adults and the Grand Prize, there is also a \$1,000 scholarship drawing for one lucky junior angler. All together, more than \$75,000 in cash and prizes is distributed.

There are a number of shark tournaments every year but one that has gained in popularity over the years is the **Annual Shark Tag N Release Tournament** put on by *The Fisherman* magazine. The boats in this tournament can fish out of any New Jersey port, with a captain's choice of days to fish and an observer assigned to every boat entered.

This contest, which has been held for the last 14 years, was started not so much to distribute big money prizes but "to initiate an incentive in tagging sharks and develop that habit among New Jersey anglers," explains *The Fisherman's* Pete Barrett. "After the prize money is distributed, the proceeds left are given to various non-profit organizations involved in fish conservation," he adds.

So far, the tournaments have generated almost \$70,000, with the money being distributed among the New Jersey Artificial Reef Program, The American Littoral Society, International Game Fish Association, and the Cooperative Shark Tagging Program. Prizes vary little from year to year, with the first place prize winner of the 1997 contest taking home \$1,000 in cash, a Penn International 30 T and 2260 Shark Rod, a two-night/full-day charter out of Palm Beach, \$500 towards air fare and a valuable Steve Goione print.

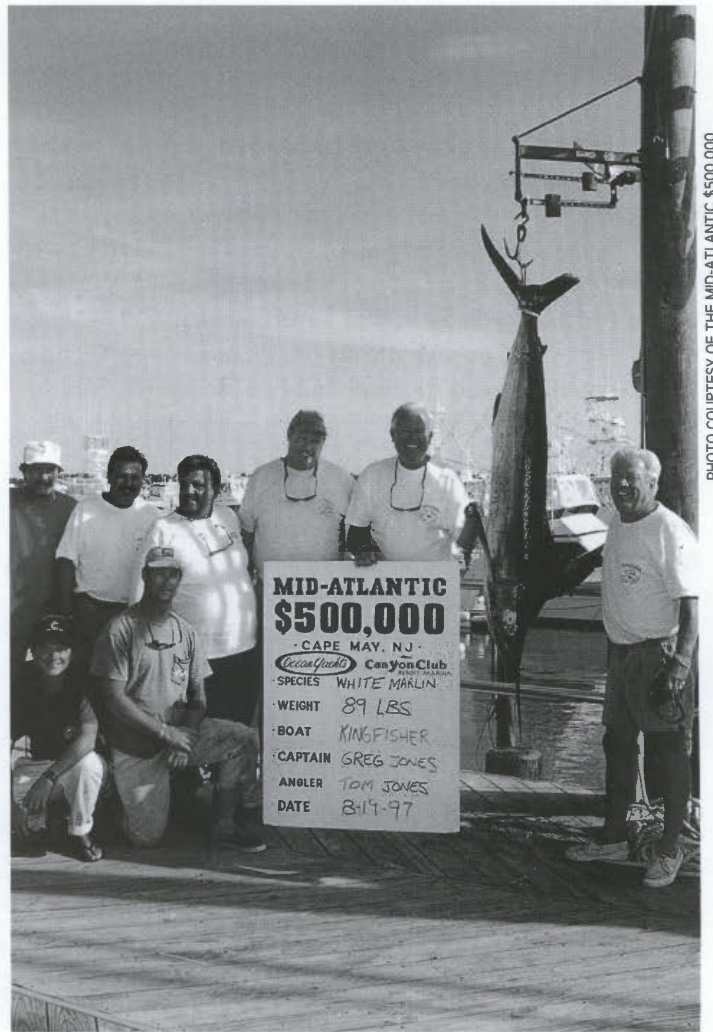


PHOTO COURTESY OF THE MID-ATLANTIC \$500,000

Big Bucks

A big tournament out of Clarks Landing Marina is the **Annual Mako Mania Tournament**, sponsored by the Point Pleasant Charter Boat Association. Winners of this mako-only contest take home more than \$50,000 in prizes, making it one of the largest tournaments in the state. Drew "Whitey" LaFrance, on his boat *Due East*, has participated in Mako Mania for years. While he hasn't won it yet, he says, "I keep my engines tuned, my bait fresh and my hooks sharp, and any one of these years a big mako with my name on it will take the prize and I'll be able to prove to my wife that all the money I spend on my boat and tackle is not in vain and maybe then she'll understand."

If it's really big money you're after, the **Mid-Atlantic \$500,000** is the tournament for you. It's known as the richest

Members of the Women's Surf Fishing Club placed first in a tournament last year hosted by Long Beach Island's Surf Anglers. Pictured (l-r) are Chris Pancoast, Ida Davis, Sarah Wirth and Chris Henry, with Flo Pancoast in the foreground.



PHOTO COURTESY OF THE WOMEN'S SURF FISHING CLUB

marlin and tuna tournament in the world, according to tournament director Bob Glover.

"The number of boats entered in our tournament each year guarantees a minimum of \$500,000 in cash prizes," he says. "However, it's always gone beyond that and this year we expect over a million dollars in the pot, as 1996 saw a record \$1,133,000 paid out and 1997 was close to that number as well."

This five-day tournament runs out of the Canyon Club Resort Marina in Cape May and International Game Fish Association rules apply. The only other restrictions are that participants must fish within 125 miles of the Cape May buoy and pick just three of the available five days to fish.

The top three white and blue marlin each earn at least \$100,000 and the three heaviest tuna each receive \$75,000, \$35,000, and \$20,000. There's also a dolphin category that brings \$10,000 to the winner. Besides these "official" prizes there are also calcuttas with a "side bet" of \$1,000, \$1,500, and \$2,500. A calcutta is separate prize, often a winner-take-all, where the biggest fish of a given species on a given day takes all the money for the participant. Most of the larger tournaments have them and the amounts won can be considerable. In the case of the Mid-Atlantic \$500,000, the substantial payouts go to the top three white and blue marlins and tuna.

There is also a White Marlin Pro Jackpot, with a \$5,000 fee, which is a winner-take-all calcutta. In addition to the cash prizes, fish released under the minimum weights of 60 pounds for white marlin and 400 pounds for blue marlin and boated tuna earn points for valuable trophies. Finally, there's a raffle where all funds raised go to the Billfish Foundation.

There are saltwater fishing tournaments in New Jersey for anglers with all kinds of resources. For a minimum entrance fee, you can have fun on the water or in the surf. Maybe you'll land a winner and take home some prizes and enough money to fund a few fishing trips. Or, for a larger fee, you have the chance to win some really big money. In either case, keep your line tight and your hooks sharp — you never know when the big one is going to bite.

*Bob Illes, a lifelong resident of the Jersey Shore, fishes the ocean, the bays and the surf. An active member of the Outdoor Writers Association of America who specializes in writing about salt- and freshwater fishing, his articles have appeared in **The Fisherman** magazine, **Fly Fishing Quarterly**, and other regional and national publications. Bob also fishes in many of the tournaments he's written about in this article, and has finished "in the money" in many of them.*

A Sampling of the 1998 Tournament Line-up

■ June 6

JCAA Annual Fluke Fishing Tournament, 732/506-6565

■ June 6

12th Annual Cumberland County Weakfish Tournament
609/455-0328

■ June 12 - 14

18th Annual South Jersey Shark Tournament
609/884-2400

■ June 13

Chestnut Neck Fluke Tournament, 609/652-1119

■ June 13 - July 13

Fisherman's Conservation Organization
1998 Shark Tournament, 732/363-0060

■ June 17 - 21

The Fisherman Magazine 15th Annual Tag N Release
Shark Tournament, 732/753-6438

■ June 20 - 21

12th Annual Mako Mania, 732/681-6306

■ July 18

8th Annual Charity Fluke Tournament, 732/706-0294

■ August 1

14th Annual Leonardo Fluke Tournament, 908/363-4951

■ August 15

Boys and Girls Summer Surf Tournament, 609/398-9800

■ August 16 - 21

1998 Mid-Atlantic \$500,000, 609/884-2400

■ August 21 - 22

41st Annual Invitational Tuna, Bluefish,
and Fluke Tournament, 609/693-2562

■ August 29

Chestnut Neck Weakfish Tournament, 609/652-1119

■ October 4

7th Annual Governor's Surf Fishing Tournament
908/637-4125

■ October 4 - November 16

44th Annual LBI Surf Fishing Tournament, 800/292-6372

■ October 31

14th Annual Women's Surf Fishing Club Tournament
215/855-3411

■ November 7 - 9

\$10,000 Striped Bass Tournament, 732/899-4851

Meadowman

by Mark McGarrity

Vision quest was a term John R. Quinn understood back in 1949 when, on a cold winter morning, the 10-year-old slipped out of his house in Ridgefield Park and stole into the frozen wild marshes at the end of the street. His purpose? To witness dawn breaking over the frigid Meadowlands.

He'd read about how the Lenape, New Jersey's Indians, had required pre-teen boys to enter the surrounding wilderness and seek out a guiding spirit that would accompany them through life, rendering advice and counsel.

The ethereal persona might be found in any natural aspect of the environment: a rock, a tree, a spider or some animal. But finding his own was the furthest thing from Quinn's mind on that chilly January morning 48 years ago. He merely wanted to observe the "gradual emergence (of the marshland landscape) from the window of the night," he writes in his lyrical and excellent compendium of Meadowlands knowledge, *Fields of Sun and Grass: An Artist's Journal of the New Jersey Meadowlands*, that Rutgers University Press recently published.

Just as the sun topped the tall grasses, a "distant swarm of gulls far away and high above the frozen creek . . . (burst) into cold flame, flaring into tiny sparks, white wings and bodies ablaze against the high, bright sky."

Then, as the sounds of morning came to him — "the dry whisper of reeds . . . the drip and run of gray, tainted waters below the cover of snow and black ice . . . an auto horn . . . an engine cranking into life" — he chanced to look down and his eyes "pluck(ed) the meandering track of a bird from the anonymity of the snowfall's blank page." It had been made by a rail, he supposed, one of the several species of birds that wintered in the brackish estuary. But

what was a "water-loving bird" doing so far from open water? Walking not flying. Could it be injured? Or starving?

So the young Quinn followed the solitary track to a reedy cover where, he imagined, the bird had hidden itself, "deep among the dry brown grasses. I knew at once that a wildling, a creature of another sphere of existence, crouched there . . . awaiting the next move of its pursuer."

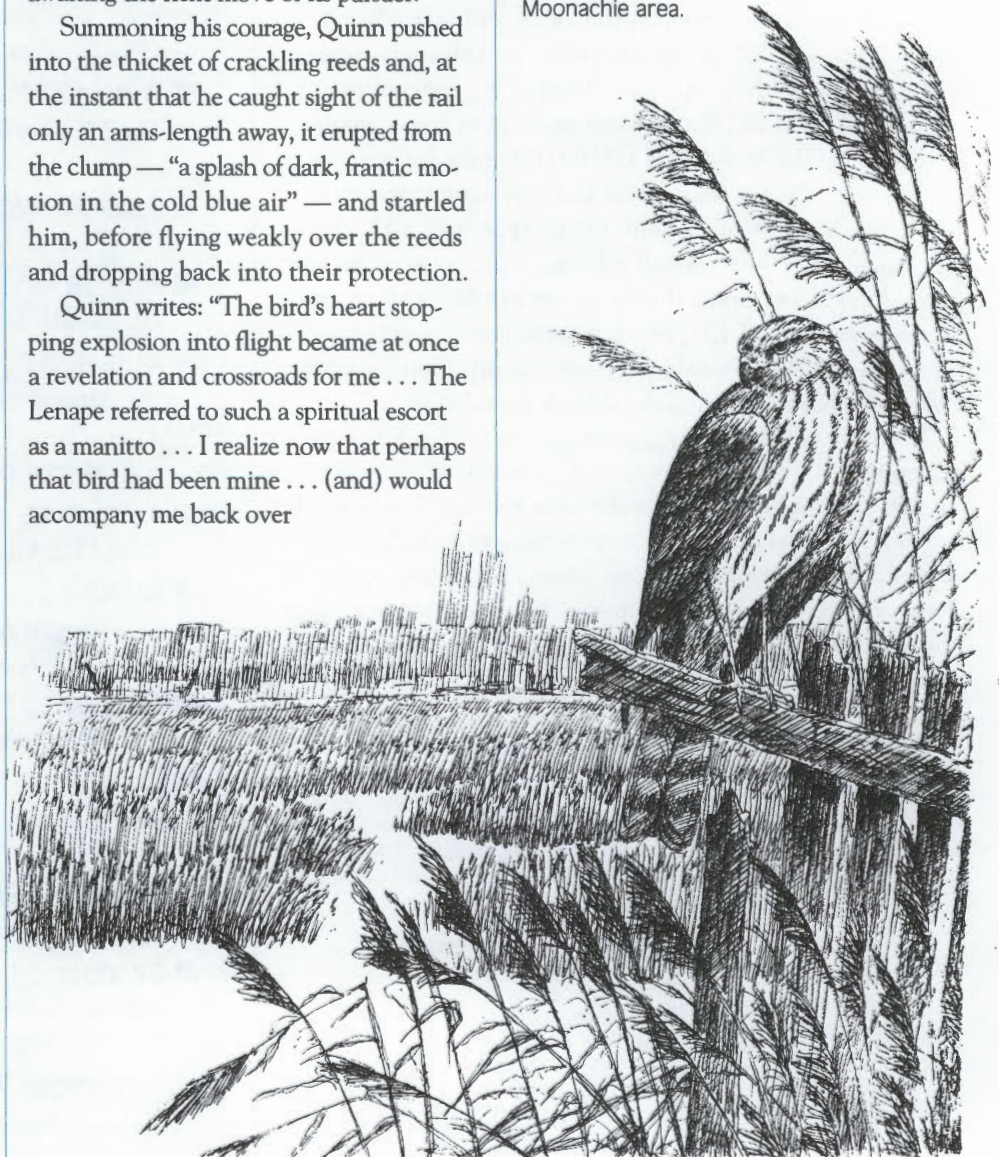
Summoning his courage, Quinn pushed into the thicket of crackling reeds and, at the instant that he caught sight of the rail only an arms-length away, it erupted from the clump — "a splash of dark, frantic motion in the cold blue air" — and startled him, before flying weakly over the reeds and dropping back into their protection.

Quinn writes: "The bird's heart stopping explosion into flight became at once a revelation and crossroads for me . . . The Lenape referred to such a spiritual escort as a *manitto* . . . I realize now that perhaps that bird had been mine . . . (and) would accompany me back over

the years to these once-beautiful meadows and allow me to discern them with the eye of an artist and the heart of a naturalist."

It took Quinn three weeks to track the rail down, catch it in a crude trap, confine it for the winter, and ultimately — "following inner conflict" — to release the bird "to its rightful freedom." In so doing, he not only discovered his own *manitto*, but Quinn also acquired the "first tentative soundings of an environmental conscience" that has resulted in his writing and illustrating 10 books on nature and science.

This female marsh hawk was found in the Moonachie area.



SKETCHES ON BOTH PAGES TAKEN WITH PERMISSION FROM *FIELDS OF SUN AND GRASS*. JOHN R. QUINN, © 1997

Origin of the Meadowlands

Fields of Sun and Grass, however, has to be Quinn's most personal, since he has lived much of his life on the margins of the Garden State's most-maligned natural curiosity: painting, drawing, studying, recreating there, and — as a journalist for two Bergen County newspapers — writing about “the swamps,” as the area was called throughout much of its history of abuse.

The volume is a must-read for anyone who has ever wondered — while stuck in traffic or riding one of the train lines that lace the once pristine impoundment — just what the sea of fox-tails, grass, muck, trash, debris, landfill, swamp and river is. Where did it come from? And what's in its future?

All the answers are in Quinn's book. But the short one is that the Meadowlands have been in the making for the past 20,000 years, since the last glacier withdrew and created several large, shallow lakes in pockets that it scoured from the bedrock of the region. Glacial Lake Hackensack stretched from present-day Perth Amboy all the way to the New York border, a distance of 50 miles, and was about 15 miles wide.

About 10,000 years ago, the terminal moraine, which had been acting as a dam, was breached, the lake drained, and layers of rich, water-holding, estuarine clays were left behind. Mastodon roamed there. With temperatures some 18 degrees Fahrenheit cooler than today, other storied beasts called the area home: huge moose/elk, beaver weighing in at 400 pounds, saber-toothed tigers, and woolly mammoths.

But as the climate got warmer over the millennia, the flora and fauna changed as well, and the Meadowlands began to assume their pre-Columbian form some 9,000 years ago: a network of extensive freshwater marshes and swampland filled with rushes, sedges and cattails. A cedar forest sprang up to cover approximately one-third of the 20,000-acre Lenape hunting preserve, which contained most eastern North American game species and, during fall and spring,



sky-darkening swarms of migrating birds.

In the early 17th century, Samuel Groome, an explorer-successor of Henry Hudson for the Dutch East India Company, wrote of the Meadowlands around Newark: “Well, here is a brave country, the ground very fruitful and wonderfully inclinable to English grasses such as clover. Those swampy lands bear great burdens of grasses and the land is four times better than I expected.”

But, for shame, four times wasn't enough. Trying to make it even better, the Dutch were the first to attempt to drain the area and, like the Indians before them, they torched the meadows every spring and fall, both to sweeten the soil and to shoot the game that was flushed from the fields. A hundred years later, all the forests were gone, stripped for masts for the Royal Navy. Quinn writes: “Thus, well before the dawning of the eighteenth century . . . the inexorable process (was set in motion) by which the Meadowlands would be transformed from a trackless wilderness to the cityscapes of the twentieth century.”

The March of “Progress”

As the state industrialized and population centers encroached, diking and draining operations increased dramatically, mainly to control mosquitoes both

of the bothersome kind and those that could become disease vectors for malaria and equine encephalitis. In our own time, the Meadowlands have been ribboned with roads and rail lines, platformed by two airports, filled in for developments, and dumped upon. At the height of the trashing, the Meadowlands landfills were accepting 40 percent of all garbage generated by the Garden State and 70,000 tons per day from New York. Egregious mountains of fetid garbage were created that can still be seen today.

The Oradell Dam, built in 1923, was another stellar blow to the ecological character of area. It contained the Meadowland's historic supply of fresh water, while allowing brackish waters to flow in with every tide. The change in salinity encouraged the growth of the now nearly ubiquitous phragmites (fox-tails, a hardy exotic originally from Australia) at the expense of native grasses and plants that supported a wide variety of marsh animals and birds.

As of the book's writing, a plan had been developed for the management of the remaining wetlands that would permit new development on 2,200 acres, including 841 acres of marsh that would have to be filled, and earmark the remaining 7,700 acres for preservation as open space and crucial riverine habitat.

Of the 7,700 acres to be preserved, 3,400 are considered degraded wetlands that will require improvement, or mitigation, to restore them to ecological health.

And yet *Fields of Sun and Grass* is no downer. Quinn remains hopeful. Sitting on top of Snake Hill in Secaucus with the Turnpike below him, "assailed by the

noise of a hundred thousand machines," he looks out on what's left of the Meadowlands and imagines he can hear "the rush and clatter of half a million caribou, moving up the valley from the sea." But then the roar of the highway intrudes.

Quinn muses: "What I had been hearing and feeling was not just noise; it was

the collected energy, the vital force, if you will, of all this life — eons of it — that had been picked up by the wind and delivered to the wall of the mountain, from there to be swept heavenward . . . I saw and heard this exultation not as a craven offense against nature but rather as a spectacular confirmation of it. We speak of 'change' so often today that it has become a meaningless, politicized buzzword. But change — constant, subtle, and eternal — is indeed an incontestable rule of nature."

And later, "I know that such an environment cannot be an improvement over the 'pristine' river valley that lay under a November sun of two thousand, or ten thousand, years past. But for better or ill it is a world of our own making, and we have, to the best of our short-term-gain abilities, adapted to it. It is still a livable place, in all its fierce vitality and tensions."

Fields of Sun and Grass is lavishly illustrated by Quinn, offering manifold pen-and-ink drawings of Meadowlands settings; its plant, animals and birds; maps; imaginative illustrations of the glaciers that beset the region; highways, airports and landfills. It's fun just flipping through the illustrations.

But the signal pleasure of *Fields of Sun and Grass* resides in the fact that Quinn is a polymath — the quaint 18th-century word meaning that he possesses many talents: gifted writer and artist, historian, and naturalist with fine grasp of other disciplines, such as anthropology, sociology, the history of transportation . . .

Quinn is an erudite man in the best sense, and his book both entertains and informs on many levels. For the story of the Meadowlands is quintessentially a Jersey tale, and one should hope that in knowing it we might know ourselves better.

Mark McGarrity is a freelance writer who lives in Morristown. His writing covers the spectrum from the fiction genre to travel.

Meadowlands Canoe Launches

In most cases, it is much wiser to arrange for a drop-off and paddle one-way — with the tide — to a second vehicle waiting at the destination.

The lower Hackensack River is canoeable for its entire 35-mile length, from Newark Bay to the dam at Oradell. It is possible to put ashore at many places along the river . . . though again, careful attention must always be paid to the tide schedule to avoid an onshore stranding.

Steven Barnes of the Baykeeper stresses that private citizens are assured access to riparian lands through the Public Trust Doctrine. Access to the river should be . . . guaranteed the canoeist via . . . parks and other such publicly owned lands.

■ **Overpeck Creek Park** in the turn-around at Overpeck County Park just south of Fort Lee Road in Leonia. You will have to carry your canoe across the park lawn and through the reeds to the creek bank. But the impounded part is not tidal, so access is unlimited regardless of time of day. The tidal portion can be reached off Bergen Turnpike in Ridgefield Park, just west of the village's creekside McGowan Park.

■ **Little Ferry: Pirate's Cove Marina** Located at 120 Industrial Avenue, this marina offers a boat ramp. 201/440-4554

■ **Secaucus: Laurel Hill** Canoes maybe launched at the new HMDC ramp at Laurel Hill Park, located at the foot of Snake Hill. No launch fees; free parking. 201/436-8300.

■ **Secaucus: Snipes Park** Good access at this small municipal park, but park your car in the adjacent Channel 9 parking lot and carry the canoe to the river. Please take care walking through the cordgrass at the river's edge.

■ **Secaucus: Red Roof Inn** Located at 15 Meadowlands Parkway, between the east and west overpasses of Route 3, the motel has a marina with fine access to the river. Launch fee payable at the inn's registration desk. 201/319-1000.

■ **Secaucus: The Old Mill, Mill Creek** Located at the mouth of Mill Creek and Mill Creek Mall, this restaurant has a good ramp and charges a fee.

■ **Carlstadt: The Meadowlands Golf Center and Marina** Located off Washington Avenue at the end of Paterson Plank Road, the facility offers refreshments, ample parking and a good launching ramp. 201/507-5656.

■ **Carlstadt: The River Barge Cafe** Located on Outwater Lane next to the Meadowlands Golf Center and Marina, the restaurant offers excellent food and a fine launch ramp. 201/531-0700.

■ **Kearny MarshWest** This freshwater wetland habitat is accessible to canoeists by way of the Gunnell Oval, a public park off Schuyler Avenue in the township of Kearny. The HMDC offers warm-weather canoe cruises, guided by staff naturalists who explain the ecology of the marsh and its history. 201/436-8300.

Taken with permission from Fields of Sun and Grass. John R. Quinn, © 1997

Underwater Cleanup

PHOTO COURTESY OF BLUE WATER DIVERS



PHOTO COURTESY OF DIVERS TWO



by Bo Smolka

A volunteer diver (above, left) from New Jersey emerges from the waters of Lake Kanawaukee in New York's Harriman State Park with a bag of debris.

It's a dirty job, but somebody has to do it (above, right).

Eighty feet beneath the surface, beneath whitecap swells and howling winds, the ocean is a more serene place. Sunlight and storms dissolve in the depths, leaving only a cold, blue silence.

