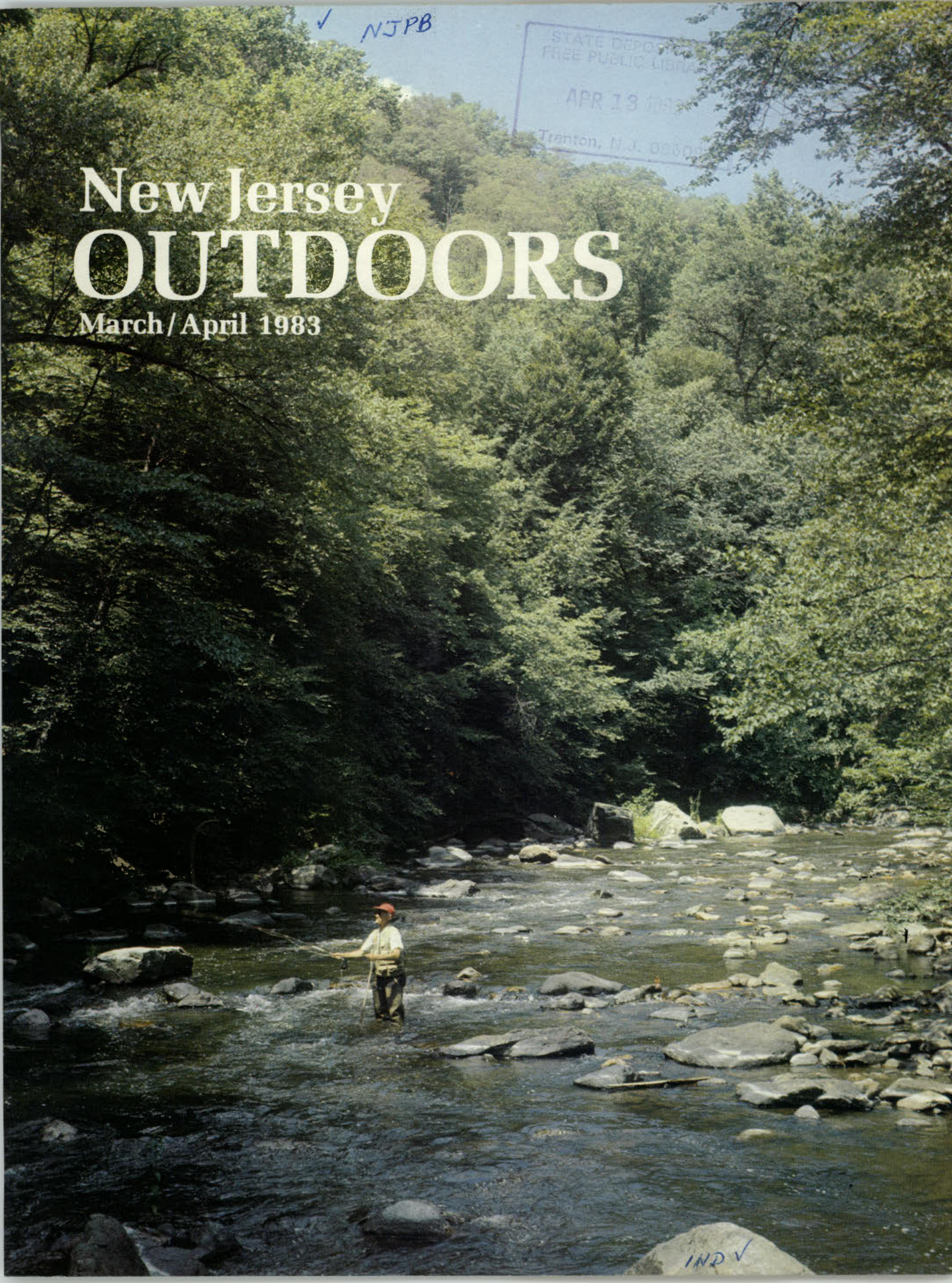


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New Jersey OUTDOORS

March/April 1983



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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.

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From The Editor

It must be Spring!

Because this early Spring issue goes on press in early February, I must write this Spring editorial during the second or third week in January. The weather has not been Springlike. I think it was 5° last night. Yesterday my car wouldn't start. And I was almost frozen solid waiting for an emergency vehicle to jump-start me.

But I must think Spring. Because by the time you read this editorial it will be early March and you will have already seen the first red-winged blackbird, and maybe some cardinals and chickadees too. And if you live by a

pond, or some flooded woodlands, you've heard the familiar songs of Wood Frogs and Spring Peepers. And if these events haven't convinced you that Spring is almost here, check the ditches and low spots by the road as you drive to work and you'll notice that skunk cabbage has pushed up through the muck and mud and is growing fast.

