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# New Jersey OUTDOORS





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# From The Editor

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It's almost vacation time and our readers would like to know more about the recreational resources available in our state. So I'll tell all.

- Vacation Guide titled, "New Jersey's Got It."
- "Get to Know New Jersey"
- "Marinas and Boat Basin Guide"
- "Beach Guide"
- "Campsite Guide"
- A mini guide to historic sites titled "Cross Roads to the Revolution."
- "Mini Tours Guide." This publication is available in English, French, Spanish, Japanese and German. All the above guides are available from:

New Jersey Division of Travel and Tourism  
CN 384—Trenton, NJ 08625—(609) 292-2470

- A year-around guide, "New Jersey Invites You To Enjoy its State Forests, Parks, Natural Areas, Marinas, Historic Sites, Wildlife Management Areas" is available from:

Division of Parks and Forestry  
State Park Services  
CN 404—Trenton, NJ 08625—(609) 292-2797

- A new publication called, "Canoeing the Pinelands Rivers" is available from:

Green Acres Program  
Bureau of Recreation and Heritage Planning  
CN 404—Trenton, NJ 08625—(609) 292-2455

- For the more adventurous, a set of 10 recreation maps (plus canoe safety information) of the Delaware River is available for a fee of \$4.00 from:  
Delaware River Basin Commission  
P.O. Box 7360—West Trenton, NJ 08628

- For those looking for recreation on the wild side, send for the:

Wildlife Management Area Guide  
Division of Fish, Game and Wildlife  
CN 400—Trenton, NJ 08625—(609) 292-9450

This is a 122-page guide of New Jersey's wildlife management areas—over 150,000 acres of diversified habitat (forests, meadows, salt marshes, lakes and mountains) scattered throughout the state. The guide contains maps, roads, and directions. It sells for \$4.00. If you wish the guide sent first class, send an additional \$1.50 postage.

And the best source for all outdoors activities in the Garden State is *New Jersey Outdoors*. If you haven't renewed your subscription as yet, send in the attached card so you won't miss a summer issue. Or even if your subscription is not about to expire, renew early and save yourself the worry of remembering to renew later, and we'll extend your subscription and it will save us the postage required for renewal letters. And it will make our accountants so happy.

## In this issue

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Author Thomas R. Dunn says, "If someone were to approach you with the idea of doing some wilderness hiking in southern New Jersey, perhaps you would be quite puzzled at the thought." Don't be, read *Hiking the Batona Trail*.

New Jersey is blessed by a multitude of navigable rivers which pass through areas where few roads go. So the way to go is by canoeing the rivers. In the article, *New Jersey's Rivers: Waterways to Yesterday* author Patrick Sarver discusses most of the major streams and also rates them.

New author Caroline Smith writes about *Horseback Riding for the Handicapped* which is the name of the official statewide organization involved in the training of handicapped riders, organizing rideathons in which the handicapped can participate, and raising money to support these programs.

The most popular sport-fishery in New Jersey has to be fluke. The reason might be that there are very few people who don't like fluke. The article, *Casting and Trolling for Fluke* by Pete Barrett will tell you how and what to use to catch your dinner that evening.

A program that will provide recrea-

tion for New Jersey anglers in the future was introduced in the fall of 1979 by the release of about 4500 four-inch bass into Farrington Lake in Middlesex County. To date, over 17,000 bass have been released in Farrington and over 3,000 have been released into Carnegie Lake in Princeton. Biologist Dave Chanda of the Division of Fish, Game and Wildlife's Information and Education group discusses this program in the article, *Striped Bass for Freshwater Lakes*.

Author Paul Olsen, *Spring Fishing in Great Bay*, May/June 1980 and *Spring Fishing in Great Bay*, May/June 1981 is back with *Fishing the Sod Banks*. Again he is writing about his favorite fishing area, Great Bay, and how to locate the most productive fishing spots in this area, and what to use to get the fish.

Something different for us this spring! *Inviting Butterflies to Your Garden* by Molly Monica, new to our magazine but widely known in New Jersey because of her interest in Lepidoptera. Included in the article is a list of nectaring plants that will attract butterflies to your garden.

A short piece by a new author Bob Herres is titled, *In Tribute to Old Friends*. The "Old Friends" are sun-

fish or "sunnies." And he's right, they do taste delicious.

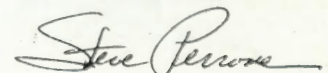
Another new author, Donald L. Jeka, writes about *Fitting-out in a Jersey Boatyard*. It's designed to rouse you sailboat skippers and "stink pot" captains too.

The title of this article, *Rediscovering New Jersey's Abandoned Railroad*, tells what it's all about. Author Tom Horvath writes, "maybe someday in your travels along these routes you might be fortunate enough to hear the ghostly shrill of a steam engine . . . or see the fading coach lights of the Erie Lackawanna's *Phoebe Snow* as it heads toward Chicago."

The best bargain in South Jersey is the Cohansick Zoo in Bridgeton. It is free and has a fine selection of wild animals, and over 50,000 school children visit this zoo each year. This article is by Deborah Boerner, a frequent contributor, and the photographs were shot by Pat Boffo, who didn't like photographing the hawks from inside the cage.

New author Al Peineke recommends fly fishing for Calicos in the

*continued on page 16D*



# Hiking the Batona Trail

By Thomas R. Dunn

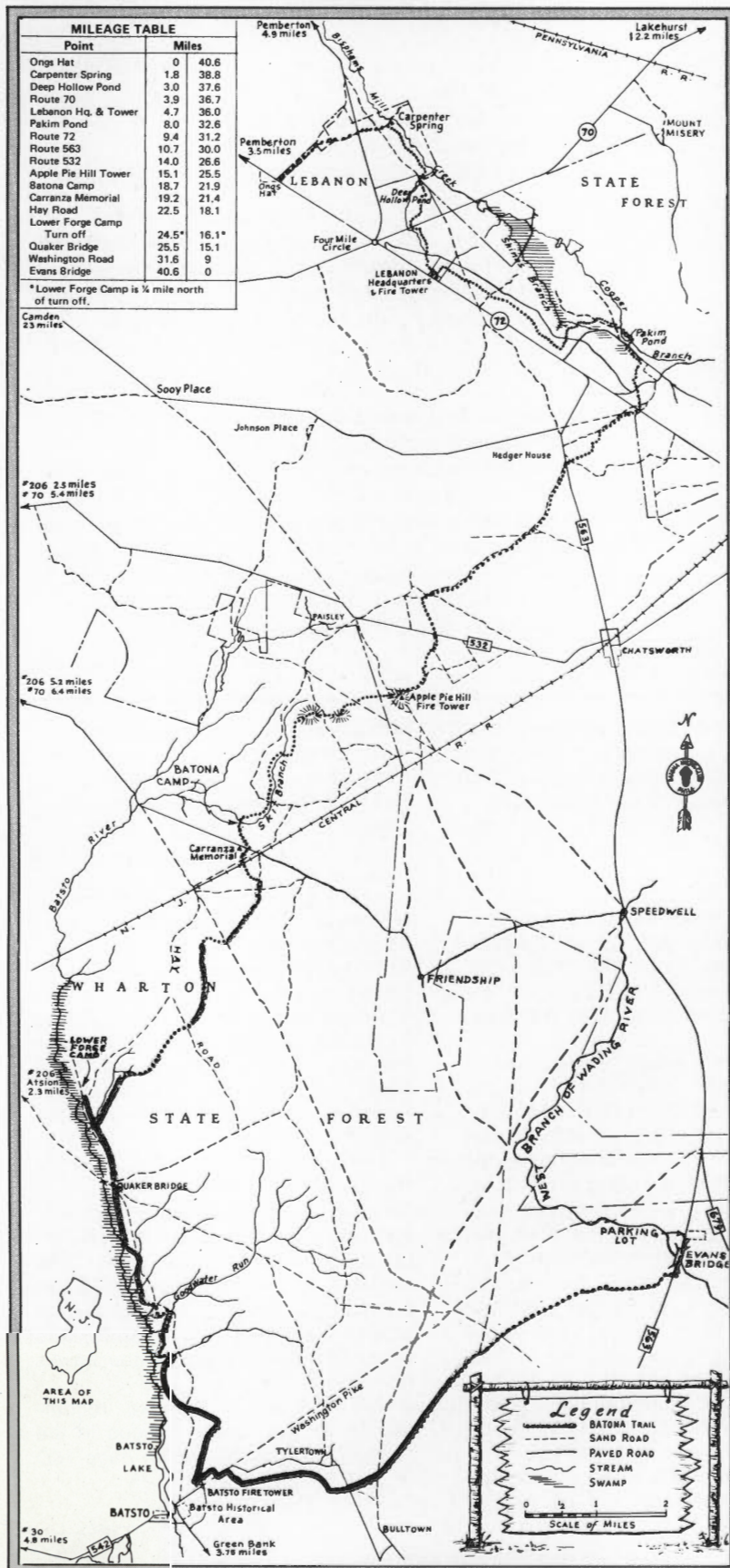
If someone were to approach you with the idea of doing some wilderness hiking in southern New Jersey, perhaps you would be quite puzzled at the thought. Wilderness? New Jersey? The words just don't seem to fit together. Indeed, most people are not aware of the truly wilderness area that comprises the 2000 square miles of New Jersey's Pine Barrens.

For many, the only glimpse they get of this area is from a car window as they speed through miles of pine forests on their way to New Jersey's popular seashore resorts. Yet, within an hour or two's drive of Philadelphia and New York, one can discover an area so remote and beautiful that an undisturbed day of hiking can easily be enjoyed.

The Batona Trail is the only established and maintained trail within the Pine Barrens of any substantial length. It is still quite new, having been charted and built in 1961. Since I discovered the Batona, the trail has provided me with a rare opportunity to escape to a truly wilderness environment, without having to drive a long distance. The beauty of the Pine Barrens region has to be shared, perhaps for no other reason than to satisfy the need for things wild that metropolitan dwellers may have, but find difficult to satisfy.

The trail is located in the south-central portion of New Jersey and follows a general north-south direction. Beginning in the extensive Wharton State Forest, near the Batsto Historical Area, the trail winds its way approximately 30 miles to Carpenter's Spring in Lebanon State Forest. The terrain the trail covers is predominantly pitch pine forest, from which the Pine Barrens receives its name. The land, however, is far from being barren, as one can discover after being on the trail for only a few miles.

In walking the entire length of the trail, I found Batsto Village to be the most convenient and interesting starting point. The headquarters for Wharton State Forest is located here, where you will find the information, trail map, and camping permit needed to hike the entire trail.



After securing the information for your hike, you can then spend an enjoyable day prior to your hike by exploring the restored Batsto Village. The site is that of a once-important Colonial ironmaking center. Batsto furnished a great deal of the colonies' iron needs during the Revolution and the War of 1812. A number of buildings date back to the early 1800's and an attempt has been made to recreate the atmosphere and life of those early days.

You can also discover a very unpretentious nature center here. It is filled with a variety of simple exhibits that encourage visitors to follow the invitation printed on the front door: "Enter and Investigate." If you're not aware of some of the unusual and unique aspects of the Pine Barrens, the nature center is a must stop before beginning your hike.

My most recent trip on the Batona found me walking the quarter mile from Batsto to the trail head on a pleasant, cool, summer day. I found the trail quite easily behind the Washington Road Fire Tower and was soon surrounded by a dense forest of pitch pine and blackjack oak. This early section of the trail is quite narrow, although easy to follow, and seems to engulf you immediately into the Pine Barrens experience.

Walking at a steady pace, I soon discovered that I was not alone as I stirred a pair of catbirds who had been feeding in the low brush. Their flight was soon followed by that of an equally startled chipmunk, who scurried off into the dense cover. I adjusted my pace so as to create as little noise as possible, hoping for an opportunity to photograph some of the wildlife. My attempt at being quiet paid off about a mile further along the trail. A pair of white-tailed deer and I quite literally bumped into each other. The density of the forest enabled me to go unnoticed until the deer and I were quite close. However, my hopes of getting a photograph were soon dispelled, for after only a moment of eye contact the pair were bounding off, snorting their disapproval of my intrusion.

The trail soon emerged into an area of tall pine trees, a sprinkling of young oaks, and a knee-high carpet of lush ferns. In only a few minutes I realized why such an abrupt change in vegetation had occurred. The charcoal-black bark on the pines provided the

initial evidence of the fire that had recently burned this area. The scattering of scrub oak and lack of underbrush completed the story. Fire is an integral part of the ecology of the Pine Barrens. The pitch pine and blackjack oak have a tremendous ability to sprout new growth even after the most severe fires. Evidence of this remarkable ability to recover after a fire is visible at a number of places along the trail and reminds a hiker of how fire has been a significant factor in maintaining this unique environment.

The trail soon turned toward the northwest and approached the Batsto River, which it then paralleled for about five miles. As I neared the river, large stands of Southern white-cedar loomed in front of me. The cedar swamp is another unique feature encountered along the trail. This area is often much cooler and the cedars can take on an ominous and foreboding appearance, especially in foul weather. I abandoned the trail for a time and decided to investigate, hoping to find some of the more interesting attractions. I spotted one quite easily—it was a sun-dew, just one of the carnivorous plants growing within these swampy areas.

I was also on the lookout for the Pine Barrens tree frog which is extremely rare and would have been a colorful subject to photograph. My search proved fruitless, however, and I eventually headed back to the trail with boots a bit damper than when I started.

The next few miles of trail were very enjoyable as I snacked on wild blueberries. Some time was spent waiting for an obstinate box turtle to emerge from his shell, but he proved to be camera shy.

After stopping at Quaker Bridge for a short snack and some pictures, I walked the remaining mile and a half to Lower Forge. The Lower Forge wilderness camp, where I planned to have lunch, is actually a quarter of a mile off the trail. The campsite proved to be a perfect spot. It is located along the river and to my surprise it was unoccupied. I soon found an area where I could stretch out and I proceeded to enjoy my lunch. The river was great for soaking tired feet!

During this time I was entertained by a red squirrel, chattering and scrambling through the tops of some giant cedar trees across the river. The agility



A section of the Batsto River as seen from Quaker Bridge. Pine Barrens Rivers although quite narrow, are a favorite with many canoeists.

he displayed in leaping from limb to limb was undoubtedly the best part of his act.

Returning to the trail, I set about finishing the mileage I had planned for the day, and concentrating on some of the more common life of the Pines. Two of the more interesting inhabitants of the area are the leopard frog and the fence lizard. Both are quite common but are easy to overlook because of their protective coloration. As in all my hiking experiences, it takes some time before I really become attuned to the subtleties of an area. I couldn't help but wonder as I walked along how much I had already overlooked.

Later in the afternoon the trail passed through another area of forest that had been burned recently. Once again I encountered many examples of the ability the pine and oak trees have to sprout new life after a fire. It was quite evident throughout this burned section that the fire would eventually prove beneficial, for example, in the increased browse created for the deer population.

Finally I reached Batona Campsite, one of the two designated camping areas along the trail (Lower Forge was

*Continued on page 30*

# NEW JERSEY'S RIVERS: Waterways to Yesterday

By Patrick Sarver



PHOTOS BY AUTHOR

DELAWARE WATER GAP, N.J.

In 1524 the Italian explorer Giovanni da Verrazano became the first European to lay eyes on what is now New Jersey. The land he discovered was then mostly covered by forests, broken here and there by pure, free-running rivers and inhabited by only a handful of Delaware Indians. By today's standards, it was an area of diverse and scenic natural beauty.

About 100 years later, a few Dutch settlers arrived. It wasn't until the British gained control in 1664, though, that New Jersey was regarded as a place suitable for towns and commerce. Three hundred years have passed since then, and New Jersey has had more than its share of development. Today it is one of the most populated and industrialized areas of the nation.

Despite this urban growth, there are still many areas in New Jersey that are almost as wild as when the Dutch first arrived. Other sections, while long settled, bear a stronger resemblance to rural scenes of the nineteenth century than to the state's present-day urban image.

One of the best ways to explore the natural beauty and rural areas of New Jersey is to canoe its rivers. These waterways pass through areas where few roads go, and the land along their banks is less developed and more scenic than that along nearby highways.

In the Pinelands, for example, the rivers flow through an area that is strongly reminiscent of wilderness canoeing country of northern Minnesota or Canada. The streams—the Wading, Oswego, Batsto, Mullica, and Great Egg Harbor rivers—are among the cleanest in the Northeast. They pass through stands of cedars so dense in places that little sunlight reaches the forest floor.

Streams in other parts of New Jersey are also water-

ways to the state's natural beauty. The Delaware River cuts through the edge of the Appalachian Mountains. Unlike most other major rivers of the region, it is still largely unspoiled. One portion of it has recently been designated part of the national Wild and Scenic River system.

In central New Jersey, the South Branch of the Raritan and the Millstone rivers flow through rolling farm and estate country that has a colonial flavor. Old mills stand at several points along the streams, as well as many other remnants of the past. Even the towns retain much of their original colonial style.

In addition to offering a diversity of scenery, the rivers of the state themselves have unique personalities. The rocky rivers of the northern New Jersey hills, for example, offer a much different kind of canoeing than the smooth, winding rivers of the Pinelands. Two streams in the same part of the state that may appear similar can also be as different as night and day to a canoeist. And major differences may be encountered from one section of a stream to another and even on individual stretches as water levels vary with the season.

