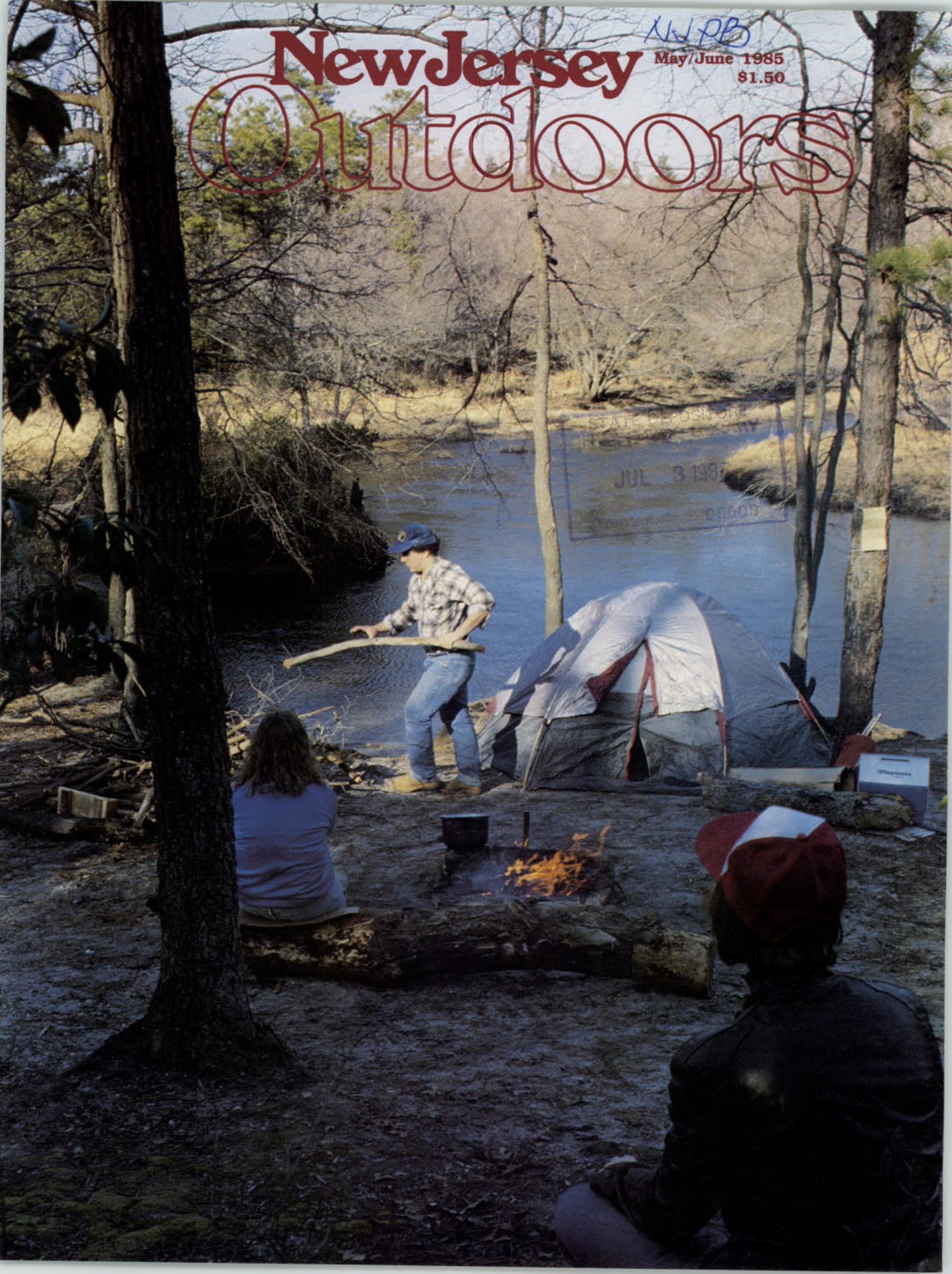


NJRB
New Jersey May/June 1985 \$1.50
Outdoors



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NEW JERSEY OUTDOORS CREDO

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

(Note: Costs of publishing the magazine not covered by subscriptions are met from general revenues available to the Department of Environmental Protection.)

The views and opinions of authors do not necessarily represent the opinion or policies of the Department of Environmental Protection or the State of New Jersey.

FROM THE EDITOR

For the housebound New Jersey on the verge of contracting cabin fever while counting down the days till vacation time, a bay fishing trip, a spring hike, or whatever one's fancy turns to at this time, we have included a Calendar of Events on pages 5 and 37.

For other information about New Jersey's recreational resources, write or call for the following publications:

- Vacation Kit
- Calendar of Events
- Marinas and Boat Basin Guide
- Beach Guide
- Campsite Guide
- Mini Tours Guide. All the above guides are available from:

New Jersey Division of Travel and Tourism
CN 348, Trenton, NJ 08625, (609) 292-2470

- What's Happening—A schedule of special events held at State Parks and Forest this summer
- A year-round guide, "New Jersey Invites You To Enjoy its State Forests, Parks, Natural

Areas, Marinas, Historic Sites, Wildlife Management Areas" from:

Division of Parks and Forestry
State Park Services

CN 404, Trenton, NJ 08625, (609) 292-2797

- For the more adventurous, a set of 10 recreation maps (plus canoe safety information) of the Delaware River is available for a fee of \$5.00 (plus postage: \$1.24 1st class; 97¢ 3rd class) from:

Delaware River Basin Commission
P.O. Box 7360, West Trenton, NJ 08628

- A late breaking item: The Fifth Pine Barrens Weekend sponsored by the New Jersey Audubon Society on May 31 to June 2, 1985. The place: Mount Misery Methodist Conference Center, Route 70, Pemberton Township. For information and reservations, write to the Rancocas Nature Center

N.J. Audubon Society
RD #1
Mount Holly, N.J. 08060

IN THIS ISSUE

The front cover camping scene photographed by Ray Fisk from Harvey Cedars introduces the article titled, *The Garden State Is Camping Country* by Cathie Cush, a frequent contributor from suburban Philadelphia.

More on camping *In the Land of King Nummy: Belleplain State Forest* was written by Parvin State Park Naturalist Paul E. Taylor, another frequent contributor who also provided the photographs.

Moving slightly eastward we go on *A Journey Along the Jersey Shore—From Sandy Hook to Sunset Beach*, directions provided by author Carolyn Bevis, another frequent contributor from Surf City.

While at the shore we can try our hand at *Great Bay Blackfish* angling as discussed by author Don Kamienski, a fluke fisherman of some renown in these parts.

Moving north along the coast we'll spend *A Day on a Dive Boat* with author and underwater photographer Gail Mitchell, from Caldwell, who also likes lobster.

Legend and Lore of the Flatbrook by William Zander, Professor of English at Fairleigh-Dickinson University, is just what it says, the legend and lore of this famous New Jersey trout stream. The illustrations are by Mike Pardo, his first work in NJO.

New Jersey's Butterflies—On Film was

written and photographed by Lawrence Tobak, a first time contributor. The author says all you need is a 90-110mm Macro lens.

On a chilly May morning about midway through the four-week period known as "Bay Week," author Loraine Page and photographer David Borrelli boarded a DEP survey boat, the LINDA ANN, to observe, note, and photograph the *Delaware Bay Oyster Transplant*. The author, an Atco resident, has written for our publication several times.

In its heyday the Irvington-Milburn race drew crowds of up to 30,000 spectators. Its heyday was about 1894, and it was called *The Great Memorial Day Bicycle Race*. The author is Eileen Van Kirk, a frequent contributor, and the illustrations are the work of Mike Pardo.

On May 5, 1984, Charles J. Mower caught a world record American Shad on the Delaware River near Columbia, N.J. The fish weighed 11 pounds, one ounce.

Senior Fisheries Biologist Arthur J. Lupine describes the annual Delaware River spawning run of the *American Shad*.

The ingredients for *Dinner at the Pond* described in this article were harvested from the area around a tranquil pond in southern New Jersey. The authors/chefs are Laura Weiss, Bryan Brunner, Kyle Paterson, Ira

Tauber, David Detoro, Wael Labban, and Gregg Gollas, all students in a class taught by Dean (Jolly) Roger Locandro of Cook College, Rutgers University.

Bareback riding, steer wrestling, barrel racing, and rodeo bull riding? Where? South Jersey at the Cowtown rodeo. Read *New Jersey's Wild West Frontier* by author/photographer Carl J. Petruzzelli, from Woodbury.

This article is about *Protecting New Jersey's Rich Plant Heritage*. It was written by Fran Wood, author of several other articles for NJO.

A new author, Alan Darling from Manchester, New Hampshire, has written about *The Red Eft*.

A new Natural Lands Trust Print by Stefan Martin is featured on page 38.

Our Wildlife in New Jersey series article is the *Pied-billed Grebe*, written by Anne Galli, former Assistant Director, Wetlands Institute, and illustrated by Carol Decker.

On page 24 of the March/April 1985 issue the photo credit for the Black Skimmer color photo should have been William D. Griffin, instead of Breck Kent. We goofed.

Steve Perrone

The Garden State is

CAMPING COUNTRY



BY CATHIE CUSH

The Garden State could have been given a more appropriate nickname. Sure, there are farms scattered throughout the state. Sure, New Jersey tomatoes are legendary and its berry crops are second to none. But a much more befitting moniker for this highly industrialized, urbanized piece of real estate would have been "The Campsite State."

When it comes to camping, probably no other state in the nation can offer the sheer variety of environments and facilities that New Jersey can. From the mountains to the sea, the state offers camping in almost every type of terrain to be found in the northeastern United States. And campers can choose any style of camping they wish, from a backpacking trek into the Pine Barrens to a stay at one of the increasingly popular resort campgrounds. They can even elect to buy their own campsite at condominium or timeshare campgrounds.

New Jersey campers can camp in a total of more than 130 state parks or privately-owned campgrounds. They can spend the night in a tent, a cabin or any one of a number of types of recreation vehicles (RVs). When it comes to camping, New Jersey is kind of like Burger King—you can have it your way.

And it's a good thing, too. Because there are as many types of campers as there are people. The kinds of camping they do are different, and they often do it for different reasons. And New Jersey has something to offer every one of them.

What most campers have in common is a love of the outdoors. But they love it to different degrees. For some, camping is an end in itself. For others, it makes it easier to participate in other outdoor activities such as fishing, hunting, hiking or boating. Still others camp because it provides a relatively inexpensive way to travel. While a backpacker would prefer the solitude of the wilderness, an RVer would probably be happier at one of the many rallies, or gatherings, organized by RV clubs for their members. But both call themselves campers.

For the most part, backpackers partake in what is known as primitive camping. These campers take only the equipment they can carry on their backs (or in a canoe or on horseback) and set up camp at a site far from the proverbial maddening crowd. They gather wood for a fire and sleep in small tents or under the stars. While serious backpackers have been known to tackle the most uncivilized country Mother Nature has to offer, trekking into a state forest gives campers the security of knowing that



*Camping at Parvin State
Park*

PAUL E. TAYLOR



Camping on the Wading River

RAY FISK

someone—in this case the ranger—knows their whereabouts. Both Wharton State Forest and Round Valley State Park offer wilderness sites accessible only by hiking, canoe or small boat.

Primitive campers say there's nothing else like it, and they're probably right. It's as close as a civilized person can get to nature without joining an aboriginal tribe, and a far cry from the world of insistent telephones and traffic jams. It has an amazing way of cleaning out those cobwebs that sometimes clog the brain. A primitive camping experience can also instill a strong sense of accomplishment and self reliance.

But it's not for everybody. It's more often than not strenuous, inconvenient and occasionally downright uncomfortable. But that's OK, because there are plenty of alternatives.

Tenting isn't necessarily synonymous with primitive camping. Tent campers can choose from tent sites at both state facilities and private campgrounds. It's still an inexpensive way to camp. For a few dollars a night, and a relatively small investment in equipment, campers can enjoy the outdoors without giving up the conveniences entirely. (Not the least of which are flush toilets.)

Amenities at state park facilities vary. They range from pit toilets at Jenny Jump Forest to flush toilets, hot showers and a laundry at Allaire Park. And would-be campers who don't own a tent can take advantage of other accommodation options available at state parks. Although a little higher priced than a tent site (\$15-\$55 vs. less than \$10), lean-tos, camp shelters and cabins offer additional security and comfort.

Lean-tos, at Bass River, Belleplain and Stokes forests, provide protection from the elements and sleep four to six. Most cabins will accommodate four to six, although there are a few that can sleep as many as 12. All cabins have kitchen and toilet facilities as well as sleeping quarters and a living room area. Most have a fireplace in the living area. They can be found at Bass River, Lebanon, Stokes and Wharton forests and at High Point and Parvin parks. Reservations are required for summer stays, and applications should be filed with the Division of Parks by early January.

Camp shelters, found at Belleplain and Lebanon forests, offer the same set-up as the cabins, but without kitchens. There are outdoor cooking facilities.

Camping in a recreation vehicle at a private campground is the closest a camper can get to having—literally—all the comforts of home. An RV can be as simple as a folding tent trailer that costs less than renting an oceanfront home for a week to

an elaborate self-contained motorhome complete with hot and cold running water, four-burner stove and microwave oven, color television and a satellite dish. Fully equipped with all the luxuries, these rigs can sometimes cost as much as a modest home. And there is a lot in between: converted vans, truck campers, smaller trailers and mini motorhomes built on van chassis.

Once the initial investment is made, RVing can be a relatively inexpensive proposition. While they'll never get the mileage of a subcompact, RVs are being designed to be more fuel efficient. Campground fees are low—base rates run from \$5 to \$18 at private campgrounds in New Jersey. And because many of the rigs have cooking facilities, campers can save on the high cost of eating out. (They can also use the fireplaces or firebricks provided at most campgrounds for cookouts.)

There is usually a slight extra charge for "hook-ups", i.e., receptacles that give the RVer the added luxury of running water, electricity and a sewage dump. Larger rigs carry propane tanks to power the stove and refrigerator. Some appliances can run on either propane or electricity, depending on which is available. Units can even be air conditioned.

There are more than 120 privately owned campgrounds in New Jersey. Approximately 75, with a total of more than 18,500 individual campsites, are members of the New Jersey Campground Owners Association. (In addition, RVers can camp at many of the state park facilities, although without hook-ups, and tenters are welcome at most private campgrounds.) The greatest concentration is in the Southern Shore region from Ocean City south to Cape May, where there are 37 private and 1 state facility. But campers will even find a few sites in the Gateway region in the northeast—including a 250-site campground in North Bergen!

Private campgrounds vary in atmosphere from small, family-run operations to large franchises such as the KOAs and Yogi Bear's Jellystone Parks. Some provide a base camp from which to visit a variety of attractions, while others provide a wide range of activities and recreation facilities on the premises. At the very least these usually include a swimming pool or access to some other body of water; courts for basketball and volleyball; a playground, and a recreation room with video games and ping pong tables. Campers, especially RVers, tend to be a very social group, and this is reflected in the types of activities on campgrounds' calendars of events. Square and other dances are common, as are pancake breakfasts and steak dinners, flea markets, Christmas in July parties, Gong Shows and the like.



PAUL E. TAYLOR

Waiting for
dinner

RAY FISK



There are a number of ways to find out more about New Jersey camping possibilities. One way is to write for the brochures and listings available from a number of different agencies and organizations (see box). Another way is to visit any of the camping and outdoor shows held throughout the state. These include a major annual show at Convention Hall in Asbury Park each winter, as well as shows in Parsippany, Wayne, Morristown, Trenton and elsewhere. Another is to talk to campers. Still

another is to read regional camping publications such as *Camperways* or *Northeast Outdoors*. These offer articles on attractions as well as listings and reviews of campgrounds. Sample copies can usually be obtained free from campgrounds or at camping shows. But the best way to find out what "The Campsite State" has to offer is to roll up a sleeping bag, toss a few things in a backpack (or in the RV) and experience New Jersey camping firsthand. But be careful—it can be habit forming.

WHERE TO OBTAIN CAMPGROUND INFORMATION

Your New Jersey Campsite Guide is available free from the NJ Dept. of Commerce and Economic Development, Div. of Travel and Tourism, CN 826, Trenton, NJ 08625.

A brochure listing **State Forests, Parks, Natural Areas, Marinas, Historic Sites and Wildlife Management Areas** is available from the NJ Dept. of Environmental Protection, Div. of Parks and Forestry, State Park Service, CN 404, Trenton, NJ 08625.

New Jersey Camping 1985 can be obtained from the NJ Campground Owners Association, RD1, Box 351, Sussex, NJ 07461. Please include 50 cents for postage and handling.

Atlantic County Camping is available from the Atlantic County Private Campground Owners Association, P.O. Box 61, Mays Landing, NJ 08330.

31 Great Reasons to Camp the Jersey Cape is published by the Cape May County Campgrounds

Association, P.O. Box 175, Cape May Court House, NJ 08210.

In addition, brochures on specific campgrounds may be obtained by writing to the individual facilities as listed in the above directories.

WHERE TO FIND OUT MORE ABOUT RECREATION VEHICLES

Who's Who in RV Rentals is available for \$3.50 from the Recreation Vehicle Rental Association, 3251 Old Lee Highway, Suite 500, Fairfax, VA 22030. Dealers are listed by state and city.

Family Camping Vehicles Publications Catalog lists 45 publications of interest to RVers. **This is the RV life** is a six-panel brochure designed to highlight the RV lifestyle. Both can be obtained by sending a self-addressed, stamped long envelope to Recreation Vehicle Industry Association, 1896 Preston White Dr., Reston, VA 22090. The association also has priced literature on RVs.

CALENDAR

OF EVENTS

MAY

18
SATURDAY
9 A.M. MAN & BAY TOGETHER—An exploring look at the Past, Present, and Future of the Delaware Bay. Conference at Clayton Hall, University of Delaware, Newark, Delaware. For information contact Mollie Hibbard, WETLANDS INSTITUTE, at (609) 368-1211.

19
SUNDAY
10 A.M. WALPACK CIRCULAR—From the District Ranger Station in Walpack we will walk through the village along the Flatbrook past Buttermilk Falls. We will then climb up Pompei Ridge to obtain views of both the Walpack Valley and the Delaware River Valley. Leisure 6 mile hike. Lunch on the trail. Start at 10:00 am from the parking lot at the Ranger Station on Rt. 615, Walpack Center, Delaware Water Gap National Recreation Area. Leader: Phil Campbell, 201-948-4075.

JUNE

8
SATURDAY A DAY OF SAILING ON BARNEGAT BAY. One Sailing Sloop and three catamarans will take us across Barnegat Bay to Island Beach St. Pk. We will show you how to sail, clam, and "raise a little hull" on the catamarans, of course. Limited enrollment, reservations required. Call George Henkle—West Jersey Sierra Group—(609) 893-5628

8
SATURDAY
10:30 A.M. BIKE RIDE: HARRISVILLE-BATSTO (31 miles). Mountain Laurel's in bloom. Here's a ride to see lots of it en route. Bring lunch for a stop at Batsto Village, with some time to look around. Bring a swimsuit for a dip after the ride, in Harrisville Lake. Meet on Rt. 679, opposite the dam, 11 miles south of Chatsworth.

8
RAIN DATE
9 RENAISSANCE DAY IN THE PARK—Mayor Aitken Drive in Bridgeton City Park. For information, call 609-455-3564.

9
SUNDAY
10:30 A.M. BIKE RIDE: BURLINGTON COUNTY RAMBLE (27 & 31 miles) MT. HOLLY-VINCETOWN via HILLIARD'S BRIDGE ROAD. Level terrain in an environment of orchards, dairy farms, and open fields. Stop at Smithville, home of the famous "Star" high-wheeler. Bring lunch or buy at midpoint. Meet in corner of Acme Super-Saver lot, High St. (Rt. 541) and Ridgley St., Mt. Holly.