That makes it official. And do yourself a favor this Spring—get out and get involved in outdoor activities. For starters, try some of the activities discussed in this issue.

In this issue

The bison grazing on our western plains on our back cover introduce National Wildlife Week, March 20-26. The National Wildlife Federation selected the theme, "This is Your Land" for 1983. We are reminded that public lands belong to all of us. "The more we learn about these lands, the more fully we can enjoy their benefits, participate in their wise management, and appreciate their importance to the wildlife and citizens of our nation."

On our front cover the trout fisherman on the Flatbrook reminds us that *Opening Day*, April 9 is upon us again. So don't forget to purchase a 1983 fishing license and a trout stamp but first read *Pardon My Back Cast or Excuse Me, I believe You're Standing On My Trout*, written by fisheries biologist Robert Soldweldel and illustrated by Tony Hillman.

Or if you don't like trout fishing, try *Apple Pie Hill/A Hike For Any Season*, written by Bert Nixdorf, former president of the South Jersey Outdoors Club.

Author Deborah A. Boerner concludes

the article, *The Charcoal Industry in New Jersey*, with the question, *Is It Worth Reviving?*

Next, a pictorial piece titled, *A Place to Watch Spring Unfold*, written by Betty McAndrews and photographed by Anne Ross, both new to our publication. The "place" is the Reeves-Reed Arboretum.

Discover Cape May is about the old Cape May and the new. The author, Betty J. Grossberg, is acting Public Affairs Officer at the Pomona FAA Technical Center. Ms. Grossberg nee Moschella was the writer of an article in the September/October 1982 issue on *Scuba Diving*.

Who Was Ken Lockwood? is a first for outdoor writer Marty Boa in our publication. If you've ever fished that stretch of the South Branch of the Raritan called the Ken Lockwood Gorge, you'll want to know.

Forestry Assistant Professor John Kuser from Cook College, Rutgers University explains why *Deer Roadkill Triples in Closed Townships*. John has written for us before but not for awhile.

Arline Zatz is back with an article about Washington Crossing State Park Nature Center.

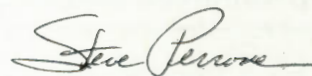
Our *New Jersey in Focus* article by Robert J. McDonnell discusses *35 MM Films and their Selection*.

Outdoor writer Ferd DiPalma says *Five Is About Right* to start fishing.

Cliff Ross, DEP's Water Resources Division, writes about *Emergency Flood Control Bond Funds at Work* in New Jersey.

A Tree Grows in New Brunswick and Elizabeth and Califon . . . is all about the neighborhood beautification projects administered by DEP's Green Acres Program. The author is Jane M. Farrell, a Principal Planner in the Grants Section with the Green Acres Program.

Carol Decker's illustration of *Flying Squirrels* introduces the *Wildlife in New Jersey* article by wildlife biologist Robert McDowell.



Girl Scout Week, March 6-12, gives us the opportunity to see the many ways Girl Scouting affects our world—for the better. We hope Girl Scouts continue to find new worlds for many more years.

“do unto others as you would have them do unto you” applies very well to fishing. If you’re fishing a stream and you see someone downstream of you working a stretch of water, don’t crowd him. Get out of the stream above him and don’t re-enter until you’re a decent distance below him. What’s it going to cost you? Neither one of you is probably going to catch the trout anyway. If you want to fish the specific spot he’s fishing wait him out or next time go there earlier. Respect other people’s territory and they’ll respect yours.

A certain amount of respect is also due the fish. Whether you gently release every fish you catch or serve them

up with white wine, you should bear some reverence for your quarry and appreciate the great privilege of being allowed to pursue your sport and make life-or-death decisions over your catch. Don’t get me wrong. I’m not preaching a total catch-and-release philosophy. With the way I love eating pan-fried trout alongside a stream, that would be the height of hypocrisy. Also, from a fisheries management standpoint, it is often recommended that some fish be removed from a body of water for the benefit of the total fish population. Those of us who come in contact with large numbers of fish through our profession may appear to be rather callous

to the plight of the individual fish, but we are in the position to influence the total fish population through our actions and that is where our main responsibility lies. Even so, we often go to extremes in our concern for the individual fish, helping them to recover if they’ve been hit hard during electrofishing or taking great pains to extract them from gill nets so that they might survive the experience. When fish are killed it is for the ultimate benefit of the fisherman and the resource.

Fishermen and hunters have historically honored and revered their quarry. This is evident from the cave paintings and totems of primitive man to the lucrative wildlife art industry of today. Outsiders cannot understand the love we have for the creatures we pursue. If we ourselves lose this love, then we are no more than what they perceive us to be.