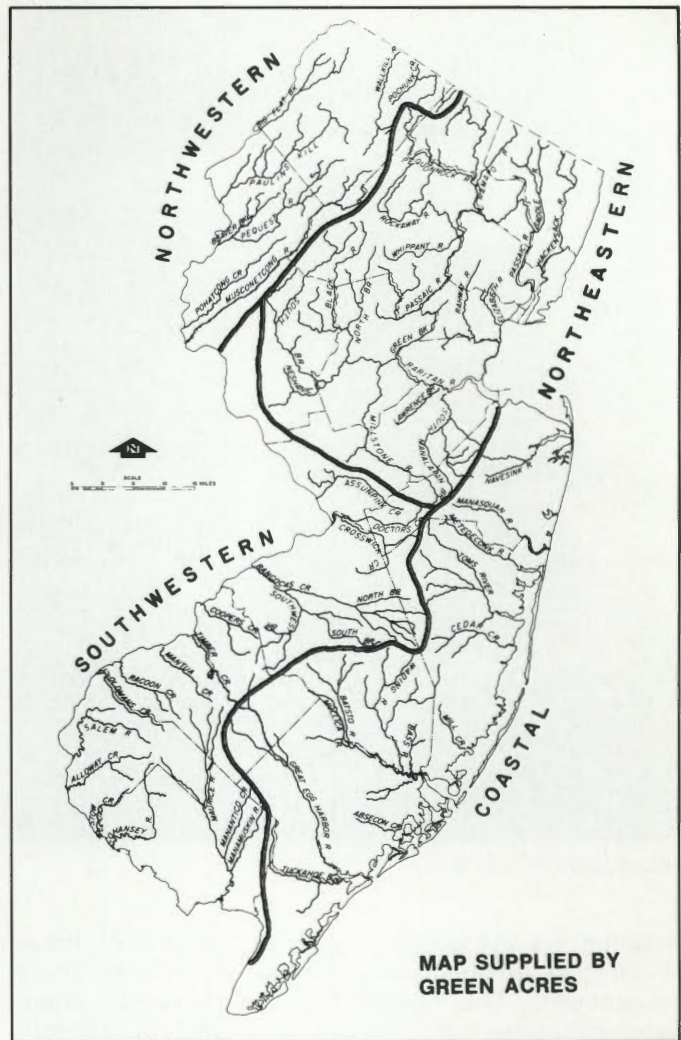
The most popular canoeing river in the state is the Delaware, particularly the section from the state's northern tip to the Delaware Water Gap. On summer weekends, hundreds of canoes line this portion of the river. Most of the land along both banks is part of the Delaware Water Gap National Recreation Area, making the river popular for fishing and camping as well as for canoeing. On the New Jersey side of the river, the Kittatinny Mountain rises to about 1,800 feet, adding to the river's scenic beauty. Canoeing here is also relative-

ly easy, although there are a few mild rapids along the way, and low water in late summer also exposes rocks that can give novice canoeists some problems.

South of the Delaware Water Gap, the river offers a variety of canoeing experiences. Long pools of deep water alternate with rapids. Just south of Belvidere, for example, the Delaware crosses the Foul Rift, a set of rapids that even expert canoeists consider a challenge. There are also many sections of this part of the Delaware that are very calm.

The Wading River, which flows along the eastern edge of Wharton State Forest in southern New Jersey, is the second-most popular canoeing river in the state. Like many other streams in the Pinelands, its waters run deep amber in summer, stained by the many cedars along its banks. It is also a relatively easy waterway to canoe, and offers many access points along the main stretch from Speedwell to Bodines Field. The Wading flows through a near-wilderness area, with thick forests lining most of its banks, except where it passes blueberry and cranberry bogs.

Streams in other parts of the Pinelands flow through similar country. The Mullica meanders through the western side of Wharton State Forest. From Atsion to Sweetwater the canoer will see no buildings or settlements, for only a few sand roads cross this section of the forest. This part of the stream takes about a day to canoe, and challenges canoeists with sharp bends, fast currents, and dense foliage hanging over the river. Nearby, the Great Egg Harbor River from Penny Pot to Mays Landing provides another route where few signs of civilization intrude, even though U.S. 322 runs nearby. The foliage along much of this river is dense. Penny Pot, established in 1686, and Weymouth, site of an old iron works in the early 1800s, are remnants of a unique past that set the present-day Pinelands apart from other sections of New Jersey.



The best river for beginning canoeists really isn't a river at all: It is the 44-mile Delaware and Raritan Canal. Running south from New Brunswick toward Trenton then turning north along the Delaware River, the canal was built in 1834 by Irish immigrant laborers. During the last century, it was an important commercial waterway, rivaling New York's famed Erie Canal in the number of barges and other water traffic it handled. Today, it is part of a state park.

The canal is well suited to beginning canoeists because its water is maintained at a constant level. There is little current, and only a few locks where canoeists must portage their canoes. The canal also has a certain scenic charm. After its decline as a commercial waterway, it was unused for many years. Trees and bushes grew up along its banks. It now looks very much like a natural river along much of its length.

The Millstone River, which parallels part of the canal, has few rapids along its meandering course. Because it is so close to the canal—often no more than 100 feet away—a day of canoeing the canal can be combined with a trip down the Millstone.

A number of small rivers on the edge of suburban areas in the northern part of the state also offer good canoeing. These include stretches of the Passaic, Rahway, Ramapo, and Hackensack rivers. Because of

| River             | Best Canoeing Stretch                  | Rating             |
|-------------------|----------------------------------------|--------------------|
| Delaware (upper)  | Port Jervis, NY, to Delaware Water Gap | Easy-Moderate      |
| Delaware          | Delaware Water Gap to Trenton          | Easy-Difficult     |
| Musconetcong      | Stanhope to Reigelsville               | Difficult          |
| Paulins Kill      | Stillwater to Columbia                 | Difficult          |
| Passaic           | Millington to Singac                   | Easy-Moderate      |
| Rahway            | Cranford to Clark                      | Easy               |
| Ramapo (upper)    | Mahwah to Oakland                      | Difficult          |
| Ramapo            | Pompton Plains to Singac               | Easy-Moderate      |
| Hackensack        | Tappan Lake to Hackensack              | Easy-Moderate      |
| S. Branch Raritan | High Bridge to South Branch            | Moderate-Difficult |
| N. Branch Raritan | Bedminster to South Branch             | Moderate           |
| Millstone         | Carnegie Lake to Weston                | Easy               |
| D & R Canal       | Entire length                          | Easy               |
| Manasquan         | Rt. 547 Bridge to Hospital Road        | Moderate-Difficult |
| Toms              | Holmansville to Toms River             | Moderate           |
| Cedar Creek       | Dover Forge to Lanoka Harbor           | Moderate           |
| Batsto            | Lower Forge to Batsto                  | Moderate           |
| Wading            | Speedwell to Bodines Field             | Moderate           |
| Oswego            | Oswego Lake to Harrisonville           | Moderate           |
| Mullica           | Atsion to Sweetwater                   | Moderate           |
| Rancocas          | New Lisbon to Mount Holly              | Easy               |
| Great Egg Harbor  | Penny Pot to Weymouth                  | Moderate           |
| Maurice           | Willow Grove to Millville              | Moderate-Difficult |



MILLSTONE RIVER, N.J.

pollution on the lower, industrial portions of these rivers, their upstream stretches are often overlooked by canoeists. The Passaic River, for example, offers good canoeing from Passaic Township to Summit. From there downstream to Little Falls there is some pollution but the river still offers a chance to canoe through a surprisingly rural setting.

Canoeing New Jersey's rivers can be combined with other outdoor activities. Camping trips by canoe are popular. Some of the top spots are islands in the Delaware River, the state park between the Delaware and Raritan Canal and the Millstone River, and along the Wading, Batsto, Mullica, and other rivers in southern New Jersey.

Fishing and canoeing are a natural combination. The Delaware River offers good fishing for smallmouth bass, catfish, muskellunge, and trout. Prime spring trout fishing can be enjoyed by canoeists on the Musconetcong and the South Branch of the Raritan, and on a number of other rivers where fish are stocked. In the Pinelands, the best fishing is for pickerel, with the Wading and Mullica rivers topping the list.

Because many of New Jersey's rivers pass through state parks and forests, canoe trips and short hikes go hand in hand. Day trips by canoe down the Batsto and Mullica rivers in Wharton State Forest or on the Delaware River near Worthington State Forest are good routes for planning combined activities.

Many of New Jersey's historic sites and villages are situated near canoeing rivers. The village of Batsto on the Batsto River, for example, is a restored eighteenth-

century iron-making center. Allaire State Park on the Manasquan River has another old iron-making village. In northern New Jersey, the Musconetcong River passes Waterloo Village, a restored town that was once an important stop on the old Morris Canal.

Washington Crossing State Park on the Delaware River north of Trenton commemorates the site where the general crossed on Christmas night in 1776. Washington's last headquarters during the Revolution, Rockingham, is also about a mile from the Delaware and Raritan Canal near Rocky Hill.

These areas, which preserve earlier ways of life, along with the scenic beauty of New Jersey's rivers, are attracting more canoeists each year to the state's waterways. While there is little likelihood that New Jersey will ever be as rural as it once was, there are still many areas where canoeists can enjoy glimpses of the state's scenic past and explore its natural beauty.

### PLANNING A CANOE TRIP

River canoeing, even on New Jersey's flattest rivers, is unlike canoeing on ponds. The current, changes in course, and obstructions in the water all require attention and experience in handling a canoe. It is advisable to make detailed plans before going on a canoe trip. For beginning canoeists, a distance of five to eight miles a day is plenty; longer trips are possible, but you may get tired a lot faster than you think, even where the water is fairly fast. Careful planning is needed so that you begin and end trips at access points along rivers. Canoeing a stream is also unlike canoeing a pond because you may have to carry your canoe through or around shallows or to bypass obstructions such as trees or low roller dams.

The best way to plan a trip is to use detailed maps and guides such as the following:

#### Exploring the Little Rivers of New Jersey

By James and Margaret Cawley  
Rutgers University Press  
30 College Ave.  
New Brunswick, NJ 08903

#### Canoeing the Jersey Pine Barrens

By Robert Parnes  
East Woods Press  
Fast and McMillan, Publishers  
6000 Kingstree Drive  
Charlotte, NC 28210

#### Canoeing in New Jersey

New Jersey Department of Community Affairs  
363 West State Street  
Trenton, NJ 08625

#### Canoeing the Pinelands Rivers

New Jersey Department of Environmental Protection  
Green Acres Program  
CN 404  
Trenton, NJ 08625

Delaware River Maps (set of 10)  
Delaware River Basin Commission  
Box 7360  
West Trenton, NJ 08628

# Horseback Riding for the Handicapped

By Caroline Smith

It is a warm, overcast Saturday in mid-June. Four horse trailers and a concession wagon stand in a misty meadow in the Somerset Hills. In the distance, three horses and riders disappear up a woodland trail. Setting: Crossroads Farm, Bedminster, New Jersey. Scene: The annual summer rideathon to benefit Horseback Riding for the Handicapped of New Jersey.

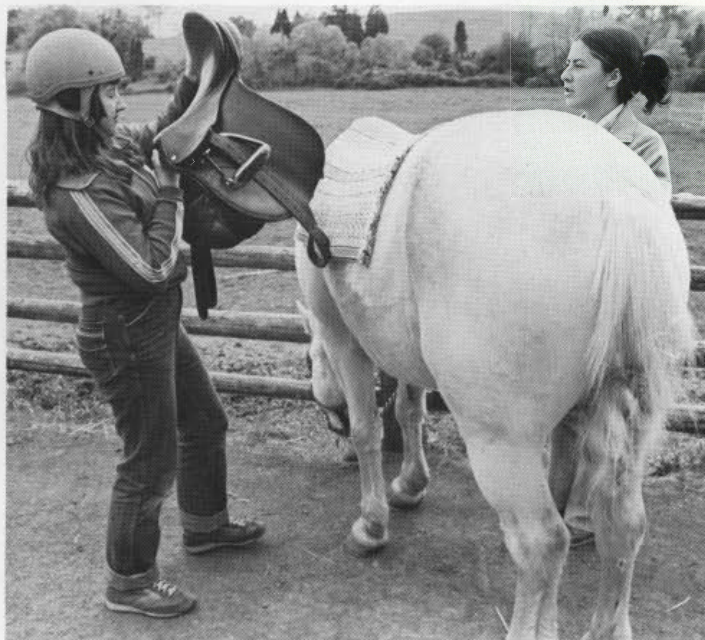
We've heard about walkathons and telethons, but in a state which celebrates the horse as its official animal, in the year following the year designated the "International Year of the Disabled Person," what is more appropriate than a mounted event to benefit the handicapped? And this is an event in which the handicapped themselves can participate.

"Telethons emphasize the person's disability, and stress the importance of 'getting better,'" said 33-year-old actor-equestrian Henry Holden, who was crippled by polio at the age of four. "Telethons inspire pity—horseback riding evokes respect."

Holden had wanted to ride as a child, but family and friends had discouraged him, saying that his legs were too weak to hold onto the horse. Not



PHOTOS BY  
AUTHOR



Jenny Straw saddles Stormy for a ride.

until he saw a picture of the 1974 Easter Seal poster child astride a horse did he determine to give riding another try. After seven years of instruction in Bedminster, Holden rides competently and comfortably, and can even vault onto a horse from the ground.

On horseback, the disabled person is "looking down for the first time," Holden says. "It's beautiful for the head—I'm going places I'd never thought of." The Newark-born Holden claims that before he took up riding, he had never seen deer before—except on roadside "Deer Crossing" signs. For the mentally retarded, the learning disabled, and the emotionally disturbed, as well, riding provides an invaluable opportunity for growth and learning in a noncompetitive atmosphere.

Although Horseback Riding for the Handicapped has been around for a long time now—the national North American Riding for the Handicapped Association, Inc. (NARHA) is a well established organization providing full insurance for programs across the country—New Jersey did not have an official statewide organization until November 1980. Many states have private organizations which raise mon-

ey on an individual basis, but because of New Jersey's small size and concentrated population, it was relatively easy to form a statewide program, according to Octavia Brown, President of the New Jersey organization and Program Director at Somerset Hills Handicapped Rider's Club in Bedminster. Horseback Riding for the Handicapped of New Jersey (HRH) serves as an overseeing body which organizes state events and distributes funds to local programs according to need. Raising money through a central body removes the need for individual programs to hold continual fund-raisers in their respective areas.

So far this year, different New Jersey HRH groups have raised more than \$7000 from area rideathons. The money raised is used to defer the costs of horse maintenance, in addition to paying the salaries of specially trained instructors. (Additional help is provided by volunteers.) Brown estimates that at the Somerset Hills Club it costs a total of \$400 a year for each rider to ride once a week, or about \$12 to \$15 per lesson. The eventual goal of the New Jersey organization is to provide half the funding for any program in the state.

Both handicapped and able-bodied riders participate in rideathons held on consecutive weekends, collecting



Volunteer Caryn Loomis helps Lisa Kaer and Circus complete 5 miles in the June rideathon.



Leaving her wheelchair behind, Heather Ryan is helped onto Stormy with the help of Somerset Hills Chief Instructor Cathe Busack.

pledges from family and friends at designated dollar amounts per mile, with distances ranging from five to ten miles for handicapped riders to 15 to 20 miles for able-bodied riders, depending on the terrain. The handicapped riders raise money only for their own local programs—so that they can actually see the results of their efforts, Brown says—while the balance is contributed by volunteer riders from the “general horsekeeping public,” including members of 4-H clubs and other organizations.

At this year’s June rideathon in Bedminster, the members of the “general horsekeeping public”—some from as far away as Flemington and South Plainfield—included amateurs out for a first ride, who returned with the marks of the trail, and experienced horsemen, who rode into the corral at Crossroads in spotless condition. An added bonus this year was the appearance of a group of cowboy disc jockeys from WKHK FM, a country-and-western radio station in New York City, who had raised \$1000 in pledges over the air. The weekend before, 13 handicapped riders had navigated five miles of controlled territory in the same area to raise approximately \$1600 in a single day.

The recent surge of interest in New Jersey’s state animal has been accompanied by a corresponding growth in programs for handicapped riders. A state equestrian event for the New Jersey Special Olympics was held in Jackson (Monmouth County) last Septem-

ber 26. In addition to the traditional sports events for the physically and mentally handicapped—wheelchair races, track-and-field competition, etc.—several state handicapped riding clubs participated in an actual horse-show, with equitation classes, relay races, obstacle courses, and gymkhana events. Riders on the lowest level were accompanied by walkers or leaders; others, virtually independent riders, participated in jumping events. In addition, the New Jersey Equine Advisory Board, at work on plans for a state horse park at Stone Tavern (Monmouth County), hopes to develop special facilities for handicapped riders. Many local horseshows also sponsor special classes for disabled riders.

Five accredited programs for handicapped riders now exist in New Jersey. In addition to the Somerset Hills Handicapped Riders in Bedminster, organizations have been formed in Cape May, Monmouth, and Morris counties. Rideathons are held regularly throughout the year in various locations across the state. For the handicapped and the able-bodied alike, it is a lovely way to see the most beautiful areas of New Jersey.