10
MONDAY
6:30 P.M. BIKE RIDE: SUNSET RAMBLE (12.5 miles). Mostly rural loop with a brief ice cream stop in Slabtown (now Jacksonville). Start promptly; end ride before dark. Easy pace. Meet at Acme Super-Saver, Mt. Holly (All bike rides, call Bert Nixdorf, 609-267-7052).

14
FRIDAY
10:30 A.M. INNERTUBE FLOAT IN WARM WATER! In the warmest water we know enjoy your first tubing of the

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JUNE						
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JULY						
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28	29	30	31			

season. 1½ hours in the water, plus a 20-minute walk back to your car. Participants must wear old sneakers. Children and weak swimmers should also wear life jackets. Bring lunch and an innertube. Meet below Harrisville Dam, at entrance to Bodine's Field, Rt. 679, 11½ mi. south of Chatsworth. Co-leader: John Schmidt 215/535-5147.

15
SATURDAY
12 NOON

INNERTUBE FLOAT IN WARM WATER. This is the same trip as yesterday's for those who couldn't make it or who want to do it again. Note change of starting time. Today it begins at high noon.

23
SUNDAY

WHITESBOG BLUEBERRY FESTIVAL AND CROSS-COUNTRY RUN. Whitesbog Village in Lebanon State Forest. For more information call 609-893-4646 or write to: The Whitesbog Preservation Trust, 120-34A Whitesbog Road, Browns Mills, NJ 08015. Sponsored by the Whitesbog Preservation Trust, Pemberton Twp., and Lebanon State Forest.

29
SATURDAY
10:00 A.M.

HIKE: SHEEP PEN HILL & BLUEBERRIES (7 miles). Through blueberry fields and woods to a lunch stop on a bend in the river. See picturesque reservoir and cedar swamp. After hike pick choice blueberries from the fields at the going rate (55¢/lb in 1984). Containers provided, or bring your own. Bring lunch/beverage and meet at Pemberton Twp. Moose Lodge, Magnolia Rd., 3.7 mi. north of Rtes. 70/72 Circle and 3.1 miles south-east of Rt. 530 and 7-11 store in Pemberton. (Sierra)

JULY

10
WEDNESDAY
10:30 A.M.

INNERTUBING ON CEDAR CREEK. Float under summer's sun in the purest water of the pinelands; a truly memorable trip is assured. Bring same needs as for June 14 trip. Meet at Double Trouble State Park (no park fees) for 1½ or 2½ delightful hours of cruising in a tube, plus a short walk to and from start and finish. The park is on Pinewald-Keswick Rd. via Rt. 530 from Whiting. Go 4½ miles east of Ocean Co. Airport and .9 mi. east of Berkeley Twp. Municipal Offices. Bring lunch and be on time. Alternate contact: John Schmidt 215/535-5147.

SUMMER FESTIVAL '85

NEW JERSEY STATE COUNCIL ON THE ARTS
609-292-6130

JUNE

29
SATURDAY
7:30 P.M.

Jersey Jazz featuring special guest star Dizzy Gillespie and New Jersey Jazz artists
Liberty State Park, Jersey City, Hudson County

(continued on page 37)

In the land of King Nummy: Belleplain State Forest

By PAUL E. TAYLOR
PHOTOS BY AUTHOR



Watching canoeists on Lake Nummy.

Many, many years ago, the southernmost portion of New Jersey was ruled by an Indian chief known by us today as King Nummy. Reminders of his presence include Nummy Island, between North Wildwood and Stone Harbor where his remains are believed to be buried, and Lake Nummy, located in Belleplain State Forest. This forest and other forests that once covered the southern portion of the state were the hunting and fishing grounds of the Lenni Lenape Indians, who King Nummy ruled.

Lake Nummy was once a cranberry bog operated by the Meisle family. The state began acquiring land in the area in 1928, and during the '30s, Lake Nummy was created by men in the Civilian Conservation Corps who dug the lake out by hand.

Today the Lake Nummy area is the activity center for Belleplain State Forest. The forest office and maintenance shop are located here, as well as the campgrounds.

The family campground on the south shore is divided into two sections—the Meisle Area and the C.C.C. area. It consists of 273 sites, including several enclosed lean-tos. There are 83 sites in the north shore area, and a group-camping area is located to the west of the lake.

Along the western end of Lake Nummy's north

shore is a popular bathing beach, which is guarded during the summer season. Nearby is a bathhouse and refreshment concession, a playground and a picnic area. Fires are permitted only in the designated stoves and fireplaces, or in picnickers' stoves which have been approved by a forest official. No alcoholic beverages are permitted.

Further south in the forest is East Creek Lake with a comfortable lodge along its southern shore. The lodge, which can accommodate 24 people, is equipped with a complete kitchen—even plates and tableware are provided.

Canoes and small non-power boats may be launched at both lakes. Fishing and hunting are governed by the state's Fish and Game Laws.

Two self-guided nature trails are located in the vicinity of Lake Nummy. Numbered posts, placed at intervals on the trail, correspond to numbers in the pages of a trail guide. Behind the park office there is a nature area where guided walks and programs are scheduled during the summer months.

Belleplain presents an excellent picture of a typical coastal plain forest. Dominant species of trees include pitch pine, black oak, white oak and American holly. During late May and early June, clusters of blossoms adorn the mountain laurel bushes



*Canoeing on
Lake Nummy.*

which form part of the forest underbrush. Sheep laurel, a small bush with grayish-green leaves and clusters of small, deep pink flowers, grows throughout the area. Several varieties of huckleberries flourish in the shady forest and bracken fern cover the forest floor.

Over the years, there have been plantings of red pine, white pine, the native pitch pine and other species, and parts of the forest are managed for timber.

In the swamps, red or swamp maple and Atlantic white cedar predominate. Highbush blueberry, sweet or coastal pepperbush, swamp azalea and Turk's cap lilies are also found in the low, wetter areas. Along the edges of the lakes one may find the spatula-leaved sundew. Sticky droplets on its leaves capture insects, which the plant consumes as a source of nitrate.

Cinnamon fern, royal fern and sphagnum moss also grow in the wet areas. The sphagnum moss, with little pockets in its leaves for holding water, helps the swamp serve as a water storage area.

In some shallow parts of the lakes there is golden club, and spatterdocks or yellow pond lilies grow in some of the deeper parts. All shrubs and wildflowers are protected from being picked or removed.

A variety of wild creatures call Belleplain State Forest home. During many visits over the years, I have observed gray squirrels, red squirrels, raccoons, striped skunks, opossums, pine voles, red foxes and white-tailed deer. There are eastern box turtles, black rat snakes, rough green snakes and eastern hog-nosed snakes—all non-poisonous. Many species of birds also inhabit the area: scarlet tanagers, northern orioles, rufous-sided towhees, wood thrushes, gray catbirds, crested flycatchers, ovenbirds, red-bellied woodpeckers, ruffed grouse, and great blue herons.

In the swamps and lakes I have often observed large red-bellied turtles, painted turtles, eastern musk turtles, northern watersnakes, green frogs, bullfrogs, and even carpenter frogs. Native fish include pickerel, black bullheads or catfish, carp and bluegills. As in all forests and parks, non-game species are protected year 'round and are not to be killed or removed from the forest.

Belleplain offers opportunities for discovering and enjoying the outdoors in a variety of ways. You can reach this southernmost state forest from Route 49 via Belleplain Road, or from the town of Millville via Routes 47 and 550. From the Garden State Parkway, southbound, take Exit 17 to Route 550; northbound, take Exit 13 to Routes 9 and 550.

Picnicking at Belleplain State Forest. The Berry Family.



the Red Eft

ALAN DARLING

Often seen ambling through the moist woods of the Northeast, the eft is an adolescent salamander. The Eastern Red-spotted Newt begins and ends its life in the water, but in between spends one to three years on land as a red eft.

The newts are the only representative in North America of the family Salamandridae, a family with its roots in the Old World. They are also the only North American salamanders to exhibit this three-stage life cycle. The freshly hatched larva resembles the tadpole or larva of other amphibians, but it soon becomes a gilled miniature of the adult newt, complete with the characteristic row of red spots across both sides. In early autumn, the gills disappear as the larva's color changes from a drab green to the bright orange of the eft. In this stage, the eft wanders into the deep woods, far from the still waters of its birth. As its period on land ends, the eft again turns olive green, and its tail broadens as it prepares to return to the water. This final transformation often takes only a few days.

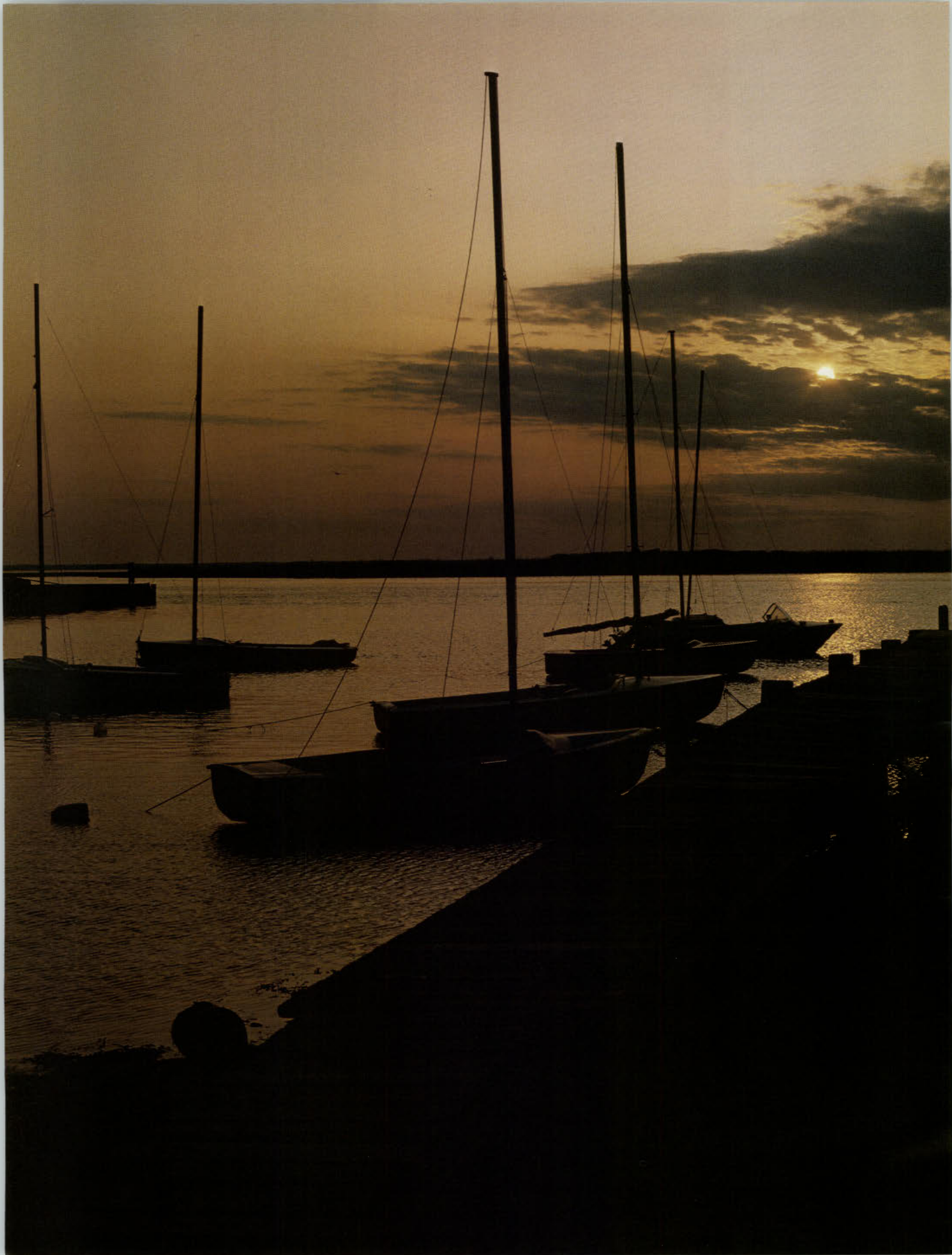
The adult newts, which range in size from 2¾ to 5½ inches, have lungs and must resurface occasionally to breathe. Lacking predators because of a toxic skin secretion, they lurk at the bottom of the murky swamps, woodland ponds and slow-moving brooks they inhabit, waiting in ambush for the insects, tiny crustaceans, and other animals that comprise their diet. They often remain active all winter, and can sometimes be seen moving beneath the ice.

The newt's life cycle is anything but consistent. Some newts are in the eft stage for just a few months, others for up to three years. Some skip the eft stage, and go directly to the aquatic adult stage. Some even give up their larval gills, and draw their oxygen from the water throughout their lives.

Mating takes place in the spring, after a curious courtship practice. The male seizes the female with his hind legs and gently strokes her body with his tail. After this stage, which may last several hours, the unfortunate female is dragged, shaken and twisted by the male as he carries her through the water. At the end of this ritual, the eggs are fertilized. The female lays her eggs singly, carefully attaching each to the stem or leaf of an aquatic plant. The eggs hatch in six to eight weeks.

The newt can adapt to new conditions. If forced to, the aquatic adult can take to land, and an eft can return to water. Like other amphibians, newts can regrow a leg or toe that has been cut off.

Like the adult newt, the eft (1¾ to 3¾ inches long) are carnivorous, and are known for their voracious appetites. A hungry eft may swallow 2000 springtails. Because of the protection provided by their distasteful skin secretion, the eft is extremely bold, and march defiantly across the open forest floor. After a summer shower, they come out in hundreds. So tread lightly this summer.



A Journey along the Jersey Shore From Sandy Hook to Sunset Beach

BY CAROLYN BEVIS
PHOTO BY CORNELIUS HOGENBIRK

To start the day with a sunrise at Sandy Hook or to watch the sun sink into the sea at Cape May's Sunset Beach, is to see a side of the Jersey shore that we rarely stop to discover during the mad search for summer sea, sand and suntans. For the adventurous traveler, the Jersey coast can be a treasure trove of historic places, spectacular sights and rare glimpses of nature. For a vacation adventure, travel the oceanside roads. Savor the summer essentials offered in the many coastal towns en route—boating, swimming, surfing, boardsailing, water skiing, fishing. Spend some time at the boardwalks, amusement parks, motels, restaurants, and small shops. But also take time to explore the spots that make each point on the coastline special.

Start at Sandy Hook, the six-mile-long sand spit that extends into the Atlantic Ocean and Lower New York Bay. From several points on this narrow strip of beach surrounded by water and swept with sea breezes, the ocean and bays are visible simultaneously—a panorama of endless, sparkling seas.

The peninsula is a part of the National Park Service's Gateway National Recreation Area, and contains a wealth of recreational opportunities. During the summer, a substantial portion of Sandy Hook is devoted to recreation in the water and on the beaches, and accommodating services are provided—refreshments, showers, telephones, first aid, rest rooms, parking areas, and of course, guarded beaches.

Beyond the beaches, salt marshes, fresh marshes and a holly forest can be found on the hook. Beach grass, beach heather, goldenrod, dusty miller, bayberry, beach plums, wild black cherry and holly thrive on the dunes and in the dense thickets in this salt-drenched environment, providing a haven for wildlife where birds are abundant.

The entire New Jersey coastline lies along the Atlantic Flyway—nature's skyward version of an Interstate 95, traversed by birds seeking warm southern climates in the winter and northern nesting areas in the summer. Sandy Hook is a particularly attractive resting spot for birds in the Flyway, who funnel in before and after crossing New York Bay. Three hundred different species of birds have been identified at Sandy Hook, and the Hook's bird sanctuary is a nesting area for great blue heron and osprey.

Rising above the bayberries, is the white, octagonal tower of the Sandy Hook Lighthouse. This beacon, built in 1764, was one of 12 lighthouses built by the first 13 American colonies. Until 1907, the Sandy Hook Channel was the only passageway for large ships entering New York Harbor, and the lighthouse served as a strategic navigational aid. During the American Revolution, British and rebel soldiers fought for control of the beacon, and for a time it was occupied by British troops. Today, the light atop the 103-foot-high tower, visible 19 miles at sea, is still in use and it is designated a National Historic Landmark. Tours of the lighthouse are available.

The Hook is also the site of the first U.S. Lifesaving Service boat station, built in 1849. A larger, 1894 Lifesaving Station with lookout tower still stands and houses one of the Sandy Hook visitors centers.

Perhaps the most alluring part of Sandy Hook is the Fort Hancock Historic Area, a remarkably civilian-looking village, nestled behind holly forests that shield it from the ocean, but open to the broad horizon of Sandy Hook Bay. The fort was built during the 1890s as a military defense installation. Today the National Park Service uses few of the buildings, and the quiet village with vast green lawns—the former military parade fields—has a college campus-like atmosphere. There is an elegant grandeur about the miniature community of taupe-colored brick Victorian mansions, trimmed with forest green gables and broad porches, perched in the sea spray of Sandy Hook Bay.

Sandy Hook's strategic location near New York Harbor has made it an important military defense site throughout American history. Fort Hancock is but one of a series of defense installations that were located on the Hook. An earlier fort, constructed during the pre-Civil War era but never completed or used, lies near the northern end of the peninsula. Several massive concrete batteries that once housed huge seacoast guns that could fire at ships at sea remain near Fort Hancock. The Hook was also used as an Army proving ground to test new equipment, and later it served as a Nike missile site.

A museum located within the Fort Hancock Historic Area chronicles the history of the area, and a variety of educational and recreational programs are offered throughout the year.

A complement to the seascape afforded by the flatlands of Sandy Hook is the grand vista seen from the vantage of the Twin Lights State Historic Site, located across the bay in Highlands, New Jersey. At an elevation of 200 feet above sea level, Highlands is the highest point on the eastern seaboard of the United States. New Jersey low-landers who brave the sharp curves and steep ascent of the Twin Lights access road will find the view from the top well worth it. Three overlooks afford spectacular panoramas of the Shrewsbury River, Sandy Hook Bay, New York Bay and the Atlantic Ocean, and the Sandy Hook Peninsula, and Long Island coast and the New York skyline.

The ornate, fortress-like Twin Lights, built of brownstone in 1862, were refitted in 1898 to become the first electrically-powered lighthouses in the country. The beams of the Twin Lights could be seen 22 miles at sea.

In 1899, Guglielmo Marconi, giving the first demonstration in America of the wireless telegraph, placed his telegraph receiving mast on the Twin Lights. Marconi's original telegraph is on display in the Twin Lights Museum. There are also exhibits of lighthouse lenses, nautical navigation aids, and tools of the New Jersey boating and fishing industries. A collection of boats of the Jersey shore contains a Barnegat Bay sneakbox, Sea Bright skiff, Shrewsbury crab skiff, and a replica of the Fox, the



Party boats at
Atlantic Highlands

Previous page:
Sunset at
Spray Beach,
Barnegat Bay

first boat rowed across the Atlantic (a feat accomplished by two New Jersey men, of course).

From the front of the Twin Lights, the next leg of this Jersey shore journey is visible—Route 36, the ribbon of highway that unwinds through the coastal resorts of Monmouth County. Here the traveler can choose between beaches with boardwalks or beaches without, amusement parks and playgrounds open for the day or private beach houses for rent for the summer. Route 36 eventually connects with Route 71, and in Ocean County, Route 35 spans the shore from Manasquan Inlet to the Seaside.

Just south of Seaside Park lies the true jewel of Jersey beaches for those who enjoy nature in an unspoiled state—Island Beach State Park. This 10-mile-long strip that encompasses 3,002 acres of rambling barrier beach gives a glimpse of the Jersey Coast as it would have been without man's intrusion.

Undisturbed sand dunes, thick with dune grass and Japanese sedge, tower along the oceanfront. Westward, they give way to beach heather, beach plums, bayberry and holly, and then woody oaks, cedars, and pines. On the bayside, tall cord grass covers the natural salt marshes. Many forms of wildlife flourish on Island Beach, and the environment attracts both upland songbirds and a variety of shorebirds.