This is a world known only to sea creatures and scuba divers.

"It's like being in outer space," says Joe Skimmons of Divers Two, Inc., a scuba store in Avon. "You just float through the water. You see things that only someone who puts on the (scuba) gear can see."

Floating through the deep, Skimmons sees schools of fish meandering in search of food, marine plants swaying in gentle ocean currents, and algae slowly conquering the rusting hull of a sunken ship.

For all the beauty, though, he also sees trouble. He sees beer bottles, car batteries and aluminum cans. He sees human carelessness wreaking havoc on a fragile marine environment.

For the last two years, Skimmons has worked to repair that environment by participating in the Underwater Cleanup, a worldwide, grassroots effort to clean up the world's water. Coordinated by the Washington, DC-based Center for Marine Conservation (CMC) and supported by a host of environmental organizations, the dive project is an offshoot of the International Coastal Cleanup, which has been conducted one September weekend every year since 1986.

Since the first cleanup 12 years ago — which featured 1,200 volunteers combing 120 miles of Texas shoreline — participation has skyrocketed. According to CMC estimates, the 1997 event drew more than 250,000 people representing every state and more than 50 foreign countries. At least 25,000 of those volunteers were scuba divers, including more than 100 from the Garden State.

"The International Coastal Cleanup is a tool to influence policy changes," says the CMC's Rebecca Burger, "and to alert people as to how bad the marine debris problem really is."

The numbers do that easily enough.

According to final 1996 data compiled by the CMC, volunteers worldwide collected more than 4.5 million pounds of debris. In the United States alone that year, the totals included 600,000 cigarette butts, 100,000 glass bottles and 8,000 tires.

"It's just so appalling when you see someone drive down the highway and empty an ashtray out the window," says Skimmons. "Cigarette butts are small, but they do a lot of damage to marine life."

Close to Home

The CMC relies heavily on volunteers known as “Trash Captains” to coordinate the cleanup on the local level. Projects range in scope from creekside litter patrols to more elaborate events like the one Skimmons organized last year in Belmar.

Generating publicity through local media and by word of mouth, Skimmons assembled more than 250 volunteers — the largest group ever to participate in this event in New Jersey. Dressed in wetsuits and armed with gloves and collection nets, divers scoured the bottom of the Back Bay, while non-divers cleaned the beach and helped sort debris that divers hauled from the water.

“We had all ages,” recalls Skimmons. “We had schoolchildren as young as seven years old who walked the shoreline with their teachers, and we had parents who brought their children to learn more about the environment.

“Those kids were unbelievable,” he adds. “I’ve never seen that beach looking so spotless. They didn’t leave anything unturned.”

Among the most common items found at the Belmar site were bottles, cans, plastic lids and Styrofoam. Divers also retrieved more unusual items, like an industrial floor stripper that had been dumped in the water.

“It’s one of those things you walk behind,” Skimmons explains. “It was huge. The police took that right away.”

The local nature of the Underwater Cleanup appeals to people, says Elana Farrell who, along with 30 other divers, cleaned the reservoir at the popular Round Valley Recreation Area in Hunterdon County.

“We could go down to the shore,” says Farrell, who operates The Scuba Store in Flemington, “but people are more likely to get involved if we stay close to home. It’s something for the environment, for the water, and for an area their kids use.”

While the Underwater Cleanup is conducted primarily by divers, local efforts depend heavily on non-diving volunteers for support duties such as transportation and first-aid. In addition, Boy Scout troops and other service organizations often join the effort along the shore.

The cooperation of local authorities is also critical and appreciated, organizers say. In many cases, police and search-and-rescue personnel have participated, and state parks authorities have granted special permission for cleanup crews to dive in areas otherwise off-limits.

Turning the Tide

Many volunteers say the amount of debris they discover is staggering.

“We didn’t even make a dent,” says Farrell, whose Round Valley crew spent the entire day hauling garbage from the reservoir. “Ninety percent of what we brought up was beer bottles, wine bottles and beer cans. And there’s no drinking there, right? People just dump their garbage so they don’t get caught.”

“We were amazed at how much litter people leave behind, even in the state parks,” adds Lorraine Riscinti. Affiliated with Blue Water Divers in Ramsey, Riscinti and a 65-member cleanup team tackled Lake Kanawaukee in New York’s Harriman State Park. In addition to bottles and cans, the group retrieved bicycles, monofilament fishing line, and even a picnic table.

Fishing line can be a particularly troublesome underwater hazard. The line easily becomes tangled on underwater plants, logs and rocks, and fish that swim into it can become trapped.

Despite the enormity of the task at hand, Skimmons believes progress is being made.

“There are probably other toxins in the water that we don’t see,” he says, “but in terms of physical garbage in the area, we’ve noticed improvement.

“Given a chance,” he adds, “the water will heal itself.”

Bo Smolka is a certified scuba diver and freelance writer living in Lewisburg, Pennsylvania.



PHOTO COURTESY OF DIVERS TWO

More than 300 divers and helpers worked to clean up the Shark River in Belmar.

It's everyone's water, and people of all ages are welcome to help clean it up.



PHOTO COURTESY OF DIVERS TWO

The "Dirty Dozen"

The Center for Marine Conservation gathers data on every item collected during the International Coastal Cleanup. After the debris has been collected and tabulated, as much as possible is recycled. Though final 1997 figures were not available at press time, these were the most common items found in the U.S. during the 1996 cleanup:

| Rank | Item | No. Found |
|------|----------------------------|-----------|
| 1. | Cigarette Butts | 608,759 |
| 2. | Plastic Pieces | 240,820 |
| 3. | Foam Plastic Pieces | 206,890 |
| 4. | Plastic Bags/Food Wrappers | 205,762 |
| 5. | Plastic Caps/Lids | 179,103 |
| 6. | Paper Pieces | 158,957 |
| 7. | Glass Pieces | 140,667 |
| 8. | Plastic Straws | 131,602 |
| 9. | Beverage Cans | 130,134 |
| 10. | Glass Beverage Bottles | 127,633 |
| 11. | Plastic Beverage Bottles | 121,703 |
| 12. | Foam Plastic Cups | 96,394 |

Source: Center for Marine Conservation

Dive In!

If you think you'd like to try scuba diving, you aren't alone: The number of people certified in scuba (an acronym for self-contained underwater breathing apparatus) has doubled since 1990, and now stands at more than seven million. Approximately one-third of all divers certified last year in the United States were women. Many scuba diving stores offer certification courses year-round in conjunction with a local YMCA or community pool. A typical course features three classroom sessions, in which you learn about equipment, technique and safety, and three pool sessions, in which you

begin to put your new skills to use. The certification process is completed with four "open water" dives, where your skills are tested in an actual marine environment. The certification is a lifetime one, although a "refresher" course is recommended if you go more than a year without diving.

"A lot of people think scuba diving is risky," says Joe Skimmons. "It's not at all. In fact, it's probably one of the safer activities because of the formal training."

Elana Farrell first dove nine years ago, and was "absolutely overwhelmed." Now she teaches other would-be divers. And before she took up diving? "I was afraid of the water. And I was a terrible swimmer."

Most local dive shops are affiliated with the Professional Association of Dive Instructors (PADI) or the National Association of Underwater Instructors (NAUI). To find a dive shop near you, consult your local phone

book under "Scuba" or "Diving," or check with the national organizations. PADI can be contacted at 714/540-2609 or on the Internet at www.padi.com. NAUI can be reached at 813/628-6284 or at www.naui.org.

Underwater Cleanup '98

The United Nations has declared 1998 *The Year of the Ocean*. You can do your part to help clean the world's waterways by participating in Underwater Cleanup '98, scheduled for September 19. To get involved, contact the Center for Marine Conservation at 202/429-5609, or call a New Jersey "Trash Captain" near you:

- Joe Skimmons, *Divers Two, Inc.*, Avon, 908/776-7755
- Elana Farrell, *The Scuba Store*, Flemington, 908/806-3999
- Reece Bigger, Fort Lee, 201/969-1533
- Dave Riscinti, *Blue Water Divers*, Ramsey, 201/327-2822

And the Winners Are . . .



Selecting winners from among the many entries in this year's photo contest was a challenge, but one that was met successfully by our distinguished panel of judges. Again, hundreds of slides and prints were received, depicting people, nature and history in every corner of New Jersey. Some were poignant; others, funny. Some told

stories of more than a thousand words; others captured forever the beauty of a fleeting moment.

But whether the camera's eye was focused on people or natural or historic resources, the images were a delight. We congratulate all of this year's winners and thank all of you who participated for sharing your vision with us.

First place in the *Enjoying Our Natural Resources* category was taken by [Alyce Parseghian](#)'s stunning *Fishing by the Shimmer* (cover photo). The Franklin Lakes resident's winning shot depicts an angler fishing by the setting sun in Wawayanda State Park. Second place was awarded to [Betsy Satterfield](#), who lives in Cape May



Court House. Her *Enjoying the Nature Trail*, snapped by the Cape May Lighthouse, featured the father-and-son team of John and Jack Satterfield. Third place was captured by **George Draney**, of Nutley, whose *Hiking to Mt. Tammany* provides a unique perspective of the view atop Mt. Tammany at Indian Head.

Summer Time, the first place image in the **Remembering Our Past** category, memorializes the carefree enjoyment of yesterday's simple pleasures. **Anne-marie Latimer**, of Columbia, captured Jody and Danielle Latimer sharing a ride on a tire swing in Millbrook Village. Morristown's Jockey Hollow provided the



Summer Time (opposite page), by Annemarie Latimer

Enjoying the Nature Trail (left), by Betsy Satterfield

Friends (above), by Timothy Demarest

setting for the second place winner, photographed by Jersey City resident **Emanuel Lekkas**. In *Welcome Home*, a picture reminiscent of a wartime reunion, these re-enactors actually were expressing their pleasure at seeing each other after a practice session for drummers. Another Cape May Court House resi-

Plantosaurus (right),
by Alma Nygren

Hiking to Mt. Tammany
(below), by George Draney





See page 63
for info on our next
photo contest

dent, **Susan Karaso**, snapped the third place winning photo. Using sunlight and shadows most effectively, her *The Village Smithy* captures the simplicity of the structures and implements of our forefathers as preserved at Cold Spring Village in Cape May.

The winning images in the category *Finding Hu-*

mor in Nature show there's good reason to pack a camera when you venture into New Jersey's outdoors. The kiss of a live squirrel doesn't seem to be waking up the "Sleeping Beauty" version of its species, but *Friends*, snapped by **Timothy Demarest**, of Sussex, succeeded in capturing first place. The second place

winner, **Burton Lipman's** *One Horse's Opinion*, was taken at a horse-boarding farm in Middlesex County. The appearance of blowing raspberries proves that this horse can express his feelings, according to East Brunswick's Lipman. **Alma Nygren**, of Middletown, found the third place winning *Plantosaurus* in her town's Deep Cut Park. "Apparently this species is only found in New Jersey — at least, this is the only one I've ever seen," she says.

Parseghian, Lekkas and Nygren all are repeat winners, having won county honors in last year's *New Jersey Outdoors* photo contest.

One Horse's Opinion (above, left), by Burton Lipman

Welcome Home (above, right), by Emanuel Lekkas

The Village Smithy (left), by Susan Karaso



Is Their Fate Sealed?



These seals were rehabilitated at the Marine Mammal Stranding Center. Shown on their release day are a hooded seal (top of page) and a harp seal (silhouetted above).

PHOTOS ON THIS PAGE COURTESY OF BOB SCHOELKOPF, MMSC



by *Dusty Rhodes*

A pair of bright eyes bobbed in the predawn water.

At least I thought so. Perhaps being on the water at 5 a.m. had begun to take its toll.

And registering ownership, if indeed I had seen eyes, was an even greater burden at that moment. Consider the circumstances: The sun had just begun its fire dance across the eastern sky that early spring morning as our center console sliced Barnegat Bay on course for Island Beach State Park. Intent on provoking dawn strikes from hungry striped bass, just fishy swirls occupied our minds. Bright eyes simply weren't on the menu.

There they were again, bobbing in the water, yet I still hadn't grasped the significance of that vision.

"Hey, Rich," I called to my fishing host, "do you see anything in the water off our starboard stern?"

It's a Seal

After a quick glance in that direction, he nodded affirmatively. "Yeah, that's a seal," he tossed my way with an annoying touch of affected nonchalance.

"What do you mean *seal*?" I retorted, somewhat more loudly than I had intended.

Mike, busy with herring at the livewell, struck a superior pose, thus readying me for the crusher: "You don't know we're visited by seals?"

The things one learns on fishing trips.

I *hadn't* known about local seal visits, quite frankly. In fact, except for seals witnessed in California's San Diego Bay some years back, I had never seen seals in the wild. Little did I know I was soon to add more grist for that particular mill.

As we approached the Island Beach State Park shoreline, Rich pointed to several boulder-like shapes sprawled on the edge of the sedge banks. "More seals,"



Marine Mammal Protection Act

Enacted in 1972, the Marine Mammal Protection Act (MMPA) serves as a regulatory safety net to keep this nation's marine mammal resource from harm. According to *Our Living Oceans, Report on the Status of U.S. Living Marine Resources 1995*, published in February 1996 by the U.S. Department of Commerce, three goals highlight such protection:

- Maintain animal stocks at optimum levels;
- Restore depleted stocks to optimum levels; and
- Reduce human-caused mortality and serious injury to insignificant levels approaching a zero rate.

That's no small task, especially with 163 marine mammal stocks to manage. The East Coast and Gulf of Mexico list of protected marine mammals includes whales, dolphins, seals and manatees, almost 40 in all, although some species are further subdivided into multiple stocks, which brings the total to 62.

Marine mammal protection was further refined by a 1994 amendment that required the Commerce Department to develop stock assessment reports evaluating the status of all U.S. marine mammals. Accomplished through the National Oceanic and Atmospheric Administration (NOAA) and the National Marine Fisheries Service (NMFS), the assessments direct particular attention to strategic stocks, those listed as endangered or threatened under the Endangered Species Act (ESA), or considered depleted under the MMPA.

Further, the 1994 amendment requires NOAA and NMFS to establish a process that determines the acceptable level of incidental deaths to marine mammals such that stocks will not fall below optimum levels. In simple terms, human-caused death or serious injury must be strictly monitored and controlled. Excess interactions between humans and mammals can now be dealt with through fishing gear restrictions (generally commercial) and/or by closures of ocean areas to human use.

the know-it-all commented.

Sure enough, as we throttled down to avoid nudging the bank, several seals could be seen lolling about. One or two raised their heads, casting inquisitive glances in our direction, but none seemed to mind our presence. Suddenly, a bulky form popped out of the water and laboriously hauled itself onto the bank to join the others. Old Bright Eyes, no doubt.

While my buddies dished up a barrage of unkind remarks about my seal ignorance, Old Bright Eyes, I was certain, regaled companions with a tale of how he or she had startled yet another fisherman. To this day I insist I watched blubbery bellies quake with mirth at my expense!

That introduction, experienced earlier this decade, has been reinforced by additional seal sightings. And no wonder, because the incidence of pinnipeds — aquatic animals with flippers — in Jersey waters definitely is on the rise.

Increasingly Frequent Visitors

Those visitors are from among four distinct species of seals — harbor, hooded, harp and grey — located primarily in the North Atlantic and Arctic oceans and, therefore, proximate to our East Coast. The hooded and harp varieties are most often spotted in local waters; in fact, half of all seals aided by the Marine Mammal Stranding Center (MMSC) in Brigantine since 1988 have been harp seals. According to Bob Schoelkopf, the center's director, "Before 1988, there were no Arctic seal strandings along the Jersey coast, but in 1995, we aided 76 seals, of which 45 were harps."

Not surprising, considering scientists place the harp seal population in the 3.1 million range with an estimated 2.7 million in Canadian waters alone. That's a lot of flippers thrashing water and a lot of fish sliding down pinniped gullets.

Occurring throughout much of the

North Atlantic and Arctic oceans, harp seals also are highly migratory, a trait attested to by increased sightings and strandings from Maine to New Jersey from January through May, when the western North Atlantic stock is at its most southern migration point.

During winter and spring, the extreme southern limit of the harp seal's habitat extends to U.S. waters where, according to the National Marine Fisheries Service (NMFS), annual strandings have increased from an average of 8 during the years from 1989 to 1992 to between 45 and 50 in 1993 to 1994. Considering the 45 harp seals stranded in New Jersey alone during 1995, it's hardly surprising that scientists have openly postulated a distribution shift or expansion southward into U.S. waters. Given such movement, the incidence of seals locally is not only increasingly possible, but quite likely. And with each occurrence comes the opportunity — or the specter — of more human interaction.

The poignant expression on this seal's face reminds us to respect and protect our wildlife.

Out in the Deep

Contrasting to the harps are hooded seals, which prefer deeper water and thus occur farther offshore. Despite a native attachment to northern waters, hooded seals have been known to paddle those bulging bellies considerable distances, sometimes reaching Puerto Rico and the Virgin Islands. Moreover, their sightings during January through May from Maine to Florida have steadily increased. No surprise there — scientific data suggest hooded seal numbers are up, with approximately 400,000 such animals in Canadian waters.

Another pinniped visitor is the harbor seal, a year-round coastal water resident of Canada and Maine. They're also occasionally found along the southern New England and New York coasts from September through late May. Autumn and early winter give rise to a southern migration from the Bay of Fundy to southern New England, whereas a movement back to the north occurs prior to the pupping season — from mid-May to June. It's believed the majority of animals moving into southern New England are juveniles seeking additional food sources.

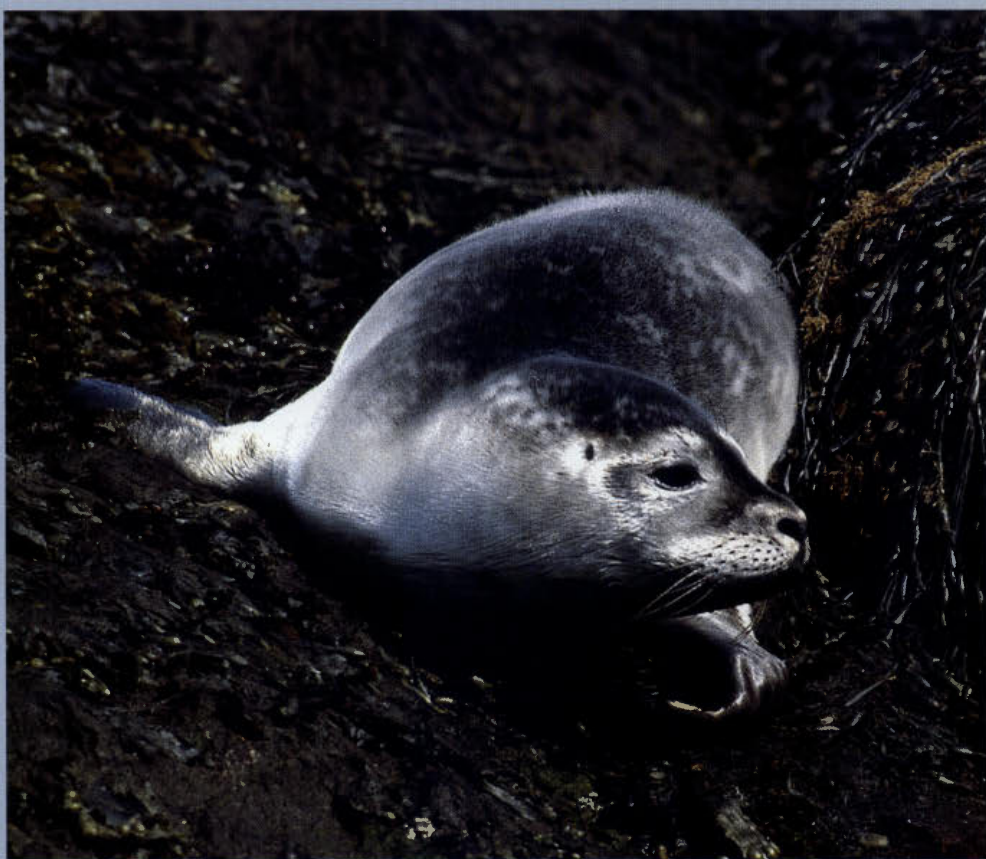
Bounty hunted in New England until the late 1960s, harbor seals have increased five-fold along that coast since the passage of the Marine Mammal Protection Act (MMPA) in 1972. And along the Maine coast, harbor seals have increased at an annual rate of about 8.7 percent since 1981.

Of less importance in terms of potential local occurrence is the grey seal. Although greys have been found in New Jersey's waters for many years, their population is centered in the Gulf of St. Lawrence, ranging from New England to Labrador. The smallest of the western North Atlantic stocks, the grey seal population is considered to have increased for several decades in Canadian waters.

Good News; Bad News

While the potential for increased sightings of migrating seals might be a

PHOTO COURTESY OF JOHN NICOLAS, NOAA/NMFS



pleasant prospect for some, environmentalists articulate another perspective. As the number of seals bobbing about locally increases, so does the likelihood of negative human interaction. Records from the Marine Mammal Stranding Center indicate such impact has begun.

According to Schoelkopf, the MMSC has aided stranded seals with clear indications that nooses of some sort had been tied around their necks. Others have been found with shotgun wounds of the face and body while at least one had a stainless steel leader embedded in its neck.

Some of those injuries might be accidental, but gunshot wounds certainly aren't. Furthermore, seal migrations might be sparked by food shortages, or there might not be enough forage base locally during the winter months to feed the number of seals we host. Both scenarios point to increased seal strandings, from any perspective a definitely negative situation. In fact, Schoelkopf recalls one harp

seal with three pounds of rocks in its gut. "Apparently," he reasons, "it took to eating rocks in place of food which, for some reason, it could not acquire."

But all news isn't necessarily bad. While seal strandings capture media attention, not all seals in local waters are distressed. Many seem to be here for much the same reason as Canada geese — they've found hospitable conditions. Indeed, during one recent December to April period, MMSC personnel counted more than 170 seals at an undisclosed haul-out area (an on-land congregation point) along the Jersey coast.

A somewhat less obvious, but nonetheless potentially explosive, issue swirls in the wake of increased local seal presence. According to experts, seals eat about five pounds of fish daily, which has sparked considerable concern about seal impact on fish stocks. A quick look at a situation on the West Coast provides insight into what could replicate here or

Close Encounters — of the Illegal Kind

Interaction between humans and marine mammals, particularly in Florida, recently has increased. According to the 1st Quarter 1998 issue of *MMPA Bulletin*, "More and more people are seeking out close encounters with wild dolphins and other marine mammals by closely approaching, petting, feeding, and/or swimming with the animals." The *MMPA Bulletin* is published by the National Marine Fisheries Service's (NMFS) Office of Protected Resources, located in Silver Spring, Maryland.

To emphasize the dangers associated with such interactions, NMFS launched a media and education campaign in May 1997 aimed at increasing public awareness about the dangers of feeding and harassing wild dolphins, acts that are illegal under the Marine Mammal Protection Act (MMPA).

Although that type of human interaction with seals hasn't yet surfaced in New Jersey waters, it's just a matter of time before close encounters of the illegal kind rivet government attention locally. According to the *MMPA Bulletin*, "Feeding marine mammals in the wild alters their behavior in ways that put them at increased risk of injury and death, and may impact their ability or willingness to forage for food."

what might actually prompt southward seal movements in the first place.

What Then?

California sea lions (a type of pinniped with an exposed ear) and Pacific harbor seals are alleged to have a negative impact on the recovery of West Coast salmon stocks. In other words, seals are charged with eating too many salmon. So much attention has showered this issue that the NMFS, in conjunction with the Pacific States Marine Fisheries Commission and fish and wildlife representatives from Washington, Oregon and California, has launched a scientific study. The goal is to determine the real underlying cause of slow salmon recovery — seal foraging, human fishing pressure and/or environmental factors.