Information on HRH programs and scheduled rideathons can be obtained from either Octavia Brown, President of NJ HRH, at (201) 234-1907, or Barbara Isaac, Vice-President, at (609) 259-3884.



L. to R.—Octavia Brown, Maura Kelly on Hightime, volunteer, and Tracy Carroll on Valiant preparing for a benefit show.

# CASTING & TROLLING FOR FLUKE



Happiness is a young boy with a three-pound fluke. Author's son, Rich, caught this fish trolling a fluke-belly bait in the Manasquan River. PHOTOS BY AUTHOR

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## By Pete Barrett

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A west wind, but an outgoing tide, made for bad drifts on the Manasquan River. The fluke were there, and before the wind picked up the catches were steady with a dozen or so keepers already in the bucket. A standard fluke rig with a single hook and a live killie had worked well—but what now? With no drift our baits weren't moving, we covered no water, and for a half hour had not a single hit.

There were far too many boats, either anchored or running up and down the river, to troll; so we fell back on a technique that many fishermen south of Beach Haven use very successfully. We bucktailed the fish, and caught fairly well.

South Jersey anglers work bucktails around the edges of the marsh grass edges, along channel drop-offs, and over deep holes and put together some very impressive catches. Yet north of Barnegat you rarely see anyone bucktailing.

The weight of the bucktail depends on the depth of the water. You need just enough to stay on or just off the bottom. In the Manasquan that day I used a 3/8-ounce bug that worked fine. Fishing deeper or faster water along the beaches would require a heavier bucktail. The sandy-bottomed areas off Sandy Hook along the dropoff from the beach are good for fluke, but a three-quarter to one-ounce bucktail is the lightest I use there.

The killie should be hooked through the roof of the mouth, but not so deep into the head that it kills the

bait. The mouth tissues are fairly tough and you can cast and retrieve a single bait for quite some time—until a big fluke smashes it.

Other baits, such as spearing, squid strips, fluke belly, and sand eels, can also be used on the bug, but some frozen baits are too soft and quickly tear off after only a cast or two.

The advantage of working bucktails is that it gives you the ability to cover a lot more water than you can by simple bottom fishing while drifting. As you drift, you can cast the bucktail 360° around the boat covering a circle of about 150' in diameter, as compared to a narrow area of only a few feet wide on a drift with baits.

I get impatient on a drift when only working a drifted bait on the bottom; so I'll often cast up into the drift with the bucktail. That way I get the best of both worlds, but it can be a bit hectic if two baits go off at the same time you get a hook-up on the bucktail!

After the bucktail is cast, let it settle to the bottom and then begin a slow twitching retrieve that makes the bug jump in short hops along the bottom. You don't need long, hard sweeps of the rod tip like you might use for blues—just short strokes and not too fast.

At times, we'll fish a dead stick with a bucktail drifting with no action. Cast the lure, let it settle so it is bouncing the bottom and put the rod in a gunnel holder. Many times the dead stick will outcatch the rod in your hands.

Colors of the lure can be important. White is my favorite because it has more flash, but yellow and red/white are also good on many days. I fished next to a man behind Margate and he was catching real good with a black bucktail and the killie.

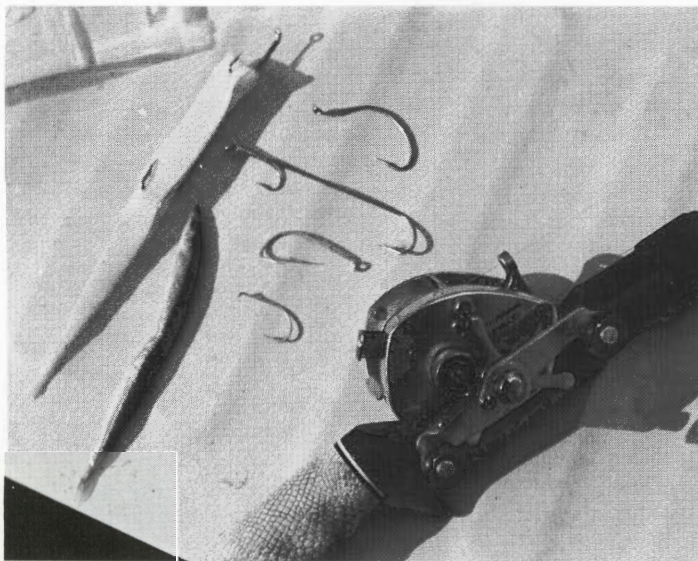
Bucktails work best where the bottom is relatively clear of kelp, sea lettuce, or grass which tends to load up on the hook. Sandy or gravelly bottom is the easiest to fish, yet you can still work bucktails over the weed-covered areas if you keep the retrieve just high enough to avoid the weeds. It can be tricky at times, but worth it if the fish are hitting well.

Bucktailing has saved the day, or added lots of fish to a slow day on many occasions. Some anglers look over at our boat with raised eyebrows when we start casting in the middle of a fluke fleet all dragging baits on the bottom, but the method does work and is just one more technique that helps put the odds in your favor.

The most popular and effective method of taking fluke is by drifting, but wind and current conditions can combine to make drifting difficult and ineffective. A drift that is too slow, or moving against the direction of the current will often be counter-productive to successful fluking, and it's times like these that trolling may be the technique to save the day.

As a rule, when trolling you will have to put out a length of line that is at least three times that of the water's depth in order to keep the rig on the bottom. So the best trolling depth is water 10 to 15 feet deep—which means you will have to put out only 30 to 45 feet of line to keep the rig on the bottom. Trolling in 20 feet of water is still effective, but anything over 25 feet isn't practical.

Some of the more productive areas for taking fluke by trolling include: beach dropoffs at the shallow shelf where the water depth drops suddenly next to a beach; sandbars or shoals that have built up at the mouth of an inlet; large depressions or troughs close to a shoreline; the edges of a channel, or on the flats themselves when the fluke are spread out over a wide area. Small baitfish swim down-current, and fluke must know this, so they instinctively will always lie facing up-current watching



Light tackle is fine for summer flounder and adds to the sport of catching these good eating fish. A variety of baits will fool the fish, such as fluke-belly strips and sandeels.

for approaching baitfish. Therefore, you should NEVER TROLL UP-CURRENT.

The speed at which you troll the rigs is often critical to success. What is the proper trolling speed for fluke? The correct speed is the one that catches fish. You should vary your speed to find what is most productive. This speed can change in a few minutes time, depending on wind and current conditions, and the mood the fish are in. One minute it will be a crawl, and the next minute, three or four knots. So your best bet is to start trolling by moving the boat just fast enough to make progress over the bottom. If you make a pass without the bait getting any attention, troll at a slightly faster pace and continue to increase speed on each pass until you hook up with a fish.

If you have a high-powered single outboard engine on your boat, you may experience a little difficulty trying to troll at the slower speeds. Some anglers overcome this problem by trolling backwards with the engine in reverse so that the stern of the boat moves first, slowing the trolling speed down considerably because of the increased water resistance.

Others find it much easier to put the engine in gear and go until it is moving too fast, then throw it into neutral and coast. When the boat slows down, throw the engine back into gear again and repeat the process.

The most effective rig for trolling is the standard one-hook rig with a slight modification. Because of the length of line let out while trolling and the resulting long scope, the distance between the end loop for the sinker and the dropper loop for the hook should be increased from 6 to 12 inches, to a minimum of 12 to 24 inches. This will keep the bait off the bottom.

Always use either the bank or ball-type sinkers when trolling because their tendency to roll makes them less likely to become fouled on bottom obstructions. If the trolling is being done in an area where there is a chance of coming across an occasional weakfish or striped bass, it's always a good idea to try fishing with a high/low rig. The high hook can be baited with a squid strip for weakfish, or a blood or sandworm to take both weaks and stripers. The low hook is baited for the primary quarry—fluke.

The sliding-sinker rig is one to stay away from when trolling. It hangs up on bottom obstructions too easily, collects unbelievable quantities of seaweed and eel grass, and the bait stays too close to the bottom, fouling with sand, weed, and kelp.

Just about any of the standard fluke baits may be used for trolling, but I have found a few that seem to produce better than the others. My favorite bait for trolling is sandeels. My second preference is a thin fluke-belly strip bait that will have an enticing flutter as it is trolled through the water. The third choice for trolling is a five- or six-inch pennant-shaped strip of squid.

Either way, trolling or bucktailing, catching fluke is fun and the eating is superb.

# Striped Bass for Freshwater Lakes

By David Chanda

As part of the New Jersey Division of Fish, Game and Wildlife's objective to provide more fishing opportunity for New Jersey anglers, a new program was initiated during the fall of 1979—the introduction of striped bass into freshwater impoundments. Approximately 4,500 four-inch striped bass were released into Farrington Lake, Middlesex County, in September 1979. Striped bass introductions into freshwater lakes have been successful in other states when forage species such as alewife herring or gizzard shad were present. Preliminary studies by Division biologists indicate that a select group of New Jersey's freshwater lakes have suitable habitat to maintain stripers.

## The Program

To date the Bureau of Freshwater Fisheries has released more than 17,000 bass into Farrington Lake and 3,000 stripers into Carnegie Lake in Princeton. The size of the fish released varied from three to seven inches. The ultimate goal of the project is to provide and maintain harvestable populations of striped bass in select New Jersey freshwater lakes.

Division biologists carefully considered a number of lakes which would be suitable for the initial release of striped bass. Farrington Lake was chosen as the first lake to receive bass, for three reasons. First, Farrington Lake contains a reproducing population of alewife herring, which is an essential food source for the bass. Second, this reservoir has recently been studied under a project titled "Inventory of New Jersey Lakes." This study identified all the fish species which are found in the lake, their population size, and their status. This lake profile will provide valuable information for the final evaluation of the bass introduction. Finally, striped bass were introduced into Farrington Lake in the late 50s. This stocking provided limited

fishing for stripers for several years.

If the Division's program is successful, biologists feel that stripers averaging four pounds (18-20 inches) will be available within four years. Striped bass weighing more than 20 pounds may be available within 10 years.

## Can Stripers Live in Freshwater?

Though normally found in saltwater, striped bass survive well in freshwater. These fish are anadromous, which means that they live in saltwater and migrate up freshwater streams in order to spawn.

Raising stripers in freshwater hatcheries is new to New Jersey biologists. Fish hatcheries in other states that rear striped bass have only a 6%-10% survival rate. However, New Jersey, unlike other states, does not have large supplies of young striped bass to work with. The state hatchery receives only 25,000 one-inch bass per year from Harrison Lake National Fish Hatchery. As a result, New Jersey fisheries biologists had to develop a more efficient way to raise these fish. The technique (known as the "semi-closed intensive rearing system") enables biologists to achieve a 50% survival rate in the young bass. The system regulates temperature and food, the two most important factors affecting growth rate of the stripers at the Hackettstown hatchery. The bass are able to hatch from eggs and grow to a length of five inches in four months. To obtain such results, the fish are fed a special diet through an automatic feeder that drops food in the bass runway at five minute intervals, 24 hours a day. Also, the water temperature is kept at a minimum of 70°F. Since the well water that feeds the state hatchery comes in at 52°F, the water must be heated before it is released into the bass runway. In order to increase the efficiency of this heating process, our



Biologist Bob Stewart releases the end product—striped bass—into Carnegie Lake in Princeton.

biologists designed a series of three filters at the end of the bass runway to remove the stripers' waste products from the water, thus permitting the heated water to be recycled through the system.

## Will Stripers Affect Other Game Species?

The evaluation of this project will include a study of the stripers' impact on the existing fish population. However, since the striped bass will be utilizing a presently unoccupied area of the lake there will be no competition with other game fish species. Striped bass prefer the deeper, more open areas of the lakes, where it is cooler. This is also the same habitat where the stripers' food source (alewife herring and gizzard shad) can be found. Other warmwater species, such as pike, chain pickerel, bass (largemouth and smallmouth), and sunfish prefer the shallow littoral zone (zone of aquatic vegetation). This area offers excellent protection for these species when they are smaller and maintains a wide diver-

*Continued on page 32*

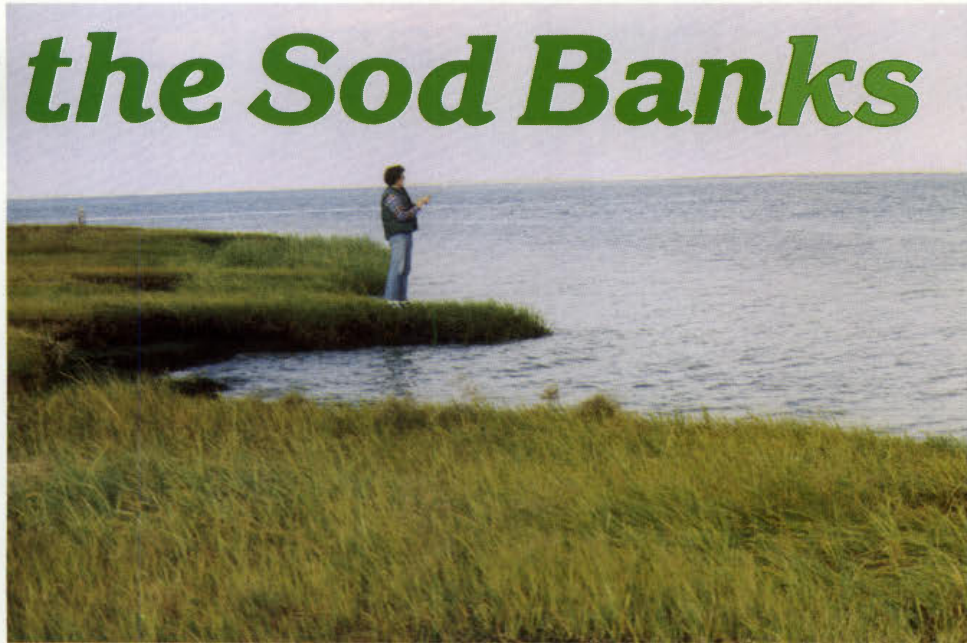
# Fishing the Sod Banks

By Paul Olsen

PHOTOS BY AUTHOR

Geography has specific effects on sport fishing in coastal waters. This is particularly evident along the New Jersey shore, where several different situations exist within a relatively short distance. Great Bay lies in a more or less natural area near the center of New Jersey's coastal zone. Though there is access around much of its perimeter, no highways pass directly over this wide estuary. By contrast, the coastal sections of Atlantic and Cape May counties, to the south of Great Bay, comprise a network of saltmarsh (or "meadows") with winding waterways interlaced by roads. Here, inland fishing often centers around the bridges which cross the narrower channels. To the north, the wide lagoon of Barnegat Bay contains thousands of acres of shallow flats with little visible tidal flow. Fishing effort here is often concentrated around the inlet, where waters are circulated to a greater degree. Between Manasquan and Sandy Hook, inland waters are discontinuous, and a greater proportion of fishing is done in surf and ocean waters. In the ocean it is often necessary to troll a wide area, or enlist the aid of electronics, to locate fish. In the bays, however, productive locations are more readily found by landmarks or geographic features.

The marshes lie just west of the inlets and the barrier islands. They have been formed over centuries by layers of decomposed marsh grasses (primarily *spartina* sp., or cord grass), held together by the root systems of living plants. In New Jersey, most of these areas are located southward from Barnegat Bay. Large tracts in the vicinity of Barnegat and Brigantine are part of the National Wildlife Refuge system, while several other parcels are state-managed for public hunting and fishing. Where marshes lie adjacent to inlet or channels, vertical cross sections of the clay and peat have been scored out by current and wave action. Often the drop-off is deep enough to allow a motor boat next to the bank, even when the tide is not at flood. In some sections (such as in Little Egg Inlet) large chunks are often broken off, creating a scene resembling the Labrador coast. Marshes extend farther inland where major rivers such as the Mullica, Great Egg Harbor, and Dela-



"The marsh provides a barrier which allows predatory fish to trap bait, and puts the angler in a strategic position."

ware flow to the ocean.

Steep "sod banks" are an indication of flushing within the estuaries. Where there is little (such as in much of Barnegat Bay), the shoreline consists of gently-sloping beaches, often with higher-growing reeds and submerged beds of eelgrass. In Great Bay, flood currents from the inlet focus again at the mouth of the Mullica River, so virtually the entire perimeter is lined with steep banks. In Atlantic and Cape May counties, many miles of steep banks line myriad interconnecting channels; however, the back bays and sounds consist primarily of mudflats. In Delaware Bay, because of its size, there is less direct wave focus on marsh areas, although sections such as Egg Island (near Fortescue) are productive.

In spring, wintering fish such as striped bass and flounder leave local waters, while fish migrating from the south enter the bays and rivers to forage on productive flats and marshes. Some stay only briefly on their northward journeys, but others remain through summer. Only one species of note, the white perch, remains in our inland saline waters year-round. School-size stripers, weakfish, and bluefish are the primary invaders of the shallows, while others such as sea bass, tautog, fluke (or summer flounder) and kingfish lie in adjacent pockets and channels. Fishing normally picks up in April for striped bass, and in May for the other summer species, when water temperatures are in the 55° to 65°F range. Shallow sections and adjacent marshes well inside the bays see the earliest activity, since these waters

warm faster than those nearer the ocean. The bottom in these areas, interspersed with shellfish beds, consists of fine sand, mud, or sticky clay, all of which provide habitat for the small invertebrates (especially grass shrimp) and baitfish which make up the diets of predatory fish. Live bait such as bloodworm, clam, or cut mackerel, usually produces the best early-season catches. Many of the earliest catches are made by shore-based fisherman using surf gear, when water temperatures are in the 45° to 55° range. Boat fishing, and the use of artificial baits, becomes effective when water temperatures are around 60° and above. Weighted bucktails tipped with bait, pork rind, plastic worms or twisters usually work well in spring. Generally, fishing is best when the weather, including wind and precipitation, has been moderate, and the water is relatively clear.