Approximately two-thirds of the park is managed as a natural area, and nature tours are available. Surf fishing, bathing and picnicking are permitted in the park, and guarded swimming areas are provided in the central recreation area.

"Old Barney," the distinctive red and white lighthouse of Long Beach Island is visible to the south, but there is no access from Island Beach by bridge.

To continue this shoreline exploration, the traveler must return to the Garden State Parkway on the mainland, and head south to exit 63, which leads to Long Beach Island's causeway and bridges. The best time to approach this 18-mile-long barrier island, six miles at sea, is after dark when the island's tiny lights on the nighttime horizon resemble a strand of sparkling white pearls.

The width of Long Beach Island spans only two to four blocks, and there is less commercial development there than in many of the coastal resorts. Only one main road—Long Beach Boulevard, also called Bay Avenue—stretches the full length of the island from Barnegat Light to Holgate.

Barnegat Lighthouse State Park, on the northern tip of the island, offers a fine view of Barnegat Inlet's rough waters, and of Island Beach across the inlet to the north. On a summer's evening, commercial fishing boats and charter party boats can be seen churning their way home through the inlet while streams of squawking seagulls trail behind, diving for scraps from the freshly-cleaned day's catch.

Barnegat Lighthouse is open to the public, and on a clear day the beacon's catwalk affords far-reaching views of the surrounding waters and marsh islands, and a glimpse of the South Jersey Pine Barrens to the west.

Picnicking and swimming are permitted in the park, and rest room facilities and parking spaces are available.

The southernmost two miles of Long Beach Island comprises the 256-acre Holgate Unit of the Edwin B. Forsythe National Wildlife Refuge (formerly called Brigantine National Wildlife Refuge). Holgate's two-mile stretch of ocean beach, accessed only by foot, is open to visitors. However, the dunes and the bayside salt marshes, visible from the ocean beach,



CORNELIUS HOGENBIRK



MICHAEL BAYTOFF

are off-limits to humans and harbor a rich array of shorebirds. The marshes provide nesting sites for black skimmers, terns, gulls, and a variety of migratory birds.

The southern tip of Holgate, overlooking Beach Haven Inlet, is the perfect spot for a hardy hiker to hold a secluded, waterfront picnic. The much larger, southern portion of the Forsythe refuge can be seen in the distance by day, and the glow of the Atlantic City skyline is visible at night.

Again, no bridge connects the southern tip of Long Beach Island with lands to the south, and the traveler must backtrack to the mainland to continue on the way. The principal 20,000 acres of the Forsythe National Wildlife Refuge lie just east of the town of Oceanville in Atlantic County, and are reached from Route 9.

Much of the refuge consists of saltgrass tidal marshes, flowed by bays and channels. About 1,600 acres of the refuge have been diked and converted to freshwater habitat, and a small portion of the refuge contains upland habitats of pines, mixed hardwoods and honeysuckle.

Whitetail deer, red fox, gray fox, striped skunk, opossums, red squirrel, gray squirrel, cottontail rabbit, mink and muskrats inhabit the upland regions, and there are nature trails through the woods.

An auto route built on the refuge dikes gives an elevated view of freshwater ponds, salt marshes and mud flats. Osprey, peregrine falcon, gulls, terns, skimmers, rails, brant, black duck, Canada geese, pintails, gadwalls, shovelers and other birds can be seen in the refuge, which was established to protect and manage waterfowl in the Atlantic Flyway. At times, fishing and hunting are permitted.

Just a short ride south on Route 9 brings the explorer to the intersection of Route 30, which leads

east to Atlantic City. The city's world famous boardwalk runs the length of the ocean beach, and the brightly colored beach cabanas, nowadays provided by the casino hotels, dot the shoreline—a longstanding trademark of summer in Atlantic City.

Abeson Inlet near Atlantic City marks the start of Ocean Drive, the sliver of scenic shore road that meanders over a string of small toll bridges and through the southern 40 miles of Jersey coastal towns to the tip of Cape May. Speed limits are slow and stops are frequent on this scenic route, but for the patient traveler, the apex of each small bridge will reveal deep green marshes unfolding against fields of blue bays and inlets.

Corson's Inlet State Park, on the southern end of Ocean City, offers hiking trails, boat launches and picnic spots in an undisturbed inlet environment.

Nearly half of Cape May County is comprised of wetlands—meadowlands, marshes, bays, creeks and lakes—and much open space is preserved. As a result, birding in the county is superb. One fine spot for birding located directly on Ocean Drive is the Stone Harbor Bird Sanctuary, a 21-acre heronry under the aegis of the Stone Harbor municipal government. As many as 6,000 birds have been counted in the sanctuary, and the many species of heron include the American (or common) egret, snowy egret, Louisiana heron, green heron, black-crowned night heron, yellow-crowned night heron, cattle egret and glossy ibis.

Binoculars are available to the public at the parking area on the east side of Ocean Drive. The best times to view the birds during the summer months are just before dawn and just after sunset when dozens of heron fly to and from their feeding grounds.

This undeveloped wooded area preserved amidst otherwise dense development is registered as a Natural Landmark under the National Park Service.

A second excellent spot for birding in Stone Harbor is the Wetlands Institute and Museum on Stone Harbor Boulevard. This 6,000-acre tract of protected salt marsh interspersed with tidal creeks includes hiking trails, a museum and a lookout tower.

Beyond Stone Harbor, Ocean Drive winds its way through the Wildwoods and on to the Jersey shore's southernmost resort, Cape May. The City of Cape May is the oldest seashore resort in the United States and was chosen as a vacation spot by Presidents Abraham Lincoln, James Buchanan, Franklin Pierce, Ulysses S. Grant and William Harrison.

Cape May is one of a handful of American cities designated a National Historic Landmark City, and it is a virtual museum of Victorian architecture. Several hundred freshly painted Victorian homes and inns, sporting ornate gingerbread trim, broad verandas, crowned dormers and captain's walks, lend charm to this small, southernmost resort. Its designation as a National Historic Landmark requires that older homes are maintained in their original design, and newer ones are built to complement the Victorian theme. Since 1976, the city has made a successful, all-out effort to restore its stately Victorian mansions and charming cottages.

Great Bay BLACKFISH

Great Bay is the home of spawning blackfish in late Spring.



BY DON KAMIENSKI
PHOTOS BY AUTHOR

The hook, baited with fresh crab, sank quickly through the slowing tidal flow and finally settled on the bottom some twenty five feet below the water's surface. In a few minutes, a solid thump on the taut line indicated that a hungry blackfish (tautog) was interested in the fresh crab offering. A quick thrust of the rod tip skyward drove the hook home, but instead of coming to the surface under the beckoning of the sturdy rod, the fish made a hasty retreat into one of the few sod bank holes that dot the bottom along the eastern edge of Great Bay in south Jersey. I could feel the fish as it sent vibrations up the line to my hand, but since the sinker had become lodged in the hole with the fish, I couldn't budge either one.

The next minute or two became a series of frustrating moments knowing that I had a solidly hooked fish at the end of my line, yet I was unable to coax him out of his underwater sanctuary. Finally, to see what would happen, I threw the reel into free spool and allowed the fish some extra loose line. Feeling the line pull reduced, the fish calmly swam out of his hole into the open water dragging the sinker with him. When this happened, I threw the reel into gear and began reeling as fast as I could to keep the fish from bulldogging his way back to the safety of the hole. The fast retrieve was successful, and a quick swipe of the landing net deposited a fat six-pound tog on the deck of my boat. Not bad for the first fish of the day!!

Between the twin bodies of water of Little Egg Harbor and Great Bay in south Jersey, a three mile long peninsula extends eastward from the town of Tuckerton towards Beach Haven Inlet. Great Bay Boulevard runs the entire length of this strip of land, and on either side of this thoroughfare, some of the best Spring fishing for blackfish occurs during the months of May and June. Traditionally, the late Spring months signal the start of an inshore migration of blackfish in order to spawn. Since the sod banks of Great Bay offer the migrating tog plenty



of cover and food, large schools of this fine eating fish will set up residence in this area.

Great Bay fishing for blackfish is very different from other areas along our coastline. In most cases along Jersey, anglers in pursuit of a bucktooth tog will either head offshore to a rocky patch of bottom, or they will spend a few hours fishing the rock jetties or bridge abutments from Sandy Hook to Cape May. With either of these type locations, you can count on two things occurring. First, you can expect to lose tackle in the rocks, and secondly, you can expect to be constantly pestered by bait stealing bergalls as you try to tempt a tog.

Great Bay blackfishing tends to be somewhat different in that the bottom is not strewn with rocks nor are bergalls resident to any great degree. Instead of using rock crevices as do their offshore cousins, Great Bay tog inhabit the slopes located between the sod banks and the deep channel areas. A word of caution though, if you fish too high or too low on the slope, you tend to catch lesser amounts of blackfish. However, if you can position your anchored boat and bait towards the middle of the slope, you should end up with a heavier cooler of fish at the end of the day.

By far the best bait to use for Great Bay tog is fresh crab. Unfortunately, most area tackle stores do not stock this bait. As such, you have to either bring along your own crabs, or better yet, let me suggest that you spend an hour and catch your own bait supply. It's really simple. To catch your own bait, it's best to have a boat. Since Great Bay is relatively shallow, finding a sandbar at which the water is three to five feet deep is no problem. Once a sandbar is located, drop an anchor over the side. This anchor will help keep your boat in one spot as you attract crabs. Catching a five gallon bucket of crabs is nothing more than dropping a few handlines which have been baited with bunker (menhaden) chunks over the side of the boat, and scooping up the crabs with a long handle net. The crabs you'll be catching will be the tan-colored calico variety with medium and large crabs yielding the best baits. Toss back the smaller crabs and allow them to grow.

Once your crab supply is sufficient, it's time to go tog fishing. Several good spots to try from an

anchored boat includes the end of Great Bay Blvd. near the Coast Guard Station, and where Big and Little Sheepshead Creeks enter the bay. The best method of preparing your fresh crab bait is to remove all of the claws and legs, and then peel off the backs. A sturdy clam knife helps out with this chore. Once this operation is complete, cut the crab into halves or quarters depending on its size, and place a piece of bait onto a #4 Virginia style hook. Use a vacant leg hole to help insert the hook into the bait.

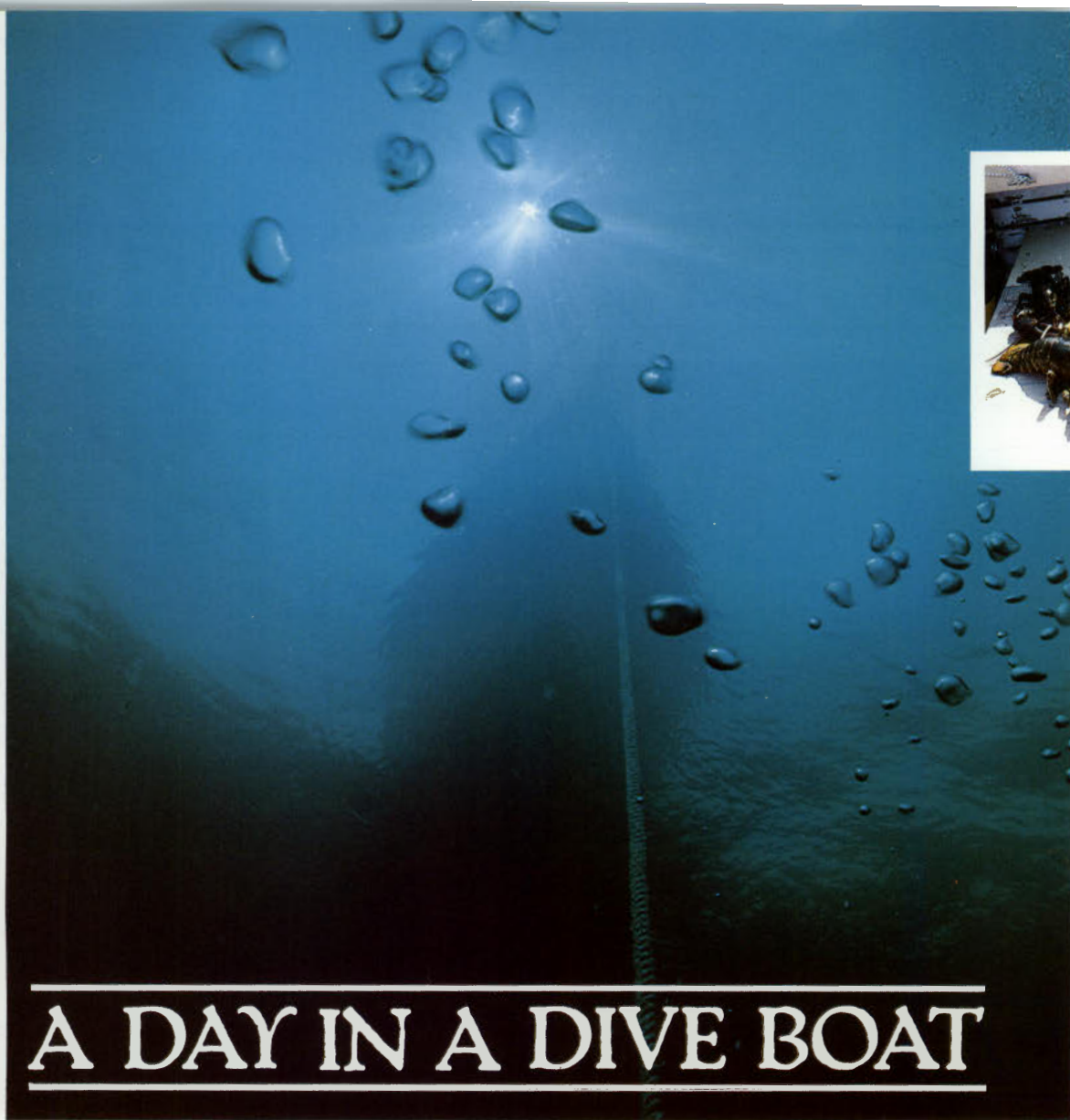
The current around the sod banks of Great Bay tends to run fast especially during the Spring tides, so it may be necessary to use up to ten ounces of lead to keep your baits near the bottom. However, when the tide begins to slow down, you can usually get away with as little as three ounces of lead to hold bottom. In most cases, I've found that the last hour of incoming or outgoing tide is the most productive time period with big fish prevailing.

The trick with blackfishing is knowing when to set the hook. Normally, the first tap you feel on the line is when the tog is grabbing the bait with its anterior canine teeth. The next series of taps will be when the tog is passing the bait and hook back towards its posterior crusher teeth. The best time to set the hook is when the bait has been passed to the crushers. If you set the hook at the initial tap, you will end up pulling the hook and bait out of the fish's mouth. It may be a little frustrating at first, but eventually, you'll get the hang of it.

Located on Great Bay Blvd., are a series of boat liveries at which you can either launch your own boat, or rent a boat for a day of blackfishing. Two such liveries include Capt. Mikes (609-296-4406) and Rands (609-296-4457). A quick phone call to either one of these facilities will get you up-to-date information regarding current catches of blackfish. While you can catch blackfish from the shoreline in this area, most good catches are taken by anglers fishing from an anchored boat.

If catching Spring blackfish without the hassle of lost tackle or pesky bergalls hasn't already convinced you that you should give Great Bay tog a try, consider that some blackfish in this area exceed 13 pounds. Further, when the fishing is hot, you can expect a tog bite every 30 seconds. Convinced now??

The accurate anchoring of a boat will help put more tog in the cooler.



A DAY IN A DIVE BOAT

4:30 a.m. The alarm sounds. The morning sky begins to lighten as I drive down the Garden State Parkway to the dive boat. When I reach it, we load all our dive gear, coolers and my camera equipment aboard.

7 a.m. sharp. The boat pulls away from the dock. It's a beautiful, clear summer day as we pull out the inlet with other pleasure craft and many fishing boats.

Divers begin to assemble equipment and make last-minute repairs. The boat ride seems long. The dive location today is one of 500 wrecks located on the bottom of the ocean between Philadelphia and New York ports.

In the early days, severe northeast storms sometimes drove ships fully rigged into the breakers as their sails and lines became so ice covered that they were unmanageable.

Then, even as today, ignorance of common-sense navigational rules resulted in many collisions, as did rain, fog and other conditions or poor visibility.

Each war, from the Revolution through World War II, took its toll on ships due to enemy action.

Some of the most interesting wrecks in the world are off the coast of New Jersey. Exploring them requires the ability to scuba dive. New Jersey cannot claim to have warm water with 100-foot visibility, but for real adventure and challenge you can't beat New Jersey wreck diving.

There are treasure wrecks, mystery wrecks and eerie remains of ships that still contain bones of the victims. Wrecks of obscure vessels of no particular significance in their day now form beautiful and valuable oases of marine growth and fish life. One marine denizen that is particularly popular with divers is *Homarus americanus* or the North American lobster. All divers on board today are in search of at least one lobster, or "bug," as they call them.

As the boat anchors into the wreck, several divers are already prepared to hit the water. When the anchor is secured and checked by the dive master, we enter the dark, blue-green water. At first it is cold, but the water in our wet suits is warmed by our body temperature.

Once on the bottom we begin our search for the "bug." We poke our underwater flashlights into every hole looking for an antennae or claw. Many times the lobsters are so far back in their holes that a hook is needed to pry them out. Other times a hook does no good. Once the lobsters have been brought from their holes, the divers put them in mesh catch bags.

The short 40 minutes spent on the wreck seem to disappear. Checking our gauges tells us that it is time to ascend all too soon. Leaving the deep, silent world, we come up the anchor line to the boat.

The catch of the day is displayed on the hatch cover—and what a catch it is!

BY GAIL MITCHELL
PHOTOS BY AUTHOR



The dive boat



Legend & Lore of the FLATBROOK



... his fingers nibbled by giant trout ...

Near the remote outpost of Flatbrookville in Northwest Jersey, the Delaware River changes course twice within a mile-and-a-half, creating the zig-zag known as Walpack Bend. South of the bend, the river straightens, following a valley filled with drift, rock debris dumped by Pleistocene glaciers that began retreating some 10,000 years ago. To the northeast, this same drift-filled valley is followed by Big Flatbrook, which joins the big river at the bend.

This area is old. The drift of the so-called Walpack Valley is based upon Upper Silurian shales and limestones, more than 400 million years old. Big Flatbrook, the stream that courses through it, is a string of pools, pockets, and riffles, sometimes deep and slow, sometimes plunging over the rocks that are largely responsible for its character. Along the way, there is gorgeous scenery: somber forests of white pine and hemlock, thickets of rhododendron and wild rose, glimpses of lady's slippers among the ferns, a splendid view of the Blue Mountains to the east.

This is unspoiled country. There is hardly a farm along its 21-mile course to pollute the stream, and no industries or population centers. And as every Garden-State angler knows, Big Flatbrook is Jersey's blue-ribbon trout stream, comparable in some ways to the storied Catskill streams just to the north, where the Delaware itself begins.

One of these ways is its history, its legend and its lore, including, certainly, angling lore. The area has been inhabited by man for more than 10,000 years. At the time of the first people there was a colder climate; moss, scrubby bushes, and evergreens covered the ground. People hunted big game—musk ox, mammoth, mastodon, and caribou. About 8,000 B.C., the climate began to grow warmer, some animals vanished, and survival techniques in the area changed. Among other things, people began to fish, as evidenced by stone fish spears, net sinkers, and bone harpoons dating back as far as 5,000 B.C.

When the first white explorers penetrated the area in the 17th century, they found a culture that called itself the original people, the Lenni Lenape. The newcomers learned much about fishing from these Indians, among other things how to make traps out of tied-together bushes. The first white settlers, mostly Dutch and Huguenot, called their new home "Walpack," an Indian word meaning either "whirlpool" or "deep water," referring to conditions that developed during flooding at the junction of Big Flatbrook and the Delaware.