Is such controversy likely to happen here? Perhaps not, but as seal numbers mount, so does the potential for various interactions with humans. And that

raises several issues. Can migrating seals compete harmoniously, albeit seasonally, for local fish stocks with recreational and commercial fishermen? Will there arise negative human interactions such as entanglement in commercial fishing nets or strikes by pleasure and recreational fishing boats? Will seals prompt business endeavors like the ones in Florida involving dolphins?

Unquestionably, we're a long way from serious trouble with seals, but when one combines steady herd growth with federal protection that does not provide for marine mammal harvest to thin overpopulated species, it's certain that more seals will reach our shores. As that happens, what then?

Indeed, what then?

Dusty Rhodes, who is a member of the Mid-Atlantic Fishery Management Council, is a freelance writer living in Howell. He is New Jersey's recreational advisor to the Atlantic States Marine Fisheries Commission and chairs the commission's Bluefish Advisory Panel.

Spring Seal Sickness Puzzles Experts

In late March, New Jersey's shoreline was the focus of renewed marine mammal attention when a number of sick hooded seals stranded on local beaches. In less than a two-month period, six of the seals had died. The animals were found to have a type of bronchial pneumonia caused, experts believed, by a virus then still undiagnosed.

To learn more about the mysterious disease, dead seals were sent to Dr. Perry Habecker, an assistant pathology professor at the University of Pennsylvania veterinary school. The virus was eventually eliminated as the culprit, but by early April the exact origin was still unknown. Nevertheless, analysis disclosed that the dead seals also were underweight and suffering from parasites in their gastrointestinal tracts and in their lungs. The puzzle intensified when it was learned the seals had undergone a leaking of blood into their gastrointestinal tracts.

The search for the elusive cause has attracted help from another quarter. Dr. Tom Lipscomb, chief of the Division of Veterinary Pathology at the Armed Forces Institute of Pathology in Washington, D.C., also began studying tissue samples from the dead seals. No stranger to mammal death mysteries, Lipscomb helped identify a virus that killed 742 Atlantic dolphins in 1987.

Although nothing has suggested the possibility that humans or pets could contract the illness from sick seals, experts warned the public to avoid contact with stranded animals. If sighted, such animals should be reported to the local police and the Marine Mammal Stranding Center (www.mmsc.org) at 609/266-0538.

This creation captured a familiar Atlantic City sight — a boardwalk visitor in a wicker rolling chair.



Castles — and More — in the Sand

Story and photos © by Lois Brunner Bastian

Before the MacGregor family left for their annual vacation in Ocean City, New Jersey, they packed the usual — swimsuits, shorts and sun block — and the unusual — several 2.5-gallon buckets, sturdy flat shovels, trowels and sprinkling cans. Why lug such gear all the way from their home in Mechanicsburg, Pennsylvania? To compete in one of the amateur sand sculpture contests held at the shore resort each summer. Although their masterwork is obliterated within hours by the incoming tide, thousands of beach-goers engage in this activity. Some do it to recapture the fun of digging in the sand; others use the contests as a way to display their creativity or engineering prowess; still others just enjoy doing something a bit different with family and friends. In fact, there probably are as many reasons to sculpt sand as there are grains of it.

Two years earlier, the MacGregors had entered an amateur contest for the first time and loved it. Now they're raring to go — plans carefully laid, design sketched on paper and each member of the extended family assigned his/her role. The men, Bob and Larry, man the shovels and assist the women, Diann and Suzanne, with construction. Two teen-age sons haul in water from the Atlantic Ocean and wet down the structure with sprinkling cans as work progresses.

Not a conventional sand castle, the MacGregors' semi-circular construction will consist of five large arches, six columns topped with sand spheres and a connecting staircase. To make each arch they must build two pillars. First, they fill a bucket with sand and saturate it with sea water before inverting the bucket. The process is repeated until they have 10 pillars. Then comes the tricky part — bridging the gap between each pair of pillars to create an arch.

Everything Imaginable!

All around the MacGregors, other contestants have staked out their plot of sand and are busy creating their master works, some realistic, some fantastic. They've got two hours to complete the work, so there's no time to dawdle. Contestants compete in six classes — three for sub-teens, plus one each for teen-agers, single adults and families.

While the work is underway, spectators swarm along the



"A-head of the crowd" could be the title of this entry in Ocean City's sand sculpting contest.

beach oohing, aahing and pointing to their favorites. Imagination is running riot. A group of teen boys fashions a fierce shark clenching the torso of a man in its jaws. For macabre impact, the real egg case of a whelk (a marine snail), simulating intestines, protrudes from the victim's abdomen. Splashes of red food coloring heighten the gory effect.

Twelve-year-old Sarah is building *Big Foot*, an over-sized foot that ends at the ankle. Not all that exciting in itself, but she has added clamshell toenails painted with crimson polish. It's a whimsical touch. Where did she get the idea? "I was on the beach yesterday and it came to me," she explains shyly. A fanciful creature that seems to be a cross between a hippopotamus and a crocodile (a hippo head on a croc body) is being sprayed green with a bottle containing food coloring and water. Last year the makers saw a contestant use the same method to tint a rose sculpture pink. The idea of using color has caught on quickly.

There are castles, of course; an anchor draped with real seaweed; a chubby VW Beetle; a huge and amazingly lifelike crab; and a reclining head with mouth agape and pop-eyes staring skyward in fright.



This fish shows the fine detail professional sculptors achieve.



The antique sand sculpture silhouetted above is one of those on display at the Atlantic City Museum.

Sand Sculpting Events

■ July 10, 1998 • Sand Sculpture Contest

9 a.m.; 12th Street beach, Ocean City; 609/525-9300

■ August 5, 1998 • Sand Sculpture Contest

9 a.m.; 12th Street beach, Ocean City; 609/525-9300

■ October 11, 1998 • Sand Sculpture Contest

9 a.m.; 12th Street beach, Ocean City; 609/525-9300

■ June 18 to 20, 1999 • Exhibition and Contest

A demonstration/exhibition by a team of professional sand sculptors and a contest for amateurs will be held as part of BeachFest '99, on the beach beside Ocean One Mall and across the boardwalk from Caesar's, Atlantic City; 609/484-9020.

Tricks of the Trade

Back at the MacGregor site, trouble's brewing. While Bob uses his hand as a support from below, Diann piles sand on top to create the arch bridging two pillars. Suddenly it sags and collapses. The base it stands on isn't level, they decide. So they must rebuild. Meanwhile the tide's sneaking up and Larry has to hurriedly throw up a dike. "I've been put on emergency shovel," he jokes.

Not all beach sand is created equal. Some is coarse, some fine. The greatest detail can be rendered only with fine-grained sand. Beyond fineness, the sand must have a good cohesive factor, that is, the ability to stick together. Cohesiveness depends on the amount of silt, be it limestone or beach sediment, that the sand contains. Compacting the sand until it is dense helps it hold vertical surfaces and other extreme shapes.

There are ways to test sand quality before settling to work. One expert suggests running across the beach into the water, then running back and rolling in the sand. If it sticks to you, you stay. If not, you find another beach.

Lucinda Wierenga, better known as Sandy Feet, recommends the juggling test. Grab several handfuls of saturated sand and toss them into the air again and again. The longer they remain intact, the better the sand is for building. That's one of the tips she reveals in the book, *Sand Castles Step-by-Step*, that she co-authored with Walter McDonald. It's filled with excellent how-to information.

Birthplace of the Professionals

Amateur sand sculpture contests like the one in Ocean City are popular across the country when the weather is warm. Perhaps not as well known are the competitions among professionals. That's right, professionals. A small group of them practice their art both indoors and out all year long, both here and abroad. Some are part-timers who have another full time occupation. Others support themselves wholly by carving sand for promotions, marketing, entertainment and all sorts of special events.

Sand sculpture has been carried on as long as humans have been trekking to the water to catch dinner and taking their kids along to play in the sand. The first record of people mak-

ing a living this way is found in Atlantic City, 10 miles up the coast from Ocean City. The year was 1897.

Atlantic City's famed wooden boardwalk, elevated several feet above the beach, provided a fine platform for viewing artists at work below. They created popular subjects of the day as well as portraits. Fascinated spectators leaned on the railings as they watched and threw coins down to the artists.

It wasn't long before the first professionals began adding cement to their works and painting them to make them more permanent. For nearly 50 years the sand artists were regulars on the Atlantic City beachfront. After a big hurricane in 1944, the city banned sand art as a trade and its practitioners disappeared from the scene. But some of their works survived. In recent years, several pieces that had been swaddled in beach sand for nearly half a century resurfaced in surprisingly good condition. They're on display at the Atlantic City Museum on Garden Pier.

The Sandtennial Celebration

Last year, to mark the 100th anniversary of professional sand art, a team of 20 masters (carvers who have won in masters' competitions) convened in Atlantic City where it all started. They weren't there to compete against each other as they usually do. They'd come to join together in celebrating the "Sandtennial." How? How else? By turning approximately 5,100 tons of sand into a half-block long panorama of famous personalities, sights and events in the history of America's most famous resort during the first half of the 20th century.

In four days of non-stop work, they re-created the famous horse and rider who once dove off Steel Pier daily; a Miss America in cape and crown; a rolling wicker chair of the sort that still plies the boardwalk; and the short city buses called jitneys. With them were Mr. Peanut, who greeted visitors outside the Planter's Peanut Store for decades; Lucy the Elephant, a landmark since 1881; King Neptune; a curvaceous mermaid; and a castle that even the Disney folks would envy. The masters' sculptures were superb; spectators were enchanted.

A master wouldn't think of competing in a contest for amateurs. "But I don't stick up my nose at amateurs," says Rich Varano, a full-time master from Orlando, Florida. "They've given me a lot of good ideas that I've expanded on. The quality of their work may not be professional, but no one has a monopoly on ideas."

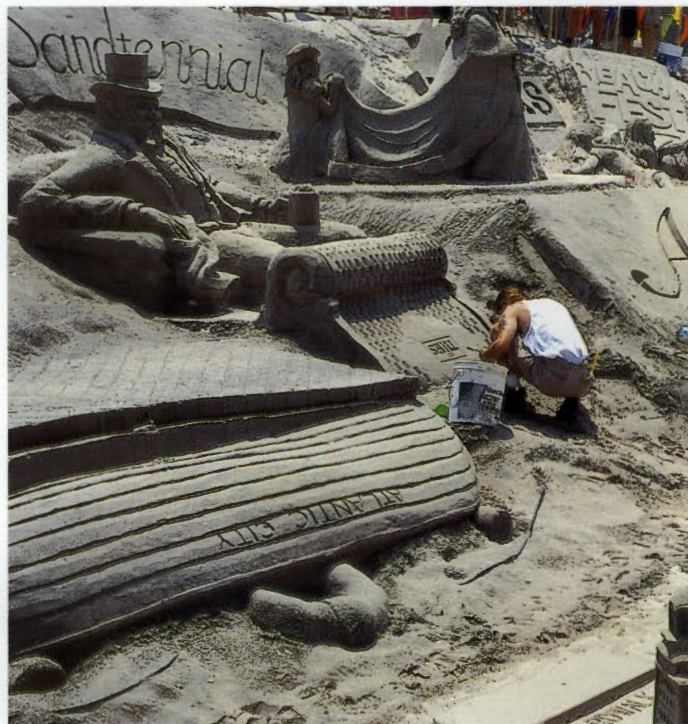
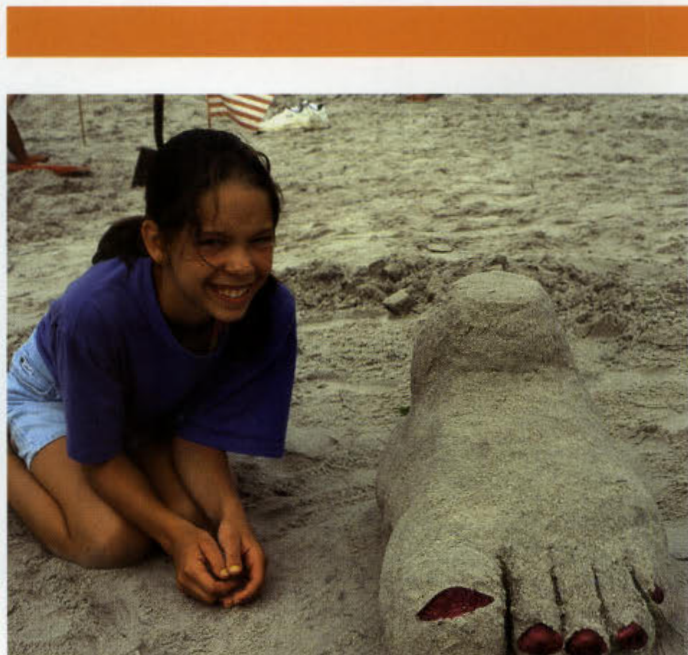
The amateurs back in Ocean City are awaiting the judges' decision. Sarah's *Big Foot* earns a third place plaque in her class. The teenagers win first prize with their green hippo-croc. In the family division, the MacGregors cop second prize — but had their hearts set on first.

Oh, well. As a sage once said, "Just wait until next year."

Lois Brunner Bastian, who lives in Holmdel, has written articles on various subjects for New Jersey Outdoors. She enjoys traveling and uses her writing and photography skills to record her trips and experiences.

Ocean City contest entrant Sarah with "Big Foot," (below) which captured third place in her category.

Visitors were thrilled by this Sandtennial view of Atlantic City (bottom).



Biking

the Old Mine Road



This barn is just one of the restored structures that enable the living history village of Millbrook to offer visitors a glimpse of yesteryear's pastoral lifestyle.

PHOTOS © BY DOTTY WAXMAN

by James E. Held

America is laced with a maze of highways and roads that carry passengers and commerce. While multi-lane interstates are light-years ahead of the Indian trails and rutted stage coach turnpikes of ages past, all share the purpose of getting from *here* to *there*.

To the shrewd Dutch, in the 17th century, that goal meant arriving with a profit. With Calvinist zeal, the little nation of the Netherlands roamed the world and, through the Hudson River Valley, made inroads into North America.

Holland's New World possessions were never graced with gold, but legends claim a few restless souls, prospecting in the stark wilderness of northern New Jersey, struck pay dirt. Poker players and prospectors, however, never reveal their hands. Perhaps the Dutch exhausted the supply of high-grade copper ore in modern Warren and Sussex counties, and the shafts dug into the sides of the Kittatinny Mountains were concealed after the 1664 British seizure of Nieu Amsterdam. Maybe to haul the valuable ore out, these intrepid miners did build a route of 104 miles out of the forest and mountains between the Hudson River port of Kingston, New York, and Pahaquarry, New Jersey. Then again, that may be just myth and folklore, but for those who love travel

on two wheels, there is one undisputed fact — the Garden State's Old Mine Road offers great bicycling.

Many stretches of these 45 miles to Port Jervis, New York, may be smooth enough for skinny tires. Still, versatile mountain bikes can better handle pavement, dirt roads, ruts and bumps reminiscent of jarring ox-drawn wagons on pioneering roads. Scenery and sagas more than compensate for jolts and roughness. Not surprisingly, biking here can mean some hard climbs, but there also are some gentle grades and even relatively flat roads.

Interstate 80's easy access to the Delaware Water Gap reveals a stark lesson in contrasts. Traffic racing along at 70 miles per hour slows abruptly after exiting to a modest 15 on a pot-holed one-way road perched on a cliff side. As the grade climbs, the echoes of tractor-trailers fade, replaced by the sounds of waterfalls, wind rustling through the hardwoods and bird songs. The Kittatinny Point Visitor Center (a National Park Service/Delaware Water Gap National Recreation Area information station) and the Karamac Parking Area are two of the many locations to leave cars — and the 20th century — behind, and begin your journey by pedal power. The information station is located 1/4 of a mile from the bridge over the Delaware River; the parking area is about 1.7 miles beyond the station.

The slopes of the Kittatinny Mountains rise sharply from the road, and foot trails such as the Beulahland, which starts near the Karamac Parking Area, run upward toward the Appalachian Trail, winding along the ridges above. Breaks in the foliage give a lovely view of one of America's last major free-flowing rivers: the Delaware, formed in the past, more of an obstacle than a highway.

Those rifts and rapids defied steamboat technology and other attempts to use or tame the river. The copper ore extracted so painstakingly by the Dutch was too precious to trust to the Delaware's capricious current, and this road beneath the wheels — the Old Mine Road — may have been the only alternative. It follows a somewhat straight line, paralleling the river, then skirting off the flood plain. When the longing for water overwhelms, access roads lead to riverside parking, launching and picnic sites.

The Old Mine Road has carried many travelers and many names. At various times in its history, it has been known as King's Highway, Queen's Highway, Trade Path, Path of the Great Valley and Good Esopus Road. It also serves as a great biking route to some of New Jersey's loveliest natural wonders and most fascinating historic structures.

Shortly before Poxono Island, the Copper Mines Trail sign indicates a hiking route that shares the name of the abandoned shafts. The tunnels and overgrown foundations hold more heart-break than mystery, as successive companies, following tales of copper, probed into the hillside.

The search for copper was not the only undertaking whose abandonment helped shape the Old Mine Road's environs. Clamor arose for a dam after the devastating 1955 flood, part of a two-storm system that did hundreds of millions of dollars in damage and killed 400 people. In preparation for the Tocks Island dam and reservoir, which would have controlled dangerous deluges and generated hydroelectric power, hundreds of historic structures were destroyed.

If the project had been completed, much of the valley would have disappeared under water, with motorboats above throwing a wake over the sunken road and foundations of buildings like the Calno Schoolhouse. Located about 1.2 miles beyond the Copper Mines Trail, the schoolhouse is just one of hundreds of historic structures on the route that have endured so much use, abuse and neglect.

Wild and Scenic River protection stopped the controversial project, but not before the Corps of Engineers condemned buildings and forced 8,000 inhabitants to relocate. What had been family homes for generations now stand in empty and forlorn condition.

Beauty and History Preserved

Roughly a mile beyond the Calno Schoolhouse is one end of the Van Campens Glen Trail. The tree-shaded trail parallels the Old Mine Road for almost a mile before rejoining it and is a perfect place for a break.

Once back on the Old Mine Road, continue your journey for

Tour Tips



Plan your trip ahead of time. Call or stop at the Kittatinny Point Visitor Center (908/496-4458). It offers an excellent selection of books and information on the Old Mine Road's fascinating history, both human and natural. While navigating a road squeezed between river and mountain wouldn't seem complex, the *New York-New Jersey Trail Conference* maps 15 through 17 are great guides and are highly recommended.

If you will be on the road overnight, remember that campgrounds and the American Youth Hostel (973/948-6750) are the only accommodations available.

Traveling on the Old Mine Road means venturing into an area with few, if any, rentals, mechanics or convenience stores. Like a pioneer, you should plan to travel self-sufficiently, bringing water, food, first aid supplies and items required for repairs, such as a spare inner tube, patches, pump, tire irons and any wrenches required for adjustments.

Once you begin your journey, pay attention to the road, be considerate of the environment and respect trails that are reserved exclusively for hikers.

Have a great trip!

approximately 1.7 miles until you reach the living history village of Millbrook, a success story in the preservation and re-creation of a rural 19th century village.

Millbrook's roots go back to around 1740, when Abraham Van Campen's gristmill attracted farmers who, in turn, attracted blacksmiths, wagon- and shoemakers to practice their trades. A handsome white church was built to serve their spiritual needs in an era when death in forms of illness, war and accidents always lurked close by.

Progress, however, in the form of a railroad line built along the opposite side of the Kittatinny Ridge, rendered the village obsolete toward the end of the 19th century. To preserve the essence of the past before it was obliterated, existing structures were restored. Several, including the general store, the rustic Depue Cabin and Van Campen's Farmhouse, are not native to Millbrook. Rescued from demolition in locations nearby, they are placed to appear as if they sprouted on that piece of earth. Together, they offer a glimpse of rural life before railroads routed elsewhere and nearby factories drained Millbrook's population and vitality.

The township in this snug valley now boasts a mere seven inhabitants which, in the 19th century, represented one home-staying family in this thriving town. Today, volunteers and



National Park Service employees, garbed in period clothes, demonstrate for visitors the crafts of a century ago: blacksmithing, woodworking, spinning and weaving.

A Plethora of Paths

The gentle valleys of the Old Mine Road are separated by steep climbs and well-earned descents. The sharp ascent from Millbrook can leave lungs and thighs burning, but it's only about 1.5 miles to the Delaware View House and General Store, which offers the opportunity to slacken thirst, restore electrolytes and carbo-load. After intervals as a Russian resort and an artist colony, the cavernous old house now is being restored to life by George Kately. It not only has a monopoly on thirst quenchers and power bars along the entire Old Mine Road, but also offers a spectacular view of the river winding through the Wallpack Bend with the Kahkhout Mountains looming magnificently on the Pennsylvania side. The grassy knoll on which it is situated forms a perfect spot for picnics and rest breaks.

If pause stimulates the desire for more climbs, Blue Mountain Lakes Road leads to miles of summit trails through high forests surrounding Blue Mountain Lake and Hemlock Pond. Otherwise, Old Mine Road descends to the bridge over Flat Brook, which drains onto the flood plain shared by cornfields and willow thickets. Rather than mineral riches, the wealth of fertile river bottoms attracted early settlers who came with little but the intention to prosper from the rich soil.

For the next 7 miles or so, knobby tires stir the dust on the gravel road leading to the Van Campen Inn. Built in 1750, this handsome Georgian structure exudes sophistication in a rustic location, a symbol of endurance and Isaac Van Campen's proof

that his stern God rewarded his hard work and callused hand.

The title "inn" is a misnomer. Van Campen was a farmer and the impressive stone structure was actually a private home that also functioned as a hostel and refuge in times of need. Such noted figures as John Adams, Count Pulaski and General Gates may have stayed at Van Campen's, as travelers in that era could always expect protection behind his sturdy door.

Military troops undoubtedly taxed Van Campen's hospitality, but since the soldiers protected the settlers, they were welcomed. Intrigue and conflicts in the distant courts of Europe also brought raids of tribes allied with the French and our Revolutionary War adversaries. The inn's sturdy fireproof walls and high ground-floor windows protected the inhabitants when war cries echoed on the Delaware.

Other blockhouses were strung along this road for when frontier life became precarious. A long peace, rather than fighting, reduced them into overgrown ruins hidden behind roadside birch groves and cedar saplings.

As the road continues north of Route 206 into New York, its character fades among modern homes and a faster pace of traffic. But the Old Mine Road is no place to hurry. Take a week to hone weaving, blacksmith or pottery skills in courses taught by resident artists at Peters Valley. Located on Kuhn Road, this village of lovely stone and wood buildings forms a loop that arguably offers the area's best tour.

The road remains mercifully flat as it passes the American Youth Hostel toward Montague. Here, Native Americans and settlers lived peacefully together. Around 1690, the Lenni-Lenape invited the first documented settler, blacksmith William Titsoort, to settle here and make tools for their community along this river ford. Montague became a pioneering hub. Raftmen used the Foster Armstrong House as a rest stop on their wild 19th century ride to the tidewater bay on rafts of lashed timbers, but now the community rests comfortably on its past laurels and present solitude. During summer weekends, both the Foster-Armstrong and the Neldon-Roberts houses offer exhibitions, craft classes and a view of their simple yet comely interiors.

Turning right after crossing Flat Brook leads to an alternate path, Route 615, which brings the rider to Walpack Center with its historic Rosenkrans House. Lovely side roads, both gravel and paved, pass through a still wild landscape to stunning sites such as Butter-milk Falls and Tillman Ravine. En route, pay your respects to founding families in a quiet cemetery of beauty and sorrow. If dirt roads are more appealing, coast past the cemetery straight into the marshes and trout streams of Flatbrook Wildlife Management Area.