Tidal forces cause a reciprocal movement of sea waters, which becomes most apparent in and near estuaries and embayments. This funneling action creates visible current patterns which aid fish in navigation and in feeding. In this respect, fishing in the bay is similar to that in a stream. From the open sea, fish must concentrate to enter the relatively narrow inlets leading to the inland waters. Flood currents often focus where sod banks lie in and behind inlets, thus fish find their way and will feed against the drop-off. These crevices harbor small invertebrates and baitfish which are stirred by the action of wind and tide. Fish will often concentrate near a point where the current first contacts the bank forming a boil or a "rip." The outline of



"Striped bass often follow the shoreline contours. This ten pounder was taken near Little Egg Inlet."

the marsh bank contour gives an indication of tidal patterns within a given area. Flood currents normally assume a definite set or rip along certain banks into adjacent creeks or channels. Inside the inlet where the bay widens, currents disperse around marsh (or "sedge") islands, and over sandbars or flats lined with marshes. Fish may feed on the banks and flats through the high tide period until the early ebb stage. On the outgoing tide a rip may focus in a slough or channel, often with a steep drop-off, extending from the marsh or flat toward the inlet. Deep channels with concen-

trated flow are best fished during the later ebb stage as currents subside. Away from the inlets and marshes, fish may spread out over open bay areas where depths (six to ten feet or more) and currents are uniform.

Depth, or stage of tide, also has a bearing on fishing in marsh areas. Where the flow is consistent, bottom-dwellers such as flounder will feed in depths as shallow as five or six feet. Here, bottom rigs with one or two oz. weights, or bucktails of  $\frac{3}{8}$  oz. or less, are employed. Early and late in the day, other fish will invade productive areas as



"At low tide, vertical cross sections of the peat and clay banks are exposed."

shallow as three or four feet. Tidal range here is such that flats or banks with virtually no water at low tide may have well over three feet at high tide. In this situation, fishing with surface/diving plugs (four to six" size) is effective. When the tide is down, or during mid-day hours, fish normally move to deeper sections. Banks near deeper water may see fish activity even at lower stages of tide. Deepest banks are in and near the inlets and river, where channel depths may exceed 40 feet. At these focal points of tidal flow, the drop-off is usually in steps, so that maximum depth is attained within only a few yards of the bank. Here, fish will lurk in eddies and niches out of the swift current. On navigation charts (No. 12314 and No. 12316, National Oceanic and Atmospheric Administration) these sections are indicated by white (deeper water) next to green (marsh). In addition to plug casting, deep fishing from the bank (or from a boat near the bank) with live bait or weighted bucktails, can be productive in these locations.

A word of caution is in order for boaters. Though some productive locations are directly accessible to shore-based anglers, many more can be reached only by boat. An outboard gives the advantage of operating in waters less than four feet deep. One should gain familiarity with the area before venturing forth on the miles and miles of inland waterways, especially in the evening. Watching other boaters in the area can be helpful. In shallow sections, marsh banks may be deep enough to approach when the tide is up, whereas a gently-sloping beach or flat in the same vicinity may not be navigable. Certain creeks may be passable only at high tide, whereas others of similar width may be relatively quite deep. Mud flats are especially difficult to maneuver out of—I learned the hard way! Particular attention should be given to the stage of tide and direction of the wind. Boots or waders should be on hand in case one has to jump out and push. Besides that which is required by the Coast Guard, safety and emergency gear on board should include flares and gun, a lantern, insect repellent, additional clothing, spare anchor and line, a compass, and (preferably) a two-way radio. The latest marine weather forecast, current tide tables, and navigation charts for the area should also be on hand. On the charts, a solid black line separating water (blue or white) from marsh (green) usually indicates a section that is approachable. This and other information regarding local conditions can be obtained from marinas and experienced fishermen in the area.

*Continued on page 31*

# Inviting Butterflies To Your Garden

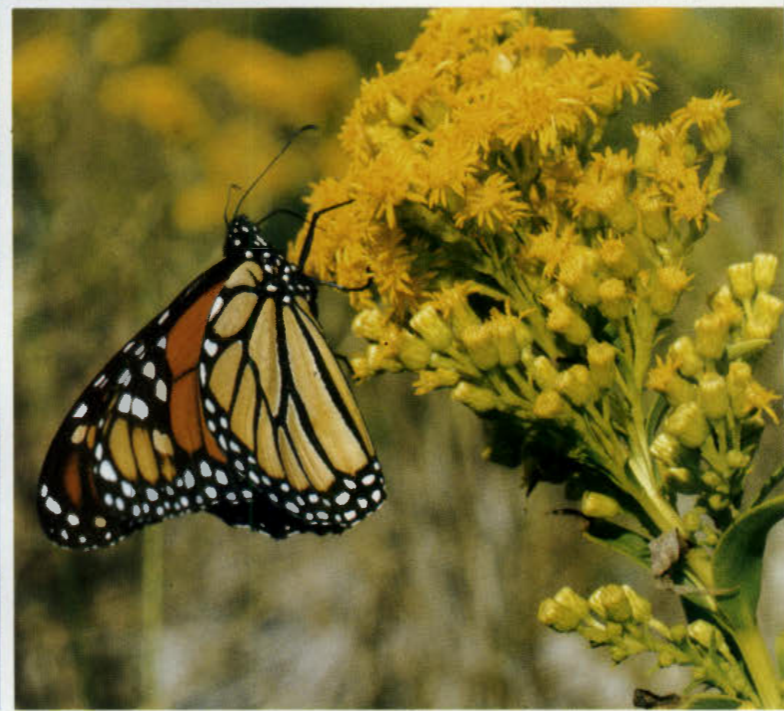
By Molly Monica

TOM KOELLHOFFER

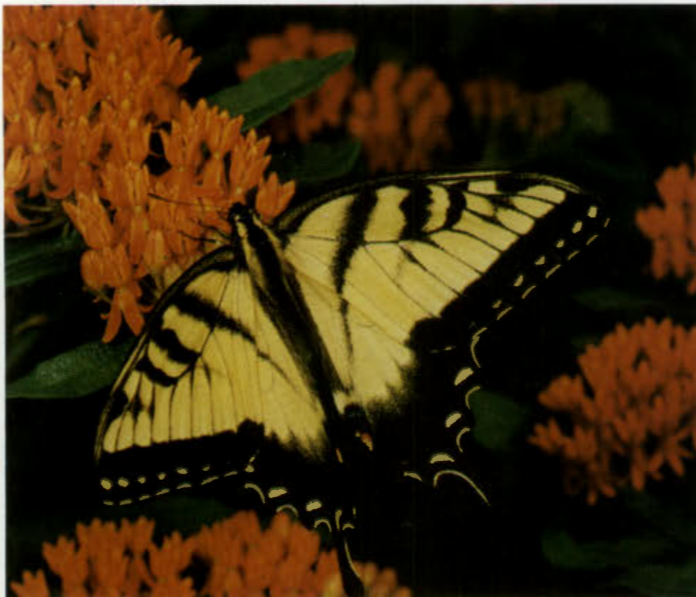


Field thistle & monarch

ALICE WOODCOCK



Pictured at left, a tiger swallowtail male on Butterfly weed. Above, a monarch showing proboscis feeding on seaside goldenrod.



JOHN WOLF



It is no accident that some gardens swarm with butterflies in an endless stream from early May through the first frost. As soon as the early sun is high they are on the wing eager to feed and as long as the sun's rays penetrate their world they remain active till sundown. One of your neighbors may have a garden that is alive with butterflies, while another right next door has the most magnificent garden without a single butterfly in it. Why?

Because a flower is beautiful or brilliant—even prize-winning—is no guarantee that a butterfly will share your opinion. Then, what special magic must a flower possess to be constantly attended by butterflies?

It has something to do with the anatomy of the flower





# In Tribute To Old Friends

by Bob Herres

The first fish I ever caught was a sunfish. I jerked it from the pond with a pole which had the flex of an I-beam. The fish flew from the hook, sailed behind me and landed in a pile of brush. I found the "sunny," took it home, and fried it for supper. It was delicious.

From the experience I learned that with a sharp knife you can filet anything larger than a grasshopper and, more importantly, that I like to fish in farm ponds. I still do.

With light tackle, the humble sunfish and all relatives (family Centrarchidae) and friends who swim in small waters is sporty. With ultralight tackle these fish are scrappy as a newly commissioned Marine. They are fun fish—not fussy fish.

The proper time to go fishing is now. Best time is probably early morning or late in the day, but there is no really bad time.

The proper lure to use is already in your tackle box. Success is practically guaranteed if you dunk any and all the mechanical devices you own even if they have never been used before and you purchased them just because they were on sale. Try your full assortment of flies (they are most effective). This is your chance to teach worms and bugs a wide variety of swimming strokes because pan fish seek them. You will learn that everything works sometimes, and even mistakes will not frighten the fish for long.

The fisherman who presents the lure improperly eventually succeeds. The fish wait until improvements are made and then attack the bait. Farm pond lessons center on the basic skills of fishing and the teacher is always present. And who knows what is pulling on the unseen end of the line?

Pan fish strike with vigor. Small fish chase lures larger than they are and, in fact, are of a size which

should scare them but don't. These determined little fish whet the creative fancy of the fisherman.

A dedicated angler has a special type of imagination. He knows that trophy-sized specimens are often hauled from little waters. The fisherman plans to haul his prizewinner to shore today and, if not today, tomorrow for certain. The next fish will probably be a bass so large that it could barely turn around in the pond without backing up several times. That is the quality of thought which is the return ticket to the pond. A fisherman lives on hope and visual imagery.

A fisherman can see himself fishing. During business meetings when the speaker is iterating, reiterating, stating, and restating an already exhausted point, a sportsman can mentally leave the room. Memories take over.

People call to mind different geographical areas. Some people remember a night boat ride off the coast of New Jersey in pursuit of shark while others recall a flying trip to the Ungava Peninsula. Events of past trips can be cerebrally rerun as though on videotape. I remember the time I spend on a farm pond.

I see myself fishing, usually with one foot in mud over my shoe tops and the other foot not doing that well and enjoying the experience.

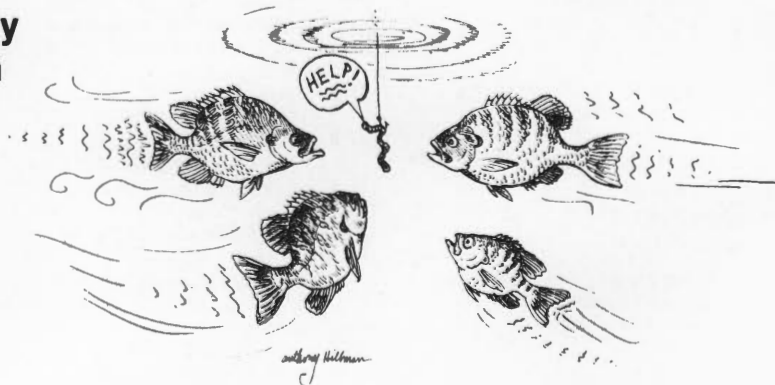
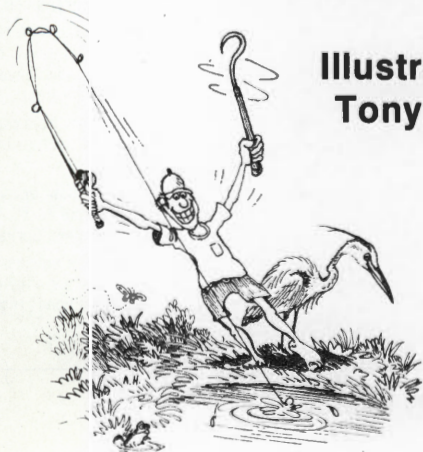
I remember the pleasure of fishing without transportation worries and with the certain knowledge that fish are there. I recall the simple joy of being outdoors.

It is stimulating to get away by yourself, with friends, or with the dog. A portion of the rewards from this type of fishing is the lack of pressure to catch large fish.

The angler can even enjoy being skunked. No one seriously expects him to pull out a giant fish—not from a farm pond. Fishing of this type is childhood revisited—it is so very familiar.

I know that catching land-locked salmon is spectacular, arctic char are a challenge, trout are my favorite, and saltwater fish are fighters. But I grew up with "sunnies." I must go see my old friends just as often as I can. And they still taste delicious.

Illustrations by  
Tony Hillman





# Environmental News

## BE CAREFUL—THE WOODS ARE DRY

FOREST FIRES can occur at any time of the year when the woods are dry enough to burn but historically, the most dangerous fire seasons in New Jersey are the spring and fall when dry and windy weather conditions prevail. State Firewarden James Cumming urged extra precaution this year because the drought conditions of 1980 and 1981 resulted in a precipitation deficit of more than eight inches. Although the rains and snows of this past winter have somewhat alleviated the problem, the swamplands that normally act as natural barriers to advancing wildfires continue partially dry and unstable. IT'S SAD but true that 99 percent of all forest fires in New Jersey are started by humans—and in 1981, a shocking 57 percent of these were caused by incendiaryism, the malicious burning of the woods! (The penalty for willful violation of the Forest Fire law has been raised to \$100,000 for each offence.) Anyone who recognizes an act of arson should immediately report this to the nearest fire warden. Other "man-caused" forest fires are mostly the result of carelessness—tossing a lit cigarette out the car window, leaving a campfire to smoulder, children playing with matches.

IN 1981 there were 2,355 wildland fires which burned 14,429 of the 2.7 million acres of forestland under surveillance of the Bureau of Forest Fire Management, a unit within DEP's Division of Parks and Forestry. The cost to taxpayers to extinguish the fires: \$464,000.

STATE FIREWARDEN Cumming stressed that public cooperation, including good individual conservation practices of sportsmen, picnickers and residents, along with the intensive training of forest fire service personnel and the use of modern fire fighting equipment, is vital to forest fire prevention and control.

ALL FOREST fires should be reported. This can be done by phone. Dial "O" for the operator and say, "I want to report a forest fire." You will be connected to the nearest fire warden.

## COURTS RULE FOR NEW JERSEY

On February 12, 1982 the Honorable John H. Pratt of the U.S. District Court, District of Columbia, granted motions for summary judgment brought by the Environmental Defense Fund, the State of New Jersey and the State of Connecticut, and ordered the federal Environmental Protection Agency (EPA) to promulgate the revised National Contingency Plan (NCP) required under the Superfund Act within 90 days. Under the Act, the federal government was to have promulgated the new NCP by June 9, 1981. The suit was filed upon failure of EPA to meet the statutory deadline.

The NCP is a prerequisite to allocating Superfund monies to states for cleanup of toxic waste sites. It will serve as the federal government's guide for choosing which hazardous waste sites will be cleaned up first and include an operational blueprint on how to carry out those cleanups.

On February 22, the Honorable H.

*Continued on page 16B*

## DRUMS OF TOXIC WASTE REMOVED FROM NINE SITES

Close to 200 drums containing flammable and/or toxic substances were removed and disposed of under the supervision of DEP's Division of Hazard Management by Mid-Atlantic Refinery Service, the successful bidder for the state contract. The drums had been illegally dumped at nine sites around the state. The two-phase project (sampling and classifying substances through lab analysis; removal and disposal of drums), carried out in February, cost \$47,000. The state department of Treasury authorized the use of state Spill Compensation Fund money for the project.

The 196 drums of hazardous wastes were cleaned up from sites in Jersey City and Bayonne (Hudson County), South Hackensack (Bergen), Wayne Township and Paterson (Passaic), Plainfield (Union), Alloway Township (Salem), Clayton Borough and Logan Township (Gloucester).

## FENSKE, GRAHAM NAMED TO TOP LEVEL POSTS

DEP Commissioner Hughey announced the appointments of Helen C. Fenske, of Green Village (Morris County) as the department's Assistant Commissioner for Natural Resources, and Donald T. Graham, of Brick Township (Ocean County), as its Assistant Commissioner for Regulatory and Governmental Affairs. Both appointments became effective on March 15.

Mrs. Fenske will be responsible for overseeing the activities of DEP's divisions of Coastal Resources; Fish, Game and Wildlife; Parks and Forestry; and the offices of Green Acres and Pineland Acquisitions.



Before joining the department as assistant commissioner for Natural Resources, Mrs. Fenske served as a consultant to the U.S. Environmental Protection Agency (EPA) Administrator for Region II, and special assistant to EPA Administrator Russell Train in Washington, D.C. From 1971-74, as special assistant to DEP's first commissioner, Richard J. Sullivan, she directed the Office of Environmental Services (a local community governmental outreach program). Earlier, she was for two years a consultant with the Resources and Environmental Office of the Ford Foundation. Mrs. Fenske founded the Association of New Jersey Environmental Commissions (ANJEC) and was founder and first director of the New Jersey Conservation Foundation. Her experience in matters of environmental concern, particularly the proper use of natural lands and resources, is well known. Mrs. Fenske was actively involved in successful efforts to establish the Great Swamp National Wildlife Refuge and two nature centers, and to expand and improve the Morris County park system.