This was river country, then, good for rafting logs down the big river, good for the mills that sprang up on even the smallest feeder streams. Some historians believe the first mill in what is now Sussex County was on Big Flatbrook near the bend. In case

By WILLIAM ZANDER
ILLUSTRATIONS BY
MIKE PARDO

of a poor harvest for the grist mills, however, there was always plenty of game—and fish. Each year in the middle of June, there was a fish drive on the Delaware, which used the brush-trap technique learned from the Indians. The largest catch recalled by one observer was a stack of fish 20 feet wide by five feet deep.

One of the first lists of the area's plants and animals was a report taken back to Europe by early explorers. It included the following: "... The river fish is like that of Europe, namely: carp, sturgeon, salmon, pike, perch, roach, eel, etc." Salmon?

*The list shows a European bias. Atlantic and Pacific salmon were unsuccessfully introduced into the Delaware by the New Jersey Fish Commission after the Civil War, but there is no evidence that salmon were native to rivers this far south. And the list does not mention our native brook trout (really a char), the dark, brightly speckled beauty that was a new fish for Europeans. There were no browns or rainbows until after 1883, the year some 80,000 brown-trout eggs arrived in Long Island from Germany. By then, angling was an established sport in this country, and the brook trout, which had succumbed to thoughtless slaughter and logging practices, was badly in need of replacing.

When the forces of industrialization put an end to many of the old river industries, these same forces created an urban leisure class that longed to get away from it all. Wealthy anglers formed fishing clubs and bought up fishing rights on streams in the Catskills. Big Flatbrook, even closer to the cities, had its own club by 1893, exactly 20 years after the first Catskill club, when a group of well-to-do sportsmen banded together to found the Flatbrook Valley Club. At first the group merely leased some land on Big Flatbrook, but in 1905 the club was formally incorporated and began acquiring its own land. By 1911, it owned nearly 1,400 acres and had some 12 miles of stream tied up, posted and patrolled to keep the heathens out.

At some point a large, brown-shingled clubhouse was built, with several fieldstone fireplaces, high leaded windows, and a cedar-shake roof. Up the road, the club built a small fish hatchery and began stocking its section of the stream. There were holding ponds down by the clubhouse, including one where the giant "breeder" trout were kept. The club had an ice house and cut ice on the ponds. There was a fulltime caretaker-guard, whose wife served as maid and cook.

For many years, Wilbur Hamler was the caretaker for the club. He and his wife, Bea, who produced fabulous gardens, lived near the breeders' pond in a white clapboard house. Their nephew, Wilbur "Bill" Hamler of Newton, can remember visiting his uncle as a boy and having his fingers nibbled by giant trout when he put his hand in the pond. These trout were fed on chopped liver.

The stream was stocked every Friday, in preparation for the advent of club members and guests. One of the founding members, Robert McCurdy, arrived one weekend to find there was no room for him in the clubhouse. According to Russell Spinks, a farmer in Layton and biologist with the state Division of Fish, Game, and Wildlife, McCurdy was so outraged that he immediately ordered that a cottage be built for himself. Thus the McCurdy house was speedily erected, overlooking the stream and blocking the view from the clubhouse.

Wilbur Hamler took his job seriously. He would allow no one but members and guests to fish the streams. One spring, some local good-old-boys



started a poker group that met once a week. Hamler was asked to join, and he played cards happily with the group for several years. Finally he noticed that at every meeting there was always at least one member absent. His suspicions aroused, he discovered that his friends had arranged this gathering entirely to guarantee to each in his turn an evening's undisturbed fishing on Big Flatbrook.

As was the case in the Catskills, local residents did not take kindly to "fancy-pants" big-city dudes coming out and evicting them from their favorite fishing holes. As illustrated by the poker club, poaching on private land became a challenge and a high art.

No doubt the resentment was exacerbated by some of the club's cavalier practices. According to Rudi Buenz of Newton, an internationally acclaimed maker of stained-glass windows and a first-rate fly fisherman, there was a dam at the southern boundary of the club's property, the old Kean's Mill dam, roughly where the Roy Bridge now crosses the river.

"I've seen fellows from the old club standing on top there and catching the little trout down below the dam and throwing them into the upper part—the club property—until the game warden stopped them," Buenz says.

The locals dealt with this affront in a rather artless way. One night someone sneaked in and dynamited the dam.

One night someone sneaked in and dynamited the dam.

... "I'll bring the damned thing down..."



"They were real, kind of, hillbillies, real bandits, I guess," Spinks says.

These locals, after all, did not fish mainly for sport; they fished (and hunted) to survive. Spinks came to the area in 1947 to help maintain Wildlife Management Areas there, including the former club properties, which had recently been sold to the state. Harry Garris, an old bachelor from Walpack, worked for him until he was in his eighties and told him how the locals lived off the land, not always legally.

One of these "bandits" Spinks referred to was once brought to court for taking a shot at a Navy dirigible, flying low over where he was hunting, illegally and probably drunk. Apparently he felt he was being pursued. According to courtroom testimony printed in a 1929 Sussex Register, the culprit "pointed his shotgun at the big machine and fired twice, saying 'I'll bring the damned thing down.' The big dirigible showed no effect from the shots."

Not all the locals were so violent, however. According to Howard Brant, outdoor columnist for the Star-Ledger and longtime habitué of the valley, one Frank Losey of Flatbrookville used to bring his violin to the fields along the Flatbrook on moonlit nights. There, he would lie on his back and play it, so that a night fisherman working the stream might hear strains of Beethoven as he cast his fly.

The end for the Flatbrook Valley Club came in

1943, when it was sold to the state for \$60,000. By then, it was surrounded not only by local heathens but state lands open to heathens from anywhere. The state was clamoring for more, and, according to Bill Hamler, the club was in decline.

"A couple of the members dropped out, a couple died, and the remaining members found it too hard to keep up," he says.

Hamler's uncle and aunt moved to Newton—Mrs. Hamler taking her snap-dragons and johnny-jump-ups with her—and the club became headquarters for the Flatbrook Wildlife Management Area.

There were other sportsmen's clubs on Big Flatbrook, but today only one remains, the Overlook Club, which established itself on the stream in 1937. A Masonic club where the state's governors sometimes take a ceremonial cast on the opening day of trout season, the Overlook finds itself a somewhat embattled hanger-on in the midst of the Delaware Water Gap National Recreation Area.

Not only governors have gazed upon Big Flatbrook and the beauty of the Walpack Valley. Russell Spinks has a story about Gyp Rosselli, the late proprietor of Gyp's Tavern on U.S. 206, a favorite hangout of hunters and anglers. According to Spinks, Rosselli was driving by the gravel bank near the Roy Bridge and stopped his car to watch a particularly graceful fly fisherman at work.

"Gyp stopped, and a couple of Secret Service men came over and said, Look, you gotta move on," Spinks says.

The angler was President Herber Hoover, a guest of the Flatbrook Valley Club.

Hoover may not have been the only president to have fished Big Flatbrook. Well before he became (briefly) the country's ninth president, William Henry Harrison eloped with a Sussex County woman and later (as a reward?) acquired land on the stream from his father-in-law. Though Harrison sold all this land by 1811, and may indeed never have seen it, who knows?—he, too, may have wet a line there.

Babe Ruth, the Sultan of Swat himself, loved to come to this part of the country to hunt and fish and, betimes, to bend the elbow with the locals, including Gyp Rosselli. In the '20s, the New York Yankees came to Newton to play exhibition games, and it was during these visits that the Babe developed a fondness for the Sussex County countryside. What's more, a young pitcher with the team, Russell Van Atta, a native of the little farming community of Augusta, was pleased to show the great slugger around.

According to Van Atta, now 78, the locals did it up big when the celebrity was in their midst. The Babe was often a guest at Cal Agar's farm in Hainesville. Agar, founder of the Whippany Paper Board Co., actually built ponds on his property for Ruth's pleasure and stocked them with fish. Lee Rosencrans, who once ran the general store in Walpack Center, says the Babe also came to a fishing camp on Big Flatbrook. The camp was near Lake Ocquittunk in Stokes State Forest.

Van Atta says the Babe was not a classy fisherman, just a "worm dunker," but besides Hoover, there have been many artists with the fly rod who have fished Big Flatbrook. Ray Bergman, whose *Trout* (1938) was a bible for a whole generation of fishermen, is known to have fished there. Not as well known as Bergman (not a writer) was the late Buck Short, a semi-pro baseball player who retired to a little cottage between Tuttle's Corner and Schaefer's Bridge on Big Flatbrook. There he tied and sold flies, including his "Flatbrook Bastard." Short used to tell how he once landed a brown trout over five pounds on that fly, even though the fish broke his rod in the process. After he was too old to fish, anglers on the Flatbrook often saw Short with his dog, walking along and stopping to offer advice.

Rudi Buenz is himself a noted angler. Now in his eighties, he grew up in Hamburg, Germany, and came to the United States in 1925. In 1981, Buenz made a film for New Jersey Network's *New Jersey Outdoors* series, entitled "Take a Kid Fishing." The film was shot on Big Flatbrook.

Buenz was always strictly a dry-fly fisherman and fished in the classic British manner, to the rises. He remembers a time when Japanese beetles were the fly to use on Flatbrook, a non-standard pattern that challenged the ingenuity of his friends who were fly-tiers (he's not).

"The beetles were eating those willow bushes all the heck and gone, right below the Three Bridges Parking Area," he says. "Boy, they were dropping in the water like all get out. Even suckers were taking them."

Fishermen. It sounds awfully sexist. Yet one of the most famous angling clubs still thriving in the Catskills is the Woman Flyfishers Club, which was incorporated in 1932. These aristocratic ladies enjoyed nine outings at Big Flatbrook, annual events



from 1933 to 1941, as guests of the Flatbrook Valley Club. Every time they came, Wilbur Hamler would put some of the monster breeder fish into the stream for them. He also patrolled it with a shotgun, and when someone snagged a high branch on her back cast, Hamler would shoot the line free.

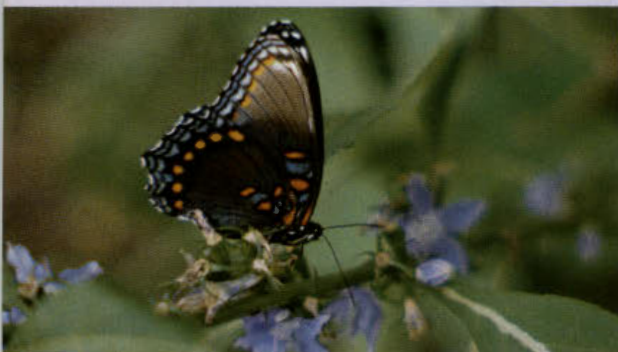
Today, 70-80 percent of Big Flatbrook flows through state or federal land that is open to public use. The Walpack Valley, saved for now from the bitterly contested Tocks Island Dam, remains a near-wilderness. At the Flatbrook Wildlife Management Area headquarters on county Rt. 615, the brown-shingled clubhouse and McCurdy house still stand, though unused and in a state of deterioration. The bare floors creak spookily, and dust lies everywhere. The local game warden lives in the Hamlers' house, but the giant breeders are gone from the pond, which is choked by weeds. At a bend in the road to the north, the ruins of the old hatchery can be seen; the spring that fed it still runs clear and cold, laden with peppery watercress.

**Carp were probably suckers or the quillback carpsucker; pike were probably chain pickerel; roach were probably golden shiners, and the salmon could have been shad?*

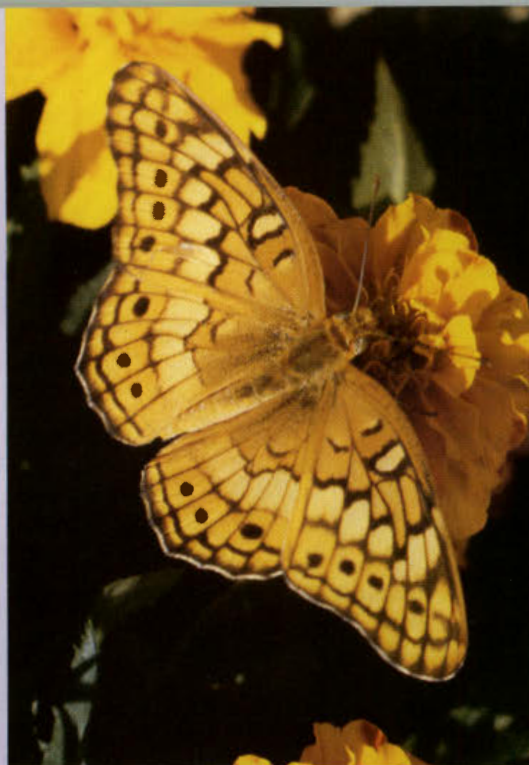
"Babe was . . . just a worm dunker."



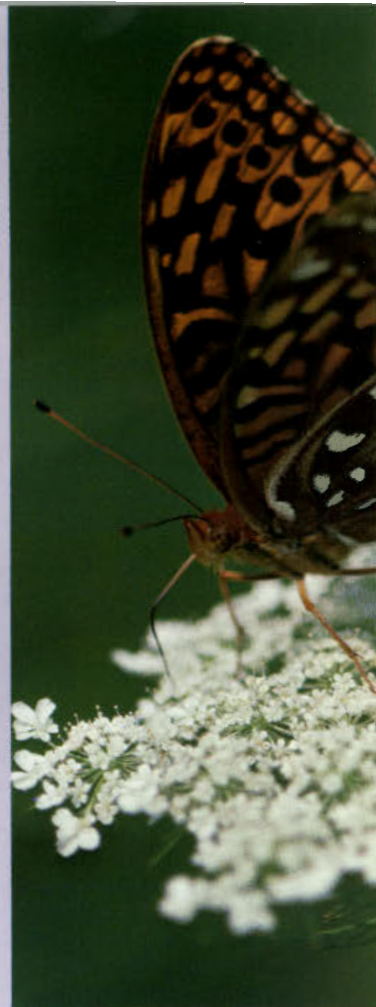
This Spicebush Swallowtail was observed near the Barnegat lighthouse. Swallowtails are often observed drinking from wet sand and mud puddles, or even from bird droppings or dung. It is thought that the butterflies obtain needed salts and minerals in this manner.



The Red Spotted Purple can often be seen darting among trees in wooded areas. Its fidgety nature can make it difficult to approach close enough to observe the orangish-red markings.



The Variegated Fritillary is one of the many butterflies that, while common in other parts of the country, is relatively rarely seen in New Jersey.



New Jersey's Butterflies On Film

BY LAWRENCE TABAK
PHOTOS BY AUTHOR

I got my first butterfly net when I was four years old. My mother concocted it out of a bent wire coat hanger, cheesecloth, and a few feet of sawed-off broom handle. I must have begged for one for some time since I was wildly jealous of an older neighbor who was constantly chasing butterflies with a similar net. He was six years old.

For the next eight or nine years if a family photo taken between May and September captures me, it also includes one of the direct descendants of that homemade net. After all, one never knew when a prized quarry might drift into the picture.

Fishermen landing that unbelievable trout, coin collectors being handed a 1909 VDS penny, or golfers sinking a chip shot have some idea of how a 10-year-old butterfly collector feels upon netting a Giant Swallowtail or an unknown species of fritillary. A different, but equal, thrill is watching a captive caterpillar undergo the amazing metamorphosis into pupa and finally winged adult. Rearing butterflies is a natural outgrowth of netting them, and advanced collectors spend as much time looking for eggs and caterpillars as for adults.

Although I gave up chasing across meadows in my self-conscious teens, I have since renewed that passion. Instead of a net, however, I now carry a 35mm camera. Photographing butterflies, it turns out, is even more challenging than netting them.

Hundreds of species of lepidoptera (butterflies and moths) can be found in New Jersey, although

even those who spend many hours outdoors can often recall seeing only a few of the more common ones. Finding butterflies is really no problem. It is more a matter of developing an eye than learning any tricks. Different species inhabit different environments; as a result you can find certain butterflies in the woods, others in open fields, and still others along the shore. Probably the best time to observe butterflies is when they are feeding on the nectar of flowers.

One of my favorite New Jersey spots is a long stretch of open meadow that borders a local forest preserve. Here species common to both meadow and woods can be seen feasting upon the flowering thistles, Queen Anne's lace, and milkweed. It is not unusual to find examples of almost all of the pictured butterflies in one afternoon's walk in such an area.

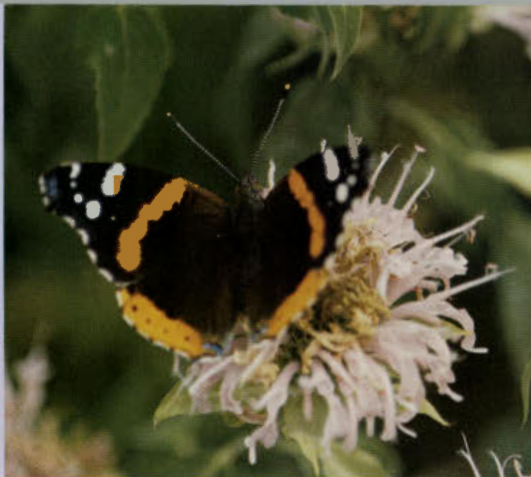
To find the rarer butterflies, such as the prized Olive Hairstreak, one must be more aware of the proper time, place, and food plant. The Olive Hairstreak, for example, feeds on Eastern Red Cedar; knowing this, collectors have no trouble tracking down this particular species that otherwise might never be encountered.

The rather small, goldish-brown butterflies known as elphins are considered good catches; these can be found in late April fluttering close to the ground in the Pine Barrens.

Photographing butterflies takes more patience than special equipment, although the results from



Great Spangled Fritillary, near Princeton. The largest and most common of the Fritillaries, or Silverspots.



The Red Admiral is a familiar butterfly in open meadows and at woodland borders. Either excessively aggressive or friendly, it will commonly land on the light-colored clothes of visiting hikers.



The familiar Monarch is the long-distance champion of the butterfly family. In autumn they can be observed gathering in groups for the long migration south to Louisiana, Florida, and Mexico. Although some of the same butterflies undoubtedly make it back to New Jersey the following spring, most die after spawning a new generation on the way north.



The Common Sulphur is the butterfly that rises in clouds from roadside mud puddles. In open meadows, it is usually the most common butterfly.

a standard 50mm lens are bound to be disappointing. One entomologist suggests unscrewing the lens, reversing it, and holding it to the camera to create an instant close-up lens. Many photographers have zoom lenses with macro settings that are really quite good for shooting larger butterflies. For smaller species the cheapest adaptation is to use extension rings or a screw-on closeup lens that fits like a filter.

For regular close-up photography a specialized macro lens is a boon. Those come in various focal lengths. Since some species tend to be easily startled, it is useful to have a 90-100mm macro lens, which will allow you to be twice as far from the subject as a 50mm macro. The photos illustrating this article were all shot with a 90mm macro lens. For smaller butterflies I add a 2X multiplier, which converts this to a 180mm macro.

When approaching butterflies slow smooth motion is best. The ability to focus and shoot rapidly is a necessity since they are seldom ideal models. Natural lighting is usually sufficient, since butterflies are generally most active on bright, sunny days.

Many of New Jersey's butterfly species are active well into September and October. Probably the most common butterfly at this time of year is the familiar orange Monarch. Monarchs are our only migrating butterflies and can be observed congregating in groups in preparation for a winter in Mexico.

The Tiger Swallowtail is one of the most distinctive and familiar butterflies in New Jersey. It is strongly attracted to flowers and can often be seen in flower gardens, even in urban areas.