The Legend Lingers

Many cling fervently to legends, though today's historians are more inclined to debunk such theories. Believers of the Old Mine Road's 1650 construction include Henry Beck and Amelia Decker. Their respective books, *That Ancient Trail* and

Points of Interest

The Roads of Home, quote a 1657 West India Company letter, stating "We have lately been shown a small piece of mineral, which is said to come from New Netherland, and which we found to be good and pure copper . . . a copper mine was said to be in the Nevesinks." To tell their story, the faithful have constructed heavy bronze plaques set in sturdy stone along the way that, like the legend, are not easily moved or destroyed.

Detractors claim Captain Arent Schuyler's 1694 survey found no white settlers. Modern testing has shown the area's copper purity is extremely low; the logistics of the undertaking — mining the hard stone — were practically impossible; and the natives were hostile. Archaeologists have yet to unearth any traces of Dutch presence at this early date.

Others, like historian Leonard Peck, take the middle "road." Peck cites a Dutch West India Company letter from Dirck Duyster, manager of Fort Orange (modern Albany), who led prospectors through the area in 1627. Leonard also discovered the 1660 ship's manifest of the homeward-bound Dutch vessel, *Princess*, which, after leaving Nieu Amsterdam, sank with 3,200 pounds of ore samples on board. The puzzle continues to intrigue scholars and historians.

Realistically, the Old Mine Road probably evolved slowly from Indian trails, with many more settlers moving in than copper ore ever shipped out. Lost mines, however, are the stuff of legends — and the Old Mine Road, while not lost, lacks none of the mystique and mystery that surround the Dutch era and their influence on America. True or not, to travel the Old Mine Road is to touch legend itself.

Freelance writer James Held, who's also an avid historian, enjoys biking and canoeing in the Delaware Water Gap area. A Coast Guard reservist, he lives in New York City.

Bikers find the tree-shaded Van Campens Glen Trail a perfect place for a respite (opposite page).

Almost 250 years old, the Van Campen Inn (right) still stands as a sturdy reminder of its role as a refuge during the Revolution.

■ Kittatinny Point Visitor Center

Located just off Interstate 80 (last exit before the Delaware Water Gap bridge). Open daily from 9 a.m. to 5 p.m. from spring through late October and most winter weekends from 9 a.m. to 4:30 p.m. The center offers information, an audio-visual program, displays, park-related items (for sale) and restrooms. 908/496-4458 For additional information, check out the National Park Service's Web site for the Delaware Water Gap National Recreation Area www.nps.gov/dewa/ or call the Area's main office at 717/588-2451 if you're looking for information that can be mailed to you. That phone line is staffed from 8 a.m. to 4:30 p.m., Monday through Friday (except holidays), and provides recorded information round the clock.

■ Millbrook Village

Located on Old Mine Road in Millbrook, 12 miles north of Interstate 80. Grounds are open year round; selected buildings are staffed from 9 a.m. to 5 p.m. from Wednesday through Sunday from spring through late October. Crafts are demonstrated on summer weekends (Friday through Sunday); for craft demonstration hours, call 908/841-9531 or 908/841-9520.

■ Van Campen Inn

Open Sunday afternoons, from 1 to 5, during the summer months. 973/729-7392

■ Peters Valley Craft Center

19 Kuhn Road, Layton. Art education center, gallery and store specializing in American crafts. Studios are open to the public Friday through Sunday, from 2 to 5 p.m., only in June, July and August. www.pvcrafts.org/. 973/948-5202

■ Neldon-Roberts Stone House and Foster-Armstrong House Demonstrations and talks on summer Sundays. 973/293-7350



The Boats of Barnegat Bay

Story and photos by Tom McDonough

Waterman Norman Dupont, of Waretown, has fished, clammed, hunted and sailed Barnegat and Tuckerton bays for more than 50 years. "A boat's the same for me as a pickup truck is for a carpenter going to work," he says. "He has to have a good truck. I have to have a good boat."

Generations of baymen have felt like Dupont. A boat let them earn a living, not just fishing and clamming, but ferrying people from the mainland to the coastal islands, hauling farm produce and freight, carrying the mail, running rum and responding to emergencies.

"The boat was everything to people," says Tom Gormley of the Barnegat Bay Decoy and Baymen's Museum. "Back in the old days (before 1950), you'd find more houses with boats than cars in front of them."

Using the natural resources available to them — principally white cedar, an extremely durable and light wood ideal for boat building — New Jersey's skillful boat builders and baymen created three distinctive watercraft: the *sneakbox*, the *garvey* and the *catboat*. All three were perfect for the shallow brackish bays, estuaries and marshes along the Jersey Shore.

Today, while the commercial and economic demand for these boats has declined, a few master boat builders continue to make them in the traditional, time-honored manner for the growing number of enthusiasts who still want to sail them "up the bay."

The Devil's Coffin

The year was 1836. A West Creek sea captain and duck hunter named Hazelton Seaman designed an unusual cedar boat — a craft 12 feet long by 4 feet wide with a shallow draft, a spoon-shaped bow and a melon-shaped hull — that allowed him to silently approach waterfowl. He called it the *devil's coffin*, but the more common name became the Barnegat Bay sneakbox.

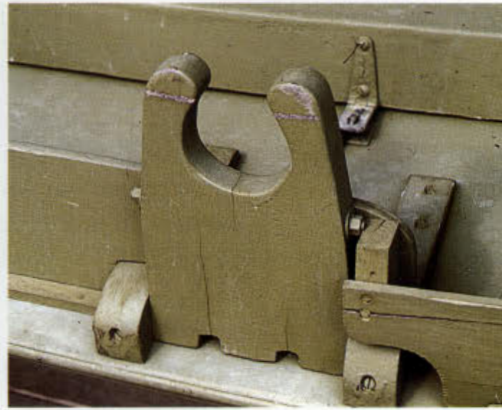
To John Chadwick, one of the premier sneakbox builders in New Jersey, the boat's so good because of its ability to float in the shallowest of waters. It is said that a sneakbox can glide over areas marked as land on coastal maps.

Chadwick, dressed in camouflage clothing and coveralls, is refurbishing a 70-year-old sneakbox in the galvanized boat shop of the Perrine Boatworks on School Street in Barnegat. He is a multiple winner of the sneakbox building competition at the Old Time Barnegat Bay Decoy and Gunning Show and owner of the Perrine Boatworks, which he inherited from his father, who was the foster son of founder J. Howard Perrine. The Perrine Boatworks has been famous for building sneakboxes and other sailing craft since the late 1800s.

"Besides its shallow draft, the sneakbox has other features that made it perfect for the bays around here," Chadwick says. "The boat is completely planked over except for a small cockpit, where the hunter or clammer sits, and which, lined

This 12-foot sneakbox was built around 1960 by Allan Chadwick of Barnegat.





Bayman and boat builder Sam Hunt crafted this 12-foot gunning sneakbox (far left), which is on display at the Barnegat Bay Decoy and Baymen's Museum.

A fold-down oar lock (left) on a hunting sneakbox.

John Chadwick sands down the combing – the border that keeps water out of the cockpit – of a 70-year-old sneakbox he is rebuilding (below).



Years ago,
garveys had
one purpose:
to be practical.

— Bob Fricke

A duckboat was a class of sailing sneakbox designed to teach youngsters how to sail. The 12-footer shown here was built by Beaton Boatworks.

with something like salt hay, keeps you warm. Provided you have a hatch cover, you can spend a night in one.”

Built of cedar, the boat is light. Fully rigged, most weigh in at about 250 pounds, which allows a bayman to haul it easily over the marsh grass of the saltwater flats.

The broad beam makes it a very stable boat. It is fitted with a mast and sail, a rudder for sailing and oarlocks for rowing. A canvas windshield, called a windbreaker and traditionally made by the builder's wife, protects the hunter or clammer from the wind and spray.

“But everything folds down,” says Chadwick, “so there's nothing showing. The rudder can also be detached, and the decoy rack removed. You can pull one right into a notch in the banks, grass it over, and you'll never know it's there.”

Additionally, the boat has runners for traveling over ice, and its sloping transom allows bayman to row backwards in channels that are too narrow to turn around in.

The hunting sneakbox was popularized in the late 19th century when Nathaniel Bishop, of Toms River, sailed and rowed one called the *Centennial Republic* down the Ohio and Mississippi rivers to the Gulf of Mexico. In 1879, he detailed his adventure in a book entitled *Four Months in a Sneakbox*.

“When I planned my second voyage from northern America to the Gulf of Mexico, and selected the great water-courses of the west and south (the Ohio and Mississippi rivers) as the route to be explored and studied, I chose the Barnegat sneak-box as the most comfortable model combined with other advantages for a voyager's use,” he wrote.

Sneakboxes also proved to be excellent sailboats, and their competitive possibilities were quickly recognized. In the late 1800s and early 1900s, fleets of sneakboxes in a variety of sizes, ranging from 12 to 20 feet, competed in sailboat races.

In 1918, J. Howard Perrine developed a 15-foot, gaffed-rigged (where the sail is held at the top of the mast by a wooden beam or spar and has almost a square shape) sailing sneakbox that proved immensely popular. “They used them to teach kids to sail,” says Chadwick.

The Barnegat Bay Yacht Racing Association accepted the boat as a class in 1922, and it was the leading sneakbox class, as well as the leading sailboat class, until the late 1950s when fiberglass boats replaced it.



Chadwick still builds his sneakboxes using the cradles — the forms that give the boat its unusual shape — that Howard Perrine used when he first started. The only modern conventions customers seek are fiberglassing over the cedar (for easier maintenance) and brackets on the transom for an outboard motor. The price is modern, too. Because cedar costs so much now, a 15-foot, fully rigged sailing sneakbox, which cost about \$250 in Perrine's day, could run approximately \$10,000 today.

“Still, the ultimate gunning machine is a sneakbox,” says Chadwick.

The Ugliest Boat Alive

Some have described the flat-bottomed, blunt-nosed garvey as the ugliest boat alive, but this dynamic work boat — the Baymen's Boat — is supposedly the oldest form of watercraft in New Jersey. Its origins can be traced to the early 1700s and a man named Jarvis Pharo, who is credited with introducing the boat to the Barnegat Bay area when he settled in West Creek, bringing with him a design for a flat-bottomed, shallow-draft *punt boat*.

A traditional garvey ran between 14 and 30 feet long and was 4.5 feet wide; it was equipped with sails or could be rowed or poled across the bay. The square, flat bottom allowed clambers to stand and lift the heavy clam tongs and Shinnecock rakes used to drag for the bivalve mollusks without the risk of falling overboard.

Bob Fricke, a tall affable man, is one of the few garvey builders around. He makes his boats, which can be seen on coastal waters from Maine to Florida, in his garage on Atlantis Boulevard in Tuckerton. Fricke recalls when his grandfather, who had a farm in Tuckerton, used to load up his garvey with vegetables and sail over to Beach Haven to sell the produce.

"Years ago, garveys had one purpose: to be practical," Fricke says. "It didn't matter how they looked as long as they served the purpose they were built for. Nowadays, the new ones on the bay are built for pleasure and look more like sport boats than the old flat-bottomed work boat."

Fricke's grandfather probably wouldn't be able to pick out a newer garvey anchored in the marina around the corner. "The major change is that most garveys today have V-bottoms," Fricke

says. "The ones I'm building are all V, from nose to stern. There's no flat on the bottom. This allows them to run much faster than the old boats and to be more stable in heavier seas."

Today, garveys are powered by inboard or outboard motors and the sportier models come equipped with consoles, bucket seats, canvas canopies and self-bailing capabilities. Most are built of marine plywood or fiberglass, says Fricke, because these materials are much stronger than cedar which, despite its rot resistance, is a soft wood.

"I was at Harbor Sails, a marine plywood manufacturer in Baltimore, Maryland, and watched them test each wood. It took a 4-inch-thick piece of cedar to equal the strength of a 3/4-inch piece of marine seven-layer plywood," Fricke says. "Also, if you buy cedar, you have to wait three to four months for it to season before you can use it. Marine plywood can be picked up at a distributor, and you can start working with it the next day."

According to Fricke, a 2,000-pound marine plywood garvey holds three times its weight. "You take a 30-foot cabin cruiser — say around 20 tons; try to put 60 tons in it and see if it will float," he says. "It will go right to the bottom."

Ruy Allan, a bayman and boat builder, built this 28-foot cedar garvey around 1948.



Tom Beaton oversees maintenance of the Lotus, an A-cat built in 1924.

Changing the design of the boat was necessary for garveys to survive, Fricke says. "If it didn't, it would have been like the Model T. It would be gone. People want garveys because they are traditional but they don't want one their grandfather had because it's not practical."

Garveys have a racing circuit too, which began in the 1950s, under the auspices of the Speed Garvey Association of New Jersey. Throughout the summer, sleek speed garveys compete in five classes according to engine size and power accessories — stock, superstock, 358, 375, and modified — hitting speeds of 100 mph.

Grand Old Ladies of the Bay

The clapboard boat shop at Beaton's boatyard, off Mantaloking Road in Mantaloking, is filled with the aroma of freshly sawed cedar and spruce. Tom Beaton, a fourth generation boat builder who is considered one of the finest craftsmen of wooden boats in the state, is busy refurbishing a

turn-of-the-century, Barnegat Bay-style catboat.

Catboats, he says, were originally long (28 to 33 feet), wide, shallow-draft, single masted, gaff-rigged sailboats. During the 1800s, they became known as the "workhorses of the bay." Their history is vague, though naval historians suggest the Dutch, who settled in the Barnegat Bay area in the 1700s, had a strong influence on the design.

The old catboats were versatile; they were used for fishing, oystering, passenger service, mail carrying and hauling freight, mostly salt hay cut from meadows. In the late 1800s, the catboat became a popular racing boat.

"The commercial catboat skippers raced informally among themselves as they headed home. They wanted to see who could get there

first," says Robert Klump, past president of the Toms River Seaport Society.

In 1871, the Toms River Yacht Club was founded, and it set up the Toms River Challenge Cup Races. The cup is the oldest competitive sailing trophy in the United States.

Catboat design reached its pinnacle in 1922, when federal judge Charles McKeehan of Toms River commissioned famed naval architect Charles Mower to design him a catboat that would win the Toms River Cup. Mower created a 28-foot vessel with a 46-foot mast, a 28.5-foot boom, and 605 square feet of sail. Instead of a gaff-rigged sail, Mower gave the boat a Marconi rig — a triangular sail running straight up the mast — and cut away the underwater portion of the bow, which gave the boat more maneuverability.

The innovations, quite controversial at the time, created a boat of unsurpassing beauty that was much faster than older catboats. The boat, christened the *Maryann*, also launched a new class of catboat, the A-cat.



"Because of the shape of the hull and the large sail area, A-cats achieve 7 or 8 knots," says Beaton. (A knot, or nautical mile, equals approximately 1.15 statute miles, so a sailing speed of 8 knots would be equivalent to about 9.2 mph.)

Beside the *Maryann*, five other A-cats were built in the 1920s, designed either by Mower or by Francis Sweisguth, another naval architect. Four have survived and are listed on state and national registers of historic boats or vessels. With the A-cats produced within the last 20 years (two by Beaton and two by John Brady of the Philadelphia Maritime Museum), the fleet of these "grand old ladies of the bay" today totals eight.

The newer A-cats are faithful to either Mower's or Sweisguth's designs. Beaton follows those blueprints and uses traditional construction methods — such as steaming the slats of wood used for the boat's ribs so he can bend them into shape and using copper and brass nails and screws that don't corrode in saltwater — because he wants to preserve the class.

"There are things I could do to make a new boat superior to the older boats, such as making it lighter by using more modern materials, but I build them the way the older boats are built," Beaton says. "I'd hate to see a new boat win every race. That would do more harm than good."

His comment reflects the commitment he shares with John Brady (boat builder at the Philadelphia Maritime Museum) and the owners who commission them to build A-cats. They want to preserve the class so the older boats can still compete. By building all the boats the same, the races come down to seamanship, not technology. Like sneakbox builders, they seem to have a love affair with these boats and feel that changing them would ruin the boat and threaten their existence.

So people can still witness one of these graceful, traditional-looking boats, with its big sail and rigging, out on the water is another reason Beaton builds them. "Rather than tell people about the A-cat, I can show them. When people say, 'When I was a kid, I used to watch A-cats race,' I can say they're still racing."

On the Horizon

The future of sneakboxes, garveys and A-cats, and the men who build them, is perhaps better than it's been in the last 20 years.

"They will survive because of their uniqueness and the need for them," says Gormley. Because the building of permanent duck blinds is prohibited, the sneakbox is still ideal for the 12,000 to 15,000 hunters who apply for duck hunting licenses each year. As for the garvey, one bayman says, "If you're serious about working the bay, a garvey is the only way to go."

The only real problem, especially for the sneakbox and A-cat builders, has been finding enough quality New Jersey white cedar to build these boats. The Pinelands Commission requires loggers to get a permit for cutting the trees and, since there isn't much demand for cedar anymore, sawmills have not been stocking it.

However, according to Dave Edelman, supervising forester for the state, "We've got as much cedar in New Jersey as any state does." Recent estimates put the amount at more than 30,000 acres. And the state is working on a 10-year restoration project at 25 sites in Bass River State Forest to retain, restore and manage the cedar there. If successful, the program will be expanded to other state forests.

Much of the heritage of the coastal towns in South Jersey revolves around the sneakbox, the garvey and the A-cat. Says Beaton, "It's important to continue building them, because they are the Jersey Shore."

*Tom McDonough is a freelance writer and photographer who lives in North Bergen. He has contributed articles to **New Jersey Outdoors** on a variety of subjects. Tom's last article focused on the lives and lifestyles of New Jersey's baymen.*

✓ Them Out

To learn more about these small boats, visit:

■ **The 21st Annual Toms River Wooden Boat Festival**
July 18 & 19; 9 a.m.; Huddy Park, Toms River; free; 609/387-5680.

■ **The Barnegat Bay Decoy and Gunning Show**
September 26 and 27; 7 a.m. to 5 p.m.; Tip Seaman County Park, Pinelands High School and Pinelands Middle School, all in Tuckerton; free; 609/971-3085.

■ **The Toms River Maritime Museum**
Operated by the Toms River Seaport Society, the museum is open on Saturdays and Tuesdays from 10 a.m. to 2 p.m. It's located at the intersection of Water Street and Hooper Avenue in Toms River and has some fine examples of these types of vessels on display. There's no admission fee, but a donation may be made. For additional information, call 732/349-9209.

■ **The Independence Seaport Museum** (formerly the Philadelphia Maritime Museum)
Located at 211 South Columbus Boulevard and Walnut Street in Philadelphia, the museum offers not only exhibits, but also hands-on boat-building workshops. It's open daily, except Thanksgiving and Christmas, from 10 a.m. to 5 p.m. Admission fees vary, so call 215/925-5439 for additional information.

Horseshoe Crabs, Delaware Bay and the Future

by Karen Williams

It isn't often in today's world we find an ecological phenomenon that has persisted for more than 300 million years. Yet the Delaware Bay hosts one each spring — the annual spawning of the Atlantic horseshoe crab, *Limulus polyphemus*.

Granted, today's biologists have no way of knowing for sure the springtime events of 300 million years ago, but paleontologists have determined that horseshoe crabs were around then, and they did have to reproduce, so something had to be happening. It also is not possible to know for certain what kinds of animals were taking advantage of an easily obtainable food source in those prehistoric times. We do know migratory shorebirds, such as those that rely on this Delaware Bay resource to-



day, were not among them, since shorebirds have inhabited Earth a mere 75 million years.

An Enduring Lifestyle

Horseshoe crabs have flourished on Earth, surviving the extinction of the dinosaurs and other major extinction events over the eons. It is no wonder that people are fascinated with these creatures. Their presence indicates they have found a niche in the ecology of this planet that works for the long haul.

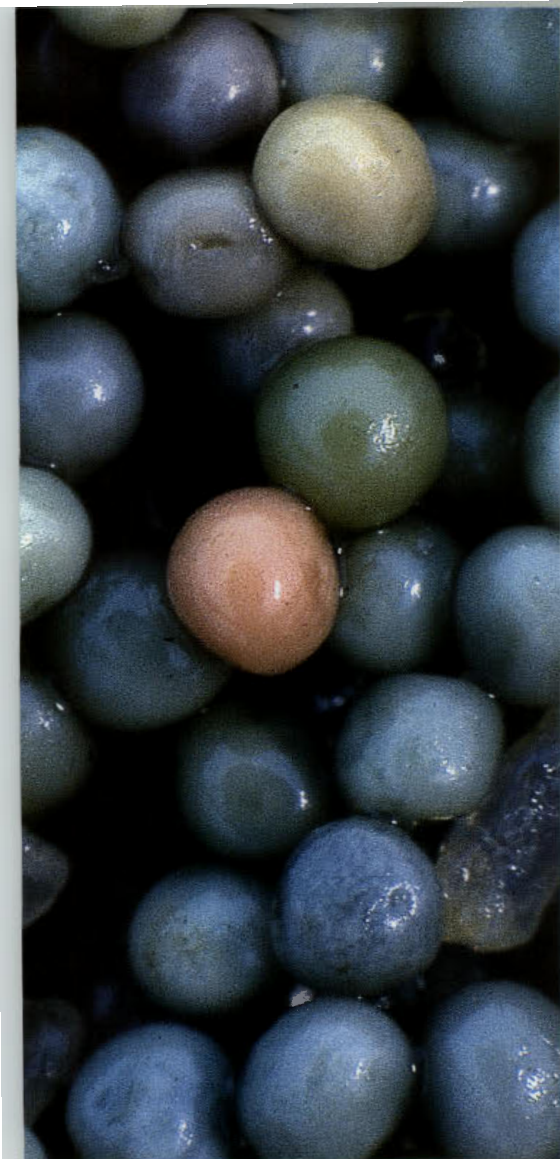
Horseshoe crabs lead a life of foraging for marine worms and small clams in the soft sediments along the eastern coastline of North America, ranging from Maine to the Yucatan Peninsula. They walk along the bottom, sometimes using their horseshoe-shaped shell to bulldoze bottom sediments. They sift through the loosened material with

their five pairs of legs, grind up food items with the legs' spiny segments, then push the food into their mouth, which is located between their legs.

Horseshoe crabs spend the warmer months close to shore, ranging into tidal marshes and onto mudflats to feed. They may retreat to deeper waters in fall as the water cools, repeating the process in spring, although local fishers have said they're all over the bay during the winter months.

Horseshoe crabs lay their eggs on sandy, sheltered, low energy beaches. Low energy is a term used to describe beaches that are protected from the open ocean, thus having smaller waves break on their shores. These low energy beaches are found in bays and sounds.

Females crawl onto the sandy beaches at high tide accompanied by one or more males. They dig into the



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The eggs of the horseshoe crab resemble polished stones.

Laughing gulls (below) gather at the water's edge to feed.



© PEGGY ANN VARGAS

sand until their backs are flush with the surface and lay clusters of approximately 3,500 eggs. Males shed milt (sperm) into the nest and the seawater washes the milt over the eggs, accomplishing fertilization and burying the eggs in the sand. Several nests may be made before the animals crawl back into the water.

Individual females may repeat this process several times over the course of the reproductive season. Eggs remain buried in the sand for four to six weeks, until they hatch. Hatching time is influenced by temperature (the larvae develop more quickly at warmer temperatures), moisture and oxygen content in the sand.

After hatching, the larvae are mobile and spend about a week swimming before settling to the bottom to molt. Most larvae settle in shallow, intertidal

areas near the beaches where they were spawned, and juveniles usually spend their first and second summers on or near intertidal flats. Once they vacate the near shore environment they are seen only occasionally until they reappear en masse as adults to spawn.