*Continued on page 16B*

**TO REPORT ABUSES  
OF THE ENVIRONMENT  
CALL ACTION LINE  
609-292-7172**

Continued from page 16A

## TOP LEVEL POSTS

Graham, before assuming the duties of his new assignment, had been assistant commissioner for Natural Resources for more than two years. In his new role as assistant commissioner for Regulatory and Governmental Affairs, he will be responsible for coordinating the legislative, regulatory and enforcement activities of the department. A career employee with the department and its predecessor agency, the state department of Conservation and Economic Development, Graham entered state service in 1962. He was director of DEP's Division of Coastal Resources (formerly the Division of Marine Services) from 1974 until appointed to his first post as assistant commissioner in 1979.



Continued from page 16A

Continued from page 16A

## COURTS RULE

Curtis Meanor of the U.S. District Court, Newark, approved a Stipulation of Agreement, signed by federal and state attorneys, which states that the federal Superfund legislation does not preempt the New Jersey Spill Compensation Fund. This means that the federal government has agreed that New Jersey can have its own toxic waste clean-up fund and also receive money for cleanups from the Superfund.

## NATURE PHOTOGRAPHY CONTEST ANNOUNCED

The Northeast Natural Science League, a nonprofit environmental organization, recently announced the sponsorship of its fourth annual natural science photographic competition. The deadline for entries is June 14, 1982.

Photographs must be taken anywhere in the thirteen state area of the Boston-Richmond megalopolis (Virginia to Maine), and may be of either nature subjects on earth or phenomena of the sky and space. In other words, subjects may range from bugs to black holes. Color slides, color prints, and black and white prints will be included. A total of five slides and/or prints may be entered by each participant.

The winners of the four major divisions—FAUNA, FLORA, ENVIRONMENT, and ATMOSPHERE & SPACE—will be awarded engraved plaques while those placing first, second, third and non-

# Summer time, and

*Winter's over, spring is here, and summer is 'just around the corner.' The 'what, where, and how-to' information given below will help you plan your summertime visits to New Jersey's parks, forests and recreation areas.*

## PARKS/FORESTS BROCHURE

The DEP brochure, *New Jersey Invites You to Enjoy its—State Forests, Parks, Natural Areas, Marinas, Historic Sites, Wildlife Management Areas*, will help you choose just the right place to find the activities you prefer. The glove-compartment size, foldout, color brochure offers descriptive text about recreational opportunities at New Jersey's many state-owned facilities plus five charts and a map which shows where the facilities are located. To obtain a copy, write to DEP, Division of Parks and Forestry, State Park Service, CN 404, Trenton 08625, and request the "New Jersey Invites You" brochure.

## CAMPSITE RESERVATIONS

Though general camping information pamphlets are available from DEP's Division of Parks and Forestry at the aforementioned address, **NO RESERVATIONS ARE HANDLED BY THE TRENTON OFFICE.** All arrangements should be made through the park or forest office in charge of the campsite desired.

For specific information about cabins, shelters, campsites, lean-tos, group camping, and application forms for reservations at a particular campground,



CAMP SHELTERS differ from cabins in that they have no inside kitchen facilities, outdoor fireplaces are provided. There are six camp shelters at Bass River State Forest and two at Jenny Jump State Forest. Reservations are required.

write directly to that park/forest office as follows:

**Northern New Jersey Locations:** Bull's Island section of Delaware and Raritan State Park (SP), R.D. 1, Box 4, Canal Rd., Belle Mead 08502; High Point SP, R.R. 4, Box 287, Sussex 07461; Jenny Jump State Forest (SF), Box 150, Hope 07844; Round Valley SP, R.D. 1, Round Valley Rd., Lebanon 08833; Stephens Section of Allamuchy Mountain SP, Hackettstown 07826; Stokes SF, R.R. 2, Box 260, Branchville 07826; Swartswood SP, R.R. 5, Box 548, Newton 07860; Voorhees SP, R.D. 2, Box 80, Rte. 513, Glen Gardner 08826; and Worthington SF, Old Mine Rd., Columbia 07832.

**Southern New Jersey Locations:** Allaire SP, Box 220, Farmingdale 07727; Bass River SF, New Gretna 08824; Belleplain SF, P.O. Box 450, Woodbine 08270; Cheesequake SP, Matawan 07747; Lebanon SF, New Lisbon 08064; Parvin SP, R.D. 1, Elmer 08318; and Wharton SF, Batsto, R.D. 4, Hammonton 08037.

## ARE YOU ELIGIBLE?

**Free Clamming and Oystering Licenses** (one license issued for both

## HUGHEY SWORN IN AS DEP COMMISSIONER

**Robert E. Hughey was sworn in as Commissioner of Environmental Protection on February 26. The oath of office was administered by New Jersey Supreme Court Justice Alan Handler in the Governor's Office, State House, Trenton.**

# the Livin' is Easy



THE 'GOOD OLE SUMMERTIME.' The bathers, and the youngsters intently building sandcastles at Lake Wawayanda, are reminders that sun 'n fun time is almost here. The 1982 opening date for the 15 state-operated inland beach parks swimming areas is May 29 (Memorial Day weekend). The two oceanfront areas open two weeks later, June 12, when the water temperature becomes more comfortable. All 17 swimming areas are served by trained lifeguards, who had to pass a series of difficult performance tests at the various facilities, and who must take part in a summer-long program of physical conditioning, first aid and water safety.

Here's the list, by county, of state-operated facilities with beachfront swim areas. **Inland:** BURLINGTON—Atsion Recreation Area in Wharton State Forest (SF), Bass River SF, Lebanon SF; CAPE MAY—Belleplain SF; HUNTERDON—Round Valley State Park (SP), Spruce Run SP; MIDDLESEX—Cheesequake SP; MONMOUTH—Prosperstown Recreation Area; MORRIS—Hopatcong SP; PASSAIC—Shepherd Lake in Ringwood SP; SALEM—Parvin SP; SUSSEX—Stokes SF, High Point SP, Swartswood SP, and Wawayanda SP. **Oceanfront:** OCEAN—Barnegat Light House SP and Island Beach SP. Photo by Barry Leilich

activities) are available to New Jersey residents age 62 or over. **Free Fishing Licenses** are available to New Jersey residents age 70 or over. For applications for one or both write to DEP, Division of Fish, Game and Wildlife, CN 400, Trenton 08625.

**Senior Citizen Park Passes** for free admission and free parking to day-use facilities at any state park, forest or historic site are available to New Jersey residents age 62 or over, upon presenting proof of age and completing the application form. Other fees are not covered by the pass. Any resident of New Jersey who is totally disabled may obtain a **Totally Disabled Persons Pass** which provides the same free admission and free parking admission privileges as the Senior Citizen Pass. Application forms for both types of passes are available at each park/forest/historic site office or from DEP, Division of Parks and Forestry, State Park Service, CN 404, Trenton 08625.

## FREE ENTERTAINMENT

This summer the New Jersey State Council on the Arts and DEP will again present free performances of mime, theatre, dance, folk and bluegrass music, and puppet shows on a regular schedule at 24 state parks/forests. A flag with a picture of a butterfly on it will be raised on performance day at the parks ... watch for it. Specific program information will appear in your local newspapers. A performance schedule (parks, dates, times) is available from the Division of Parks and Forestry (address above).

## FORE!

The 18-hole Spring Meadow Golf Course, adjacent to Allaire State Park in Wall Township (Monmouth County), is part of the state park system. Spring Meadow is a 5,302-yard, par 68 course. For greens fees and other information, call the Spring Meadow office at 201-449-0806.



BOAT LAUNCH area at Round Valley State Park.

## MEMO TO ANGLERS

DEP's Division of Fish, Game and Wildlife reminds anglers that their New Jersey fishing licenses must be prominently displayed on their outer clothing when fishing. Ask for a free copy of the New Jersey Summary of 1982 Fishing Laws when you buy your license.

## LIBERTY PARK FERRY SERVICE

The direct ferry service from Liberty State park to the Statue of Liberty and Ellis Island began on April 24 and will continue through October 31. Circle Lines, in cooperation with DEP and the National Park Service, operates three trips a day, seven days a week. **Boats leave** Liberty State Park for the Statue of Liberty at 10:30 a.m.; 12:45 p.m. and 3 p.m. **Boats leave** the park for Ellis Island, "America's Immigrant Gateway," at 10:30 a.m.; 1:15 p.m. and 3:30 p.m. **Fees:** Adults, \$1.50; Children under 12 years, 50 cents. Group rates (more than 25 persons) are available. For further information, call 201-435-8509. Liberty State Park is reached by car from Exit 14B of the New Jersey Turnpike, or by bus from Journal Square in Jersey City.

*Don't let being confined to a wheelchair or being otherwise handicapped keep you from joining friends and relatives for an outing at a state recreation area. The three newest parks—Spruce Run, Round Valley and Liberty—have barrier-free design. Others, such as Allaire and Washington Crossing which have nature trails designed for the blind, are partly barrier free. The "New Jersey Invites You" brochure, mentioned above, lists the addresses and phone numbers of all state recreation areas. Contact the office of the park you want to visit in advance to find out the degree of difficulty for handicapped persons at that facility.*

## WATER CONSERVATION OFFICE ESTABLISHED

A new agency has been formed within DEP's Division of Water Resources to develop strategies for water conservation. The Office of Water Conservation will develop educational programs for schools and communities, emergency plans to provide quick response to any water shortages in the future, and will collect and pool water conservation technology which will then be available to industries to help with their industrial water conservation efforts. Ms. Susan Goetz, who has been with DEP for five years and holds a masters degree in Environmental Science from Rutgers University, has been named to head the office. For further information, write to the Office of Water Conservation, DEP, Division of Water Resources, CN 029, Trenton 08625, or call 609-292-1637.

## AIR POLLUTION CONTROL RULES FIGHT SMOG

The department recently adopted revised and expanded air pollution control rules concerning volatile organic substances. Volatile organics, which include gasoline and most solvents, react in the atmosphere to produce ozone, an unhealthy and destructive component of smog. The revised regulation establishes volatile organic substances limits for six new categories of sources: surface coating of wood paneling, surface coating of metal parts and products, graphic arts, volatile organic substances storage tanks equipped with external floating roofs, fugitive emissions from petroleum refineries and fugitive emissions from gasoline loading facilities and tank trucks. The state air pollution control program is administered by DEP's Division of Environmental Quality.

*Continued from editorial page*

## IN THIS ISSUE

article titled, *Calico Bass—Take One*; Follow fisherman Peineke's recommendations and take home a couple or more.

Canyon fisherman Ferd DiPalma, a frequent contributor, writes about the mid-May happening in Delaware Bay called, *Weakfish Roundup*. Ferd favors "one and one-and-a-half-ounce white or yellow bucktail lures whose 4-0 hooks have been dressed with a soft plastic sweetener—a worm, curlytail, Mr. Twisty—whatever!"

In spite of the drought and the declared water emergency in New Jersey last summer, Bob Cole of Fair Lawn, with the application of some "Yankee ingenuity," produced a bountiful vegetable garden by using an irrigation system he designed for



**BALD EAGLE REINTRODUCTION PROGRAM.** Volunteer tree climber Kurt Woltersdorf of Belmar, holds the lone egg produced by New Jersey's only pair of nesting bald eagles. The egg was removed from the nest atop an 80-foot pine tree in Cumberland County, and taken to a federal facility in Maryland for incubation and/or study (for the past five years the eagles have failed to produce fertile eggs). This year, according to the management plan being implemented by the state's Endangered and Nongame Species Project, the natural egg was replaced with an artificial one, and following the normal incubation period, Woltersdorf will return to the nest and replace the artificial egg with a captive-born eaglet. It is hoped the eaglet will be raised by its foster parents. This type of eagle reintroduction program has been successful in a number of states where the birds have come close to extinction. The Endangered and Nongame Species Project unit is part of DEP's Division of Fish, Game and Wildlife.

his drought-year garden. He was interviewed by Environmental News writer Edi Joseph who makes this information available for all you "backyard farmers."

In an earlier issue we printed an article about skunks in a backyard, and now we have *Chipmunks in the Family*, by Lois Brenner Bastian. The author writes about her observations of several families of chipmunks, how she gained their trust, and even induced one chipmunk, Siggy, to enter the house.

Debbie Kahn's photographs offer you the experience of a world you may be unfamiliar with or another look at a world you are familiar with. The world is *Horse Show World*.

## PINELANDS SURFACE AND GROUNDWATER REPORT

The New Jersey Geological Survey (NJGS) has published a technical report which analyzes the surface and groundwater chemistry of the Pine Barrens. The 107-page report, complete with tables, graphs and illustrations, focuses on the Mullica River and Cedar Creek watersheds, which comprise 28 percent of the Pinelands area in Atlantic, Burlington and Ocean counties. Topics covered include the geochemistry of water sampled from precipitation, rivers, estuaries and the ground; the nature of their organic components and behaviors of trace metals. The report, *Hydrogeochemistry of the New Jersey Pine Barrens*, is NJGS Bulletin 76. Copies are available at \$8 each from DEP, Map and Publication Sales Office, Bureau of Collections and Licensing, CN 402, Trenton 08625. Please make checks payable to "Treasurer, State of New Jersey."

## SAFE BOATING FILMS AND DISPLAYS

**Open to the public—no admission charge. Free refreshments and door prizes.**

### WHAT:

U.S. Coast Guard Auxiliary Day.

### WHERE:

Coast Guard Station Manasquan Inlet, Pt. Pleasant Beach, N.J.

### WHEN:

Sunday, June 6, 1982, 1:00 P.M.-5:00 P.M. (rain date June 13).

### PURPOSE:

The Coast Guard Auxiliary is the civilian arm of the U.S. Coast Guard dedicated to promoting safe boating. Coast Guard Auxiliary Day is meant to increase public exposure and further the organization's goal of educating them in boating safety.

### HAPPENINGS:

Ribbon-cutting ceremony 1 P.M.  
Blessing of the Fleet  
Tours of Manasquan Coast Guard station, C.G. Cutter Pt. Batan (if in port), and C.G. Auxiliary patrol boat  
C.G. helicopter rescue demonstration  
Marlinspike class  
Federal and Auxiliary Requirements for boats  
First aid display  
Listing of Public Education Classes  
Communications exhibit and demonstration  
C.G. Auxiliary information booth much more  
For further information call Pam Lange at (201) 899-9048.

# Fitting-out in a Jersey Boatyard

DONALD L. JEKA

Every April, amid the smells of paint and varnish and the sounds of electric sanders and popping beer cans, the dormant chill of the boatyard warms to another boating season on the Jersey shore.

Up and down the coast, ski racks and snow tires take the places where anchors and dinghys have frozen their way through winter.

It's fitting-out time again.

"I live for this time of year," says a becaped and paint spattered man as he gazes out across Cheesequake Creek from Baronowski's boatyard in Morgan, just off Raritan Bay. "May to October is my calendar," he adds with conviction, curiously leaving out April which is a hard work month.

It turns out there's a more complex chemistry going on here than the phenomenon of a two-part epoxy. Boating people have been stirring restlessly through countless Aprils past, and winters are merely periods to be gotten through on the promise of an even bigger fishing or better sailing season than the last.

In increasing numbers they come, putting in a full day's work, checking lists of chores that must be done before launching—the lawn at home be damned. It's a hard time but an easy life.

A balky engine or a tough electrical problem that nagged a mariner late last summer gets careful attention from the

concerned fraternity of this season's boatyard crowd.

Where the captain of a power boat—"stink pot" in sailors' lore—would hardly cast a glance at a sailboat skipper during the height of the season, the common pull of boats bonds them now. Help and advice are as near as the closest flurry of activity. There would be no wars if the world were a boatyard in a New Jersey spring.

Though the state has only 127 miles facing the Atlantic, it has roughly 1,792 miles of tidal coastline. It starts with the convolutions surrounding New York harbor to the North, then threads its way south tracing some of the best beaches along the Atlantic. Great names roll by: Atlantic Highlands with its peculiar twin lights; Sandy Hook, for centuries extending its crooked finger to the mariner, sometimes letting him pass without a hitch and other times burying him in an undersea avalanche of shifting sand.

Then there are the lilting Indian names like Manasquan, Manahawkin, and Mantoloking, and the points of juncture like Bay Head, Barnegat, and Cape May.

Nestled along the rivers, creeks, and backwaters of this rich and verdant coast are the thousands of boatyards where this yearly rite of fitting-out takes place. Craft of all sizes and styles have been sheltered from the harsh winters of the Northeast. Even though New Jersey is considered a northern state, if the Mason-Dixon line were extended east to the

Atlantic, one-third of the state would be in the South.

No wonder that for every mile of Jersey coast there are an estimated 9000 registered boat operators. Put another way, there is one boat for every 61.2 New Jersey citizens.

Although they don't all look it, they're an affluent lot. New Jersey boaters spend millions each year on accessories and equipment alone. And no boat is ever the "right" one. It is never big enough or fast enough. So the market for new and used boats holds together pretty well despite the ups and downs in the economy.