Delaware Bay Oyster Transplant

BY LORAIN PAGE
PHOTOS BY DAVID BORRELLI



An oyster cluster

Ray Kirchner examines oyster samples aboard the *Mary Ella Jenkins*.



On a chilly May morning, about 50 boats milled about in the green-grey waters of the Delaware Bay. It was midway through a four-week period known as "bay season," which is the only time of year that the oyster boats come out in such a large number to harvest oysters.

The *Linda Ann*, a Department of Environmental Protection boat used for surveying plots leased by the bay's oysterman, pulled out of the state marina at Fortescue at 7 a.m. and headed northwest, toward Ben Davis Point. Photographer Dave Borrelli and I were aboard, and, courtesy of the boat's captain, Royce Reed, we would spend the day watching the oyster boats harvest "seed" oysters, a "bay season" activity that has been a custom for more than 100 years. Also on board were Ray Kirchner, a marine enforcement officer for the DEP's Division of Fish, Game and Wildlife, and Jeff Feltes, a student assistant.

The Delaware Bay is the source of 95 percent of the oysters produced in New Jersey; 5 percent are produced along the Atlantic coast. The oyster boats of the Delaware Bay are old, wooden vessels that operated by sail for the first half of the century, and then converted to diesel power.

Among the boats harvesting on this morning were the *Contender*, *The Dauntless*, *Louise Ockers*, *Comanche II*, *J. Hammit Lake*, and *Vernetta Ann*. Also out there were *Cashier*, which was built in 1848 and is reputed to be the oldest working commercial vessel in the United States, and the *Martha Meerwald*, a boat that has the distinction of being the only one among the fleet without culling machinery. On the *Martha Meerwald*, a crew of about nine, wearing yellow rain gear, used shovels to pick empty shells from the piles of oysters on deck.

The *Robert C. Morgan*, a boat with a self-dumping dredge, was one of the new boats in the fleet, having been built only a couple of years ago.

More than half of the oyster boats are owned by the eight or ten packing houses in Bivalve, a tiny community adjacent to Port Norris, which is made up almost entirely of marinas and packing houses. The rest of the boats belong to individual entrepreneurs who are hired by the packing houses.

The sun peeked out occasionally from an overcast sky. The oyster boats that the *Linda Ann* visited had been dredging since dawn. They would continue dredging until their decks were laden with oysters; then they would turn and head down bay, smoke billowing behind them. Following the custom of the "bay season," they would deposit their oysters in the water of the lower bay.

"Bay season" is when the oystermen gather oysters from places where they grow naturally—seeds beds—along the Delaware Bay, and transplant them to lots they lease from the state on the lower bay. They do this each year during the last two weeks in May and the first two weeks in June. The water in the lower bay is saltier, which makes for a better crop of oysters when they are harvested later in the year. About 300,000 to 400,000 bushels of "seed" oysters are transplanted during these four weeks in the spring.

Dan O'Connor, an oyster expert who works at the Rutgers University Shellfish Research Lab in Bivalve, talked about "bay season."

"In order to get faster growth, and a better quality of meat—a plumper meat with a saltier flavor, we transplant these oysters down bay, south of an imaginary line called the Southwest Line. The further down bay you get, generally, the bigger the meats are and the faster the oysters grow. That's the main reason for transplanting."

O'Connor said the oyster meats increase in weight by 15 to 20 percent, and sometimes up to 40 percent, by the time harvesting begins in September.

But transplanting is not without risk. O'Connor explained: "The seed bed, which is a natural shoal area that is covered with living oysters, is a sanctuary for oysters. Oysters are safer from diseases and predators on seed beds. But, like the song says, 'Every form of refuge has its price,' and the price of safety is slow growth. If you take risks, you grow faster. That's how the oyster industry works."

The transplanted oysters are harvested for market beginning September 1 and continuing through December. O'Connor said the oysterman empties his leased plot each year.

Oysters are harvested with dredges (the procedures is the same whether the oysters are for transplanting or market) that are lowered from either side of the boat. The dredges, which have teeth, drag along the bottom of the bay. When they are raised, their loads contain lots of oysters—but also other items, like too-small oysters, dead oysters, empty shell, horseshoe crabs, rocks, and other debris. So the loads must be culled.

Most of the oyster boats on the bay have machinery—drum cullers and finger cullers—to cull their loads. Reed pointed out the boats with drum cullers, and commented that they were the most popular. A drum culler spins the load, throwing out the debris and keeping the good oysters. The finger culler is a kind of conveyor belt with teeth. The debris falls out through the spaces, and the good oysters stay on and go to a pile on deck. Even with culling machinery, crewmembers need to stand by to pick out empty shell that stayed by mistake.

Culling is the single most important thing the oystermen can do to ensure the survival of the oyster seed beds. The oyster larvae needs something to attach to, and it can't be sand grains or mud. It needs a hard surface, and oyster shells are ideal.

"A law was passed in 1899 called the Rough Cull Act," said O'Connor. "What this says is that when the dredge comes up—it comes up full of oysters but with a lot of empty shell in it—that this shell must be picked out, separated from the oysters, and thrown back overboard immediately." O'Connor said the DEP's main concern is enforcement of this law for the protection of the seed beds.

"It's a fundamental conservation measure, much like preventing erosion in land-based agriculture. It's to maintain the dimensions, the size, of the bed, so we don't destroy the resource that we have."

Ray Kirschner, the DEP marine enforcement officer, is on hand during "bay season" to "patrol the waters." He rides with Reed on the *Linda Ann*. On this day, Kirschner deftly boarded more than 10 boats. With the wind at 15 knots, Reed steered the *Linda Ann* to almost-touching distance of the boats. Kirschner chatted briefly with each of the oyster boat captains, then filled a bucket with samples from the oyster piles on their decks. His bucket has markings on it that tell him how much empty shell is on a pile versus oysters.

"If I find somebody that is high, I take an additional two more samples, and take an average of all of them," said Kirschner, a middle-aged man who wore a cap over his shortly cropped white hair. "If it's over 15 percent (shells), then he is in violation. Then we make them recull their whole load. All the oysters go through the machine, and the machine will, most of the time, get rid of them."

Kirschner was also collecting oysters to take back to the Rutgers laboratory in Bivalve, where a research team would analyze them.

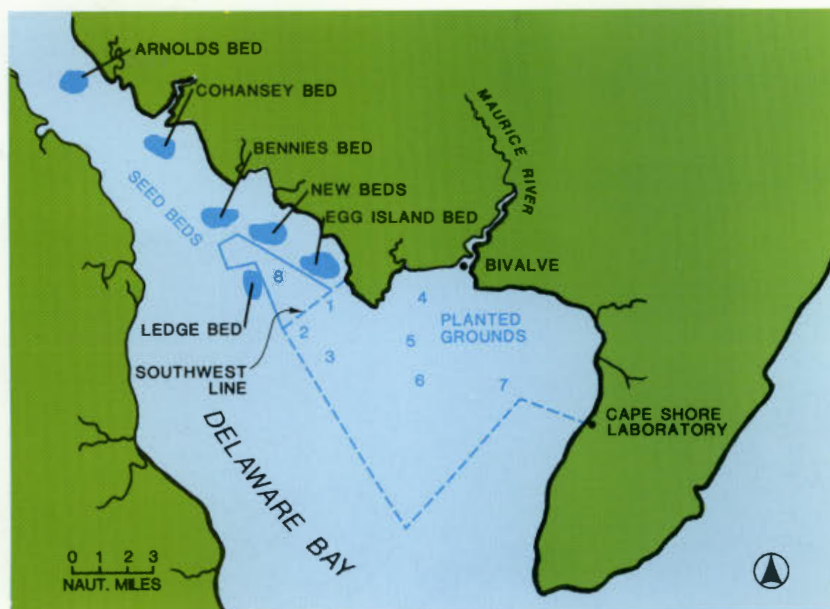
"One day a week, on a Thursday, we measure, on some of the seed beds, how much shell there is compared to oysters," explained O'Connor. "Mainly, what we are trying to do is get a rough estimate on whether that seed bed has been dredged too much, or whether there still are a lot of oysters on it. If it's been dredged very hard, and there are very few oysters left, then we might consider closing that bed to further harvesting for the rest of the season."

The decision of whether or not to close a bed for the remainder of the season is one that is reached jointly by representatives from the DEP, the Rutgers lab, and the oyster industry. If the decision is to close, oystermen are notified immediately. The closed bed will recover sufficiently to allow harvesting on it next year.

At 5 p.m., Kirschner was finished his work for the day; bags of oyster samples lay on the deck of the *Linda Ann*. Later, he would drop them off at Rutgers in Bivalve, where they would be analyzed that night. Reed headed the *Linda Ann* back toward Fortescue. He told the visitors that most of the oyster boats were in the lower bay by now, "blowing off." He explained that that was a term used to describe their task of hosing the seed oysters off deck and into the water. (Shovels are used for this on the smaller boats.)

The two visitors aboard the *Linda Ann* were ready to go home. They would take with them the sights and sounds and smells of the oyster boats, and an understanding of what "bay season" is all about.

In 1984, the DEP instituted the "Cultch Fund," which places a 35 cent tax on each bushel of oysters harvested in New Jersey. The money from this fund



goes toward planting cultch—shell material—on the bottom of the Delaware Bay to ensure that the oyster larvae have something to attach to. The DEP uses the Cultch Fund money to buy oyster shells from the processing houses. These shells are clean—free from organisms and sediment—by the time they are planted in the bay in July. Joe Dobarro of the DEP's Bureau of Shellfisheries says that planting cultch had been done intermittently over the past 50 years in Delaware Bay. Dobarro said the tax is a "user fee" that enables the oyster industry to share in the "maintenance and rehabilitation" of the natural seed beds along the Delaware Bay.

The oysters transplanted during "bay season" are harvested for market September 1 through Christmas. Harvesting is heaviest during November and December, when oysters are most in demand because of their place in traditional holiday fare.

"If the harvest is 300,000 bushels in a year, that is definitely a good harvest," says Dan O'Connor, an oyster expert. "Within the last 10 to 15 years, the harvest has ranged between 200,000 to 400,000 bushels."

New Jersey's oyster industry dates back to the time when Indians along the bay gathered oysters by canoe. The English colonists, also, would come from Philadelphia to collect oysters. Today, oyster harvesting grosses about \$10 to 12 million per year. New Jersey produces about five percent of the total oysters produced. Louisiana ranks first, and Maryland second, in the production of oysters.

Oyster production on the Delaware Bay was much higher for the first half of the century, with an average of one million bushels per year until a protozoan called MSX destroyed large numbers of oysters beginning in 1957. The industry now is recovering from MSX. It is still a concern, though, and is being studied by researchers at the Rutgers University Shellfish Research Laboratory in Bivalve. The MSX parasite attacks oysters only; it has no effect on humans.

The oysters harvested from Delaware Bay are processed in packing houses in Bivalve, before they are shipped by truck to restaurants and markets in Philadelphia, Baltimore, Pittsburgh, Chicago, Cleveland, Toledo, and Omaha. About 70 percent of the oysters are shucked and packed in containers surrounded by ice. The rest are sent intact in their shells for use in restaurant "raw bars."

Legend:

Planted Ground Areas

1. Southwest Line
2. Ledge
3. Miah Maull
4. Ridge
5. Egg Island Bar
6. Deepwater
7. Deadmans
8. Area "E"

Hand culling aboard the *Meerwald*



The Great Memorial

*"I ride a good deal on a wheel of steel,"
Said the man, "And a conscience clear
Will make you feel that a wheel of steel
Is a source of endless cheer."*

—The Wheelmen



The year is 1894. The place, a stretch of Springfield Avenue between Irvington and Millburn. It's a glorious day in May. The sky is clear, the sun is hot. Along the route houses and stores are decorated with red, white and blue bunting, as are the hundreds of farm carts that have lumbered in from the surrounding countryside. Thousands of people throng the streets, waving, shouting, cheering. And the reason? The great Memorial Day Bicycle Race.

Described as the most famous meet in America, the Irvington-Millburn race drew crowds of up to 30,000 spectators in its heyday. The race began in 1880 and was held annually for more than 20 years. The 25-mile five-lap course started at Prospect Street (known as Double Woods) in Maplewood. From there the cyclists rode to the Irvington Hotel, then back through Maplewood to Millburn, turning around at the Baptist Church.

On the day of the race people started pouring into the three towns at dawn. They came by horse car from Newark, by private carriage, on foot or on their bicycles. Everyone was in a festive mood, and the "thimble riggers" (that's the old shell game) had a profitable time working the crowd. Anyone with food or drink for sale was a welcome sight for, as one newspaper put it, beverages disappeared at a "simply astonishing" rate. In *Maplewood Past and Present*, T.B. Dally writes, "Kids would make root beer and scour the town for beer bottles, fill them and sell them for a nickel a piece." Peanuts were another saleable item. Alas, if it rained, the youngsters were struck with their supplies and had, "peanuts, root beer and stomach aches for days afterwards."

The wild rush of bikes at the start of a race often resulted in several contestants being knocked down and bikes trampled to pieces. There were 140 riders, heads down, feet pumping, at the start of the 1894 race, but a number of them dropped out during the first five miles. Billy Murphy, of the famous Brooklyn Murphys, was the favorite, but A.H. Barnet of Plainfield won the race in a record-breaking 1:11:18. His prize: a fine horse and carriage. In later years the prizes were bicycles.

To win his race Barnet had to contend with scorching sun, hilly roads, spectators spilling over on the course and blocking the way, and even fights between the crowd and the racers, not to mention normal hazards of the road. G. Clifford Jones, reminiscing in *Maplewood Past and Present*, describes a typical incident:

Day Bike Race

BY EILEEN VAN KIRK

ILLUSTRATIONS BY
MIKE PARDO

"Many a man was hurt by falls. One poor fellow, who was practicing for days for the event, was dragged into our yard with a smashed face. It was a very little stone that threw him, but it was a very long way from the seat of his high wheel to the macadam—a very long way."

Cyclists did practice for days, even weeks before the race. The City of Irvington became so concerned about reckless riders racing up and down Springfield Avenue that it passed an ordinance limiting cycle speed to 10 mph. It also required every cyclist to signal at each crossing and to carry a lantern at night. In acknowledgement of this ordinance the wheelman held a torchlight parade, blowing whistles and ringing bells in mock compliance.

On May 27, 1895, the *Newark Daily Advertiser* described contestants practicing on roads that were "hard as flint and smooth as a barn floor." That paper also reported the arrest of A.H. Barnet, winner of the previous year's race, who was apprehended in Millburn for "fast riding and using uncomplimentary language to an officer." Barnet strongly protested his innocence and, I believe, made ball in time to enter the forthcoming race.

What started all this madness? Americans probably got their first real look at bicycle during the 1876 Centennial Exposition in Philadelphia. This was the high-wheeler known as the "Ordinary". Its large front wheel measured from 40 to 60 inches with a small rear wheel for balance. Both wheels were steel and fitted with solid rubber tires. The rubber tires did little to eliminate the nickname "boneshaker". Nevertheless, people were fascinated by the bicycle, particularly a man name Albert A. Pope, known as the Colonel Pope from his Civil War service.

Pope could probably be considered the father of the American bicycle. He recognized this crazy looking vehicle's potential and immediately converted The Pope Manufacturing Company from a small parts concern to an importer of bicycles. Next he commissioned the building of an American bicycle, and finally opened a bicycle riding school. He then launched a tremendous publicity campaign to introduce Americans to the marvels of the new machine.

Pope's methods were innovative and successful. He organized agencies all across the country to deal in his bicycles and he set the price. He and A.H. Overman of the Victor Bicycle Company launched the magazine, *Wheelman*, edited by S.S. McLure. (This later became *Outing*, one of the most highly regarded sporting magazines ever.) Pope, Overman and subsequent bicycle manufacturers used assembly line methods which would later make automobile production both fast and economically feasible.

The introduction of the safety bicycle, with both wheels of equal size on a triangular frame, brought the bicycle within reach of everyone. The final touch was the inflatable tire, invented and patented by an Irishman named John D. Dunlop. By 1895 bicycle sales were estimated at 400,000.

"The bicycle," declared *Outing*, "was a peculiarly democratic machine." As indeed it was. Unlike a horse and carriage it was affordable to the working man. Suddenly mill and factory workers in Newark and Paterson, Camden and Trenton, were mobile. No longer dependent on trolleys and trains, they were off to the countryside on their two-wheelers.

But before they could travel far something had to be done about the deplorable condition of the roads. "Scarcely jackassable," was one description. So the cyclists formed an association. The League of American Wheelmen, founded by Colonel Pope, spoke for American's cyclists.

At a Law convention in Asbury Park 1895, cyclists from all across the country lobbied for better roads and, according to *The New York Times*, were being listened to by mayors, ex-mayors and United States Congressmen. The Cape May Bicycle Road Improvement Association raised thousands of dollars for improvements. New Jersey was actually a pioneer in road legislation. As early as 1891 the state passed a law allowing property owners to petition for improvements, with the state paying one third of the cost, owners 10 percent and the balance borne by the county. By 1896 New Jersey was definitely the leader of the nation in road building, laying the foundation for today's network of highways.

As the roads improved the cyclists turned out in full force, riding their machines to work, on shopping trips or just for fun. As with jogging and running today, the benefits of bicycling were extolled by physicians and health enthusiasts. (Although there were some dire warnings about permanent spinal curvature from crouching over the handlebars.)

The Eldritch Bicycle Company, promoting their wares in the *Newark Daily Advertiser*, stated:

"Dieting won't cure you

Neither will medicine

Bicycling will," Buy a Columbia \$100.

Hartford \$80-\$60.

The bicycle helped put the first crack in the color bar for athletes. As more second-hand bikes became available, black men and women were able to afford them. They, too, took to the wheels and joined the great bicycle craze. Unfortunately they did meet with some prejudice when it came to joining bicycle clubs, but not everywhere. The Post Office Cyclers of Newark not only had black members, but when criticized for it, they unanimously elected a black man, Mr. A.L. Sears, as president. One black cyclist, Marshall (Major) Taylor, became a regular contender

Some last minute advice—Newark Velodrome in the 1920's.



on the race circuit, winning a number of races. Once while racing neck and neck with the favorite in the Irvington-Millburn race he had a bucket of water thrown at him, but he generously declared that it was an accident.

If any group benefited from the bicycle it was the American woman. Finally she could come and go as she pleased. The bicycle was her ticket to freedom. Denounced from the pulpit, jeered by the ill-mannered youths, she pedaled away, wearing shirtwaist ankle-length skirt and high button shoes. The much derided bloomer costume favored by the more daring young women never gained full acceptance, but did pave the way for future slacks and shorts. Even today's liberated women probably cannot fully appreciate the intoxicating sense of power and independence achieved by the bicycle riding ladies of the 1890's. One enthusiastic lady declared a bicycle was better than a husband any day!

For the men the bicycle was another challenge in the eternal search for speed. If one rider gained the dazzling speed of 10 mph, the next had to go for 11, and so on, until young men known as "scorchers" were kicking up the dust on roads all across America. Faster and faster the wheels spun until in 1899, Charles W. Murphy (brother of the Maplewood-Millburn race favorite, Billy Murphy), challenged a train. He sped down the track in the wake of a specially-equipped locomotive at 60 mph, earning the title of "Mile-a-Minute" Murphy. His record wasn't broken until a man named Barney Oldfield came on the scene, but that's another story.

The bicycle was king, but already the usurpers were gathering behind the throne. Some were bicycle makers: Pierce, Daimler, Benz, Puegot. One day Henry Ford combined the principle of the internal combustion engine with the principle of the assembly line and a jaunty, affordable car rolled off the runway. The Model T captured the imagination of a restless generation and began to rule the world.

The glory of the bicycle was over, at least in America. Soon the roads were crowded with four-wheelers, chugging, coughing and belching exhaust.