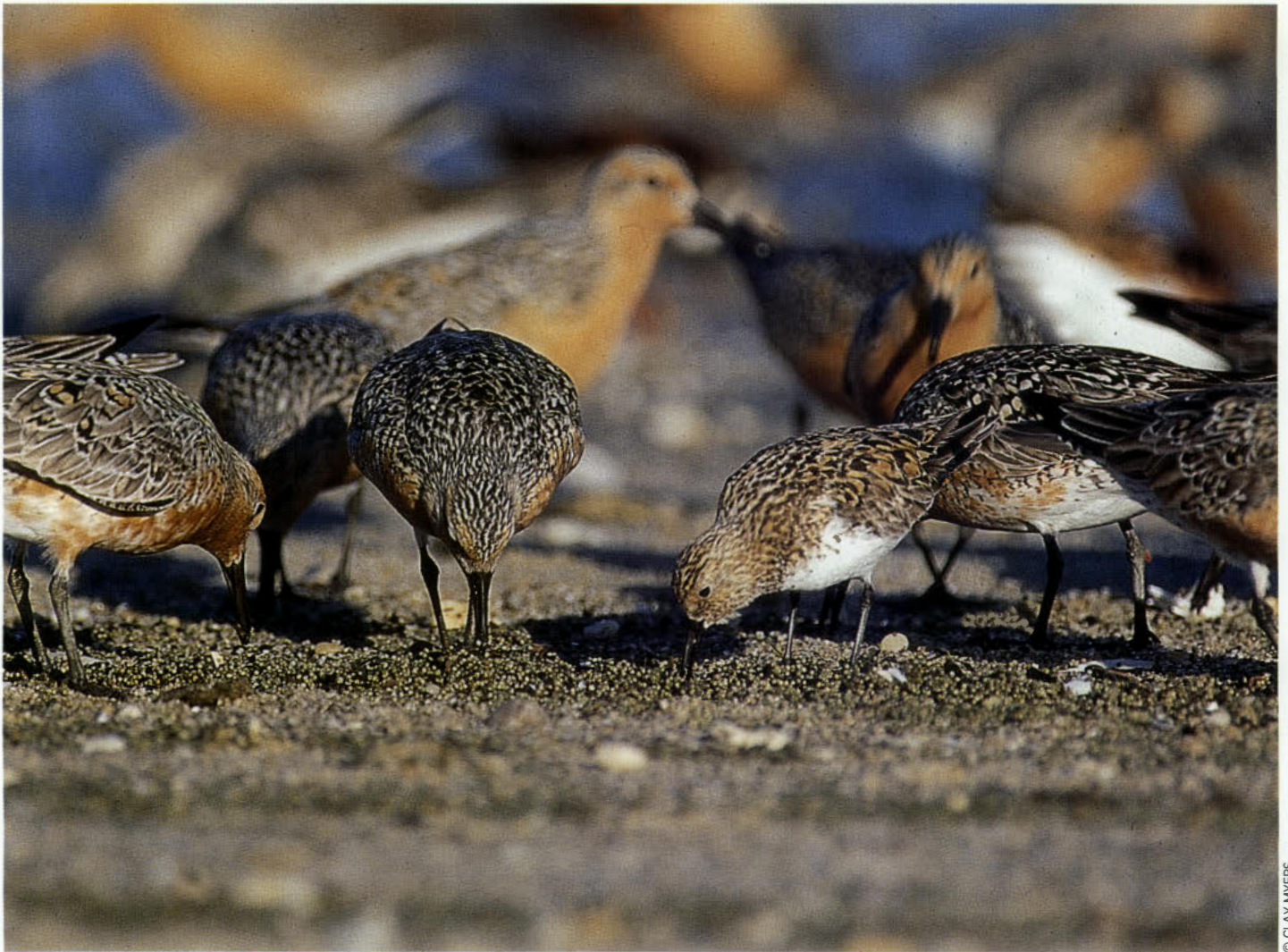
Diminishing Returns

The Delaware Bay, in the recent past, supported an incredibly dense population of horseshoe crabs. During peak spawning in May, a line of horseshoe crabs 3 yards wide and several animals deep could be observed along the high tide line of the bay's sandy beaches as far as the eye could see in either direction. This abundance of horseshoe crabs resulted in a superabundance of eggs. Frequently, spawning females would inadvertently dig up eggs deposited on a previous tide, attracting

predators to feed on the eggs. Turbid water made marine predators difficult to observe but the millions of birds feeding on the resource were hard to miss. These birds included both local nesters, such as laughing gulls and willets, and long distance migrants — shorebirds such as the red knot, semipalmated sandpiper, ruddy turnstone and sanderling — bound for their nesting ground above the Arctic Circle.

Birds blanketed the beaches during low tide. Gulls scooped up eggs floating at the water's edge. Shorebirds probed the beach surface with their bills, picking the tiny eggs (1.5 to 2 mm. in diameter) from the sand grains. The shorebirds attracted a great deal of attention from researchers examining bird migration and from birders who came to the Bay to observe the phenomenon.

This attention was largely due to the shorebirds' unusual migration pattern.



© CLAY MYERS

Many of these species migrate long distances, from breeding grounds above the Arctic Circle to wintering areas in Central and South America. Their method of accomplishing this migration is amazing.

The birds take advantage of seasonally abundant food resources along their route, where they stage (feed and rest) for periods of 10 days to 2 weeks. During this staging period, the birds can double their arrival body weight. The added fat is fuel for the next leg of the birds' journey, a non-stop flight of up to 3,000 miles.

Many of the shorebirds using the Delaware Bay as a staging point arrive after a non-stop flight from the north shore of Brazil and will fly non-stop to above the Arctic Circle after staging. Research conducted during the early part of the 1980s indicated that up to 80 percent of the entire North American population of certain shorebird species

was in the Delaware Bay area at one time. In an ecological sense this resembles putting all one's eggs in one basket; any change in the balance could cause the entire system to crash.

The Balance Shifts

It seems that this has happened. The value of the Delaware Bay horseshoe crab egg resource to the shorebirds depended on a superabundance of eggs. The surplus made foraging easy and rapid weight gain possible. Then man increased his exploitation of the horseshoe crab population.

People do not feed directly on horseshoe crabs. The animals are harvested for bait to catch eels and conchs (whelks). In the mid 1980s, interest in — and publicity about — the shorebird/horseshoe crab phenomenon increased. Bait suppliers from as far away as New England, a

region with a large eel and conch fishery, began to send tractor-trailers to bayshore beaches to load up on the bounty.

When this practice started, there were no regulations in place governing the catch. Until this time, locals had harvested horseshoe crabs for their own bait needs, with minimal impact on the population. No regulations had been necessary.

While there is a great deal of dispute regarding the validity of available data, all scientific estimates of horseshoe crab population in Delaware Bay indicate a decline over the last 10 years. Today the shorebirds continue to come in diminished numbers, but there is little for them to eat on New Jersey's shore of the bay. The birds spread out over the Delaware Bay and Atlantic Coast tidal marshes, spending more time and energy foraging for the food resources needed to complete their northward migration.

Great controversy arose over the past several seasons as the state considered regulating the horseshoe crab catch. On one side were the environmentalists, who argued that the horseshoe crab resource is necessary for the shorebirds' continued survival, and that the economic value of an intact horseshoe crab population is greater, due to the dollars generated by ecotourism, than the economic value of the harvest. They also contended that, if the population can recover under regulatory protection, a sustainable harvest would be possible in the future.

The fishers who harvest the resource argued that there has not been an appreciable decline in the population of horseshoe crabs, that annual spawning crab census data was suspect, and that the population could withstand a large harvest without crashing.

Protecting the Future

The concerns of both sides were considered as the state crafted the regulations (see sidebar) that went into effect in May 1997. It is too soon to assess what impact

Major Points of the Horseshoe Crab Harvest Regulations

- Only crabbers who previously held crab permits or eel or conch licenses for two of the past four years and reported catch are eligible.
- Horseshoe crabs can only be harvested by hand.
- Horseshoe crabs can only be caught on Tuesdays and Thursdays from April 1 to August 15.
- Horseshoe crabs can no longer be taken by boat in New Jersey, although animals taken outside New Jersey waters can be landed in other states.
- No harvesting is permitted on any of New Jersey's Delaware Bay beaches from the Cape May Canal in Cape May County to Stow Creek in Cumberland County.

they will have on the population, since horseshoe crabs take 9 to 11 years to mature. It is possible that there are some strong year classes in the bay that will be reaching breeding age in the next couple of years, but there is no way of knowing until they show up on the beaches.

The age span of the large breeding populations present in the bay during the 1980s is not known. It could have been 5 years — or 25 to 30 years. In other words, were the animals spawning

in the bay during the 1980s between the ages of 11 and 16 or 11 and 41? The answer could provide us with a clue to how long it will take the population to recover, but no one knows it.

It is inevitable in today's crowded world that issues about the best use of the planet's limited resources will occasionally reach the boiling point. The case of the horseshoe crabs is unique because it is one where the needs of one non-human species have caused the development of regulations regarding the harvesting of another species.

The current situation is not ideal. Neither environmentalists nor fishers think the regulations adequately address their needs. Only time will tell if the regulations have been effective. If they do work, the end result — more horseshoe crabs, more eggs for shorebirds and a sustainable horseshoe crab harvest — will benefit all.

Karen Williams, a biologist who lives in Woodbine, has followed the horseshoe crab phenomenon for the past 15 years.

Horseshoe crab eggs are an essential part of the red knot's diet (opposite page).

The course of true love (left) doesn't always run smooth.



© CLAY MYERS

They've Been Working on the Rail-Trail





Story and photos © by J. Wandres

Jerry Jerome remembers the day the very last train rolled through Pemberton, a small town near Fort Dix in Burlington County.

"It was March 31, 1977 — a run from Fort Dix to Mount Holly," he says, "After that, the line went dead."

This summer, the long abandoned line will come alive again as the Pemberton to Birmingham Rail-Trail, the newest of New Jersey's 22 rail-trails.

The line started in 1863 to serve passengers, farmers and manufacturers. From the time Camp Dix opened in 1917, up through the war in Vietnam, the line moved hundreds of thousands of "boot camp" trainees to embarkation points. However, like some 1,200 miles of railroad tracks abandoned or de-activated in New Jersey since the 1920s, the Pemberton and Hightstown line became an economic casualty of America's reliance on motor vehicles and superhighways.

About the same time the line was calling it quits in the mid-1970s, the New Jersey Conservation Foundation (NJCF) had begun a project that eventually would reach national importance.

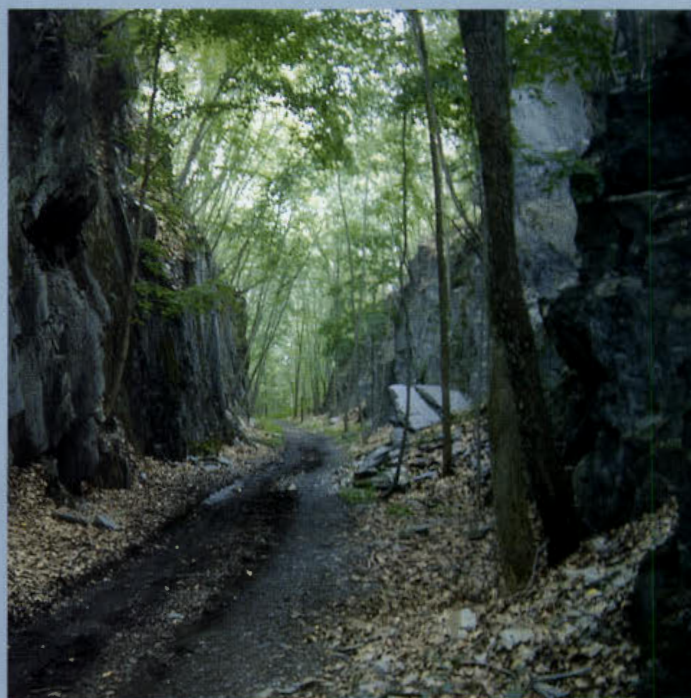
"We developed an inventory of every New Jersey rail line and its status," says David F. Moore, executive director of NJCF. The inventory determined:

- Whether the lines were active, inactive or abandoned;
- If ownership was intact;
- The physical condition (Was there any erosion? Were bridges out or unsafe?); and,
- Whether the trail could be walked or ridden.

NJCF's "recycled rails" proposal led to the formation of the nationwide Rails to Trails Conservancy (RTC). The N.J. Department of Environmental Protection's Trails Program, within

Several bridges on the Paulinskill Valley Rail Trail (left) had to be redecked to make the trail user friendly.

The Paulinskill Valley Rail Trail (right) follows the old New York, Susquehanna and Western line for 26 miles, from Hainesburg in Warren County to Sparta Junction in Sussex County.



For More Information

■ Monmouth Heritage Trail

c/o The Bicycle Hub
455 Route 520
Marlboro, NJ 07746

■ New Jersey RailTrail

P.O. Box 23
Pluckemin, NJ 07978

This statewide group can provide location and route maps of New Jersey rail-trails.

■ Rails to Trails Conservancy

1400 16th Street, N.W.
Washington, DC 20036

Trail listing at: www.railtrails.org/states/njtrails.htm

This nationwide organization advocates for and provides support to local groups developing rail-trails.

Pemberton Borough Mayor T. C. Kay and attorney Fred Gibbs donated their services to help make the Pemberton to Birmingham Rail-Trail a reality.

the Division of Parks and Forestry, also has inventoried lines. The *New Jersey Trails Plan*, published by the department in 1996, included 4 as currently eligible for the state trails system and another 12 as potential trail routes.

NJCF is preparing an updated inventory in 1998 as part of its Greenprint project. By June 7, 1998 — the seventh annual National Trails Day — RTC hopes to report 10,000 miles of rail-trails open in nearly every state, including more than 150 miles in New Jersey. The Pemberton Rail-Trail adds another 1.3 miles to this growing network.

Jerome, incoming president of the Pemberton Rotary, sponsor of the trail, realizes his group has it easy. The tracks and crossties were pulled up in 1984 and Pemberton Township bought the Conrail right-of-way, from the old rail station on Main Street (Route 616) to Birmingham, to keep it out of commercial hands.

Over the years the gravel path became both a dumping ground and an easy access path to a nearby gravel pit for all terrain vehicle (ATV) riders. The township, as well as the borough's mayor, back the effort and have lent logistic and engineering support. Grants will help to fund a blacktop surface so the trail will be accessible to skaters and people in wheelchairs.

It's Not Always Easy . . .

In other parts of the state, rail-trail development has not been so easy. Len Frank, of Hackettstown, recalls years of struggles to overcome local apathy and landowner opposition to the Paulinskill Valley Trail. The 27-mile trail — once part of the New York, Susquehanna and Western coal-hauling line — begins near Hainesburg (I-80 at Exit 4), off Route 94 in Warren County, and ends at Sparta Junction, in Sussex County, where active rail service continues.

The right-of-way had been purchased by Newark for a water conduit from the Delaware River to the Pequannock Reservoir. The planned Tock's Island dam across the Delaware was not built and Newark didn't get its waterway. For years, the Paulinskill Valley Trail Committee cataloged the historic and ecological significance of the river valley watershed, and campaigned ceaselessly to persuade people of the value of a rail-trail. In 1995, the New Jersey Department of Environmental Protection purchased the right-of-way and the developed it as a rail-trail. The project included building decks and side rails on several old bridges. Now, says Frank, some of the most vocal trail opponents are its strongest supporters.

Unfortunately, support was insufficient to overcome the opposition to a proposed rail-trail in Salem County. Known locally as the "Bridgeton Secondary," the 17-mile trail went from Glassboro to Bridgeton. The New Jersey Department of Environmental Protection was willing to purchase it, using federal monies available through the state Department of Transportation, but withdrew the offer in the face of opposition from farm owners and a local gunning club outside Elmer, located approximately in the middle of the stretch.

The Morris County Park System's Patriot's Path, when complete, will be an 80-mile trails network, most of which follows old rail lines. In Mendham Township and Brookside, however, the trail follows parkland around sections of the right-of-way in private hands, whose owners would not grant a liability-free recreation easement to let people cross their property.

But It Sure Can Pay Off

Some property and homeowners fear that strangers will disrupt their privacy, or worse, cause vandalism. Studies along rail-trails such as the 13-mile Baltimore-to-Annapolis, Florida's 47-mile Pinellas Trail and Seattle's 34-mile Burke-





Gilman Trail show that dumping and mischievous crime all but disappear. Why? Trail users and homeowners whose property backs up on rail-trails take pride in “their” trail and notify police of any suspicious occurrences.

Homeowners living next to or near the trails are discovering another benefit: the rail-trail can help increase the value of their house. Realtors in Seattle routinely advertise houses as “Near the Burke-Gilman Trail,” and report sales an average of 6 percent higher than for comparable housing in other areas.

Just as important, the level pathways provide an alternative for walking and cycling that is safer than busy streets or country roads, which often have no bike lanes or shoulders. Rail-trails also deliver an economic benefit to merchants in towns through which they pass. Several studies show that trail users spend between \$5 and \$10 a day while on a trail, at convenience stores, restaurants, local attractions and bicycle shops.

Wally Tunison, who owns the Bicycle Hub in Marlboro (Monmouth County), is active with a group that supports creating a rail-trail on a long-inactive line that parallels Route 79. The 12-mile rail corridor runs from Matawan to Freehold.

“So many new houses are being built in Marlboro and Freehold townships,” Tunison says, “that open land for recreation is disappearing every day.” He maintains that the proposed Monmouth Heritage Trail would benefit thousands of people, especially when the Monmouth County Park System develops Big Brook Park near routes 79 and 520. The inactive rail line goes through a corner of the park. The park and trail will deliver an economic benefit to merchants along the way.

“We are working hard to educate the public about the importance of rail-trails, and get the elected officials to commit to developing this corridor as a recreational trail,” Tunison says. He and others in the group realize that this could take quite some time — or, as he hopes, “the project could begin as soon as possible, and the sooner the better!”

The Henry Hudson Trail (above, left) has 13 bridges that need replacing. One crosses over the Natco Lake wildlife refuge in Union Beach.

The 360-foot trestle (above) over Lake Matawan on the proposed Monmouth Heritage Trail would be decked over and side rails would be added.

J. Wandres' last article for New Jersey Outdoors was about giving historic barns a new lease on life as residences.

The Saga of Tucker's Island

by Gretchen F. Coyle

Blond heads, hair flying straight back from the speed of the boat, are looking south. With their life preservers fastened, bathing suits on, and sunblock applied, these kids are headed for a family picnic on Tucker's Island.

The white sand of the large sandbar, surrounded by the blue waters of Little Egg Harbor and two inlets, glistens in the distance. Other boats are already there, either pulled up on the beach or anchored offshore. Toddlers are splashing in the water as Frisbees fly about and jet skis circumnavigate this playground, which emerges mostly at low tide.

The Tucker's Island of today is a changing sandbar, located south-southwest of Long Beach Island. The only relics of the past stand sentinel in the distance — the dilapidated old fish factory that transformed menhaden and other fish into fertilizer in the late 1950s and the old Coast Guard Station at the end of Seven Bridges Road in Tuckerton. The latter building today is a research and oceanographic center owned by Rutgers University.



COURTESY OF GRETCHEN F. COYLE

Nothing remains of the once famous Tucker's Island but the stories. The hotels, lighthouse, life saving station and summer cottages are all gone. Storms hit, sand shifts, and inlets come and go. A few years ago, when this sand spit rose out of the bay (to the delight of summer vacationers forbidden to picnic at the Edwin B. Forsythe bird sanctuary just south of Holgate), someone named it Tucker's Island.

So has this Tucker's Island emerged in the same location as the original? We decided to find out.

Three Names; One History

Depending on the year to which one is referring, the island might have been called Short Beach, Sea Haven or Tucker's Island. In the 1740s, when it was known as Short Beach, a farmer named Ephraim Morse raised cattle there. Morse and his wife survived a winter storm that washed away their home, but their five children died of exposure.

The couple never returned to the island and, in 1765, Morse sold Short Beach to

Reuben Tucker. Tucker built a house on higher ground, turning it into a tavern. In his book, *Eighteen Miles of History*, John Bailey Lloyd notes, "Such was Tucker's personality that his fame as a good host soon spread among watermen from Sandy Hook to the Carolinas. Tucker's Beach or Tucker's Island became a favored place to wait out a storm."

Here Tucker and his wife, known as Mother Tucker, made their living playing host to Burlington County and Philadelphia area families during the warm months. This was the first record of tourism at the Jersey shore. Mother Tucker kept up the family tradition after her husband died. She finally succumbed to old age about 1815 and the inn, which subsequently was run by Joseph Horner, then the Rogers and Willets families, was destroyed by fire some 30 years later.

Cottages were built during the 1800s, and two rather substantial hotels — the Colombia and the St. Albans — drew sportsmen to hunt and fish and families to vacation at the shore. Tucker's Island

became known as one of the first resorts along the coast. Visitors took the train to Tuckerton (named for Reuben Tucker's son, Ebenezer), then departed from Edge Cove by sailboat or steamboat for the island.

All this time the sand was shifting, the ocean roaring, and a new inlet was formed. A lighthouse, whose beam could be seen for 12 nautical miles, was built on the site of Reuben Tucker's home. The Little Egg Harbor Lighthouse, a red, 50-foot-high structure, was used for only a few years after it was erected. Then, after the Civil War, an Act of Congress rededicated the light. It blazed proudly until October 12, 1927, when it fell into the water, a victim of shifting sands.

Sea Haven's Lone Survivor

A sign sits proudly in front of the well kept up home at 788 Route #9 in Parkertown. It reads *Sea Haven, D. and E. Suter*. Evelyn Suter is the only person alive today who can say she lived on Tucker's Island. "Nonsense," she says. "Where do people get the name Tucker's Island? It was called Sea Haven when I was a child and that is what I call it now."

Sea Haven is the home of Dell and Evelyn Cummings Suter. Built by her father in 1907, the year Evelyn was born, the home is named after the island she associates with such fond memories.

"It was the happiest time of my life. I've never been happier than the two years I spent at Sea Haven," Suter says.

Her Sea Haven adventure began when Ralph Cummings, clammer and carpenter, signed on as a lifesaver at the Little Egg Harbor Life Saving Station #23. Cummings, his wife Martha and young daughter closed up their Parkertown residence and moved into a small pink bungalow on Tucker's Island on September 1, 1913.

The living conditions provided for the lifesavers and their families were primitive. Water was caught in cisterns located behind their bungalows and at



COURTESY OF GRETCHEN F. COYLE

the life saving station. Oil stoves were used for heat and cooking.

Other buildings on the island included a boathouse, a barn, a few cottages, the preacher's home, a combination church-school, the derelict old hotels and the lighthouse. Suter and the other five children walked a mile each way in all kinds of weather to the one room schoolhouse, which was equipped with a stove and an organ. Their teacher, Florence Morse from Waretown, married lighthouse keeper Arthur Rider.

Suter remembers that Tucker's Island was connected to Long Beach Island at the time; people could walk across the mud flats from Beach Haven south to Sea Haven. "When the weather was good we would go over to Tuckerton for supplies and candy for me," she says.

A wooden bridge crossed over the sloughs, connecting Tucker's Island with the beach. A horse — Harry, during Suter's time on the island — pulled boats from the life saving station to the beach when they were needed for rescues. She remembers areas of quicksand just off the

(Opposite page, from left to right) Shannon Aman of Colt's Neck, Rachael Pritchard of Bryn Mawr (PA), Michelle Aman, Maureen Monahan of Ridgewood, Hilary and Caitlin Stevens of Mt. Laurel, Elizabeth Pritchard, Alyssa Aman and Molly Pritchard — a whole new generation of Tucker's Island children — point to the spot where the Little Egg Harbor Lighthouse once stood.

In the comfort of her Parkertown home, *Sea Haven*, Evelyn Cummings Suter reminisces about the happy days she spent on the island of the same name.

path and the stories that were told of horses lost in the quicksand in the 1800s.