But for now, the job at hand is getting this year's boat ready for launching. For some it's a family affair and for others a time to be cherished in delicious solitude. On the brightest of spring weekends the yards hum with sounds other than the sanders. Kids' laughter and barking dogs punctuate the more mundane sounds of work in progress on this particular day. Two girls on horseback ride in from the marshes to the west, adding another dimension.

By noon it's a picnic. Weary workers pause for hamburgers freshly cooked on grills which have appeared from car trunks. It is time for another beer and a chat.

"This boat was built between 1900 and 1910. I can't be certain of the exact year. I modified her from a catboat to a sloop and rigged a self-tending jib so I can sail her alone when I want to," says a man with a neatly trimmed white beard. "She was built by Daniel Crosby and Son, Osterville, Mass. A Crosby is classic to catboats. I named her *Cape Dame*, first recognizing her origin on Cape Cod and then to honor her grand-old-lady bearing with an appropriate title," says Warren Schoneberger, her proud owner.

"I just had her little four-cylinder engine overhauled and as soon as I get it back, I'll be ready for launching," he adds, expectation showing in his eyes.

Later, the engine arrives on the bed of an immaculate pick-up truck. It is bolted to a small wooden pallet, sitting proudly like a jewel in a setting. From its sparkling red paint on the outside you can tell the great care that must have been taken with the inside. An hour or so later your ears confirm. The steady beat of a finely tuned masterpiece cuts through the rest of the sounds on this day of days.

Another Jersey boat is ready for another matchless New Jersey boating season.



PHOTOGRAPH BY WARREN SCHONEBERGER



# Rediscovering New Jersey's Abandoned Railroads

by Tom Horvath

"If only the rails could tell of the trains that once traversed these rails!"

TOM HORVATH

The mere mention of their names invokes a sense of nostalgia, of a time when railroads were held in higher esteem than they are today. Such railroads as the Lehigh and Hudson River, the Erie Lackawanna, and the Jersey Central have contributed to the more than 1000 miles of abandoned railroad beds that crisscross the Garden State today. But to the nature photographer or hiker, exploring these areas provides a chance to really delve into local history and wildlife.

The derelict structures, discarded ties, and other assorted sundries are mute evidence of a railway system that as late as 1964 boasted roughly 2000 miles of track; today, that figure has been whittled down to 1250 miles. The person who has the time and patience to explore these abandoned avenues of transportation can discover some fascinating railroad trivia.

Among the more common items of interest are the "date

nails" found embedded in the ties. The purpose of a date nail was to give railroad management a more concise record of a tie's lifespan. Each railroad had its own particular nails manufactured to its specifications. For example, the Erie Lackawanna's had a steel shank about two and a quarter inches long with two raised numbers on the nail's head to indicate the year the tie was placed in service. In comparison, the Lehigh and Hudson River's were of the same length but had the year's numbers indented on the head. Today, the date nail is used by only a few railroads. Their popularity seemed to hit its peak between the 1920s and 1930s, but they faded from the scene around the 1950s.

Other railroad mementoes that you might come across are the glass insulators that were used on the telephone poles adjacent to the railroad. The wires were strung on the poles to carry messages for Western Union and the rail-



RON ECKERT

**The only distinguishing feature between the common nail and the date nail is that the latter had the year inscribed on its head.**

road's telephone, telegraph, or signal system. The color, age, and design of the insulator are the characteristics that determine its value. The older and rarer threadless insulators, if in mint condition, could fetch \$1000.

Old railroad signs are other remnants of a bygone time that may be discovered when exploring these railways.

But if your interest is focused on nature rather than railroad memorabilia, these abandoned lines are a mecca for you. The roadbeds which once served as the foundation for carrying mechanized behemoths along the steel ribbons of rail still serve as avenues of travel for the wildlife that is indigenous to the area. Tracks of white-tailed deer, woodchucks, and raccoons are easily recognizable in the soft composition of coal silt and ash that formed the base of many of the early railroad roadbeds. If you are fortunate, you may see a pheasant sunning itself or catch a glimpse of a frog as he warily watches you from the safety of his haven under some submerged ties.

If I have whetted your interest with this smattering of information, your next question might be, "How do I



TOM HORVATH



RON ECKERT

**Clear glass insulators are the cheapest to produce. However, the most universally used color was green. A very popular shade of green has been dubbed *Seven-Up*.**



TOM HORVATH

discover where these abandoned lines exist?" One method is to secure a topographical map from the U.S. Geological Survey of the standard 7.5 minute series for the area in which you are interested. A second method would be to consult the local library.

Finally, before you trek off in search of the railroads, some words of caution. First always respect the right of property owners who border the railroad's right of way. Second, don't let your carelessness spoil the enjoyment for the next person who comes along.

Who knows, maybe someday in your travels along these routes you might be fortunate enough to hear the ghostly shrill of a steam engine as it bellows the "all aboard signal" or see the fading coach lights of the Erie Lackawanna's *Phoebe Snow* as it heads toward Chicago. Both apparitions of an era never to be seen again!



# THE COHANZICK ZOO

By Deborah A. Boerner

What city or town can boast of a leopard living within its limits? Or a jaguar? A lion? A Curacao lynx? The small town of Bridgeton, New Jersey, has all of these residing there. In fact, these are just a few of the animals living in the CohanZick Zoo. The zoo is part of the 1,100-acre Bridgeton City Park, which makes it the only municipal zoo in the state. Working in cooperation with the Park Commission and funded by the city of Bridgeton and the Cumberland County Board of Freeholders, it is one of the last free zoos in the country. It's also supported through various fund-raising events of the CohanZick Zoological Society.



The animals at the CohanZick Zoo are grouped according to the geographical ranges where they would live in the wild. When you first enter the zoo, you'll see an exhibit of animals native to New Jersey. Next comes a section of African animals, then the hoofed animals of North America, and finally a three-acre enclosed area where 13 species of South American animals roam.

The policy of zoo director Henry Ricci is to have only as many animals as the zoo can handle comfortably. In the past, he observes, zoos tried to crowd as many different animals as they could into the limited space they had. This attitude has never prevailed at CohanZick, and therefore the facility can provide spacious

cages and clean pens. In fact, the zoo has been cited by the Humane Society for its cleanliness and neat appearance. No wonder approximately 125,000 people visit the CohanZick Zoo each year. This number includes 50,000 schoolchildren who come to the zoo as part of their school curriculum. Mr. Ricci believes that the primary purpose of zoos today is to educate people of all ages. When people come to the zoo, says Ricci, it's the only chance most of them will ever get to see an exotic animal face to face.

It should be noted, however, that fewer than one percent of all animals in zoos ever actually lived in the wild. The CohanZick Zoo trades animals

with other zoos, sometimes to obtain an animal the zoo doesn't have and sometimes for breeding purposes. Breeding endangered or threatened wildlife is another major function of the CohanZick Zoo. Right now, they're working with other zoos on a program to breed ocelots; only about 1,000 of these cats remain in the wild. Also, the CohanZick Zoo is working with the San Diego Zoo to breed leopards, another endangered species.

In addition to its efforts at human education and animal propagation, the CohanZick Zoo serves as a holding facility for the New Jersey Division of Fish, Game and Wildlife; the United States Department of Agriculture; and the United States De-

partment of the Interior. Whenever one of these agencies has an animal that's been injured or needs special care before being released back into its natural habitat, they can call on the Cohanzick Zoo to house the animal temporarily. Recently, the USDI held some bears in Bridgeton before releasing them in the Great Smokey Mountains.

Zoo director Henry Ricci conducts his own release programs, too, but only with animals that can adjust to living in the wild. Many "wild" animals, because they were born and/or raised in captivity, could not survive the rigors of their native habitat; therefore, Mr. Ricci develops programs to test them. To evaluate barn owls, for example, he first released them into a closed barn, with food available just as if they were at the zoo. After giving the birds a few

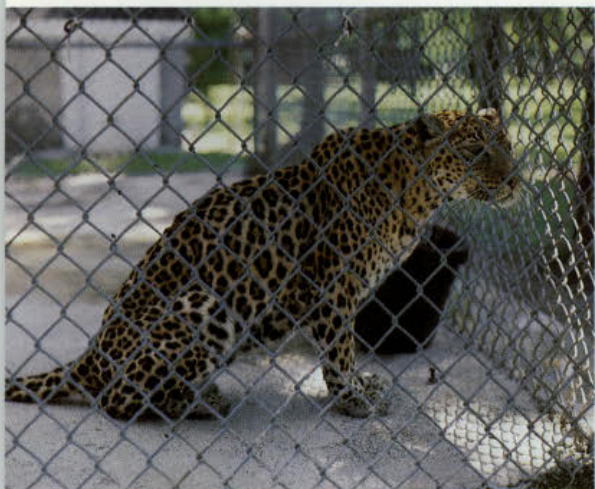
days to adjust to their new environment, openings were provided so that they could leave the barn. If the owls did not return in a few days, it was assumed that they had found their own source of food and shelter, probably in another barn or abandoned building. Three of the four owls tested did not return; the fourth, however, came back to the barn for zoo food. Apparently, it could not find food on its own and may have starved to death if released. This owl was brought back to the zoo and is presently living there.

Thus, the Cohanzick Zoo in Bridgeton, New Jersey is a unique zoo. It is dedicated to educating the public, but also conducts several ongoing projects that make it much more than an animal collection zoo. Perhaps the nicest thing about it is that a visit to the Cohanzick Zoo is

free. Bridgeton is located just a few miles south of Vineland, and if you find Bridgeton, as Mr. Ricci says, you've found the zoo, since the park covers about one-quarter of the city's area. Or just ask the first lion you see for directions!



PHOTOGRAPHS BY  
PAT BOFFO



# CALICO BASS-TAKE ONE!

By Al Peineke

Black spangles upon a burnished metallic background characterized the fish which had come to net. About a pound, the deep-sided calico bass had given a spunky scrap on the fly rod.

Frequently overlooked by anglers, these mini-scrappers furnish a delightful change of pace for devotees of the long rod. Often encountered in larger New Jersey lakes, the silvery gamesters also occur in medium and small impoundments and in the slower stretches of some streams.

A particular outing comes to mind. Perhaps the pervading atmosphere of calm had presaged a rewarding day. Quietly, the canoe had been slipped into the water. Long shadows from the east stretched across the cove as the sun began its ascent. Crows and bluejays scolded and restlessly flew about the eternal "demonstrators."

On the water, several swirls piqued our interest. Today we would attempt to inveigle the calico bass into accepting our feathered frauds.

After a short paddle the anchor had been slipped overboard near some sunken trees, a promising place to start. False casts lengthened the line and the streamer fly dropped near the trees. A countdown of five was calculated to allow the fly to sink to the desired depth.

The retrieve of short spurts had traveled about six feet when the rod arched and there was a glint of silver in the dusky depths. Boring for the submerged limbs the calico used his broad sides to advantage. Nonetheless he was denied his haven and then resorted to surface splattering. With his paper-thin mouth this could have been his moment. But our luck was alive and well and soon he tired enough to be led to the net.

Calico bass respond to streamers and wet flies from early May through late September. They are school fish, so if one is caught, the immediate area should be worked



A "wheel of good fortune," these calico bass, taken on wet flies, furnished fun and fine fare.

PHOTOS BY AUTHOR

thoroughly. Early, and again late in the season, they may occur in coves or other areas of moderately shallow depth.

Other than sunken trees, favorite haunts are off rocky points and among pockets in submerged weedbeds. In lakes they will sometimes be found under floats or near docks with sufficient depth of water.

Tackle need not be ultrasophisticated. Your favorite fly rod probably will be satisfactory, although the lighter the tackle the greater the sport. Though calicos are occasionally taken on the surface, increased success seems to come underwater, suggesting that you opt for a sinking fly line. An outfit capable of coping with the itinerant breeze will prove to be an advantage.

Flies need not be in the esoteric category of the trout aficionado. Streamers, especially the marabous,



A representative group of streamers and wet flies useful in fishing for calico bass.

have been effective in sizes six or eight. A white wing and some silver tinsel on the body are good prospects. On cloudy or breezy days our favorite is the "Black Ghost" marabou, but the less flashy "Muddler Minnow" also produces.

On bright days wet flies or nymphs in sizes eight or ten may tempt the calicos. Those with bodies of peacock herl and a gold tag, or brown, ribbed with yellow, are good choices. The "Alder" and the "March Brown" fall into this category. Undoubtedly, other patterns will also prove effective.

Leaders need not be ultrafine, nor do they need to be longer than nine feet. Those tapered to four- or six-pound test, relevant to prevailing conditions, should prove satisfactory.

In fishing the fly the key word is *slow*. Calicos tend to be deliberate, therefore the retrieve should be in keeping. Stripping six or eight inches of line between the thumb and forefinger of the rod hand, interspersed with an occasional brief pause, is one method. Often a strike will occur during the pause as the fly descends. The hand-twist retrieve also is useful. Very slow trolling with streamer flies is often a successful searching method. Sometimes streamers with a bit of blue in their makeup are effective.

Success frequently is a matter of getting the fly down to the proper level. Counting is one method of achieving depth. While at anchor in a suitable area, drop the fly, leader, and some slack line overboard and count until the fly has just about disappeared. The count may vary from one location to another but will provide a basis for starting the retrieve on subsequent casts.

Some anglers may say that they do not like calicos for table fare, but in our experience, if scaled, rinsed with a hose, and filleted, they are excellent. Also, some time in the freezer seem to make them more solid.

Assuredly, we hold the trout and bass in highest esteem, but the excitement of variety gives the panfish a real place in the angler's scheme of things. Calicos are taken by many methods, but for a most enjoyable experience, fly fishing very well may afford the most pleasure.

# Weakfish Round-up

PHOTOS BY AUTHOR



Captain Bob Wallenstein nets a nice Delaware Bay weak for John Weber. Fish was taken on a one-ounce musketball-type yellow buck-tail jig.

## By Ferd DiPalma

The telephone sounded off and I answered on the second ring. It was Sylvia. "When you come down tonight," she said, "bring some nice fillets. We'll have them for dinner tomorrow." It had always been understood that when fish was on the bill of fare, said delicacy would be provided from my well-stocked freezer. Sylvia did most of the meal planning although she specialized in the meat and potato dishes. Vivian took care of the fish courses, baked, broiled, or sautéed. All the same, Sylvia, a stickler for routine, was always curious as to what kind of fillets I was going to provide: fluke, ling, or bluefish. So before hanging up she asked the obvious question.

"None of those this time," I replied. "Tomorrow we'll have a real treat. Weakfish!"

"Weakfish!" she exclaimed, and I could sense a note of dismay in her voice. I could imagine a nose crinkled up in disappointment. "I've never even heard of the critters," she said. "C'mon now Ferd, bring blues or fluke."

Later Sylvia confessed that the very

name weakfish seemed to turn off her appetite and water down all her taste buds. "I imagined a pitiful looking fish being dragged up from the bottom of the sea—a flabby nothing fish having little more substance than a jellyfish."

So, on a subsequent trip for weaks I made it a point to keep a nice seven-pound specimen intact—except for the innards, of course. That nice specimen was presented at the Zabarsky household as both an educational and a culinary feature for the next evening's dinner. It drew rave notices for appearance, substance, taste, texture, and quality. I mention the above in passing only because, of late, more and more first-class seafood restaurants are serving fillets of this splendid game fish, listing it on the menu as Sea Trout.

Along around May 10th or 15th a stir—a kind of quickening—occurs along the Jersey shore of Delaware Bay. Tentative trips have already been made by the skippers of several vessels out of various south Jersey ports and some scattered catches of weakfish have been brought back to the docks. But the captains of charter and party boats are still awaiting the real explosion when spawning fish begin to take the one and one-and-a-half-ounce white or yellow bucktail lures whose 4-0 hooks have been dressed with a soft plastic sweetener—a worm, curlytail,

Mr. twisty—whatever! These additional icings to the cake, whether in the same, analogous, or complementary color schemes, sometimes make the difference in taking migrating weakfish as they move north from areas farther south.

When the action does build it may center around Brandywine shoals marked by that area's rock-based lighthouse. At times these beautiful fish swarm outside the bay proper and school along the inshore waters of the Cape May peninsula. All of which becomes a great plus for those anglers who patronize the New Jersey party vessels and charter boats whose skippers can put them into the thick of the action. The fishermen themselves can therefore put all of their effort into concentrating on the hows and whys of the weakfish mystique.

This is light-tackle sport that provides novice fishermen and expert angler alike with top recreation. The only difference will be in the sporting values of the tackle employed. The more experienced anglers will use 8- to 12-pound-test lines on their light spin rods. Those less practiced in their techniques will be guided to lines in the 15- to 17-pound class.

As the action subsides to normal  
*Continued on page 32*



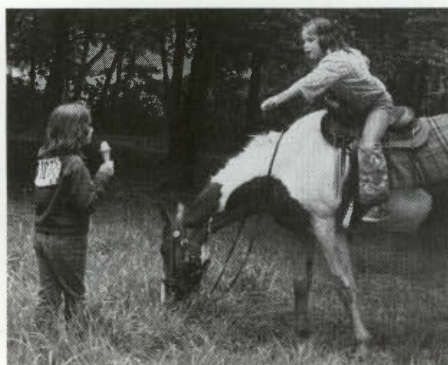
Small boat logjam of early comers sits over a small productive patch of mussels at the area known as "between the channels." Most fish were taken on Tiger Tail lures. Latecomers approached at their own peril.