As burgeoning traffic made events such as the Irvington-Millburn race impossible, the sport moved indoors. No story of bicycle racing in New Jersey would be complete without mentioning the velodromes. There were two. Located in the Vailsburg section of Newark, built around 1922, the Newark Velodrome had a seating capacity of about



20,000. The six-lap (one mile) track, made of 2-inch square pine boards, was oval and banked on the curves. Past National Champion and long-time bicycle racer, Victor Fraysse, recalls those board track days.

"Races were held every Wednesday and Sunday and the place would be packed. My dad used to race and I tagged along to watch. They usually ran eight events, including heats and semi-finals. There'd be scratch races, handicapped races, and paced races. The crowd loved them all."

The Fraysses, who own a bicycle store in Ridgefield Park, are a cycling family.

"I was actually named for a bicycle," says Fraysse. "The Victor" built by Overman. It was the bike on which my father won his first race." Emile Fraysse, Victor's father, was organizer and president of the Amateur Bicycle League (later the U.S. Cycling Federation). He was also a coach for the 1932 Olympic games, and the torch has been handed down to the third generation Victor's son, Mike Fraysse (past president of the New Jersey Bicycle Association), was coach for the 1984 Olympics.

When the Newark Velodrome burned in 1933 a new one was constructed in Nutley, on the site of the present-day recreational center. This was smaller, seating around 10,000 people. It had a shorter track (seven laps to the mile), and steeper banks. Victor Fraysse competed regularly at the Nutley Velodrome during its peak years. He believes that promoters contributed to the loss of interest in bicycle racing when they started to bring in outside competitors and set up favorites to win. Whatever the reason, interest declined steadily and the Nutley Velodrome closed its doors in 1939.

Following World War II competitive bicycling had all but died. The bicycle became a child's toy. Until, that is, the introduction of the 10-speed. New speed records became attainable and bicycle racing saw a resurgence. One more New Jersey became a leader in sponsoring races. Today open races are held every weekend from March through November, interspersed with special events such as the Fourth of July Classic held in Rahway, and the Raritan Labor Day Classic.

But somehow nothing quite matches the madness and excitement of those early days when "... the thimble riggers, the bookmakers, the farm boys, the milkmaids, the deacon and his wife ..." all converged at Springfield Avenue to celebrate the great Memorial Day Bicycle Race.

THE GREAT SWAMP WETLANDS CONFERENCE OF 1985

JUNE 7, 8, 1985
DREW UNIVERSITY, MADISON NJ
THE GREAT SWAMP WATERSHED
ASSOCIATION
NEW VERNON, NEW JERSEY

PROTECTING NEW JERSEY'S WETLANDS

A conference convened by the Great Swamp Watershed Association to bring scientists, managers, legislators and the interested public together in celebration of the 25th Anniversary of the Great Swamp preservation effort—and in recognition of the need to protect other wetlands in New Jersey.

Focusing the attention of scientists, managers and local and regional planners on the Great Swamp as a model study area, **Conference attendees** will participate in the development of research and management scenarios for the protection of New Jersey's critical wetlands areas.

The Conference will include opportunities for informal gatherings and for the conferees to know and enjoy "The Great Swamp, a place for all seasons."

CONFERENCE REGISTRATION FORM

Mail to: GSWA Wetlands Conference / Box 421
Far Hills, NJ / 07931

Inquiries: Call Candace Ashmun / 201-234-0817

I enclose registration fee for:

_____ Friday Scientific Appraisal and Function of Wetlands	\$20
_____ Friday Dinner and Round Table Discussion	\$10
_____ Saturday Planning and Management Strategies	\$20
_____ Saturday Reception and Gala	\$10
_____ Surcharge for registration after May 17	\$3 per event
_____ TOTAL ENCLOSED (Registrations will be held at the door)	

Name _____ Affiliation: _____

Address: _____ Tel. () _____

City: _____ State _____ Zip: _____

Please make checks payable to: GSWA Wetlands Conference.

LODGING REQUEST FORM

Mail to: GSWA Wetlands Conference / Box 421
Far Hills, NJ / 07931

Inquiries: Call Candace Ashmun / 201-234-0817

I enclose reservation fee for lodgings at Drew as follows:
(for hotel reservations call hotel directly)

_____ Single Room Thursday night	\$24
_____ Double Room Thursday night	\$48
_____ Single Room Friday night	\$24
_____ Double Room Friday night	\$48
_____ TOTAL ENCLOSED (Lodgings will be confirmed by mail until May 1)	

Name _____

Address: _____ Tel. () _____

City: _____ State _____ Zip: _____

Please make checks payable to: GSWA Wetlands Conference.

American Shad



BY: ARTHUR J. LUPINE
SENIOR FISHERIES BIOLOGIST

On May 5, 1984, while fishing the Delaware River near Columbia, NJ Charles J. Mower caught a new world record American shad. The record female shad officially weighed in at 11 lbs., 1 oz. Examination of several scales indicated the 27-inch fish was seven years old and was spawning for the first time.



At a time when many species are in a state of decline because of human encroachment on our natural resources, the size of the American shad (*Alosa Sapidissima*) annual Delaware River spawning runs have increased in the last several decades. Recent adult shad population estimates conducted by the New Jersey Division of Fish, Game and Wildlife indicate that upwards of 500,000 shad migrate upriver to the major spawning grounds.

A half-million shad may not appear significant when compared to the estimated 20,000,000 adult shad which utilized the Delaware River basin prior to the turn of the century. However, current spawning runs do support a multi-million dollar sport fishery in the Delaware River and a supplemental commercial fishery in the bay.

In the late 1800's the Delaware River basin supported the largest commercial shad fishery along the entire east coast prior to the evolution of the annual seasonal pollution barrier, i.e., when dissolved oxygen concentrations decrease to a level that precludes fish migration and habitation. Approximately fifty miles of the Delaware estuary in the vicinity of Camden, NJ and Philadelphia, PA has a history of major pollution problems. This pollution is a result of high density residential and industrial development along both banks of the river. In addition to pollution, man-made barriers on the tributaries, dredging and overfishing contributed to the drastic decline of the shad spawning runs to a level where there was only a small residual spawning population for many years.

However, during the last thirty years there has been a marked improvement in the overall river water quality. The primary factor for the reduction of pollution has been the cooperative cleanup effort by federal, state, and municipal authorities which led to upgraded sewage treatment and more stringent criteria for industrial effluents. Concomi-

tant with reduced pollution the American shad has responded favorably with the spawning run gradually increasing in recent years.

Increased shad spawning run has resulted in the development of a major sport fishery within a 200 mile area of the Delaware River from Trenton to the East Branch Delaware River in New York state. Shad fishing provides a quality recreational experience for many anglers in the densely populated tri-state area. Each year, numerous anglers can be observed along both shores and in boats during the major migration period from April through June. The angler catch-rate is considered quite good when compared to the catchability of other fish species.

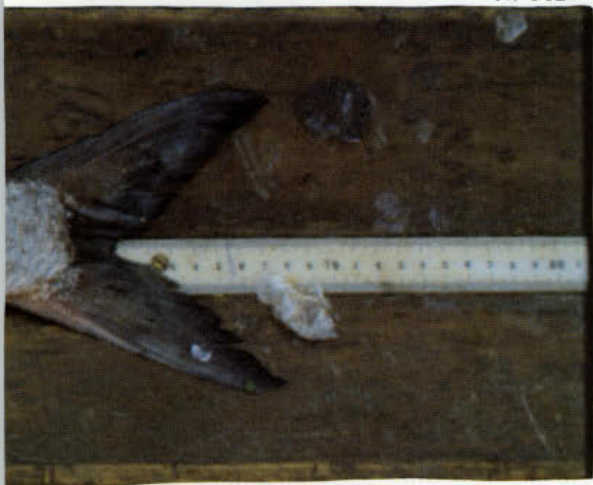
And during the past five years there has been a sharp increase in angler utilization of the Delaware River. In order to accommodate the increased usage the NJ Division of Fish, Game and Wildlife has an ongoing program to develop sportsmen access areas along the river.

What is the prognosis for the future? Unfortunately, shad runs will not attain the magnitude of historical runs even with continued pollution abatement and additional restoration projects. This is because spawning habitat has been permanently lost in certain areas of river where there is little chance of recovery. However, with continued improvement in river water quality, implementation of fisheries management procedures, restoration projects, and assuming that the shad population does not experience an abnormally high rate of mortality, shad runs are expected to improve in the future. Also, juvenile shad production data collected in past years suggests there will be further expansion of the shad population in the Delaware River.

NOTE: Anyone interested in obtaining a list of New Jersey public boat access sites and general information on fishing the Delaware River should send a request along with a stamped self-addressed envelope to NJ Division of Fish, Game and Wildlife, P.O. Box 88, Rosemont, NJ 08556.

New Jersey's Recreational and Commercial Ocean Fishing Grounds

H. UTZY



This 38-page booklet is available from the Division of Fish, Game and Wildlife. It is an excellent reference guide to the State's sport and commercial ocean fisheries. The text includes a description of the fishing methods and level of harvest, as well as illustrations of each species. There are also 25 14" x 14" charts depicting the sport and commercial grounds for all of New Jersey's important fish and shellfish. The booklet is the result of a survey of over 340 sport and commercial fishermen conducted by the Bureau of Marine Fisheries. It was first published in 1982.

Send a check or money order (no cash) for \$3.00, payable to "Treasurer of New Jersey," to cover the cost of print and mailing to:

Nacote Creek Research Station
Bureau of Marine Fisheries
Route 9
Absecon, NJ 08201

ART LUPINE



Shad fishing on the Delaware



Chickweed

Dinner at the Pond

By:

LAURA WEISS, BRYAN BRUNNER, KYLE PATERSON,
IRA TAUBER, DAVID DETORO, WAEL LABBAN,
GREGG GOLIAS

ILLUSTRATIONS BY DOREEN CURTIN

If the average observer paid closer attention to the variety of interesting and edible plants that thrive in and around a pond ecosystem, he would understand how a complete, gourmet meal can be created using the wide array of plant life that inhabits the average pond. It is this array of interesting and edible plants that we used as the basis for our project, which we appropriately call *Dinner at the Pond*. The ingredients for our feast were harvested from a tranquil pond in southern New Jersey. The surrounding forest is basically oak-pine, with a population of sassafras, sweet gum, black walnuts, and sycamores, to name a few. Ducks swimming in the cedar water typical of the southern region of the state add to the natural beauty of the pond.

For our *Dinner at the Pond*, we used a wide variety of plant species all of which deserve a brief description.

Sassafras (*Sassafras albidum*)

From the Spanish parts of America, sassafras was traded into England where it soon acquired a great reputation as a medicinal herb and was sold for a high price. It was the first plant exported from New England. Sassafras grows from Maine to Florida and west to the Plains, and it is usually abundant and easily found throughout its range. Like most plants which have entered deeply into folklore, the sassafras has a number of folk names, including Ague Tree, Chewing Stick, Tea Tree, and Cinnamonwood.

The sassafras is a member of the Laurel family. The bark of a mature tree is furrowed and reddish-brown. The leaves, aromatic when crushed, oxidize in the fall to magnificent reds and oranges. Greenish-golden flowers, which have a spicy fragrance, appear with the leaves in the spring, and the berries, which ripen in the fall, are dark blue in color.

Sassafras tea, famous for centuries on this continent, can be made by dropping a handful of preferably young roots into a pot of cold water and boiling them until a rich red color appears. The same roots can be used two or three times. However, the tea should be drunk in moderate amounts, as an overdose of the oil may have a narcotic effect.

Rose Hips

Rose Hips vary in size from species to species, from the tiny bird-shot size of the *Rosa multiflora* to the huge plum-sized hips of the *Rosa rugosa*.

They are usually green during the summer, turning orange, and finally bright red, in the fall. For the best results, they should be gathered shortly after they turn red (for later they develop a bothersome silkiness about the seeds). The larger varieties are more tasty and generally higher in vitamin C content. There is hardly any other food that is comparable in vitamin C content—a single cup of pared rose hips may contain as much Vitamin C as 10 to 12 dozen oranges.

Rose hips can be made into a soup, which can be served hot or cold, as an appetizer or as a dessert. It can also be made into a jam or jelly; we opted for the latter for our meal. According to Euell Gibbons, however, very few American cooks seem to know how to prepare rose hips so they are really palatable.

Prickly Pear (*Opuntia compressa*)

The Prickly Pear is a member of the cactus family, which is native only in the Americas. In the East, it grows from New England to Florida. They are grown for cattle feed and in thick green strips by makers of cactus candy.

Prickly pears are the cactus plants with the flat stems. The solitary flowers that appear on the padlike joints of the plant are waxy and appear in the late springtime and early summer, lending a certain lush showiness to the dry regions in which it grows. The ripened colors of the Indian figs, as they are also known, range from yellowish-green and purplish-black to the most delicious of them all, the large red fruits of the big *Opuntia megacantha* of the continental Southwest.

A variety of wildlife feast on this species, including doves and sapsuckers and little desert animals, which eat the seeds. Mountain sheep and deer, as well as cattle, disregard the thorns and browse on the prickly pear. The ripe fruit can be eaten raw or used in candy or jelly. The dried seeds are sometimes ground into flour or used to thicken soups. The newer, tender pads can be sliced, boiled, or roasted, and seasoned, and have been used as greens in lean times. A bitterish and somewhat sticky juice can be pressed or sucked from the insides of the prickly pear stem and used as emergency water.

Horseradish (*Armoracia*)

The tiny white blossoms of the horseradish, like those of the other members of the mustard family, have just four petals in the form of a cross. The leaves are often six inches wide and nearly twice as long and have waxy, scalloped edges. The white, fleshy roots are up to a foot long and two inches thick.

The perennial horseradish, regrowing in the same places for dozens of years and spreading wherever there is sufficient moisture, came to the New World from England. It has dispersed and now grows wild



Horseradish



Sheep Sorrel



Black Walnut

throughout the northeastern United States and southern Canada.

The tender spring leaves can be eaten raw or cooked in a small amount of boiling water. Horseradish is also highly nutritious; there are 87 calories per 100 grams of the raw root, plus 140 mg. of calcium, 64 mg. of phosphorus, 1.4 mg. of iron and a whopping 564 mg. of potassium. Horseradish was also used as an internal medicine by the pioneers.

Black Walnut

The walnut is a forest tree that bears one of the most valuable of nuts. Several kinds of walnuts grow in the United States. Two of these are native to the East, the black walnut and the white walnut.

The black walnut belongs to the family *Juglandaceae*, and is a hardy Temperate Zone forest tree which may grow up to 150 feet high. It is grown mainly for lumber, although the nuts are also harvested and sold. These nuts have a distinctive and rich flavor, but their shell is hard and thick. Growers have also developed a few thin-shelled varieties of these nuts.

The nuts are mainly in demand for their use in cakes, candies, and salads. For our purposes, they were used as an ingredient in the tasty persimmon bread.

Persimmon (*Diospyros virginiana*)

The persimmon is one of the finest and most abundant tree fruits growing wild in our country. It is found from Connecticut to the Gulf of Mexico and west to the Great Plains, but is most plentiful in the Middle South. The fruits vary in quality and size throughout their range, and even from tree to tree in the same locality. The fruit is better known for the puckery, astringent quality of the green fruit than for its rich delightful sweetness when fully ripe.

The pulp of the persimmon can be used to bake a tasty bread, which we did using the recipe listed at the end of the report. An additional note—the wood of the persimmon is very valuable, as it is used for flooring, golf club heads and billiard cues.

Jerusalem Artichoke (*Heliopsis*)

This native of North America is a large perennial sunflower, often growing in congested clusters. Its tubers are potato-like in appearance and they bulge from a thickly creeping root system. They are three to five inches long and have a sweetish taste. They can be eaten raw in salads, partially cooked and pickled, or boiled and roasted like potatoes.

Because they prefer damp but not wet ground, Jerusalem artichokes grow along roads, ditches, streams, paths, and fences and in abandoned fields and other wastelands from Saskatchewan to Ontario, south to Kansas and Georgia.

Root-eating animals such as prairie dogs and groundhogs seek these tubers.



Rose Hips



Day Lily

Prickly Pear

Wild Onion



Sassafras



Chickweed (*Stellaria media*)

Chickweed can be found and used any time it is not covered with snow, and from New York southward it can be found in bloom every month of the year. The tender, juicy, pale-green stems are much branched and may reach a length of more than a foot. The flowers are white, star-shaped with five petals.

Chickweed gets its name because young chickens and small birds thrive on both the leaves and the seeds. It has a taste similar to spinach, and it can be cooked, used in salads, or eaten raw. Boiled chickweed is mild and bland with a slight herbal flavor.

Day Lily (*Hemerocallis fulva*)

The Day Lily has become abundantly wild throughout much of America. Its orange blossoms are a familiar sight along roadsides and in abandoned fields during June and July. Although very widespread and familiar, few people know that the day lily is a valuable food plant.

The day lily also produces edible tubers underground, which are about a half-inch in diameter and an inch long. They are borne abundantly, clustered right under the plant. When boiled in water for about fifteen minutes, they have the sweetness and texture of whole-grain sweet corn and a very mild but delicious flavor. They can be dug any time of the year when the ground is not frozen. The older tubers become soft and inedible, but when young they are sweet and crisp, with a nutty flavor when eaten raw. They go very well in salad.

Jerusalem Artichoke



Sheep Sorrel (*Rumex acetosella*)

Garden and French sorrel is cultivated in Europe as a salad plant, but it has become widely distributed in North America. It is a member of the buckwheat family. Its leaves are pale green, softly textured, and shaped like an arrowhead. The flowers are bright and are borne in dense swirls at the upper end of the stem.

The sheep sorrel can be prepared in a variety of ways. Because of the acid, astringent quality of the young leaves, they make an excellent salad green. The leaves also have a thirst-quenching effect. The leaves can be boiled or made into a drink by steeping the leaves in hot water and sweetening with sugar.

Wild Onion (*Allium*)

Wild onions, including the leeks, the chives, and the garlics, grow all over North America except in the far northern regions. They have slender, quill-like leaves and grow from layered bulbs. However, the only characteristic on which to depend is the onion-like odor.

Wild onions usually contain more moisture and are fleshier in the spring rather than early summer. Usually the entire plant can be eaten and prepared in any way onions are. They can be boiled and eaten as a vegetable or pickled in vinegar, and the leaves can be chopped and used as chives.

Some wild onions are particularly potent in vitamin A, and they go very well with eggs.

Recipe for Persimmon-Walnut Bread

- 2 cups flour
- 1 tsp. baking soda
- 1 cup sugar
- 1½ sticks margarine
- 2 well-beaten eggs
- ½ pint (1 cup) persimmon pulp
- ½ cup chopped walnuts
- ½ cup raisins (optional)

Sift dry ingredients. Cream sugar into margarine, adding a little at a time. Add eggs and flour mixture. Mix in persimmons and the rest. Bake in a greased and floured loaf pan for 50-60 minutes at 325°.

Recipe From: *Stalking the Wild Asparagus*. Euell Gibbons 1962.

Wild Apple-Cranberry Jelly

- ½ quart wild apples*
- 1 quart cranberries (wild or domestic)*
- 2 cups sugar
- 1 cup water

Boil water with sugar; add cranberries and apple pieces; cook until berries just begin to burst. (Cook for about 10 minutes- more for thinner jelly; less for thicker jelly.)

*add more or less if desired

Wild Garden Salad With Horseradish Dressing

Wild Garden Salad:

bunch of: sheep sorrel, chickweed, wild garlic, watercress, and any other wild green edible leaf plant.

Horseradish Dressing:

- approx. 1 quart horseradish roots (several large roots)
- 1 cup mayonnaise
- ¼ cup tomato catsup
- ½ teaspoon lemon juice

Grate the horseradish root using the fine grate side of a grater. NOTE!! USE PLENTY OF VENTILATION WHEN DOING THIS; THE VAPORS AND OILS CAN BE IRRITATING. Mix in the remaining ingredients with approximately ½ cup of the grated horseradish. Use more or less according to taste.