Elemental Courage

Her respect and admiration for the lifesavers is endless. "When the men went out on a rescue, we would go up in the station tower and watch through a telescope. What sailors! How they stayed alive I'll never know. Huge waves, strong winds, small boats, very little equipment, and a big ship or schooner to board. Such bravery! All of the lifesavers had been excellent baymen."

Rescues were commonplace for the lifesavers. Suter watched the *Terre Alba* go aground loaded with bananas. To get the steamer off at high tide, all the fruit was unloaded. She remembers eating fruit all winter. Once Ralph Cummings found a bottle with notes in it from the *Titanic*. He answered the letters, receiving thanks from a lady in Houston. Life Saving Station #23 rescued more than 200 boats in distress.

Suter returned to Parkertown for the summer with her parents. Her second



COURTESY OF GRETCHEEN F. COYLE

winter on Tucker's Island was spent in an old houseboat called the *Independence*. She and her mother nearly lost their lives when the houseboat, caught in a bad storm, was being towed to the island by her father. Suter was in her bunk sick while her mother stood by the porthole praying. She remembers, "Father would have to steer with one hand and bail water out . . . first slow the engine, then gun it to keep the houseboat from coming down on him. Captain Jarvis Rider and the other people were astounded and thankful when we arrived at Sea Haven Cove."

Suter's father taught her the "wig wag," a way of signaling with flags. Other fond memories include a Chesapeake Bay Retriever named Prince, who went on patrol with the men; bathing in the ocean with her mother; and Christmas morning with a doll, carriage and an artificial geranium in a pot, proof that Santa Claus did indeed come to Sea Haven.

There was a gramophone at the life saving station so everyone could dance. Sometimes the men gave Suter a penny to

dance for them. At other times the children were put in the breeches buoy (an apparatus used for rescues at sea) when the men were practicing their rescue drill.

In the fall of 1914, a bad northeast storm hit the island, flooding it completely. Suter and her mother were carried up to the life saving station for the night. They tied their houseboat to a cistern to keep it from washing away. That winter, the bay froze over completely.

Never Again

Martha Cummings refused to go back to Sea Haven the third winter, citing fears, the Spartan life style, and the need for a more civilized existence. Suter was heartbroken. "There are many wonderful stories of the old island and the wonderful people who lived there and how we all lived in harmony. I remember every detail of the beautiful, natural island because it was such a happy time of my life."

The official location of the island and Little Egg Harbor Light was listed at 20.5 miles south of Barnegat Light in Barnegat and 12 miles north of Absecon Light in

Atlantic City. The coordinates were latitude 39° 30', longitude 74° 17' 09". Pictures and old charts show Tucker's Island south-southwest of Long Beach Island.

Life began to change for Evelyn Cummings Suter and the island. Suter's parents were divorced. Her mother moved to more populated Philadelphia. The erosion on Tucker's Island became more and more evident.

The lighthouse, which originally was built next to an inlet, was three miles north of the new inlet during Suter's stay on her beloved Sea Haven. Storms came and opened another inlet, soon to be called the Beach Haven inlet. Charts from the 1800s through about 1945 show a constantly changing island. Rock and wooden jetties placed along Long Beach Island to protect against beach erosion may have changed the current, contributing even more to the demise of the old island.

The beginning of the end came on October 12, 1927, when Little Egg Harbor Lighthouse fell into the ocean. The last lighthouse keeper, Arthur Rider, slept there the night before it collapsed. The force of the ocean waves continued to pummel what was left of the island. Buildings were washed away. Finally, in 1932, the federal government abandoned the life saving station and it, too, washed into the sea.

By the 1940s, all that was left was a sandbar, which eventually disappeared.

The "New" Tucker's Island

Families seek the fun of an island accessible by boat only, where young children can play safely in the warm tidal pools and parents can sit in beach chairs enjoying the sun. At low tide this large sandbar is filled with power- and sailboats of all sizes. People come from Long Beach Island, Tuckerton and the Mullica River area. Partying on Tucker's Island has become the favorite pastime for adventurous people of all ages. Even a wedding was held on the island a few years ago.

Most people just assume that the new

island has arisen in the same location as the old one. We did not think this to be the case. Our goal was simple: to determine the exact location of the original Tucker's Island.

My husband and I are both past presidents of the Long Beach Island Historical Association with a great deal of interest in local history. We contacted historian John Bailey Lloyd, author of *Six Miles at Sea* and *Eighteen Miles of History on Long Beach Island*, who provided historical background along with the coordinates of the original Tucker's Island. We then enlisted the help of Jim Stevens, a partner in the engineering firm of Taylor, Wiseman and Sleeper of Mt. Holly. This company was one of the original surveyors of Long Beach Island and Tucker's Island.

Off we went one morning in our four wheel drive truck to the end of the bird sanctuary, where we watched in fascination as Stevens proceeded to do his magic with a large global positioning sort of engineering device. "Go north," he said, determining that the original Tucker's Island was not as far south as we thought. After an hour of work and many "corrections" of the old coordinates (which became less accurate in view of modern day equipment), a stake was hammered next to a sign marking an "off limits" area where the birds nest. We had found the location.

The correct coordinates are latitude 39° 30' 22.33297", longitude 74° 17' 6.59714".

The stake almost indicates the site of the lighthouse. Actually, it would have been about 100 yards out in the ocean, with most of the original island south of it. The corrected coordinates left no doubt as to its exact location. Thus the old Tucker's Island was located about four fifths of the way down the bird sanctuary on the ocean side. How could this be possible?

Shifting Sands

Basically the southern tip of Long Beach Island has shifted west. One only needs to drive to the end of Long Beach

Boulevard in Holgate and look south to see that the approximately two miles of Edwin B. Forsythe bird sanctuary bend distinctly to the west. Over many years the waves and current have eroded the ocean side. More sand seems to be collecting on the west side. Maybe the jetties still influence this effect? Maybe storms have caused this? Those of us who live on Long Beach Island are continually seeing change as storms hammer the coast. Water, wind and sand can cause continual movement and erosion along a barrier island.

The exact location of the first Tucker's Island has been discovered. But that is not the end of the story. The saga of Tucker's Island will continue to fascinate people for generations to come. Evelyn Cummings Suter still has all her wonderful memories intact. We have promised her a boat trip on a calm day out to Tucker's Island so she can reminisce.

We do not know how long the present island will last. Today, new generations are forming their own special memories of Tucker's Island — memories that will be with them for a lifetime.

Freelance writer Gretchen F. Coyle and her husband John split their time between Beach Haven on Long Beach Island and Useppa Island (Florida), both places of great historic interest.

John Coyle (opposite page) hammers a stake to mark the spot on land closest to the site of the Little Egg Harbor Lighthouse. With him are his wife, author Gretchen Coyle, and engineer Jim Stevens, who determined exactly where the structure once stood.

These dramatic pictures record the demise of the Little Egg Harbor Lighthouse on October 12, 1927. They were taken with permission from *Eighteen Miles of History on Long Beach Island* by John Bailey Lloyd. More history and information about Tucker's Island can be found in Mr. Lloyd's books, as well as in the documentary video, *Tucker's Island: The Lost Resort of Sea Haven*, available in July at Long Beach Island gift shops and booksellers and from Down the Shore Publishing, Box 3100, Harvey Cedars, NJ 08008 (609/978-1233).

Going... Going...
Going... Gone!



Sabotage

on Jersey Soil



by Daniel A. Bazikian

On September 1, 1980, Ronald Reagan kicked off his Oval Office bid at Liberty State Park in Jersey City. Ironically, Reagan — who so closely identified with the concepts of a strong defense posture and a heightened national security — was speaking only a few hundred yards from the site of one of the greatest acts of terrorism ever perpetrated on our nation's soil, the Black Tom Disaster of 1916. This series of explosions, the most powerful of which literally shook the New York metropolitan area, was explained at first as an accident. Only later did the truth come out.

When, in 1609, Henry Hudson sailed into what is now New York Bay, he was entering what would become a center of global commerce. As he passed our present Liberty Island, he would have noticed an area (later known as Communipaw Cove) of shallow water containing a very large oyster bed and, just off the shoreline, an outcropping of rock that would be called Black Tom Island.

By the middle of the 19th century, New York had become America's leading seaport, and railway technology dominated our transportation scene. Railroads offered a relatively fast, year-round accessibility to markets, and the flow of commerce increased not only within our borders, but also overseas. As a result, the importance of port facilities became even more pronounced.

The railroads sought terminal facilities at ports, especially New York. In most instances, Jersey City was their site of choice. Trains would arrive, laden with cargo, which then would be transported via barges to ships. This traffic would so dominate the city's economy that, for a time, railroad companies owned more than 98 percent of Jersey City's New York Harbor waterfront.

Around 1860, this railroad waterfront construction expanded into Communipaw Cove, eventually filling in its fertile oyster bed. In 1870, the Central Railroad of New Jersey (CRRNJ), be-



HISTORIC PHOTOS COURTESY OF LIBERTY STATE PARK, N.J. DIV. OF PARKS AND FORESTRY

The devastation is evident to the two men surveying the remains of tracks 17 and 18.

came the owner of Black Tom Island. Its land mass was increased by 25 acres and the CRRNJ used the island for storage. Eventually, it passed into the hands of Lehigh Valley Railroad, which filled in its landward side, transforming Black Tom into a peninsula approximately 4,000 feet long by 1,400 feet wide.

The railroad's office, docks, float bridges and tracks, and the warehouses of its affiliate, the National Docks and Storage Company, occupied Black Tom. The tracks were used for the temporary storage of freight cars containing merchandise of all kinds.

The Stage Is Set

The United States remained neutral when, in 1914, World War I broke out in Europe. Although Americans were free to trade with both sides, British sea power proved so dominant that large-scale trade was possible only with the Allies.

The Allies took advantage of this by making very large purchases of American-made war materiel. Black Tom became the principal terminal for the shipment of these munitions, and the 500-foot-long North Pier at the extreme eastern end of the property was used to transfer the goods from freight cars to barges.

At 5 p.m. on July 29, 1916, the Black Tom facility marked the end of another work week and shut down until the following Monday morning. Guards were on duty during this period of inactivity — there was a lot of dangerous cargo to guard.

On Lehigh Valley's tracks were freight cars containing 550,000 pounds of dry trinitrotoluol (TNT), 90,865 pounds of wet nitrocellulose and — in shells and cartridges — 25,200 more pounds of TNT, 6,415 pounds of black powder and 53,437 pounds of smokeless powder. Eight carloads of TNT, comprising 400,000 pounds of the total cargo, stood on track 16. Other cars contained merchandise such as grain, steel, sugar and chlor-benzol, a liquid having a flash point of approximately 90 degrees Fahrenheit.

On the water by the North Pier were barges loaded with 2,781,442 pounds of TNT, wet nitrocellulose, black rifle powder and smokeless powder, some in bulk and some in shells and cartridges. Another barge, *Johnson No. 17*, carrying 100,000 pounds of dry picric acid and 25,000 detonating fuses, floated alongside the pier. It would play a key role in the disaster.

It was the railroad's custom to notify consignees immediately upon receipt of munitions shipments, so they could remove the cargo. Sometimes, however, the fully or partially loaded barges remained near the North Pier for several days, a situation that existed on July 30.

Ka-BOOM

At approximately 12:45 that morning, four watchmen and a barge captain noticed a fire in the yard west of them. After a quick look, they hurried to the warehouses to send an alarm. A sprinkler system fire alarm registered at the American District Telegraph Company's office in Jersey City at 12:54 a.m. and the office promptly alerted the city's fire department.

We all thought
the end
of the world
had come.
— Joseph Smith

New Jersey State Library



Jersey City's police chief, recalled 50 years later, "We all thought the end of the world had come." Fear-stricken multitudes swarmed into the city's churches and remained there praying for hours.

Buildings on Bedloe's Island (now Liberty Island) suffered serious damage. The shore was littered with shrapnel and debris. The Statue of Liberty itself escaped serious damage, although three bullet holes are said to have punctured it.

Ellis Island, site of the famed immigration processing station, looked like a war-swept town. The big, iron bound door leading into the island's main building, as well as the heavy stone portico, had been blown in, and the terra cotta roof of the hospital caved in from the concussion of the blasts.

Inhabitants of both islands stood in harm's way of the exploding munitions. Members of the military and their dependents occupied Bedloe's Island. After the initial explosion, the women and children crouched at the stone wall at the statue's base to avoid the flying missiles. By 3 a.m., the bombardment had reached such a level that a police launch was summoned to evacuate them.

Ellis Island inhabitants had to endure a three-hour bombardment of shrapnel and three-inch shells. Fearing that the buildings might ignite, authorities ordered the 353 immigrants in the main building to board the ferry, *Ellis Island*, which took them to the southern tip of Manhattan. The 90 general hospital patients and 39 patients in the contagious diseases hospital were moved elsewhere on the island.

The explosions and the fire had taken a heavy toll on the Black Tom facility, demolishing 6 piers, 13 brick storage warehouses and 85 loaded freight cars. The post-disaster landscape included a large water-filled crater, 375 feet long by 175 feet wide and varying in depth from 7.7 to 10.5 feet — the result of the explosion of the TNT-laden cars on track No. 16.

The Aftermath

Because only a skeleton crew was on duty at Black Tom at the time of the blasts, comparatively few casualties resulted. The number of dead officially was listed at seven, although no final accounting was ever made.

Government reaction was swift. On the very day of the disaster, warrants were sworn out charging three transportation officials with manslaughter. The city's director of public safety banned passage of trains bearing explosives (although a federal court seems to have voided this edict later).

The watchmen also notified the railroad employees at Black Tom. They, in turn, telephoned their division headquarters in Jersey City, requesting locomotives, and the New York City Fire Department, apparently asking for tugboats. The fire apparatus, engines and tugs all arrived at about 1:30 a.m. Meanwhile, the fire was gaining in intensity and more shells were exploding all the time.

The railroad crews began to remove cars of explosives near the fire while tugboats sought to remove the munitions-laden barges. Exploding shells and munitions in danger of exploding, however, hampered the work of the firemen. The fire could not be attacked at close range and got increasingly out of control.

At 2:08 a.m., a jarring explosion — the ignition of eight carloads of TNT on track 16 — rocked the complex. That explosion was followed about half an hour later by a second, less severe blast as the *Johnson No. 17* blew up. Smaller explosions continued as the raging fire set off the munitions on the Black Tom wharf.

The sound of the first blast jolted people awake for miles around. The shock wave, which was felt as far away as Philadelphia, struck New York City with severe force. The bridges connecting Manhattan and Brooklyn swayed from the impact, frightening those crossing them. Thousands of panes of glass shattered. Fire alarms went off; police whistles sounded. Panic-stricken people swarmed into the streets.

Jersey City suffered most directly from the physical force of the blasts as well as from the psychological shock. Many buildings suffered window breakage and structural damage; churches especially were hard hit by the loss of stained glass windows. Phone service between parts of Jersey City and New York City also was cut.

The cannonade of exploding munitions threw Jersey City's residents into a state of panic. To many, what was happening had apocalyptic overtones. As Joseph Smith, later to serve as

The initial near-consensus was that the explosions had resulted from management negligence, worker carelessness or a combination of the two. Some, however, did express dissenting opinions. Theodore Johnson, head of the Johnson Lighterage and Towing Company, contended that the fires started on the freight cars, not the barges, adding, "Fires don't start on freight cars accidentally . . . There have been numerous fires of incendiary origin in that (Black Tom) yard within the past year. We have insidious enemies who want nothing better than to prevent the shipment of munitions abroad."

The testimony of watchman Barton Scott added credence to Johnson's assertion. Scott, who claimed to be the first to discover the fire, said, "When I first saw the fire I noticed that a piece of waste . . . had been (stuffed) under the door. The car started burning near the center, under the door. This seemed suspicious to me. I don't know how the fire could have started. There were no (railroad) engines passing close enough to (throw) sparks and it was a (cool) night. The fact that I found waste on the door puzzles me."

In April 1917, the United States finally entered the war on the Allies' side. Although the war ended with Germany's conditional surrender in November 1918, the U.S. was not a signatory to the Versailles Peace Treaty and had to make peace with Germany on separate terms. The Treaty of Berlin accomplished this in October 1921.

Clandestine Doings

One of its provisions required the creation of a commission governing war claims between the two countries. By 1933, the commission had resolved all but a few of the claims, including 153 by American citizens who claimed losses of about \$23 million at Black Tom as well as at an explosion in nearby Kingsland (Bergen County) during January 1917.

During their investigations, those representing the American litigants uncovered a web of intrigue perpetrated by the Imperial German government. In July 1914, while the European countries were descending into the abyss of war, Count Johann von Bernstorff, German ambassador to the United States, went back to his fatherland. During the visit, his government gave him \$150 million in German treasury notes to advance Germany's wartime goals in neutral America.

Key members of von Bernstorff's staff assisted him. The embassy's military and naval attachés, Franz von Papen and Karl Boy-Edl, directed the sabotage activities. Dr. Heinrich Albert, the commercial attaché, served as the paymaster. Nonembassy personnel hired underlings to carry out clandestine tasks such as forging passports, fomenting strife among longshoremen (to impede the transport of munitions), and planting devices to blow up ammunition factories or cause ships to catch fire at sea.

These activities often were planned in a safe house in Manhattan. Martha Held, a former German opera singer, served as its

proprietary. Her duties included wining and dining visiting German dignitaries and providing them with attractive companions.

One of these escorts was Mena Edwards, known as "The Eastman Girl" for her modeling for Eastman Kodak Company ads. About seven years after the war, Mena Reiss (her married name) gave a lengthy affidavit to those seeking to prove German government complicity in these acts of sabotage.

"The men who came to these conferences and dinners very often had a great many papers and blueprints and pictures with them," she said. "I naturally did not appear too interested in the papers . . . but I am sure from the conversations which I overheard that these had to do with places that they were planning to blow up in different parts of the country."

Reiss said she had overheard conversations that told her exactly when they proposed to blow up the Black Tom terminal. So certain was she that, on July 29, she boarded a train to distance herself from the scene.

The "sabotage claims" case dragged on for many years. Finally, in June 1939, the commission decided in the Americans' favor. Germany, however, refused the verdict, along with its required payment.

It was not until 1953 that both governments reached a settlement that provided payment of \$95 million for all claimants (not just those involving the Black Tom and Kingsland explosions). The German government issued long-term bonds to the United States, the money to be paid out in installments to the creditors in the sabotage cases. Final payments were completed in 1979.

Black Tom Today

Conrail took over the Lehigh Valley Railroad in the 1970s and soon sold the 47.4 acres around Black Tom to the State of New Jersey, which created Liberty State Park on the site. Instead of the functional format of a railroad and pier facility, the area now is a picture of beauty and tranquility. Boasting the Liberty Science Center, a Holocaust monument and a picnic facility, as well as a gorgeous view of the Statue of Liberty, Ellis Island and the New York harbor and skyline, it draws visitors by the thousands.

What it lacked until recently, however, was a marker linking the area with Black Tom. In March 1996, a historical tableau finally was installed near the concession stand in the picnic area. There it serves as a mute reminder of that early morning in late July, 82 years ago, when the harbor shook, area residents trembled in fear, and Black Tom exploded and burned.

*Daniel A. Bazikian is a freelance writer who lives in Weehawken. He wishes to express his gratitude to Jules Witcover, author of **Sabotage at Black Tom: Imperial Germany's Secret War in America, 1914-1917** (Chapel Hill, N.C., Algonquin Books of Chapel Hill © 1989), for sharing information from his book regarding the settlement of claims.*

Complete name and location information, as well as unchanging details (e.g., times, fees, phone number) are 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 Rd. (Rte. 532), 1/4 mile west of Rte. 9, Waretown; 609/971-1593

Allaire — Allaire State Park/Historic Allaire Village/Pine Creek Railroad, Farmingdale; 732/938-2253 (park and village) or 732/938-5524 (railroad)

Aquarium — New Jersey State Aquarium, 1 Riverside Drive, Camden; 9:30 a.m.; \$10.95/adults, \$9.45/seniors (55 and older) and students with ID, \$7.95/children ages 3 to 11, free/children 2 and under; advance tickets (800/616-JAWS) recommended; 609/365-3300

Arboretum — Hunterdon County Arboretum, Rte. 31, Clinton Twp.; preregister; 908/782-1158

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

Cold Spring — Historic Cold Spring Village, 720 Rte. 9, Cape May; 10 a.m. to 4:30 p.m. daily through Labor Day, then only on weekends in Sept.; donation requested; 609/898-2300

Cooper — Cooper Gristmill, County Rte. 513 (1.3 miles west of Rte. 206), Chester; 908/879-5463

Echo Hill — Echo Hill Environmental Education Area, Lilac Drive, Clinton Twp.; \$3/individuals, \$5/families; preregister; 908/782-1158

Fosterfields — Fosterfields Living Historical Farm, 73 Kahdena Rd. (just off County Rte. 510, 1.25 miles west of the Morristown Green, Morristown; admission charged Thursdays through Sundays: \$4/ages 17 to 64, \$3/ages 65 and up, \$2/ages 6 to 16, \$1/person extra for tours and special events; 973/326-7645 (TTY: 800/852-7899)

Great Swamp — Great Swamp Outdoor Education Center, 247 Southern Blvd., Chatham; free; 973/635-6629

Hermitage — The Hermitage, 335 North Franklin Turnpike, Ho-Ho-Kus; 201/445-8311

High Point — High Point State Park, 1480 State Rte. 23, Sussex; 973/875-4800

Howell — Howell Living History Farm, Valley Rd. (just off Rte. 29, two miles south of Lambertville), Hopewell Twp. (Mercer County); 10 a.m. to 4 p.m., unless otherwise specified; free admission & parking, but a fee is charged for rides, maze and crafts; lunch served 11 a.m. to 2 p.m.; 609/737-3299

Kay — Kay Environmental Center, 200 Pottersville Rd., Chester; free; 908/879-0566

Skylands — Skylands Manor and N.J. State Botanical Garden, Morris Rd., Ringwood State Park, Ringwood; Manor House general admission: \$3/person, \$2/seniors, \$1/ages 6 to 12, free/under age 6; 973/962-9534

Space — Space Farms Zoo and Museum, 218 Rte. 519, Sussex; 9 a.m. to 6 p.m.; \$8.95/adults, \$7.95/seniors, \$4.50/children unless otherwise noted; 973/875-3223

Trailside — Trailside Nature & Science Center, 452 New Providence Rd., Mountainside; 908/789-3670

Village — East Jersey Olde Towne Village, 1050 River Rd. (Johnson Park), Piscataway; open 8:30 a.m. to 4:15 p.m. Tue. to Fri., 1 to 4 p.m. on Sun.; buildings open for guided tours during the week at 10 and 11:30 a.m. and 1:45 and 3 p.m., tours given at 1, 2 and 3 p.m. on Sun.; free, but preregistration is required; 732/745-3030

Wetlands — Wetlands Institute, 1075 Stone Harbor Blvd., Stone Harbor (3 miles east of the Garden State Parkway exit 10B); 609/368-1211

Wheaton — Wheaton Village, 1501 Glasstown Rd., Millville; 10 a.m. to 5 p.m.; \$6.50/adults, \$5.50/seniors, \$3.50/students, free/children 5 and under; 800/998-4552

Whitesbog — Whitesbog Village, mile marker 13 on Rte. 530, Browns Mills (Pemberton Twp.); \$5/person, \$10/family, free/members of the Whitesbog Preservation Trust (unless otherwise noted); preregister; 609/893-4646

Woodford — Woodford Cedar Run Wildlife Refuge, 6 Sawmill Road, Medford; 609/654-6179



Ongoing

Pequest Trout Hatchery Pequest Trout Hatchery & Natural Resource Education Center, 650 Pequest Rd., Oxford; open every day; 10 a.m. to 4 p.m.; 908/637-4125

Cape May County 63rd Annual Fishing Tournament 800/227-2297

Through August

Summer/Fall Nature Classes and Special Events PAWS Farm Nature Center, 1105 Hainesport-Mt. Laurel Rd., Mt. Laurel; call for details; reservations requested for large groups; \$5/class; 609/778-8795

Sundays

Gabreil Daveis Tavern Tour 1 to 4 p.m. (weather permitting); free; Gabreil Daveis Tavern, Floodgate Rd., Glendora section of Gloucester Twp.; 609/784-5243

Sundays through August 2

Summer Concerts in the Park 7 to 8:30 p.m.; free; Duke Island Park, Old York Rd., Bridgewater; 908/722-1200

Wednesdays through August 26

Union County Summer Arts Festival 7:30 p.m.; bring lawn chair; Echo Lake Park, off Rte. 22, Mountainside; 908/527-4900 (in case of rain, call 908/352-8410)

June 23 through September 4

Plays-in-the-Park Series *Tommy*, June 23 to July 3; *She Loves Me*, July 15 to 25; *My Fair Lady*, Aug. 5 to 15; *Jerry's Girls*, Aug. 25 to Sept. 4; 8:30 p.m.; Roosevelt Park Amphitheater Roosevelt Park, Rte. 1, Edison; \$3/ages 12 and over; 732/548-2884

July 3 through September 27

Dinamation's Dinosaurs Alive! 10 a.m. to 4:30 p.m.; Bergen County Zoological Park, 216 Forest Ave., Paramus; \$4/adult Mon. through Thurs., \$3/adult on Fri., Sat. and Sun., \$2/ages 12 and under; 201/262-3771

July 4 through August 30

Crafts in Nature: A Garden Show Gallery of American Craft; Wheaton

Mondays and Thursdays in July and August

Cape May Kids' Playhouses 10 a.m. & 7 p.m.; Cape May Convention Hall, Beach Drive and Stockton Place; Cape May; \$3/adults, \$1/children ages 3 to 12

Wednesdays, July 15 through August 12

Outdoor Concerts and Photography Show Gallery opens at 6:30 p.m.; concert begins at 7:30 p.m.; bring a lawn chair; Burlington County Park at Smithville, Smithville Rd., Eastampton; 609/265-5068

More Places to Go and Things to Do

■ **Barnegat Lighthouse State Park**, at the northern tip of Long Beach Island, is open until 10 p.m. through September 30. Its gates close at 6 p.m. in October. **Barnegat Lighthouse** is open from 9 a.m. to 4:30 p.m., daily through September 7, Wednesday through Sunday from September 8 through September 30, and on weekends only in October. In addition, the lighthouse will stay open until 9:30 p.m. on the following dates: July 4, 11, 15, 18 and 25; August 1, 2, 8, 15, 19, 22 and 29; and September 5, 12, 16, 19 and 26. For additional information, please call 609/494-2016.