The Horse Show World offered New Jersey artist Debbie Kahn a visually rich environment to explore. Having had the experience of once being a professional rider, Ms. Kahn fully understands the tension and drama, the sweat and worry, the joy and romance that is such an integral part of this environment.

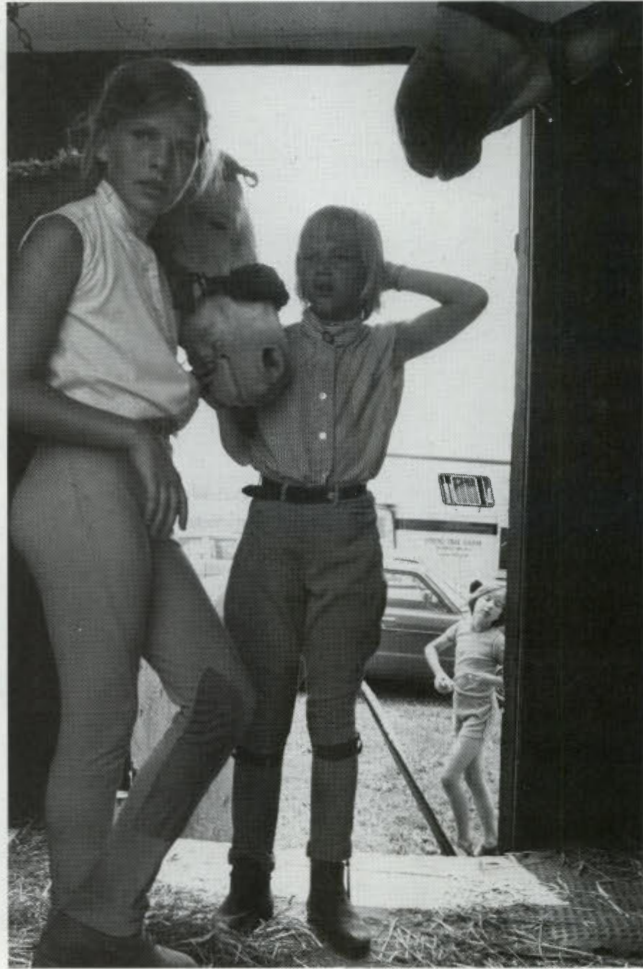
With an estimated 700 shows annually in the state of New Jersey, there is no scarcity of subject matter. With assistance from the New Jersey Equine Advisory Board in Trenton and the American Horse Show Association in New York, these shows can be readily located.

Debbie Kahn's photographs offer you the experience of a world you may be unfamiliar with, or another look at a world you are familiar with.





# HORSE SHOW WORLD



## A SUCCESS STORY

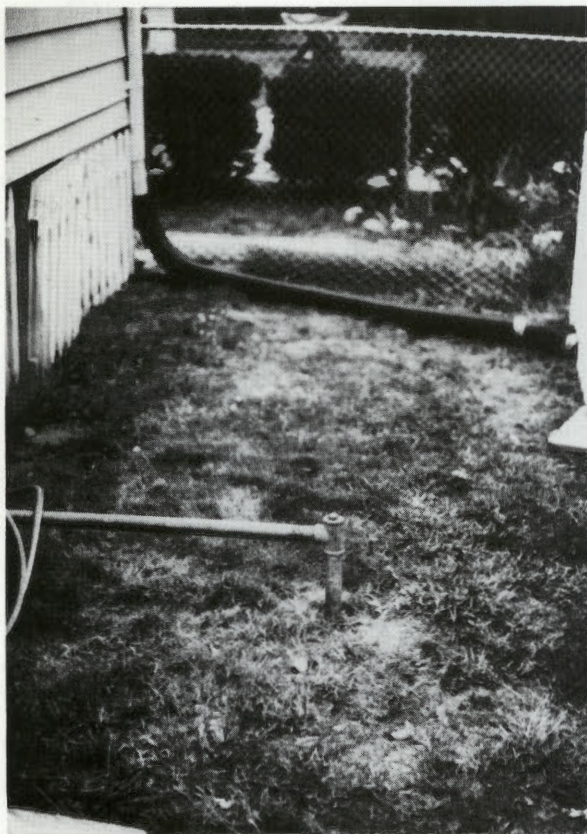
# DROUGHT GARDENING

By Edi Joseph

Robert J. Cole, Sr. of Fair Lawn in Bergen County, proved during the 1981 growing season that a garden can flourish despite the lack of regular rainfall. The secret? An irrigation system he devised which made every drop of captured rain count. The result? A 25 percent greater crop yield.

Bob Cole and his wife, Kay, are a good team. He's in charge of the gardening and she's in charge of freezing and drying their homegrown vegetables and fruits. In addition, Bob stores potatoes and carrots in the root cellar he dug under their home. (To prevent the carrots from shriveling, he uses a layer of moistened sand between each layer of carrots.) It's not easy, and it's time-consuming, but the Coles feel it well worth the effort—by the end of October 1981, they had a two-year supply of frozen vegetables and fruits at hand.

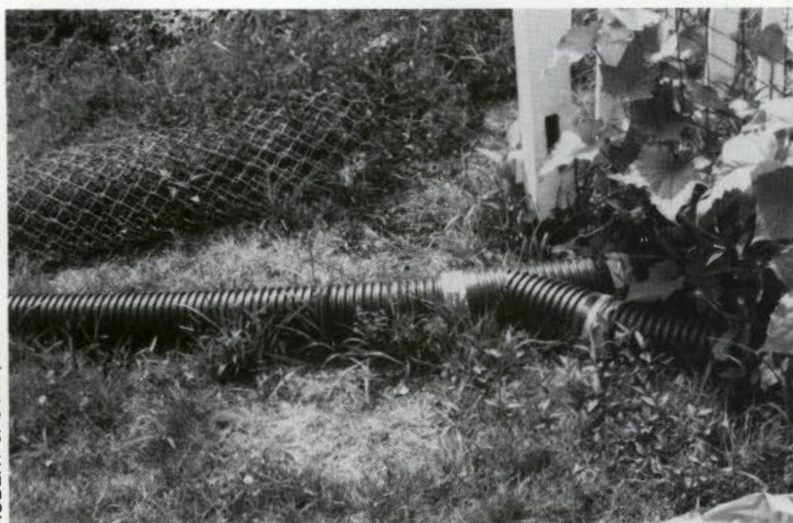
During the "Drought of 1965" Bob Cole dug a shallow well in his backyard specifically to provide water for the garden. In late September 1980 Governor Byrne declared a "State of Emergency" because of the serious water shortage, and Fair Lawn, like more than 100 communities in the drought-stricken northeastern counties of Bergen, Essex, Hudson, Morris, Somerset, Passaic and Union, was placed under mandatory water use bans. To stretch the dwindling supply of water, a cutback of 25 percent in water use was sought from private citizens, businesses and industries—whether the water supply source be public systems or private wells. Among the uses of water restricted in the emergency was watering gardens. Prohibited from drawing on the well water for the garden, Bob Cole was forced



MARGARET SHARP

Solid pipe attached to house's leader. (Capped well in foreground.)

Solid pipe joined 45 degree Y connector and perforated pipe attached to form "Y" design.



ROBERT J. COLE, SR.

Plastic elbows used to change design of irrigation system, as needed. Cole chose plastic pipe after experimenting with those made of other materials. He said the plastic was best because it's comparatively light; is easy to work with when changing the design of the system; does not rust nor clog; and is easy to dismantle and store.

MARGARET SHARP





Bob and Kay Cole

to seek an alternative—one that would do the job properly and be within the rules. As we all know, it DOES rain in a drought—and Bob Cole concentrated his efforts on a means of capturing whatever rain fell for effective use on his garden.

The Cole garden is much larger than the average city dweller's—1200 sq. ft. in all. Of that area, 600 sq. ft. are planted with vegetables that require large amounts of water. These include tomatoes, eggplants and peppers. The method Cole devised to service this area—harnessing rainwater—plus the gardening practice of using hay to prevent its rapid evaporation, he calls “simple and effective.”

To guide other gardeners interested in helping their gardens to flourish without depending on “bought” water or regular rainfall, there follows a rundown of materials, cost, time involved, and installation of the irrigation system Cole devised.

For the 600 sq. ft. area, the materials (purchased from a home and garden center for about \$50) included: two 6-ft. lengths of solid, 4-inch corrugated plastic pipe; nine 6-ft. lengths of perforated, 4-inch corrugated plastic pipe; three plastic pipe elbows; a 45 degree Y connector, and caps for pipe ends. Installation time for one man: less than a day.

“If the reader will refer to the pictures as I describe the design of the irrigation system, the simplicity of it will become apparent,” said Cole.

“After removing the rainspout, I attached the solid pipe to the house’s leader (drainpipe) and attached a 45 degree Y connector to the other end. The perforated pipe was connected to the 45 degree Y connector forming two branches in a “Y” design—this put perforated pipe in two sections of the plot. The ends of both perforated pipe sections were closed off with plastic caps, and connectors placed where the pipe lengths joined. The pipes rested on the 6 to 8 inches of hay I put down around the plants. In a heavy rain, the

water rushes down the leader through the pipe until it is backed up by the caps at the end of both branches. The backed-up water sprays out of the perforated pipe onto the plants and into the bed of hay. In a light rain, the water caught in the pipes trickles out and seeps into the hay. The hay not only prevents wasteful runoff, but also keeps water evaporation from sun and wind to a minimum; and, hay maintains warmth for the plants—which is especially important in early spring and the fall.”

In addition to the pipe system, Cole placed receptacles around the garden to capture rainwater. He used this supply in two ways—for hand watering and, using a submersible pump, to provide a greater supply of water as needed.

Now for some gardening tips from master gardener, Bob Cole. A long-time advocate of organic gardening, he prepares the soil with compost, fertilizes the tomato plants by placing three banana peels with each tomato plant to provide nitrogen, places match heads around eggplant seeds to supply sulfur; and protects the tomato plants from bugs by growing marigolds in the tomato patch.

Cole said that the combination of the irrigation system, good gardening practices and an improved garden layout made it possible for him to have a greater crop yield from fewer seeds and plants; and to have two, three and four plantings of some items. In fact, with the use of cold frames (low-to-the ground greenhouse-type glass boxes) the Coles have fresh-from-the-garden vegetables into December!

Cole remarked that the garden’s produce is “worth its weight in gold” to him because as a diabetic, vegetables form a large part of his restricted diet. The cost of growing their own fresh produce is a fraction of what it would be to buy the items at a market. The Coles discount the time and effort required for the gardening, freezing, drying and storing of their yield. They enjoy it!



Chica produced four photocopies

PHOTOS BY AUTHOR

# Chipmunks in the Family

By Lois Brunner Bastian

The two chipmunks ricocheted around the yard on that last day of June as I stood frozen in fascination. One was Chica, the female who had made her den within sight of the backdoor a year earlier. The animals are territorial and drive off intruders decisively. But this was different.

Chica advanced furiously, then hesitated a few feet from the stranger, gaze averted. Another frantic foray as they shot up the oak. A pause while they pointedly ignored each other like teenagers at their first school dance. Then . . . zoom, down the tree and across the lawn. The stop-start chase continued for more than an hour. This was not get-out-of-my-territory-or-else behavior. This was courtship.

March is the prime mating season. Chipmunks spend the winter underground in semihibernation. They emerge in late February or early March because body chemistry urges them to mate. They often mate again in June. That's why Chica's behavior was significant. Gestation is 31 days. Six weeks later the young emerge from the burrow. I circled September 9 on the calendar, watched, and waited.

Our association with the eastern variety of *Tamias striatus* began with Chip in the summer of 1971. Since then, we've known several adults for varying lengths of time, observing their behavior closely.

Chip, who lived in the woods behind our suburban New Jersey home, wandered into the yard regularly. He was unapproachable until he chose the downspout as a hiding place. Then began a war of wills. My husband crouched immobile at the spout extending peanuts or sunflower seeds enticingly. After considerable time, the lure of food overcame fear. A nose emerged a fraction of an inch, then the animal grabbed the food and darted back inside as if astonished at its audacity. At subsequent encounters, the wait grew shorter, the animal less frightened. Gradually it came to eat from the hand when not cornered. The downspout technique would prove successful with all "our" chipmunks.

The following spring when a chipmunk appeared, I called and he came to me. It was Chip—a truly wild animal would not have behaved that way.

Siggy, the second chipmunk in our lives,

who appeared in late spring of 1973, would display the same ability to remember. She was easier to observe because her burrow was in a tiny woodlot within 20 feet of our house. Nearby, a large, hollow oak with two entrances into its cavity offered a vantage point and refuge. We kept a dish of water for her at its base.

Trust supplanted fear as our acquaintance lengthened; slow, gradual movements were tolerated by her. When Siggy found us sitting outdoors she often came to panhandle peanuts and sunflower seeds. She made round trips by the hour carrying food from donor to den, her tail held like a banner in characteristic chipmunk fashion as she ran. Later that summer when I sunbathed with eyes closed, she jumped up on my head to announce her presence.

Each adult chipmunk took food from anyone who was nonthreatening. Familiarity was not a factor. It was a temptation to sentimentalize our association with these appealing creatures but food, not friendship, lay at the heart of it.

When we sat outdoors, Siggy learned to climb up a leg to claim food held at knee or shoulder level. Maximum load was a peanut in each cheek pouch and a third clenched in her teeth. She was reluctant to settle for less. Our feeding didn't seem to make her lazy or dependent. She didn't permit overt petting. By making her cross an empty hand to reach the adjacent one with food, we were able to hold her briefly.

When she climbed the four back steps, I coaxed her up over the doorsill where I'd laid a path of peanuts stretching into the kitchen. Hesitant at first, she soon climbed the steps, scaled the sill, bounded through the laundry room, and made a left turn into the kitchen with aplomb. She then came into the house daily, often as we were eating dinner.



The downspout was a favorite hiding place

At the end of July, Siggy's behavior changed abruptly. She appeared less frequently each day, often avoiding us. Was she pregnant? After several weeks, she again took food by hand and we had confirmation—nipples showed on her belly.

Six weeks after her behavior change, several small shapes bumbled about outside the den. Siggy had produced four photocopies about two-thirds adult size. I watched from a distance as they tumbled with each other, clumsily climbed trees, dug among dead leaves, and teetered on twigs too slender to support them.

After two weeks or so the babies went off on their own. Siggy closed the den entrance and dug a new one nearby as if closing a chapter in her life. By the third week in October she retreated to her burrow for the winter.

The following season Siggy appeared in early March and resumed feeding by hand. Within days two males materialized and the animals engaged in courtship as we would see Chica do years later. I watched the ritual for an hour in the frigid March air and looked forward to May.

Siggy had a litter of four that emerged in late May and another in mid-September. The following year—her last as our chipmunk-in-residence—she repeated the pattern, emerging in early March and giving birth to two litters.

Estimates of the chipmunk's life span vary from two to three years in the wild to eight years in captivity. Siggy, who would have been at least three years old by that time, did not reappear in spring of 1976.

Several chipmunks visited and took food by hand during the next two summers but none set up permanent residence until Chica moved into the woodlot beside the house in early July of 1978. Life with her was a replay of life with Siggy. Our anticipation of another long association and many offspring sagged when Chica did not emerge in March of 1979. Nor in April. In early May she appeared and resumed her old ways. Watching courtship that day in late June buoyed our hopes for young. So did her subsequent uneasiness and the decreasing frequency of her appearances. Thirty-four days after mating, she came to me after considerable coaxing. Her belly bore the telltale nipples.

Gradually, she spent more time away from the den searching for mushrooms, green acorns, grass thatch, and moss, things she seldom ate. She refused to come to us and only occasionally accepted food at the spout or the oak if I went to her.

Offered watermelon seeds for the first time, she stripped off the brown layer and ate the white portion within. She ate some, rejected others. The rejects proved to be hollow, something she recognized without opening them. (Chipmunks are largely vegetarian, favoring nuts, seeds, berries and



**The young lick my fingers**

fruit although they are reported to eat larvae, snails, insects, and worms. I once saw Siggy eat a large, crunchy, brown beetle.)

Each day Chica spent more time outside, sometimes resting at the den mouth as if taking a breather from the demands of motherhood. Not until a month after delivery did she come running to us eagerly as before.

On September 3, two babies poked their noses from the den. Four days later, four young appeared simultaneously. Chica was unconcerned when I sat a foot away, closer than I had approached young before. As she came to take peanuts, a youngster followed, climbed into my hand, and licked my fingers. I held my breath in disbelief! A baby had never come to us, nor had an adult licked our fingers. Was salty perspiration the attraction? While licking, it took a few experimental nips with sharp teeth. None of the animals ever seriously bit us; adults had sometimes nipped before learning to differentiate flesh from food.

All the young continued climbing into my hand and licked with tiny, moist, pink tongues for minutes on end until the time they left home. They pouched watermelon and sunflower seeds, ignored peanuts, shelled or unshelled.

Venturing 10 or 12 feet from the den, they examined every leaf, blade of grass, and twig. The shadow of a flying bird sent them fleeing for cover as did fluttering leaves, a phenomenon they studied crouched at the den mouth. Both Chica and the young shot to attention on their hind legs, ears erect, at the scream of jays and crows.