Recipes From: An old secret family recipe handed down three generations from the kitchen of Mrs. Pauline Tauber.

Hackensack River Festival

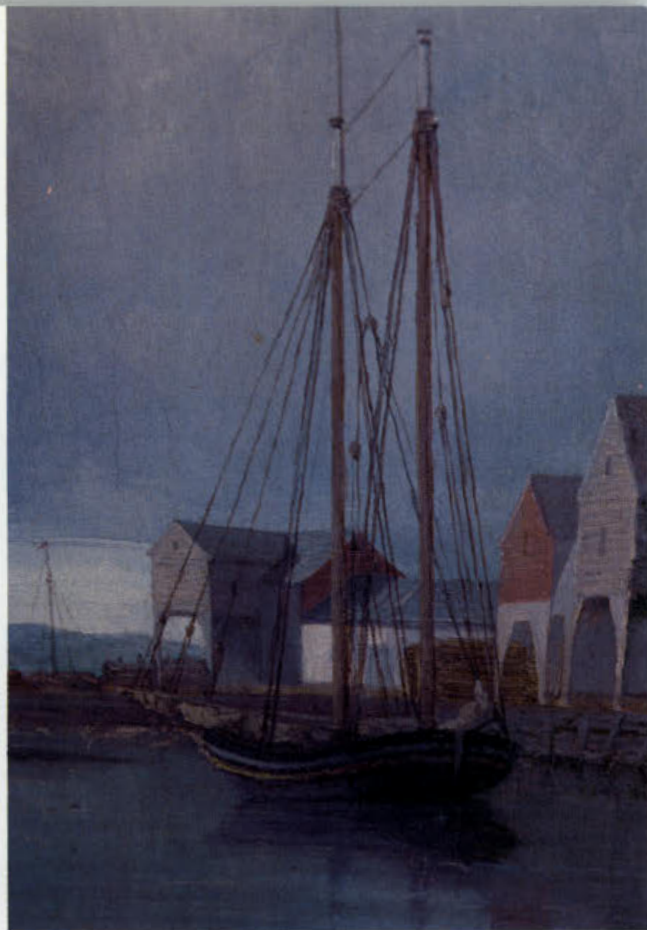
Schooner at Anderson Dock, Hackensack c1860. Photo courtesy of Bergen County Historical Society.

On the weekend of June 29th and 30th, New Bridge Landing Historic Park in River Edge and the Hackensack Meadowlands Environment Center in Lyndhurst will jointly sponsor a variety of activities in celebration of a Hackensack River Festival. Visitors are invited to relive the historic past, discover the riches of the present and share in the ideas and plans for the future of this forgotten natural resource.

The Hackensack Meadowlands Environment Center is perched over the Kingsland Creek Marsh and can be reached by following the signs for Route 17 South to Lyndhurst. For information, call (201) 460-8300.

Steuben House and New Bridge Landing Historic Park are located on Main Street, River Edge. Visitors can take the Garden State Parkway to Route 4 (east). Exit onto Hackensack Avenue (north) in front of the Riverside Square Mall and follow Hackensack Avenue for a quarter mile north to the right-hand exit for Main Street, River Edge. Turn right on Main Street. For information, call (201) 487-1739, Wednesday through Sunday (before 5 p.m.).

The festivities at both sites will take place between 12:00 noon and 5:00 p.m., on June 29 and 30, 1985.



Jersey Shore

continued from page 11

The city publishes a guide to its historic homes, and the Mid-Atlantic Center for the Arts offers walking tours, trolley tours and children's tours of the elegant buildings. A tour of "Mansions by Gaslight" includes: the Abbey, a Gothic Revival estate, built by a Pennsylvania coal baron and featuring a 60-foot tower, elaborate stained glass windows and grand formal rooms; the Mainstay Inn, a gentleman's gambling club that pre-dated Atlantic City's offering of games of chance by 100 years; the Wilbraham Mansion, an 1840s farmhouse expanded by Philadelphia industrialists into a Victorian showplace.

West of the City of Cape May lies the last stop on Ocean Drive, Cape May Point. The village of Cape May Point is a quiet, residential area with no commercial development whatsoever.

Towering above these beach cottages on New Jersey's sandy southern tip is the 100-foot-high, white tower of Cape May Lighthouse, in Cape May Point State Park. Built in 1859, the lighthouse is open to the public, and its tower overlooks the Atlantic Ocean, Delaware Bay, and the New Jersey and Delaware Capes.

The park's 300 acres of marshland and dunes surround the lighthouse, and there are hiking trails, a museum, rest rooms, and picnic facilities in the park.

Although the ocean beach is unguarded and swimming is discouraged, a huge concrete platform on the oceanfront provides a good look-out site for views of the Atlantic and of the City of Cape May to the north. Behind the dunes, a wooden platform allows visitors to peer above tassled cord grass to see the tranquility of a natural marsh that eventually meets the woods.

The Cape May Bird Observatory on nearby Lily Lake is another marsh that is worth a visit. More than 400 species of birds have been sighted in the observatory's marshes, dunes and holly forests, maintained by the New Jersey Audubon Society. The

site's location in the Atlantic Flyway makes it one of the 12 best birding spots in the country.

No trip along the Jersey coast would be complete without a ride down Cape May Point's Sunset Boulevard to its end at Sunset Beach. Each evening, beyond this simple gravel lot on the Delaware Bay, the enormous, orange fire-ball of sun sinks into the vast, open horizon with no natural or manmade intrusions to dwarf its size. To watch a summer day wind to a close on the Cape May coastline is the perfect climax to an adventure that begins with a sunrise at Sandy Hook.

* * *

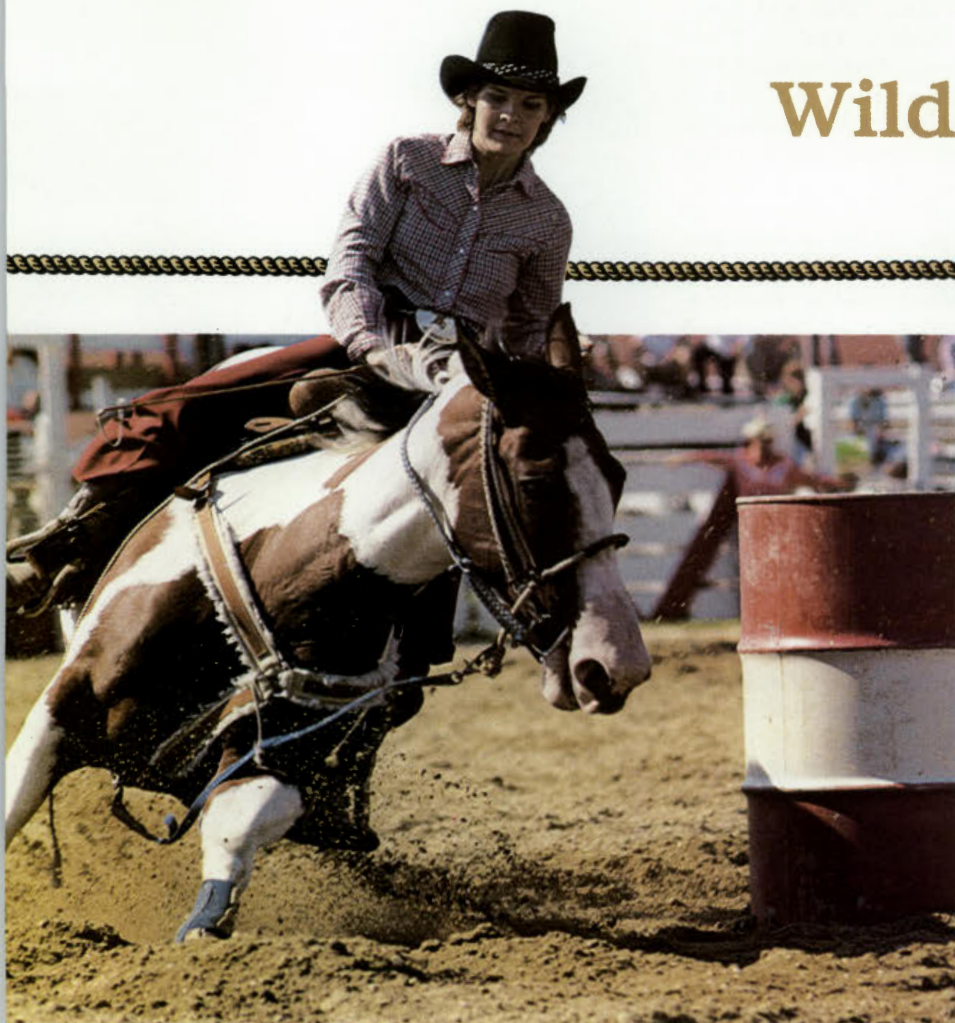
The New Jersey Department of Commerce and Economic Development, (Division of Travel and Tourism, CN 826, Trenton, NJ 08625) publishes free guides to the Jersey shore, including a fine marina and boat basin guide.

More information about the places described in this story can be obtained from the following sources:

- Gateway National Recreation Area, Sandy Hook Unit, P.O. Box 437, Highlands, NJ 07732.
- Twin Lights Historic Site, P.O. Box 417, Highlands, NJ 07732.
- Superintendent, Island Beach State Park, Seaside Park, NJ 08752.
- Barnegat Lighthouse State Park, Barnegat Light, NJ 08008.
- Edwin B. Forsythe National Wildlife Refuge, P.O. Box 72, Oceanville, NJ 08231.
- Stone Harbor Bird Sanctuary Committee, Stone Harbor Borough Hall, Stone Harbor, NJ 08247.
- Cape May County Department of Public Affairs, Box 365, Cape May Courthouse, NJ 08210.
- Mid-Atlantic Center for the Arts, 1048 Washington Street, Cape May, NJ 08204.
- Division of Parks and Forestry, State Park Service, CN 404, Trenton, NJ 08625.

New Jersey's Wild West Frontier

By CARL J. PETRUZZELLI
PHOTOS BY AUTHOR



What do horses, spurs, cowboys, open ranges and cattle have in common? They were a part of the Old West, the Wild West—a part of which lives on today in New Jersey. New Jersey? Yes, New Jersey, where the sounds and excitement of the Old West come alive at Cowtown Rodeo.

Cowboys from all over the East come to Cowtown to compete during the months of June, July and August, when rodeos take place every Saturday night, rain or shine. One of only three weekly professional rodeos in the country, Cowtown was founded 30 years ago by Howard Harris. The reins are now in the hands of grandson Grant Harris, who produces the rodeo and runs the Cowtown Ranch.

"I've always considered myself fortunate because I could make a living at my hobby," said Grant Harris. "I've competed myself for 12 years in saddle bronc riding and this is a way to stay in the business."

On an average evening, nearly 3,000 people of all ages attend the Cowtown Rodeo, and many are return visitors. "Fifty percent of our audience on any given night has been to the rodeo before," Harris said. "Rodeo to my knowledge is as broad based as any sporting event.... Children certainly like it—there's a lot of action and color—and adults go for it too."

Behind the split-rail fence that surrounds Cowtown, it seems to be another era, a place far removed from any city life. Here the dress is casual and very western. Most of the men and many of the women wear cowboy boots and hats. The atmosphere is much like a carnival. You won't find any concrete walkways or paved parking lots. There are no reserved seats save for a few "deluxe" boxes belonging to local ranches and businesses in what would be considered the upper deck at any stadium. All patrons must leave their seats and walk to concession booths to buy their popcorn.

On a summer's evening at Cowtown, the smell of freshly-made funnel cakes fills the air, while a live country-western band provides pre-contest entertainment. As the cattle begin to get restless in their pens, the rodeo begins with fanfare. All contestants, carrying flags, ride into the arena and gallop in circular formation. Then they exit, leaving behind three horses and riders who guard an American flag while the national anthem is played.

The announcer signals the start of the first event, bareback riding. To place in the money, a cowboy must stay on his horse for an eight-second ride. He is allowed the use of one-handed rigging. A rider is disqualified if he bucks off before eight seconds have elapsed or if he touches the horse or himself with his free hand.

The quality of the ride is scored by two judges according to Professional Rodeo Cowboy Association rules. The cowboy is judged from 1 to 50 points and the horse is judged from 1 to 50 points, for a combined total of 100 possible points. An average





score ranges between 50 to 60 points. It takes a strong arm and grip, good balance and plenty of nerve to win a bareback competition. Stock selection is also an important factor in many events.

"You have to draw at least an average or above average horse to get into the money," says contestant Glen Yeo. Yeo has been riding bareback for 15 years. "When I was five my father put me on a calf," he says of his start in rodeo.

"Most important is a good horse and a lot of practice," steer wrestler Skip Akers advises. "You can take a not-so-good steer wrestler, put him on a good horse and all of a sudden he can win."

In the steer wrestling event, a cowboy must jump from his horse onto a steer, stop the steer, and wrestle it to the ground while both he and the steer are traveling at about 30 miles per hour. Akers, a Florida cowboy who started riding rodeo while in high school, has made it to the National finals (the equivalent to the World Series in Baseball) three times since turning pro in 1973. He conducts three-day clinics in steer wrestling.

Akers believes preparation—especially mental preparation—is an important part of rodeo competition. "A lot of it is mental, more so than you may think . . . Once you practice all week and are physically ready, the rest is all mental," he said. "I have a plastic steer head with horns and I carry it with me and just go through mental pictures of what I do. So mental preparation is important."

Akers must be right; he was the top winning steer wrestler last season at Cowtown. He also won the all-around category for winning two or more events.

Barrel racing, a competition that includes women, requires the rider and horse are totally in tune with one another. Contestants must ride a cloverleaf pattern around three steel barrels strategically placed in the arena, and the riders are timed from a start/finish line. Horse and rider must be able to traverse the course at breakneck speed, put on the brakes to maneuver around a barrel, and then speed on to the next barrel. If any of the barrels are knocked over, a five-point penalty is assessed. The event is timed to one hundredth of a second, but on at least one evening last season two contestants tied for the same time.

Rodeo bull riding is probably one of the most dangerous sports in America. Bucking bulls weigh about 1,400 pounds apiece, and they differ from the animals used in Spanish or Mexican bullfights. Bucking bulls don't lower their heads and charge, but rather fix their eyes on a fallen or scrambling cowboy. They can move with lightening speed and will charge at anything, including a horse. Consequently, clowns are used to steer the bulls away from the cowboys after their ride. Some bulls head straight for their pens after being ridden, while others stomp around the arena and wreak havoc. It is the clown's job to change the bull's mind and point him to the door.



"Some people say you've got to be crazy to ride bulls," says Joe Farelli, of New York, the top winning bull rider of Cowtown's last season. "But I enjoy it. . . . Best part is riding them—getting off is the scary part. Hopefully you have good clowns to get the bull away."

In all, there are seven rodeo events. The remaining events include calf roping, saddle bronc riding (similar to bareback riding, but a saddle is used on horses weighing about 200 to 300 pounds more), and team roping, which involves two cowboys.

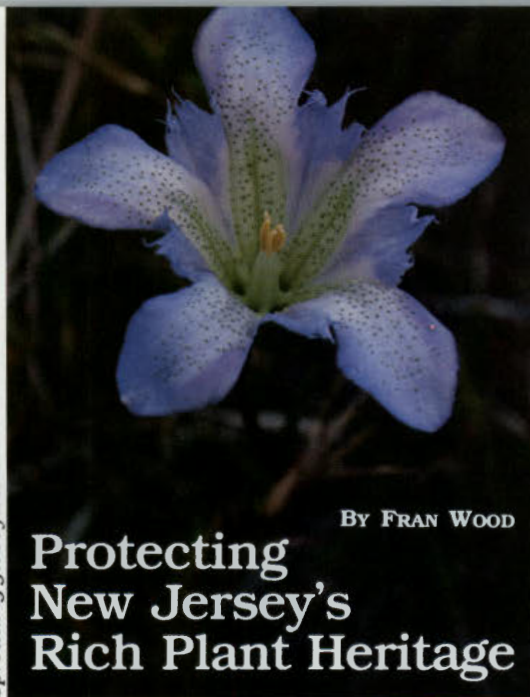
Born in the 1880s out of the forging of the western frontier, rodeo is an American sport, steeped in American history. It was only natural that these cowboys found a need to challenge one another to see who was the best of their trade. From these early beginnings came the Professional Rodeo Cowboy Association, which has been the sanctioning body for pro rodeo for the past 50 years.

Unlike many professional sports, there are no big television contracts or multi-million dollar player contracts in rodeo. Cowboys must pay their own way from rodeo to rodeo, and pay their own entry fees. "Our circuit is 13 states and there are not enough rodeos and enough money to make a full living at it," says East Coast rider Glen Yeo.

Although rodeo lacks the money and glamour of many professional sports, it offers an abundance of excitement and fast-paced action. The next time you find yourself trying to think of something different to do on summer's Saturday evening, try a visit to Cowtown Rodeo and take a trip back in time. Cowtown is located south of Woodstown on Route 40.



Spreading globe flower



Pine Barrens Gentian

BY FRAN WOOD

Protecting New Jersey's Rich Plant Heritage



Mystery



Pineland Endemic

Modern technology, methods of preservation and fine craftsmanship have made obsolescence virtually impossible. We need not worry if our favorite silver pattern is discontinued, for we can always get it through open stock; we can produce museum-quality furniture down to the last detail—including the marks of age and stress, and the average eye cannot distinguish the reproduction from the real thing; when producers decide to make a home video version of "Gone with the Wind," they need not worry about recording from an overused print, because they can get a mint-condition reel from the studio vaults.

Unfortunately, such methods are useless when it comes to preserving plant life. We cannot supply a stand of thimbleweed through open stock, or reproduce a small white lady's slipper in a design studio; or keep a creeping snowberry in a vault. Extinction is irrevocable. Once a plant is gone, it is gone forever.

It was an appreciation of this phenomenon and an abiding concern for New Jersey's rare and unique plants that prompted the state's Office of Natural Lands Management to prepare and compile a list of the state's threatened plants some months ago. It was not the first such list—indeed, many of the entries had appeared on lists prepared in 1973 and 1981, but there's a good chance this one may serve as a guide to future legislation to protect New Jersey's rich plant heritage.

The list, which includes some 245 species, was prepared by David B. Snyder, a botanist for the N.J. Natural Heritage Program housed in the Office of Natural Lands Trust (a cooperative agreement between Nature Conservancy and the N.J. Department of Environmental Protection.) Divided into four priority groups, the list ranges from plants which are known to exist and have had their locations established to those which may already have disappeared in the state.

"The first group, Priority 1, contains species which are known or believed to be rare throughout their worldwide ranges," explains Snyder. "These are either listed by federal government as threatened, or are under federal review." (The term "threatened," he notes, applies to plants whose continued survival, either in the United States or in New Jersey, is or may soon be in jeopardy.)

The second group, Priority 2, comprises species of extreme rarity in New Jersey. "These are so rare,"

PHOTOS BY DAVID B. SNYDER

says Snyder, "that if they are not protected they will be lost to the state." In some cases, there is only a single known population of a particular species, he adds.

Species in Priority 3 are species which are of rare occurrence in New Jersey but have not been observed for many years. "These species may be common elsewhere, but they are rare in New Jersey," says Snyder. "Many of these haven't been seen for 30 years or more, but we think they're still around. These are plants that, before we write them off, have to be checked out."

The prognosis isn't so optimistic for Priority 4. It includes plants which, despite repeated searchings, haven't been seen since the turn of the century. "Many were originally recorded from a single location which may now be developed," Snyder explains. "Others have been searched for and not found."