■ **The Outdoor Club of South Jersey, Inc.**, provides low cost opportunities to extend your knowledge, appreciation and enjoyment of the environment through experiences in outdoor activities. Their schedule is far too extensive to be listed here, so if you're interested in details about their backpacking, bicycling, canoeing, cross-country skiing, hiking, wilderness survival or trail maintenance activities, call 609/427-7777.

■ **The Wetlands Institute**, 1075 Stone Harbor Blvd., Stone Harbor (3 miles east of the Garden State Parkway, exit 10B) offers a plethora of summertime activities, including everything from dune and beach walks, salt marsh safaris and Sunday morning bird walks to back-bay birding and wildlife tours and back-bay kayaking. For small children and families, the Institute offers entertaining and interactive programs such as *Feature Creature* (at 10:30 on Tuesday and Thursday mornings) and *Family Night* (7:30 p.m. on Wednesdays). A small fee may be charged for some activities, others are covered by the Institute's general admission fee. For more information, call 609/368-1211.

■ **Gateway National Recreation Area's Sandy Hook Unit**, located in Fort Hancock, offers a variety of summer activities and programs including bird walks, historic walks, nature walks and beach concerts. Activities and programs are free, but a nominal beach parking fee is charged through Labor Day. For details or a complete listing of summer programs, call the Sandy Hook Visitor Center at 732/872-5970.



Events • Ongoing/July/August



August 1 through October 25 (weekends only); September 7 and October 12

The Amazing Maize Maze 10 a.m. to 6 p.m. Saturdays & holidays, noon to 6 p.m. Sundays; \$6/teens & adults, \$4/ages 5 to 12, free/children under 5; **Howell**

August 9 through September 23

NJ Shipwrecks and Nautical Artifacts Exhibit Learn some of the mysteries of the sea; **Village**

August 15 through November 15

Fall Hawk Migration Count Wildcat Ridge Hawkwatch, Wildcat Ridge WMA, Rockaway Twp.; peak flight time will be in the middle of Sept.; <http://pw2.netcom.com/~billygf/>; 973/335-0674

September 1 through November 30

Seawatch Count migrating hawks; dawn till dusk; Hawkwatch platform in Cape May Point State Park; free; 609/884-2736 or 609/861-0700

September 12 through October 11

The Human Form in Allegory, Metaphor, Myth Gallery of American Craft; **Wheaton**

September 15 through December 15

Seawatch See migrating scoters and more; dawn till dusk; 7th St. and the beach, Avalon; free; 609/884-2736 or 609/861-0700

October 3 to November 15

44th Annual LBI Fishing Tournament The beaches of Long Beach Island; \$25 registration/adults, \$15 registration/under age 15; 609/494-7211 or 800/292-6372

October 31 through January 3

Holiday Exhibition & Sale Gallery of American Craft; **Wheaton**

July

4

Old Fashioned 4th of July Celebration Alden Field, Burt Ave., Bridgeton; free; 800/319-3379 or 609/451-9208

Cumberland County Block Party 10 a.m. to 4 p.m.; Potter's Tavern, Courthouse and Riverfront, all on Rte. 49, Bridgeton; free; 609/455-0328

Independence Day Picnic Noon to 3 p.m.; **Fosterfields**

Independence Day Family Festival Fireworks included; 5 to 11 p.m.; North Branch Park, 355 Millburn Rd., Bridgewater; 908/722-1200

Picnic Social 1 to 4 p.m.; **Hermitage**

4 & 5

Craft Show (also on Sept. 5 to 7) **Cold Spring**

5

Star Spangled Splash Fireworks included; **Aquarium**

Foster's Field Day 1 to 4 p.m.; **Fosterfields**

7

Fire Building and Songs & Stories around the Campfire 8 to 9:30 p.m.; **Echo Hill**

10

Music of the 1920s Bring lawn chair; 7:15 p.m.; donation; **Skylands**

Jersey Devil Hunt Bring hot dogs and marshmallows; \$10; **Woodford**

11

Wolfdog Show 11 a.m.; HMDC Environment Center, 2 DeKorte Park Plaza, Lyndhurst; \$4.50/person; preregister; 201/460-4640

Horse-drawn Wheat Harvest Harvest and craft activity; **Howell**

Penguin Palooza New exhibit; **Aquarium**

Trailwork Day (also on Aug. 1, Sept. 12 and Oct. 3) 9:30 a.m. to 12:30 p.m.; ages 14 and up; preregister; **Trailside**

Landscape/Trails Work Party (also on Aug. 8, Sept. 5 and Oct. 3) 10 a.m.; free; **Whitesbog**

Moonlight Walk (also on Aug. 8, Sept. 5 and Oct. 3) 4- to 5-mile walk; 7 p.m.; **Whitesbog**

Canoe Class (also July 25) \$25; **Woodford**

11 & 12

Antique Show and Sale (also on Aug. 8 & 9) **Cold Spring**

12

Skylands Manor House Tour (also on Aug. 2, Sept. 13 and Oct. 4) 1 to 4 p.m.; **Skylands**

Pressed Flower Demonstration 1 to 4 p.m.; **Fosterfields**

Founder's Day Noon to 4 p.m.; \$3/car; **Allaire**

15 through 19

Harvesting and Threshing Demo plus activities; 1 to 3 p.m.; **Fosterfields**

17

Funtasia Festival for Kids 10 a.m. to 2 p.m.; Ocean County Park, Rte. 88, Lakewood; nominal charge for some activities; 732/506-9090

18

6th Annual Baymen's Seafood Festival (rain date: July 19) 10 a.m. to 5 p.m. (food service begins at noon); Tip Seaman County Park, Tuckerton; food tickets: \$23/on site, \$20 if purchased by July 12 (children under 5 eat free); 609/268-8868

Junior Zookeeper Day "Hands-on" day; **Space**

Insects 1 to 4 p.m.; **Kay**

Antique Auto Show More than 200 vintage cars; **Wheaton**

Insect Investigation 9:30 to 11 a.m.; \$3/individuals, \$5/families; **Arboretum**

Musconetcong Gorge Hike 1 to 3 p.m.; meet at Dennis Rd. parking area, Holland Twp.; \$3/individuals, \$5/families; preregister; 908/782-1158

2nd Annual Swim for the Dolphins

One-mile swim to benefit the Marine Mammal Stranding Center; 6:30 p.m.; \$16/person advance registration, \$22/person after July 8 (until 6 p.m. on the day of the swim), \$20/team member advance registration (by July 8) only; sponsors welcome — and needed; start from Beach Patrol Headquarters, Rambler Rd., Wildwood Crest; 609/266-0084

Wildflowers and Wildlife of the

Pinelands Hike (also on Aug. 15, Sept. 19 & Oct. 17) 10 a.m.; insect & tick repellent recommended; bring binoculars if possible; preregister by phone; 609/567-4559; **Batsto**

Fluke Tournament Leonardo State Marina, 2 Concord Ave., Leonardo; 732/495-8965 or 732/872-7805

Canoe Expedition Explore the Pinelands by water; \$40; **Woodford**

18 & 19

Return to Beaver Creek Powwow 11 a.m. to 7 p.m. Sat., 11 a.m. to 7 p.m. Sun.; Matarazzo Farms, Rte. 519, Belvidere; \$7/adults, \$5/ages 12 and under; 908/475-3671

Small Loom Weaving 1 to 4 p.m.; **Cooper**

Railroad Days Displays & railroad memorabilia; **Cold Spring**

19

19th Century Craft Guilds Open House Noon to 4 p.m.; \$3/car; **Allaire**

Days of Tall Ships 1 to 2 p.m.; **Village**



21 to 26

The Monmouth County Fair 5 to 11 p.m. Tues. to Thurs., 11 a.m. to 11 p.m. Fri. and Sat., 11 a.m. to 6 p.m. Sun.; E. Freehold Park, Kozloski Rd., Freehold; \$4/person, free/children under 12; 732/842-4000

23

Welcome to Cape May Houses Tour 1 to 4 p.m.; \$10/adults, \$5/children 3-12; 609/884-5404 or 800/275-4278

24

Jazz/Blues Concert Bring lawn chair; 7:15 p.m.; donation; **Skylands**

24 to 26

Morris County 4-H Fair Chubb Park, Chester; 9 a.m. to 9 p.m. Fri. & Sat., 9 a.m. to 5 p.m. Sun.; free; \$1/parking donation suggested; 973/285-8301

25

Learn and Look (also on Aug. 22, Sept. 26 and Oct. 24) 8:30 p.m.; Paul Robinson Observatory, Voorhees State Park, High Bridge; \$2 donation suggested; 908/638-8500

Antique Fair 10 a.m. to 5 p.m.; \$4; **Hermitage**

Hike Steenykill 10 a.m.; meet at the Steenykill Lake Boat Launch Area; **High Point**

Canoe Class (see July 11)

Baymen's Fishing Tournament 6 a.m. to 2 p.m.; Tuckerton; 609/296-8868

25 & 26

Mid Summer Antiques and Collectibles Show and Sale Indoor and outdoor displays; **Wheaton**

Carriage Driving Demonstration 10:30 a.m. to 3 p.m.; **Fosterfields**

School Days Classes at 1, 2 and 3 p.m.; **Cooper**

Farmfest '98 Folksinger & square dance demo on Sat.; clogging demo on Sun.; **Cold Spring**

26

Outdoor Survival for All 2 to 4 p.m.; **Kay**

Watchung Riding and Driving Club Horse Show 8 a.m.; free; Watchung Stables, 1160 Summit Lane, Mountainside; 908/789-3665

Cooking in The Willows 1 to 4 p.m.; **Fosterfields**



August

1

Lake Lenape Triathlon A 1/4-mile swim, 11-mile bike ride and 4-mile run; 8 a.m. start; 23rd St. dock, Brigantine; \$35/registration until July 18, \$50/on-site registration; 609/441-0252

Trailwork Day (see July 11)

Hike Iris & Appalachian Trail 1 p.m.; meet at the park office; **High Point**

Fluke Tournament Leonardo State Marina, 2 Concord Ave., Leonardo; 732/787-5776

Woods Hollow Classic Mountain Bike Race A 7.5- to 11.25-mile ride; 8 a.m.; Holland Activity Center, Tatum Park, Holland Rd., Middletown Twp.; \$16/pre-registration, \$20/day of race; 732/842-4000

1 & 2

Discover the Cape Exhibits and entertainment; **Cold Spring**

2

Summer Garden Planting 1 to 4 p.m.; **Fosterfields**

1830s Temperance Rally and Charitable Society Fair 1 to 4 p.m.; \$3/car; **Allaire**

Events • August/September

Skylands Manor House Tour (see July 12)

3

The Wetlands Institute's 7th Annual Golf Tournament Limited to 32 four-somes, so sign up early; Blue Heron Pines Golf Club, Galloway; \$150; 609/368-1211

7

Rock 'N Roll Oldies Bring lawn chair; 7:15 p.m.; donation; Skylands

7 to 9

Magic of Alexandria Balloon Festival Alexandria Field Airport (Exit 12 off of I-78), Pittstown; \$12/adults, \$3/children; reduced rate pre-event ticket purchases and group rates available; for brochure, call 908/735-0870, fax 908/735-0595 or e-mail upupaway@PTD.NET

8

Owls and Their Pellets 2 p.m.; limit 25; preregister; Kay

Sharkmania Celebrate sharks; Aquarium

Bridgeton Zoo Ride Bike 25, 50 or 100 miles; 8 a.m.; Schalick High School, Centerton; helmet required; \$14 until July 30, then \$17 day of ride; 609/848-6123

Orienteering 9:30 to 11:30 a.m.; Echo Hill

Teetertown Ravine Hike 1 to 3 p.m.; meet at white trail entrance, Hollow Brook Rd., Lebanon Twp.; \$3/individuals, \$5/families; preregister; 908/782-1158

Dairy Day 1 to 4 p.m.; Fosterfields

Civil War Encampment 10 a.m. to 4 p.m.; \$3/adults, \$1/children; Hermitage

Landscape/Trails Work Party (see July 11)

Moonlight Walk (see July 11)

Fluke Masters Tournament Leonardo State Marina, 2 Concord Ave., Leonardo; 732/495-8965

8 & 9

Antique Show and Sale (see July 11 & 12)

8 to 16

Feed Bags to Evening Dresses 10 a.m. to 4 p.m.; Cooper

9

Cooking in The Willows 1 to 4 p.m.; Fosterfields

Horse Ride (also on Oct. 18) Paulinskill Valley Trail; Kittatinny State Park, Andover; preregister; bring horse; 908/725-9649 or 973/694-5056

Star Watch at Wharton State Forest Sundown till 10 p.m.; flashlight recommended; bring binoculars or scope if possible; 609/561-0024; Batsto

15

Teddy Bear Day Kids with teddy bear get in free; Space

The Gigantic Yard Sale 8 a.m. to 3 p.m.; \$3/car; Allaire

Bike Tournament Leonardo State Marina, 2 Concord Ave., Leonardo; 732/787-9674

N.J. during the French & Indian War Noon to 4 p.m.; Beach Breezeway, Swartswood State Park; 973/383-5230

Wildflowers and Wildlife of the Pinelands Hike (see July 18)

15 & 16

Preparing the Feed 1 to 3 p.m.; Fosterfields

Country Corn Festival Demos & activities; Cold Spring

16

Antique Fire Apparatus Show and Muster Display; Wheaton

19

Summer Constellations 8 to 9:30 p.m.; Echo Hill

Lifesaving Stations 7 to 9 p.m.; Village

21

An Evening of Storytelling 6:30 p.m.; Kay

Guitar & Vocal Concert Bring lawn chair; 7:15 p.m.; donation; Skylands

Birdwalk on Duck Pond Trail 9 to 10:30 a.m.; meet at park office; Swartswood State Park; 973/383-5230



22

Beat the Heat Ice cream sampling and more; Aquarium

Heirloom Tomato Festival Call for information on entering vegetables for judging; Howell

Learn and Look (see July 25)

Hike Mashipacong 10 a.m.; meet at the trail; High Point

22 & 23

Jersey Fresh Food & Wine Festival Noon to 5 p.m.; Matarazzo Farms, Rte. 519, Belvidere; \$10/adults, \$5/ages 13 to 20, free/under 13; 908/475-3671

Sewing Machine Days 1 to 4 p.m.; Cooper

Antique Auto Show Different cars each day; Cold Spring

23

Late Summer Garden Planting 1 to 4 p.m.; Fosterfields

The Morro Castle 2 p.m.; Village

28

Hearthside Reading Series 7 to 9 p.m.; Village

29

Buffalo Bill Day Kids in costume (cowpoke or Indian) get in free; Space

Antique Activity Day Demos & games; Space

29 & 30

People-Powered Days 11 a.m. to 4 p.m.; Cooper

19th Century Harvest Days Displays, games & entertainment; Cold Spring

30

Laundry 1:30 to 4 p.m.; Fosterfields

Pickling the Produce 1 to 4 p.m.; Fosterfields

Antique Auto Show 8 a.m. to 3 p.m.; preregister to display; \$3/car; Allaire

September

1 to 7

Flemington Agricultural Fair 11 a.m. to midnight; Flemington Fairgrounds, 150 Rte. 31N, Flemington; 908/782-2413

5

Fall Birding in Hunterdon County 8 a.m. to 5 p.m.; bring lunch, binoculars and appropriate clothing; \$16; preregister; Arboretum

Plowing Match Watch the pros, then try it yourself; Howell

Landscape/Trails Work Party (see July 11)

Moonlight Walk (see July 11)

5 to 7

New Jersey State Sheep Dog Trials State championship; 10 a.m. to 4 p.m.; Fosterfields

Craft Show (see July 4 & 5)

6

1830s Parlor Games and Outdoor Amusements 1 to 4 p.m.; \$3/car; Allaire

7

Election Day in the 1830s Noon to 4 p.m.; \$3/car; Allaire

Hike the Paulinskill Valley Trail (also on Sept. 26) 10 a.m.; Footbridge Park, off Rte. 94, Blairstown; 908/852-0597

10 through 13

Super Boat Race Call for details; Liberty Landing Marina, Audrey Zapp Drive, Jersey City; 201/985-8000

11 to 13

Surf Fishing Tournament On the beach at 2nd & JFK Aves., N. Wildwood; 609/522-2955

12

Fall Herb & Garden Festival (rain date: Sept. 13) 10 a.m. to 5 p.m.; 5916 Duerer St., Egg Harbor; free; 609/965-0337

Trailwork Day (see July 11)

Pioneer Ways 1 to 4 p.m.; Great Swamp

An Evening Bird Walk 6 p.m.; Whitesbog

Hawk Watch 9 a.m. to 3 p.m.; Nature Center, High Point

Fluke Tournament Leonardo State Marina, 2 Concord Ave., Leonardo; 732/787-9674

12 & 13

Colonial Days Revolutionary War military encampment; Cold Spring

1750s Reenactment Encampment 8 a.m. to 8 p.m. Sat., 8 a.m. to noon Sun.; day use area, High Point

13

Corvette Show (rain date: Sept. 20) Wheaton

National Grandparents Day 1 to 4 p.m.; free for grandparents; Fosterfields

6th Annual New Jersey Storytelling Festival Noon to 4 p.m.; \$2/adults, \$1/ages 5 to 14; Allaire

Annual Railroaders Day Celebration Noon to 4:30 p.m.; train ride: \$2.50/person; Allaire

9th Ocean County Bluegrass Festival Noon to 5 p.m. (doors open at 11 a.m.); \$8/adults, \$1/under age 12; Albert

Skylands Manor House Tour (see July 12)

Ornamental Grasses 3 p.m.; donation; Carriage House, Skylands

Junior Surf Fishing Tournament 7 a.m.; Ocean Bathing Beach 1, Island Beach State Park, Seaside Park; \$3/child (must be age 16 or younger); 215/547-0146

Hike the Paulinskill Valley Trail (also on Oct. 10) 10 a.m.; Warbasse Junction, Rte. 663, near Lafayette; 908/852-0597

Mountain Bike Race 7 a.m.; Shepherd Lake Recreation Area, Ringwood State Park; <http://www.toto.com/mpaganof/>; 973/831-6199

Sprint Triathlon A 1/4-mile ocean swim, 16-mile bike ride and 4-mile run; 7:30 a.m.; \$30/participant; Seven Presidents Oceanfront Park, Ocean Ave., Long Branch; 732/542-1642

14

2nd Annual Golf Outing for the Animals To benefit the Marine Mammal Stranding Center; noon shotgun start; Greate Bay Resort and Country Club, Somers Point; sponsors needed; 609/266-0538

14 through 20

Cigna Knickerbocker Cup Liberty Landing Marina, Audrey Zapp Drive, Jersey City; 201/985-8000

15

Spider Hunt 7:30 to 9 p.m.; bring a flashlight; Echo Hill

16 to 18

Corn Harvesting and Shocking 1 to 3 p.m.; Fosterfields

18

Wings 'n Water Outdoor Photography Workshop \$100 (plus \$10 if a box lunch is desired); preregister by Sept. 14; Wetlands

Wings 'n Water Opening Party and Auction 5:30 p.m.; \$35; Wetlands

19

Fishing Derby for People with Disabilities (rain date: Sept. 20) 10 a.m. to 2 p.m.; Warinanco Park, off St. Georges Ave., Elizabeth; 908/527-4900

Jersey Devil Century 25, 50, 75, 100 or 125 miles; 8 a.m.; Thundergust Picnic Area, Parvin State Park, Centerton; helmet required; \$14 until Sept. 10, then \$17 day of ride; 609/848-6123

Mystery Trip For birders; 7:30 a.m. to 5:30 p.m.; preregister; 908/782-1158; Arboretum

Hanging the Second Run of Millstones 1:30 p.m.; Cooper

Beach Wheels '98 Beach-accessible wheelchairs enable disabled to participate in beach athletic events and fishing; 10 a.m.; Taylor Ave. Bayfront Park in Beach Haven and other Long Beach Island locations; free; 609/597-6993

Summer's End Flea Market 8 a.m. to 3 p.m.; \$1/adults, free/under age 12; Allaire

Wildflowers and Wildlife of the Pinelands Hike (see July 18)

19 & 20

Festival with a Focus on the Victorian Era 11 a.m. to 5 p.m. on Sat., noon to 5 p.m. on Sun.; Burlington County Park at Smithville, Smithville Rd., Eastampton; donation requested for tours; 609/265-5068

New Jersey Harbor Heritage Festival 11 a.m. to 6 p.m.; free; Liberty State Park, Morris Pesin Drive, Jersey City; 201/915-3412

Civil War Weekend Military encampment; **Cold Spring**

Hawk Banding Demonstration (also on Sept. 26 & 27) 10 a.m.; Hawk Watch Platform, Cape May Point State Park; 609/861-0700

Wings 'n Water Festival 10 a.m. to 5 p.m. Sat., 10 a.m. to 4 p.m. Sun.; \$10/adult, \$4/child; **Wetlands**