Chica came and went independently, paying them little attention. When they passed each other at the entrance, a baby sometimes drew close to mother, nose-to-nose in what looked like a kiss or caress.

I gave the babies watermelon, which I

had not previously offered any chipmunk. They ate it eagerly, afterward washing their paws daintily. When Chica discovered them with the watermelon, she forcibly took it for herself.

Then Chica began to "sing" as I had heard Siggy do. She stood erect and gave a series of shrill, explosive, rhythmic chirps, interspersed with trills that came straight from the diaphragm. The call started slowly, increased in frequency, peaked, then slowed to a stop followed by a few after-chirps. The song, quite different from the animal's warning cry, continued more than three minutes while the babies sat beside her placidly. The significance of this singing is not known.

Only one of the young, paler in color and more passive, could be differentiated from the others. It often sat alone quietly at the hole and it did not flee while I approached and settled myself beside the den. It was the only chipmunk we've known that submitted to petting. The animal's sex was unclear. None of the young appeared to be male but perhaps these organs don't appear until maturity.

Each day the young roamed farther and remained away longer. The fourteenth day after they emerged was the last day on which I saw all four young together.

Chica left the den the next two days flecked with loose dirt as she made alterations to her lair just as Siggy had done when child-rearing was nearly completed.

Then I saw only two babies. They sometimes took food from me but they were less approachable. One evening Chica cuffed a baby with her paw when it returned to the den. It seemed a signal that the youngster was no longer welcome.

After three weeks only Chica remained. By the end of October she had retired for the winter. We awaited spring impatiently, hoping to have chipmunks in the family once again. □

Continued from page 3

## BATONA TRAIL

the other). The site is rather large but still primitive, with only pit toilets and a pump for water. Expecting company at the campsite I was pleasantly surprised to find myself alone. I located a suitable spot for my tent and set about the business of setting up camp.

Later in the evening, I took an after-dinner walk to the nearby Carranza Memorial Monument, built as a memorial to Captain Emilio Carranza, who was killed in a plane crash on July 13, 1928. Captain Carranza was a famous Mexican pilot and hero of the 1920's who was often referred to as the "Mexican Lone Eagle." He had flown from Mexico to New York on a goodwill trip and while returning to Mexico his plane crashed in this section of the Pines.

The next morning I was up early and soon back on the trail after a quick breakfast. Already it seemed to be much hotter than the day before and I was pleased to be getting an early start. My plan for the day was to hike 13 miles to the headquarters of Lebanon State Forest, where I was to be picked up.

The trail crosses a small stream upon leaving the campsite and parallels another cedar swamp for a short distance. This section was also a good spot for deer as I observed a couple within the first two miles. I was fast approaching the Apple Pie Hill Fire Tower which I knew would afford an excellent overall view of the Pines. Upon reaching the fire tower, I ascended a few levels and was able to gaze out at a seemingly endless forest of pine trees. From this perspective the area did take on a very remote and forbidding appearance.

On many another hike, this sort of scenic overlook would always have been a highpoint. However, the Pines offer such a quiet, distinctive beauty that this kind of all-encompassing scene does little else than add to the myth that the Pines are barren. Gazing out over the area in this manner does give one some insight into why so many people can be content with the term Pine Barrens. Perhaps they are the same people who only appreciate the awesome variety of nature's beauty. No doubt the Pines has retained much of its anonymity by being just what it is: simple and unique.



This Early-19th-century mansion located in the center of Batsto is one of the interesting buildings within the restored village.

After I descended the tower and crossed the first highway of the trip, I continued on to what was to be the least scenic section of the entire trail. The trail follows a sand road for about three miles along which are a number of blueberry farms. These farms provided me with a glimpse of one of the few industries located in the Pines. The sandy soil of the area is excellent for growing blueberries. The only other major product harvested within the Pines is cranberries which are grown in the numerous bogs throughout the region.

Proceeding along the sand road I was suddenly aware of a change that is taking place in the Pines. The trail passes through a limited amount of private land and I was being serenaded by pounding hammers and buzzing saws. A number of houses were being built along this road and I couldn't help wondering how much development of this sort would affect the future of the Pine Barrens. In fact, the debate has already begun as to how this unique environment will be protected from development.

Eager to leave this portion of the trail behind, I hurried on. Crossing another highway I entered Lebanon State Forest and once again thought of the many people who overlook this area in their eagerness to get to the shore. The forest in Lebanon was somewhat different from what I had experienced up to now. Here the trees were much taller, with oaks predominant. There was also a scarcity of the thick underbrush that was common on earlier parts of the trail.

I covered the mile or so to Pakim

Pond quickly while enjoying the change in scenery. The trail actually skirts around the pond, which is used as a swimming area for the state forest. By now the day was quite hot and it didn't take long to find a comfortable, shady spot to have lunch. I had covered about 10 miles so far and since I had but a few miles left I decided on a lengthy break. Once again the cool cedar water proved to be a great remedy for my feet!

It was hard getting started again after such a long break, but I nonetheless stumbled back on to the trail. It was during these final three and a half miles that I decided to try to put the entire trip into some kind of perspective.

It wasn't the most physically challenging hike, nor was it a remote escape from civilization. Mulling over the many things I had heard and seen during the past two days, I soon realized that it would be difficult to find one encompassing aspect and say, "This is what hiking the Pine Barrens of New Jersey is all about." Of course there was wildlife and beautiful scenery which I would remember. There were also some parts I could easily forget. There was much that was common and a few things unique. At many times it was quiet and reflective and then again the air was occasionally filled with the clamoring of canoeists or the pounding of tools. Obviously the Pine Barrens experience is all of these things and much more.

I finally came to the conclusion that what sets it apart from other wilderness areas is the mere fact of where it is. Right in the middle of the largest concentration of people in the entire country, it goes relatively unnoticed. On a summer weekend there are probably as many people driving through the Pines as there are in any of our larger national parks. However, very few will take the time to investigate and experience it.

As I reached the headquarters of Lebanon State Forest, I knew what made the Pines special for me. I had walked most of the trail, and had experienced nature on a level that I consider both wild and enjoyable. In doing this, I didn't have to go to the end of the world to find my special kind of wilderness. It is there to be enjoyed just as much as Yellowstone or Yosemite, perhaps even more so since it is so often overlooked.

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## SOD BANKS

Sod banks can be prime fishing sites. To walk the banks, hip boots are often required, and chest waders may be necessary to reach certain locations. One should be watchful of potholes and drop-offs. Though depths near the bank may be only a few feet, the vertical drop allows fish to trap bait here and affords the fisherman a convenient place from which to cast. Fish are less apt to spook when approached from the bank but, often, a boat anchored or drifting near the bank gives an advantage. In some shallow sections an additional drop-off or a slough, likely a lane of travel for fish, parallels the bank within casting range. Graveling Point and vicinity (in Great Bay) is a favorite early-season place for anglers seeking striped bass and other fish migrating into the bay or out of the Mullica River. These banks are best fished by surf casting to reach the slightly deeper contour using bait rigs with two- to four ounce pyramid weights. At many sites, however, fish often prowl within a hand's reach. Stripers are particularly fond of shallow water activity, since they seem to follow these shoreline contours. Weakfish, also, will carefully nose the banks for grass shrimp. Bluefish or even fluke will sometimes chase bait right to the grass's edge. Spinning tackle with a seven- to eight foot stiffish, fast-taper rod, and floating/diving plugs or light bucktails, with ten or twelve pound test line, are especially effective in these situations. Generally, fishing next to the bank is best around high tide,

particularly when it occurs early or late in the day.

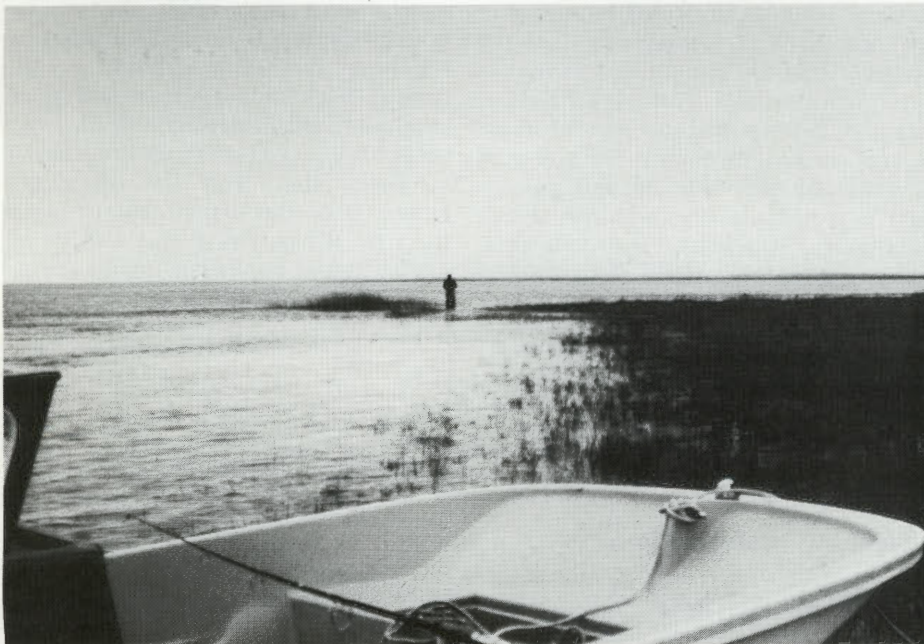
In this region high and low tides each occurring twice daily. During periods of new moon and full moon (approximately every other week) "spring tides," or those with the greatest rise and fall in water level, occur. At these times the bays are subject to greater flushing, with high tide levels well over the banks, flooding the marshes. Also during spring tides, for a few consecutive days, highs occur early and late in the day, corresponding with periods of increased fish feeding activity. In spring and summer the highest tides are usually during evening hours, bringing conditions well suited to fishing in the shallows and along the banks. Evening fishing is especially productive in spring, where the water has warmed over the flats during the day and, on the flood, the warmest water is pushed back into the marshes. Often temperature differences of 10°F or more may be observed between back bay waters and those nearer the inlets. Fishing can also be good on the ebb where this warmer water is drained from the flats and marshes. This is particularly significant in early-season fishing.

During the warmer months, back bay temperatures usually exceed optimum levels for fish (around 70°F); hence, fishing in and near the inlets becomes more productive as cooler ocean waters enter on the flood tide. The wide inlet complex of Great Bay allows a divergence of flood currents. Coriolis force, effects of the Earth's rotation, cause a tendency in this region for the dominant flood currents to focus on the north side. Shoal waters in Little Egg Inlet around Little Beach, and

in the south side of the bay, are generally productive in early season. Waters adjacent to Beach Haven Inlet on the north side are somewhat deeper and, later, action picks up in this vicinity. The presence of sandbars in the inlet may cause some upwelling of this deeper water on the incoming tide, resulting in yet cooler temperatures at the surface. Often a drop of more than 10°F can be observed at a given point between high and low tides, especially during spring tides. Typical inlet readings here in June are about 70°F at low tide to about 60°F at high tide. This effect is of particular significance in summer fishing for striped bass, because of their preference for cooler water. As the season progresses, baitfish such as silversides become more plentiful here, creating a situation conducive to the use of artificial baits. As summer wanes the temperature differences become equalized until, in fall, they are reversed. The fish become more active in adjacent ocean waters. But fishing the sod banks can be productive into autumn, as weakfish and snapper blues linger and striped bass return to their wintering locales.

This approach to fishing should be of interest to surf fishermen, as well as those appreciative of freshwater aspects, and of the outdoors in general. There are myriad locations that offer excellent opportunity for fly-rodgers. Within a five mile radius of Great Bay including Little Egg Harbor, Brigantine, and the Mullica River there are many isolated stretches with adjoining creeks or channels. Most of these can be reached via roads, marinas, or launching facilities in the general vicinity. Along the Intra-Coastal Waterway from Barnegat Bay to Delaware Bay there are many other locations which are both accessible and productive. This includes the Absecon and Great Egg Harbor areas as well as the several inlets in Cape May County.

Salt marshes form a major component of the wetlands and beach barriers which buffer the forces of the ocean. Their great biological productivity (as seen in the ubiquitous vegetation), and their ecological importance to the marine and estuarine environment are well-documented. In recent years development of these environmentally sensitive lands has come under closer governmental control, with passage of the New Jersey Wetlands Act of 1970 and the Coastal Area Facility Review Act of 1973. Yet, a large portion of our coastal wetlands remains unspoiled. The wild setting with abundant fauna, especially birds, can be enjoyed by everyone. Let us hope that, centuries from now, the present marshes and wetlands will remain largely as nature has made them.



"During periods of new moon and full moon, high tides rise over the banks, flooding the marshes."

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## WEAKFISH ROUND-UP

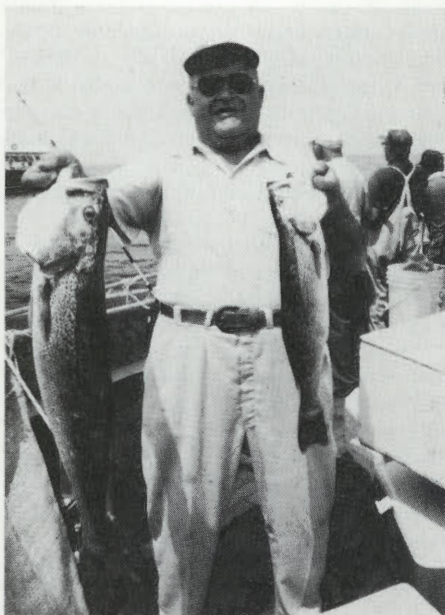
levels in the southern New Jersey waters there is some sputtering activity along the coast until the summer months bring a steady but slower paced "pick" centered in Raritan bay along the Chapel Hill channel and the high-bottom ground between the Sandy Hook and Ambrose channels.

Charter vessels will usually take these prime fish by trolling wire lines with "gorilla rigs," multiarmed umbrella-like ribs with a tube lure attached to each arm. A longer and larger tube lure is run off a three-foot leader and constitutes the center lure—the most positive attractor. Two of these rigs streamed from the stern resemble an entire school of baitfish. The large umbrellas are great for catching weakfish but leave something to be desired in the way of sport.

Meanwhile, the patrons of party boats will, for the most part, continue the jigging technique that had proven so efficient during the spring days of the early run. Instead of the bucktails, however, the prime attractor is now a 3- or 4-ounce chrome-plated metal lure that has a single, free-swinging hook attached. Although the equipment may still be on the light side it must be

remembered that the larger and heavier metal lures are triple the weight of the bucktails; hence, it is wise to up the lines to the 17- or 20-pound-test class.

Weakfish! *Cynoscion regalis*! The squeteague of our northeast coast. Called grey trout below the Mason-Dixon line, this iridescent, dark-spotted beauty is a crowd pleaser wher-



Ed Graser with pool-winning nine-pound tiderunner caught on the party vessel *Miss Take II*. The fish fell for a three-ounce *Ava 27 Chrome jig*.

ever fished and by whatever name. The species is supposed to have been provided with the New Jersey/New York appellation because of the weakness of the cheek and jaw tissues. As a result the species may be easy enough to hook but a different proposition to bring to net. Anglers have learned to contend with this problem by using rods with light whippy tips and loosened drags.

Weakfish do not have the staying power of bluefish. They will strike and hard! But after one good solid run they have usually had it. This does not mean that they turn belly up after the initial run. But firm and steady pumping and reeling should account for most fish being brought to net. Real tiderunners—those over 9 or 10 pounds—actually give a good account of themselves.

This great light-tackle gamefish is an inshore species and, as such, has understandably suffered as a result of decreased habitat owing to so-called land improvement. Real estate development on tidal lands has exacted the usual toll from this, as well as other, inshore fish. The same is true of waters that have felt the impact of chemical toxins and other wastes. The weakfish is also quite vulnerable to illegal netters and other poachers.

If ever a species cried out for effective management, that species is the weakfish.

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## STRIPED BASS

sity of other fish populations which provides their food source.

The striped bass introductions will be limited to select Central and South Jersey lakes. This will eliminate any conflicts with the trout program as the water in these lakes is too warm to support trout.

### Can the Public Help?

Sportsmen can help fisheries biologists with the striped bass project by carefully releasing any young stripers that are caught in Farrington or Carnegie Lake. Also, if schools of stripers are spotted at one of these lakes, such information as size and number of fish, location and time of day could be recorded and turned into Fisheries Biologist, Bob Stewart, Striper Project Leader, Lebanon Lab., P.O. Box 394, Lebanon, N.J. 08833

(201-236-2313 or 201-236-6788). The Division of Fish, Game and Wildlife depends on a concerned public to supply it with much of the information necessary for the evaluation of the project. Such cooperation would be an invaluable aid in determining the success or failure of the striper program. It is hoped that with the experience gained from this experimental project the striped bass population can be established and expanded for the enjoyment of New Jersey's anglers.

### FRONT COVER

*Canoeing on the upper Delaware River—Photographed by Patrick Sarver. (See article on page 4.)*

### INSIDE BACK COVER

*Spring in Far Hills—Photographed by Joseph DeCaro*

### BACK COVER

*State record rainbow trout caught by Joel Rosenstein of South Orange in Round Valley Reservoir last June—Photographed by Bob McDowell*