With so many plants on the list, the priority system is understandable. "Realistically, if you have a list of more than 200 species, you'll have a very hard time protecting them," says Bob Cartica, senior planner for the Office of Natural Lands Management. "You have to prioritize. The Priority 1 list is the one we are most concerned about. It contains 45 species, 27 of which have some federal recognition and the rest believed to be rare throughout the worldwide range." Priority 2, with another 16 species, would also be desirable, he says, "but Priorities 3 and 4 may not even exist anymore. We have to work with a number we can logically deal with."

Besides, he adds, "if you can protect 75 to 100 species, you will probably take another 100 along with them, because they occur in the same habitats."

Both Snyder and Cartica, and their colleagues in the department, are eager to make the public aware of these plants. "They grow in every possible habitat in the state," says Snyder, "from pristine woodland to roadside, Pine Barrens to backyards."

"It's not a case of drawing up legislation that says you can't pick, cut, mutilate or otherwise disturb these species," says Cartica. "Most people don't know what these plants look like, so that wouldn't work very well." Rather, he says, the focus must be to protect the *habitats* of these species. "To protect a habitat, you either preserve it in its natural condition, or you incorporate consideration for rare plants in the normal planning procedures."

Wait a minute. Is that "ecologese" for "no more construction in the state of New Jersey"?

"Absolutely not," says Cartica. "and that's one of the main reasons we need to educate people about this. First of all, many of these habitats aren't areas which would even be considered for development. In fact, many are already on state-owned lands. Second, there's no reasons why protection of our threatened plant species should preclude future development. Their coexistence is essential."

Additionally, he says, "it is important to realize that laws governing development already exist. Legislation covering threatened plants would merely 'include plants in the normal planning procedures.'"

"There's been a concern since 1973, when Dr. (David E.) Fairbrothers and Mary Hough put out their list, 'Rare or Endangered Vascular Plants of New Jersey,'" says Snyder. "Many states have protected lists and legislation to safeguard and preserve species on those lists."

While such legislation exists in some 30 states, according to Cartica, "New Jersey probably needs it (legislation) more than any other state. It has five

zones of varying geology and vegetation, and within each is a variety of habitats. Considering this, and the intense development we've seen in New Jersey, one can see the need for protective legislation."

That the state offers the natural environments for such an enormous variety of plant life should come as no surprise. Even more astonishing, 42 percent, or nearly 2 million acres, of the state is forest. And there are 6,400 miles of rivers and streams and some 965 lakes and ponds and reservoirs. "You have great expanses of woodland on the Kittatinny Mountains which are largely undisturbed," he says.

With so much pristine land, then, and much of it already either state-owned or under some form of protection, isn't it a bit redundant to talk of further protection? In a word, no—because there's no guarantee that what seems reasonable for, say, air and water quality is also going to constitute sufficient protection for plants. Cheesequake State Park, in Middlesex County, is a case in point:

"It's largely a case of knowing what you have and how to avoid having a negative impact on it," says Bill Vibbert, Cheesequake's superintendent. "For instance, we have a nature center under design, which we hope to build in the not-too-distant future, and placement of the parking area has been discussed quite a lot. We have a very large lady slipper collection here—perhaps the largest in the state—and we want to make sure nothing we do is going to have a negative impact on them."

If, about now, you're wondering if it wouldn't be a whole lot simpler to create controlled environments where such plants could flourish without considerations like trail placements and water runoff and such, forget it. "Most people don't believe in 'plant zoos,'" says Cartica. "If you take a plant out of its natural habitat and breed it in captivity, you lose a lot of the characteristics that enabled it to survive in its natural habitat. The goal is to preserve the habitat, and that goal can be realized if the location and biology of the species is known. It's the only sure-fire method of preservation."

Will the new list result in legislation? It's too early to say. "Since there was no official list, it was necessary for us to provide a frame of reference for what a rare plant is," says Snyder. "As of now, this isn't even an official list—but we certainly hope an official list will be authorized."

"We came out with this to develop some momentum," agrees Cartica. "And also because it could be used by local groups. One of the most important ways to preserve plants is through public awareness. If people are susceptible to learning about these species, that's where protection will come about—even on private lands."

"But right now, all we have is a list. It's unofficial. There's no legislative mandate. But if people want to use it to protect some species, great. If they can gather enough support in their area to influence their planning boards, that's terrific."

And if the necessary support to promote legislation isn't forthcoming?

"Well, if you can't do anything to protect these species, you're wasting your time," says Cartica. "We're talking about an important part of our natural heritage which, up until now, has only been recognized by experts in the field. Any influence we can bring about to protect these species is really important."

To receive a copy of the list, write to:
Office of Natural Lands Management
109 W. State St., CN404
Trenton, N.J. 08625

CALENDAR OF EVENTS

(continued from page 5)

- 29
2-6:00 P.M. Jersey Jazz in the Afternoon featuring New Jersey Jazz Ensembles
Liberty State Park, Jersey City, Hudson County. (South Embankment looking across to the Statue of Liberty)
- 30
SUNDAY
3-5:00 P.M. Country Western and Bluegrass Music Festival
Wharton State Forest, Atsion Recreational Area, Burlington County
- JULY**
- 7
SUNDAY
1-4:00 P.M. Salsa in the Sun featuring Salsa and Hispanic Music
Spruce Run Recreation Area, Hunterdon County

OUTDOOR CLUB OF SOUTH JERSEY, INC.

Route 4, Box 162, Franklinville, NJ 08322 609-694-4396

Call for Ride Guidelines and Classifications

MAY

- 12
SUNDAY
10:00 A.M.
C+ MILES OF MILLSTONE—39 miles. Mostly flat ride through beautiful farm country of Millstone and Upper Freehold Townships. Few stops. No restrooms. Short rest stop with food available. Meet at Allentown High School, High Street (Rt. 539), Allentown, NJ. From SJ, take Rt. 130 North, right at Rt. 534 exit, left onto High Street. Joint ride with Princeton Free Wheelers. Leader: Joey Sapia, 609-655-5467.

- 18
SATURDAY
9:00 A.M.
C+/B+ CLINTON-ROUND VALLEY TOUR—70 miles. Peaceful, somewhat hilly Hunterdon County farmland, with numerous hamlets, churches, and parks along the way; as well as splendid views. Two major climbs. Bring or buy lunch. Meet at Lambertville IGA, Rt. 29, Lambertville, NJ (north end of town). Lambertville is 9 miles north from the Int. 95 crossing of the Delaware River. Leader: Tom Burns, 301-439-6191, 609-585-7926.

- 18
SATURDAY
10:00 A.M.
C ONE FOR THE GALS—25-30 miles. An easy paced ride (trust your leader) in the vicinity of Medford. We will visit three or four Craft/Collectibles/Antique Shops along the way. Bring lunch and meet at Medford Acme, Rt. 70, Medford. **Very patient** guys are welcome also! Leader: Ruth Huking, 609-654-8472.

- 18
SATURDAY
11:00 A.M. HIKE CARNEGIE LAKE, PRINCETON—7 miles. Easy pace. Good hiking on paved roads, fine gravel and grass. Walk includes lovely residential area; part of the Princeton Campus and back along the Raritan Canal Towpath. Meet at the State parking lot, Rt. 27, Kingston, beyond the sign to Rocky Hill and over the bridge, 3.3 miles north of Princeton. Leader: Chester Park, 609-667-2749.

- 19
SUNDAY
11:00 A.M. EDIBLE PLANTS WALK—Easy pace. A perennial favorite! Discover the useful and edible plants of the Pine Barrens. Bring lunch and beverage. Meet at Whitesbog Commons by the water tower, Whitesbog Village, north of Route 530, 3 miles east of Mirror Lake, Browns Mills. Leader: Nora Hayes, 609-261-2857.

NATURAL LANDS TRUST

presents

"GENJIAN"

by
Stefan Martin

"The donation of land preserved in its natural beauty is a priceless and enduring gift made to present and future generations."

The Edition

To commemorate the 15th anniversary of the State of New Jersey Natural Lands Trust, a series of three nature engravings has been created for the Trust by New Jersey artist Stefan Martin. There are 250 prints in each edition. 200 of these may be purchased and 50 will be retained by the Natural Lands Trust.

Each engraving will illustrate an object of the Trust's preservation efforts. The first engraving of the series, "Pergrine Falcon," is representative of those species of wildlife which are threatened by the careless acts of man, yet can be restored by his thoughtfulness. The second engraving "Morning Stream," typifies a northern New Jersey river habitat and symbolizes the dawning of the Natural Lands Trust as a vital force in the pursuit of habitat preservation.

This, the third engraving, "Gentian," depicts one of a number of beautiful and delicate wildflowers that are vanishing at an alarming rate because of loss and neglect of habitat. It is the Trust's resolve to preserve areas where the Pine Barrens gentian and other threatened species abound.

The engravings are printed on 12" x 16" sheets of okawara paper, a natural white handmade Japanese rice paper and the image size is 8½" x 12". Each is hand printed, signed, numbered and titled. Prints of this size normally sell for \$200 (depending on the level of detail), but are available through this special series for \$125.00 each.

The Artist

Stefan Martin has mastered the exacting art of end grain wood engraving, a print technique demanding extraordinary skill and patience. His wood engravings and incised paintings have been widely exhibited in one-man and group shows throughout this country, and have been shown in South America, Europe and China. He has received a number of grants and awards and is represented in numerous museum, institutional and private collections including the Museum of Modern Art, the Metropolitan, the Holmberg Museum, Smithsonian Institution, Chicago Art Institute and the Rockefeller Collection among many others. Martin is a former Vice President of the Society of American Graphic Artists and currently serves as Art Director of the Printmaking Council of New Jersey.

The Natural Lands Trust

The Natural Lands Trust, a non-profit public corporation within the Department of Environmental Protection, encourages through donation, the preservation of natural areas, endangered species habitat and land dedicated to passive recreational pursuits.



To Order

To order, send a check in the amount of \$125.00 payable to the Natural Lands Trust, c/o The Office of Natural Lands Management, 109 West State Street, CN 404, Trenton, NJ 08625.

The proceeds from the sale of the prints will further the preservation efforts of the Natural Lands Trust.

Dear Editor

New Jersey Outdoors welcomes letters from readers. Letters for publication should include the writer's name and address and should be mailed to: Editor, New Jersey Outdoors, CN 402, Trenton, N.J. 08625. Letters may be edited for reasons of length or clarity. Please keep the letters coming. We'd like to hear what you think about the magazine. We'll also try to answer questions and if we cannot, we'll ask our readers for help.

As readers/subscribers to New Jersey Outdoors we wish to add some comments and observations to the enclosed Readers Survey.

In our opinion, such a survey should be conducted at least every three years ... so our congratulations on initiating this valuable tool for future readers.

Ref. Question #6: In the past few issues we very much missed the "FOCUS ON ..." features. This was the feature that initially brought our attention on New Jersey Outdoors. We also miss the "Environmental/Conservation 'update' features which were formerly in a separate colored section. We find that an occasional 'follow up' on ongoing projects retains our interest.

Ref. Question #8: We are concerned about Soil/water conservation and environmental pollution. How about a feature, in depth, on the States 25-30 worst POLLUTANTS AND POLLUTORS, based on State record, and how to combat these problems.

Ref. Question #14: May we suggest a smaller 'appointment book' type calendar or perhaps something like the 1964 New Jersey Tercentenary Calendar, of which we were major contributors.

We would like to see more Carol Decker Sketches and more nature photos by people like William Griffin (Morristown), William Hawkins (Pemberton), Edward Degginger (Convent Station), Cornelius Hogenbirk, and Breck Kent.

Thank you very much for this opportunity to express ourselves. Hopefully New Jersey Outdoors will continue to provide the coverage to increase its readership and to be an effective tool in conserving our Environment.

Sincerely,
Charles & Denise Mueller
Brookside, N.J.

In answer to your first question, we have printed a Reader Survey every three years, the latest is the fourth.

Ref. Question 6 (Reader Survey) we have several "FOCUS ON" features on file—we haven't been able to use them because we have a large backlog of articles.

The "Environmental News" is published separately but is available free by sending your name and address with zip code to: Editor, Environmental News, CN402, Trenton, N.J. 08625.

Ref. Question 8 "Pollutants and Pol-

lutors" articles are featured from time to time in the Environmental News. For specific pollution information, call the DEP hotline, (609) 292-7172.

Ref. Question 14 We are more or less committed to a full size calendar.

...

I am writing in reference to the article "A Factual Fish Tale" in the March/April 1985 edition.

Being a Throckmorton I am curious whether Ben Van Vliet's story has any fact to it or whether it is all fiction or a combination of both.

My grandfather had a home on Shrewsbury Ave. in Red Bank and the property extended down to the river where he had a boat house. When I was young in the '20s I spent a lot of time there, at that time my grandfather and his two brothers owned the Merchants Steamboat Co. that operated boats out of Red Bank to N.Y.C. I was also familiar with the Red Bank Register.

Maybe you or Mr. Van Vliet could give me more information as I am curious and interested about the source of his data for the article.

Thank you
James S. Throckmorton
Berkeley Heights, N.J.

Ben Van Vliet answered Mr. Throckmorton's letter and we thought our readers would also be interested in this exchange:

Dear Sir:

Thank you for your letter with respect to my article in *New Jersey Outdoors* entitled "A Factual Fish Tale."

The article is as factual as I could ascertain. Nearly all of the material came from the United States Fish Commission Report of 1879, and from a feature story written by Edme Seton in the April 14th., 1974 edition of the *San Francisco Examiner and Chronicle* which was pieced together from early newspaper reports and various government documents.

I was also able to find references to the attempt to catch striped bass fry from the Navesink River in the June 1879 editions of the then *Red Bank Register*, although I was not able, because of time, to find further references to Mr. Throckmorton.

As a native of the Red Bank area, I am well aware that the Throckmorton family was prominent in the early development of Red Bank and its environs.

For your information, I have enclosed a copy of the newspaper article and the U.S. Fish Commission Report which pertain to the transfer of striped bass from the Navesink to California.

I hope that this will be of interest to you.

Sincerely,
Ben Van Vliet

I enjoy your magazine very much and have been receiving it for years.

I belong to the Outdoor Club of South Jersey which I think if you investigate it would make a fine interesting article for your magazine.

They have 1550 members and have activities all year round. These include backpacking, hiking, bicycle riding. A fine organization with fine clean cut members. I would strongly suggest that you investigate for a future article.

Last September I participated with the group to do the Batona Trail 40.6 miles in ONE DAY. This same event is scheduled for May 4, 1985. Really a test on anyone's physical strength.

Dr. Thomas P. Brooks,
President
Outdoor Club of South Jersey
Franklinville, N.J.

Note that Calendar of Events (pages 5 & 37) lists many Outdoor Club of South Jersey activities.

...

I am a new subscriber to New Jersey Outdoors. I usually read your magazine in waiting rooms and have become "hooked." Being a fisherman and small boat sailor, I bought a lake front home on Pleasant Valley Lake. Much to my surprise and pleasure was your story of Largemouth bass on page 27 and the 6 lb 14 oz bass caught here. It was really great to see you write a story in my own "backyard." Usually other magazines write of far distant places I may never get to see but this one is right out of my patio and picture window. Keep up the good work.

We are also camping people and enjoy articles about Sandy Hook and especially Cape May and the point.

Edward G. Van Allen Sr.
Vernon, N.J.

...

I am a former resident of Union County, having lived at one time or another in Cranford, Roselle, and Elizabeth. In May 1976 I retired and emigrated to the low-country of South Carolina near Beaufort.

Your fine outdoors magazine keeps me informed with the goings-on up there in my native state. I am most impressed with artist Carol Decker's very professional life-like wildlife illustrations found in the inside back covers of New Jersey Outdoors magazine

Keep up the good work.

Sincerely,
Bob Henne
Frogmore, South Carolina

Wildlife in New Jersey

The Pied-Billed Grebe

BY ANNE GALLI

This is a new experience in my life as a bird watcher. Using my car as a blind, I am parked on a dike banking the Hackensack River in Kearny. Overhead are tons of concrete and steel supporting the elevated section of the New Jersey Turnpike as it bridges the river and the wetlands. The massive pillars supporting the roadway cast long shadows and in the shade of this structure it is cold. I am here because, surprisingly, these marshes in the midst of New Jersey's urban and industrial heartland are one of the best places in the state to see Pied-billed Grebes.

The grebes that disappeared beneath the water at my arrival are reappearing, so close that I do not need binoculars. I have, of course, seen Pied-billed Grebes before, but always at a distance across the wide expanse of the winter salt marshes of southern New Jersey. The Pied-billed Grebe's unique silhouette is perhaps its best field mark. Although it is shaped somewhat like a small duck, this foot-long bird has a thick, blunt, chicken-like bill very different from the flattened bill of a duck. It is compact and short-necked with small head and floats high in the water. From afar, this grebe appears to be all brown; however, if you are as close to one as I am now, the subtleties of its coloration become apparent. It has gray, brown, and black patterns on the flank, and a white undertail; in summer, it is marked by a black throat patch and a dark ring around its pale bill.

Grebes are swimming and diving birds, with unique physical features and behaviors related to their aquatic life. They have unusually soft, silky plumage and a short tail. The toes are flattened and edged with broad lobes instead of being webbed completely like those of a duck. When alarmed a grebe seldom flies, but may quietly, slowly, and without perceptible motion sink by expelling air from its body and features until only its head is above water, then swim away. If really frightened, a grebe may dive, with a taut, forward-arching leap, and swim underwater to the safety of the surrounding marsh vegetation. This disappearing act has earned the Pied-billed Grebe the common nickname "hell-diver." However, in its normal pursuit of prey the grebe dives only to about 20 feet.

Pied-billed Grebes lack the spectacular courtship rituals of their

larger relative, the Western Grebe. During the nesting season they do utter a loud call similar to that of the Yellow-billed Cuckoo; during the rest of the year they are silent. Grebes not only feed, sleep, and court on water, but also build floating nests attached to marsh plants. The clutch of 4-7 eggs, incubated mainly by the female, hatches in about 23 days. Young grebe chicks can swim and dive, but not well, so both parents carry their black-and-white striped young around on their backs or snuggled under their wings while they dive and swim underwater.

Pied-billed Grebes are secretive during the breeding season, when they inhabit ponds or marshes having dense vegetation and some open water, or estuarine waters where tidal fluctuations are small. They are more readily seen in the winter, on lakes and rivers and in coastal, brackish bays. When winters are so cold in southern New Jersey that open water ices over, grebes are forced to migrate further south. During the colder months in the Meadowlands in northern New Jersey, grebes move to the Sawmill Creek Wildlife Management Area and to the eastern edge of the Kearny Marsh brackish impoundments, where the fast-flowing water keeps some areas ice free.

Superbly adapted for life in and on the water, Pied-billed Grebes feed on fishes, crayfishes, insects, snails, spiders, frogs, tadpoles, some seeds, and soft parts of aquatic vegetation. In brackish areas, they may add shrimp and silversides to their diet. Like other grebes, Pied-billed Grebes also eat their own feathers, and parents feed their feathers even to young chicks.

The Pied-billed Grebe is endangered as a breeding species in New Jersey. Grebes require specific nesting habitat: well-concealed sites with the right proportion of open water to vegetation. Owing to filling, development, and pollution of wetlands, the amount of such habitat has been greatly reduced in New Jersey. One of the most important remaining nesting areas is the Kearny freshwater marsh in the Hackensack Meadowlands District where 15-20 pairs have nested recently. In addition, Pied-billed Grebes nest at Oldman's Creek in Pedricktown, and probably at scattered other sites in New Jersey.

I watch as the grebes in the little culvert below the dike swim and dive, preen, scratch, and sink from sight and I marvel that it all still takes place in the shadow of the concrete and steel.

FRONT COVER

Early Spring Camping on the Wading River. Photograph by Ray Fisk

INSIDE BACK COVER

The Pied-Billed Grebe. Illustration by Carol Decker

BACK COVER

Barneget Light. Photograph by Cornelius Hogenbirk



New Jersey State Library

©'85
Carol Decker