Rock'n Oldies Fall Wine and Cheese Classic Noon to 5 p.m.; Waterloo Village, exit 25 off Route 80, Stanhope; \$12/adults, \$9 ages 16 to 20, free/15 and under; 908/475-3671

20

Toy Soldiers Mountain Bike Team Race Round Valley Recreation Area, 1220 Lebanon-Stanton Rd., Lebanon; \$25; 908/719-4798

Cider Pressing 1 to 4 p.m.; **Fosterfields**

Grind-a-thon Times Two 10 a.m. to 4 p.m.; **Cooper**

Special Trees of Skylands 3 p.m.; group limited; reservations required; donation; meet at Carriage House; **Skylands**

Beach Plum Festival 10 a.m. to 4 p.m.; Island Beach State Park, Seaside Park; donation; 732/793-0506

Mushrooms Walk & lecture; 2 p.m.; **Great Swamp**

23

Professional Landscape Seminar Day 8:30 a.m. to 4 p.m.; preregister; **Skylands**

26

Fall Wildflower Walk 9:30 to 11 a.m.; \$3/individuals, \$5/families; **Arboretum**

Point Mountain Hike 1 to 3 p.m.; meet at the entrance off Penwell Rd., Lebanon Twp.; \$3/individuals, \$5/families; preregister; 908/782-1158

Blacksmithing Demonstration 1 to 4 p.m.; **Cooper**

Learn and Look (see July 25)

Hike the Paulinskill Valley Trail (see Sept. 7)

Cooking on a Wood Fire 10 a.m. to 3 p.m.; **High Point**

3rd Annual Fort Mott Day (rain date: Sept. 27) 10 a.m. to 4 p.m.; Fort Mott State Park, 454 Fort Mott Road, Pennsville; 609/935-3218

26 & 27

Potato Harvest 1 to 3 p.m.; **Fosterfields**

7th Annual Harvest Sheep and Wool Festival 9 a.m. to 5 p.m.; Salem County Fair Grounds; Rte. 40, Woodstown; free; 609/769-1526

Olde Time Lumberjack Weekend Demos & more; **Cold Spring**

Hawk Banding Demonstration (see Sept. 19 & 20)

27

17th Annual Harvest Festival 11 a.m. to 5 p.m.; \$3/ages 8 and up; **Trailside**

Cider Pressing and Cooking in the Willows 1 to 4 p.m.; **Fosterfields**

Tour the Dodge, Ford and Schofield Mines 10 a.m.; Saffin Pond, Mahlon Dickerson Reservation, Jefferson Twp.; preregister; 973/829-8666

Renovating Your Landscape 3 p.m.; donation; Carriage House at **Skylands**

Bats! Slides and a night walk; 6:30 p.m.; donation; Carriage House at **Skylands**

Cranberry Harvest Tour 9 a.m.; **Whitesbog**

Liberty Waterfront Run 9 a.m. to noon; Central Railroad Terminal, Liberty State Park, Morris Pesin Dr., Jersey City; 201/915-2040

Manasquan Reservoir Run 5 miles; 9 a.m.; Joseph C. Irwin Recreation Area, Manasquan Reservoir, Windeler Rd., Howell Twp.; \$15/preregistration, \$20/day of race; 732/542-1642

27 to Oct. 1

Cape May Food & Wine Festival Various locations throughout Cape May; for details and ticket information, call the Mid-Atlantic Center for the Arts at 609/884-5404 or 1-800-275-4278

October

3

Great Pumpkin Duathlon A 2.2-mile run, 15-mile bike ride and 2.2-mile run; 8 a.m. start; Estell Manor Park Nature Center, Rte. 50, Estell Manor; \$35/registration until Sept. 19, \$50/on-site registration; 609/441-0252

Trailwork Day (see July 11)

Chickens and Eggs 1 to 4 p.m.; **Fosterfields**

Civil War Encampment (rain date: Oct. 4) 1 to 4 p.m.; **Cooper**

Annual Fall Crafters' Market 10 a.m. to 4 p.m.; \$2/adults, free/under age 12; **Allaire**

Nature Crafts 2 p.m.; \$5/person; Carriage House at **Skylands**

Landscape/Trails Work Party (see July 11)

Moonlight Walk (see July 11)

3 & 4

Family Harvest Festival 10 a.m. to 5 p.m.; Matarazzo Farms, Rte. 519, Belvidere; free; 908/475-3671



Outdoor Fine Arts and Crafts Fair 10 a.m. to 5 p.m.; Nomahegan Park, Springfield Ave., Cranford; free; 908/527-4930

Corn Husking 1 to 3 p.m.; Fosterfields

10th Annual LBI Chowderfest Weekend 10 a.m. to 5 p.m.; Taylor Ave. Bayfront Park, Beach Haven; Sun. cook-off admission: \$10/adults, \$3/ages 12 and younger; 609/494-7211 or 1-800-292-6372

Fall Festival 10 a.m. to 4 p.m. Sat., noon to 4 p.m. Sun.; Howell

20th Annual Great Fall Classic Surf Fishing Tournament Six angler team event (50 team limit) begins at 5:30 a.m. on Sat.; the individual event runs from 5 p.m. Sat. to noon Sun.; 15th Ave. & the beach, N. Wildwood; \$40/team, \$8/individual; 215/289-2019

4

Big "C"attus Day Tours, nature walks, exhibits; 7 a.m. to 4 p.m.; Cooper Environmental Center, Cattus Island County Park, 1170 Cattus Island Blvd., Toms River; free; 732/270-6960

Hal Allaire Day Celebration 1 to 4 p.m.; free; Allaire

Allaire 5-K Run 10 a.m. to noon; Allaire

Antique Car Show 11 a.m. to 3 p.m.; \$5 entry fee for exhibitors, \$3/attendee donation requested; Duke Island Park, Old York Rd., Bridgewater; 908/526-5650

Skylands Manor House Tour (see July 12)

Winterizing Roses 3 p.m.; donation; Carriage House at Skylands

Pinelands Month 3rd Annual Kick-off & Tour 9 a.m.; Whitesbog

Antique Glass & Bottle Show 10 a.m. to 4 p.m.; free; 609/567-4972; Batsto

SPUR Hunter Pace 10 a.m. to 1 p.m.; Thompson Park, Newman Springs Road, Lincroft; 732/542-1642

9 through 18

Victorian Week Historic house tours, workshops, mystery dinners, antiques & crafts shows, concert, glass blowing and Victorian Vaudeville; throughout Victorian Cape May; cost varies by event; for information or free brochure, call 609/884-5404 or 1-800-275-4278 (TTY: 1-800-852-7899)

10

The Iron Landscape of Mount Hope Historical Park Historian-led walk; 10 a.m.; Mount Hope Historical Park, Rockaway; preregister; 973/829-8666

4th Annual Pine Barrens Jamboree 10 a.m. to 6 p.m.; Wells Mill County Park, 905 Wells Mills Rd. (Rte. 532, 5 miles west of Rte. 9), Waretown; free; 609/971-3085

Hike the Hills 2 p.m.; donation; meet at Carriage House; Skylands

Hike the Paulinskill Valley Trail (see Sept. 13)

Recycle Crafts 1 to 4 p.m.; Great Swamp

Cranberry Harvest 5-Mile Cross-Country Run 8 a.m.; \$10/preregistration; \$12/day of race; Whitesbog

Pennsauken Surf Fishing Club Tournament 8 a.m.; N. Wildwood beaches; 609/665-1540

10 & 11

Mountain Man Rendezvous See frontier history come alive; free; Space

Fall at Fosterfields 10 a.m. to 4 p.m.; Fosterfields

10 through 12

15th Annual Juried American Indian Arts Festival 11 a.m. to 6 p.m.; Rankokus Indian Reservation, Rancocas Rd., Westampton Twp. (Exit 45-A off Rte. 295 or Exit 5 off NJ Turnpike); \$8/adults, \$4 seniors & children under 12, free/under age 6; 609/261-4747

11

American Wheels (rain date: Oct. 25) Car show; Wheaton

Cooking in The Willows 1 to 4 p.m.; Fosterfields

Poetry and Jazz 3 p.m.; donation; Skylands

Cranberry Harvest Tour 9 a.m.; Whitesbog

17

Kidsparticipate Kids' crafts; Wheaton

Fall Flea Market 8 a.m. to 3 p.m.; \$1/adults, free/under age 12; Allaire

Pine Cone Workshop 2 to 4 p.m.; \$8/members, \$10 non-members; pine cones and frame provided, but bring a glue gun; Carriage House at Skylands

Trail Tales 5 to 6:30 p.m.; Great Swamp

Wildflowers and Wildlife of the Pinelands Hike (see July 18)

Timberbrook Triathlon Canoe for 2 miles, mountain bike for 5 miles and run cross-country for 3 miles; 8 a.m.; Joseph C. Irwin Recreation Area, Manasquan Reservoir, Windeler Rd., Howell Twp.; \$20/solo entry, \$30/team entry; some canoes available for rent at \$10/boat, including paddles and life jackets; 732/542-1642

17 & 18

Draft Horse Weekend 1 to 3 p.m.; Fosterfields

Apple Festival 10 a.m. to 4 p.m.; Cooper

18

The Hacklebarney Mine Historian-led tour; 1 p.m.; Cooper Mill, Chester; preregister; 973/829-8666

Horse Ride (see Aug. 9)

23 & 24

Zoo Boo (rain date: Oct. 25) 6:30 to 10 p.m.; Bergen County Zoological Park, 216 Forest Ave., Paramus; \$3/zoo only, \$5/zoo & train combo; 201/262-3771

24

Autumn Lantern Tours of the Historic Village 6 to 8:30 p.m.; \$6/person; advance ticket purchase required; **Allaire**

Halloween Show 8 to 11:30 p.m. (doors open at 7 p.m.); \$4/adults, \$1/children under 12; prizes for the most unusual, scariest, funniest and prettiest adult costumes; **Albert**

Pumpkin Carving 2 to 4 p.m.; \$10/members, \$13 non-members; pumpkins and refreshments provided, but bring a heavy-duty knife; Carriage House, Skylands

Learn and Look (see July 25)

Halloween in the Pines 7 p.m.; \$10/person; for families and youth groups; pre-register early; **Whitesbog**

7th Annual Pumpkin Festival (rain date: Oct. 25) Cold Spring

24 & 25

Civil War Weekend and Cooking in The Willows Encampment; 10 a.m. to 4 p.m.; **Fosterfields**

25

All Hallow's Eve in the 1830s Noon to 3 p.m.; \$1/person; **Allaire**

SPUR Hunter Pace 10 a.m. to 1 p.m.; Clayton Park, Emley's Hill Road, Upper Freehold Twp.; 732/842-4000

26 to November 2

Classic Creations Craft Boutique 10 a.m. to 9 p.m. Mon. and Thurs., 1 to 5:30 p.m. Sun., 10 a.m. to 5:30 p.m. all other days; \$5; **Hermitage**

30 to November 1

52nd Annual Cape May Autumn Weekend: The Bird Show 609/884-2736 or 609/861-0700

Halloween in the Pines 7 p.m. to midnight; for teens and adults only; \$10; pre-register early; **Whitesbog**

31

Miller's Halloween Stories at 1, 2 and 3 p.m.; **Cooper**

Maze Harvest for Wildlife Help the Mercer County Wildlife Rehabilitation Program; **Howell**

Historic Ghost Outing Paulinskill Valley Trail hike; 10 a.m.; Footbridge Park, Warbasse; 908/852-0597

South Jersey Surfcasting Fishing Club Tournament 8 a.m.; N. Wildwood beaches; 609/886-6314

Summer Camps and Programs

Kaleidoscope Kids Summer Academy 1998: New Jersey Pinelands Adventure
Sponsored by the New Jersey State Museum, Trenton
One-week sessions; July 6 through Aug. 7; 9 a.m. to 3 p.m.; ages 6 to 12; 609/292-6310

Time Travelers Summer Camp

Sponsored by **The Hermitage, Ho-Ho-Kus**

One-week sessions; Aug. 10 through 28; 9 a.m. to noon; ages 7 to 12; 201/445-8311

Nature Discovery, Pioneers, Junior Explorers, Senior Explorers and Environmental Camp (for children entering grades 1 & 2, 3 & 4, 5 & 6, 7 & 8, and 9 & 10, respectively)

Sponsored by the Hunterdon County Park System, Clinton Township

One-week (Nature Discovery & Pioneers) and two-week (Jr. & Sr. Explorers) sessions through Aug. 28; one 2-week session (Aug. 10 to 21) for Environmental Camp; 9 a.m. to 3 p.m. (may vary for some activities); 908/782-1158

Themed Classes; Artistic Naturalists

Sponsored by the Wetlands Institute, Stone Harbor

Themed classes: 1-week sessions through Aug. 14; 9:30 to 11:30 a.m. for children entering kindergarten or 1st grade and 9:30 a.m. to 2 p.m. for children entering grades 2 through 7. Art program — for 3rd graders or above — weeks of July 13 & 27 and Aug. 10, from 12:30 to 2:30 p.m.; 609/368-1211

Summer Camps at Cedar Run

Sponsored by the Woodford Pine Barrens Education Center, Medford

Eco-Maniacs (for 6- & 7-year-olds); July 6 to 10; 9 a.m. to noon. Pine Barrens FUN-damentals (for 8- to 10-year-olds); July 13 to 17; 9 a.m. to noon; 609/983-0326

Environmental Education Day Camp

Sponsored by the Stony Brook-Millstone Watershed Association, Pennington
One- and two-week sessions for students entering grades 1 through 9; July through mid August; 609/737-7592

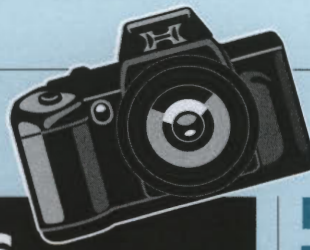
Children's and Family Programs; Half & Full Day Camps

Sponsored by the Trailside Nature & Science Center, Mountainside

July 6 through Aug. 21; session lengths, times and durations vary; program focus and target age vary; 908/789-3670



Announcing . . .



New Jersey Outdoors 1998-1999 Photo Contest!

The next *New Jersey Outdoors* photo contest will celebrate our state parks, forests, recreation areas, marinas and historic sites (listed below), so we're looking for pictures of whatever strikes your fancy at these great leisure time spots. For more information about these facilities, call the State Park Service at 609/984-0370.

State Parks

Allaire (Howell)
Allamuchy Mountain (Hackettstown)
Barnegat Lighthouse (Barnegat Light)
Cape May Point (Cape May Point)
Cheesequake (Matawan)
D & R Canal (Central NJ)
Double Trouble (Lacey and Berkeley townships)
Farney (Rockaway)
Fort Mott (Salem)
Hacklebarney (Chester)
High Point (Sussex)
Hopatcong (Landing)
Island Beach (Seaside Park)
Kittatinny Valley (Andover Township)
Liberty (Jersey City)
Long Pond Ironworks (West Milford)
Monmouth Battlefield (Manalapan)
Parvin (Pittsgrove)
Princeton Battlefield (Princeton)
Rancocas (Burlington County)
Ringwood (Ringwood)
Stephens (Hackettstown)
Swartwood (Swartwood)
Voorhees (Lebanon)
Washington Crossing (Titusville)
Washington Rock (Green Brook Township)
Wawayanda (Vernon)

State Forests

Abram S. Hewitt (Vernon)
Bass River (New Gretna)
Belleplain (Woodbine)
Jenny Jump (Hope)
Lebanon (New Lisbon)
Norvin Green (Bloomington)
Penn (Bass River; open in summer only)
Ramapo Mountain (Passaic/Bergen)
Stokes (Branchville)
Wharton (Atlantic/Burlington/Camden)
Worthington (Delaware Water Gap)

Recreation Areas

Round Valley (Lebanon)
Spruce Run (Union Township)
Shepherd Lake (Ringwood State Park)

Historic Sites and Districts (Individual)

Absecon Lighthouse (Atlantic City)
Boxwood Hall (Elizabeth)
Carranza Memorial (Tabernacle)
Drumthwacket (Princeton)
Edison Memorial (Menlo Park)
Grover Cleveland Birthplace (Caldwell)
Hancock House (Hancock's Bridge)

Hermitage, The (Ho-Ho-Kus)
Indian King Tavern (Haddonfield)
Lawrence House (Burlington City)
Marshall House (Lambertville)
Metlar House (Piscataway)
Monmouth Battle Monument (Freehold)
Old Dutch Parsonage (Somerville)
Princeton Battle Monument (Princeton)
Proprietary House (Perth Amboy)
Rockingham (Princeton)
Somers Mansion (Somers Point)
Steuben House (River Edge)
Trenton Battle Monument (Trenton)
Twin Lights (Highlands)
Veterans of All Wars Memorial (Manchester Twp.)
Wallace House (Somerville)
Walt Whitman House (Camden)

Historic Sites and Districts

(Located in state parks and forests)
Allaire Village* (Allaire)
Atsion Village* (Wharton)
Barnegat Lighthouse (Barnegat Lighthouse)
Batsto Village* (Wharton)
Blackwells Mills Canal House (D&R Canal*)
Cape May Lighthouse (Cape May Point)
Central Railroad of New Jersey Terminal (Liberty)
Clarke House (Princeton Battlefield*)
Craig House (Monmouth Battlefield)
Double Pond Village (Wawayanda)
Double Trouble Village* (Double Trouble)
Fort Mott (Fort Mott)
High Breeze Farm* (Wawayanda)
High Point Monument (High Point)
Johnson Ferry House (Washington Crossing*)
Long Pond Ironworks* (Long Pond Ironworks)
Morris Canal* (sections in Allamuchy Mountain, Hopatcong, Liberty & Ringwood)
Mule Tenders Barracks (D&R Canal*)
Nelson House (Washington Crossing*)
Port Mercer Canal House (D&R Canal*)
Prallsville Mill (D&R Canal*)
Ringwood Manor (Ringwood*)
Six Mile Run Reservoir Site (Franklin Twp., Somerset Co.)*

Skylands Manor and Gardens (Ringwood)
Waterloo Village* (Allamuchy Mountain)
Wawayanda Furnace (Wawayanda)
Whitesbog Village* (Lebanon)

Marinas

Farley (Atlantic City)
Forked River
Fortescue
Leonardo
Liberty Landing (Jersey City)

* District

Photo Contest Rules

- The contest is open to any New Jersey resident or visitor, except Department of Environmental Protection employees and their immediate families.
- Images must have been taken at or of one of New Jersey's state parks, forests, recreation areas, marinas or historic sites. Both interior and exterior shots are eligible, and pictures may have been taken in any season.
- Only 35 mm slides, transparencies and unmatted, unframed prints (no larger than 8" x 10") may be entered. Images must be crisp and in focus, except where depth of field applies. Images should not be under- or overexposed. No entries can be returned, so you might want to send duplicates.
- Each image must be attached to a completed entry form. (The form below may be reproduced as needed.)
- Entries must be received no later than June 1, 1999.
- All entries become the property of the Department of Environmental Protection and may be published or displayed for any purpose, such as illustrating a story or advertising *New Jersey Outdoors*.
- No entries will be returned, so please do not send a self-addressed, stamped envelope.

NJO 1998-1999 Photo Contest Entry Form

Name _____

Address _____

City _____

State _____ Zip _____

Daytime phone (____) _____

Title of image _____

Where taken _____

When taken _____

Description _____

Names of any *identifiable* people* _____

* *Note:* A signed release is required when the subject is easily identifiable and a potential for litigation exists.

Make copies of this form if needed.

The Northern Clapper Rail

By Lee Widjeskog

The Northern clapper rail (*Rallus longirostris crepitans*), also known as a mud hen or marsh hen, is found throughout the salt marshes of New Jersey. A slim, gray-brown bird with a short neck and a short tail cocked upwards, the clapper rail is heard more often than seen. Its call sounds like someone hitting two flat sticks together rapidly in a clapping fashion, hence its name.

The clapper rail's body is about 14 inches long with a wingspan of 20 inches. Its narrow, moderately long bill helps it grab its favorite food, the fiddler crab. The mud hen's legs are of moderate length, and its long toes enable it to wade through the shallow waters and mud of its habitat.

Centuries ago, settlers avidly gathered the clapper rail's eggs for food. The best of them reportedly were able to pick up 100 dozen eggs a day from the marshes of New Jersey. And, although relatively few hunters now seek this elusive bird on the coastal marshes during high tides in September, the marsh hen once was a much sought after game bird.

The primary habitat of the clapper rail in New Jersey includes the tidal salt marshes found from the Delaware Memorial Bridge down the Delaware Bay and up the Atlantic coast to the Hackensack Meadows.

Their nests usually are located along tidal creeks or ditches, wherever the tall marsh cordgrass grows in linear bands at least 6 feet wide and the falling tide exposes adjacent mud flats for feeding. Some nests also can be found among high tide bush and salt hay when these higher habitats are next to suitable feeding areas.

Usually, the male and female establish a territory close to where they nested the previous year. Here they construct a nest, usually during the last week of May. The peak of the first hatch occurs around the third week of June.

The nest, a grass bowl 6 to 10 inches

in diameter, is constructed high enough above the marsh surface to prevent daily flooding by tides. Some of the nests have an access ramp built from the marsh floor to the bowl. Often, a canopy of surrounding vegetation is pulled over the nest to provide overhead cover and prevent detection by predators.

The number of eggs laid can vary from 4 to 14, and it is not unusual for the birds to make second and third attempts at nesting if tides or predators destroy the initial nest.

The hen generally lays an egg each day until the entire clutch is ready. The 18- to 21-day incubation period may begin before the last egg is laid. Although it is not unusual to find one egg remaining in the nest unhatched, most often all of them will hatch within a 24-hour period at the end of the incubation period.

The newly hatched young are covered with black down and, once dry, they are able to run, hide and swim to evade predators. Their coloration and size enable them to hide among the stems and shadows of the marsh grasses and evade most enemies.

Studies have found that some pairs, after successfully hatching one nest, will attempt to hatch a second. In such instances, the male will raise the young from the first clutch, while the female lays a second clutch in a new nest. The hen will rear any young that hatch from this second clutch.

Once the young have hatched, the adults will construct small, flat, feeding platforms on the marsh grass. The young are brought to these tables where they are fed fiddler crabs and snails until they are old enough to fend for themselves.

By late July or early August, nesting has been completed. Some of the birds may start migrating south as early as the last week in August, while others will leave in September. However, some clappers can still be found on the New Jersey marshes even into December. Bandings indicate that our birds winter

on the coastal marshes from South Carolina down to Florida.

In the past, clapper rail habitat was reduced due to man's desire to use the marsh without the interference of daily tidal flow. Parts were filled for housing construction, roads and landfills. Other land was placed behind dikes for agricultural, mosquito control and wildlife enhancement purposes. Because of these various activities, thousands of acres are no longer supporting clapper rails.

In addition, snow goose populations have increased dramatically over the last 30 years. These birds arrive on the tidal marshes in October and do not leave until early April. While here, they feed upon the roots and rhizomes of the marsh cordgrass plants. Their feeding action results in the conversion of hundreds of acres of marsh grass to mud flats. Over time, these areas revegetate with cordgrass but in the interim, the area is of limited use to clapper rail since adequate food and cover are no longer present.

Mosquito control efforts of the past, which included indiscriminate diking and spraying, caused the loss of fiddler crabs, a primary food of the rail. Today, mosquito control experts avoid spraying open salt marshes. Ditching, now done as part of an open marsh water management plan, controls mosquitoes while preserving the present vegetation and fiddler crab population to the benefit of the mud hen.

New Jersey's current laws protect the state's marshes from man-made destruction, and clapper rail habitat is ample. Good populations of this bird should continue as long as adequate habitat remains.

Lee Widjeskog is a wildlife biologist with the New Jersey Division of Fish, Game and Wildlife.



New Jersey State Library