New Jersey is a relatively small and crowded state with a modest amount of natural resources. Population stress and territorial imperative are two very real facts of life and they apply to humans as much as they do to any other animal. In a small, highly populated state like ours, the stress becomes greater and the sense of having your territory invaded becomes more frequent and more acute. This stress can be greatly eased if people show a little concern and respect for the rights of others, a trait that we would do well to exercise not only in fishing, but in every phase of life. **NJ**



Fishermen and hunters have historically honored and revered their quarry



who knows what evil lurks in the hearts of fishermen



territorial imperative

A HIKE FOR ANY SEASON: APPLE PIE HILL

By Bert Nixdorf

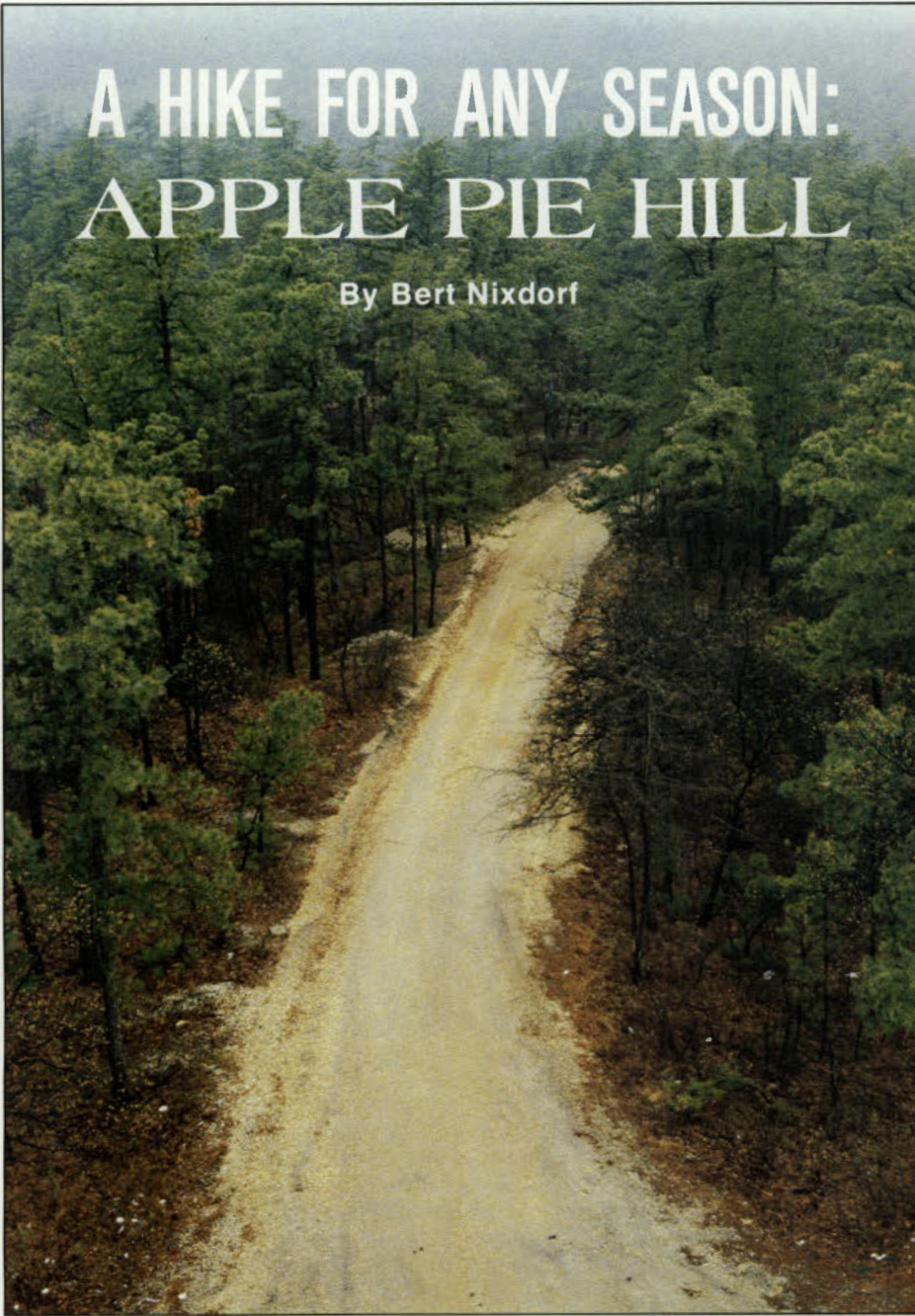


PHOTO BY CAROL C. NASH

If your sweet tooth is aching for a tasty morsel of the great outdoors, try a wedge of the Pine Barrens with Apple Pie Hill at its apex, and you have a slice of outdoor delicacy good at any season, hot or cold. It costs very little; and it's good for your health!

One of the three highest elevations in the Pine Barrens, Apple Pie Hill, at 205 feet, is like the mound on an old fashioned apple pie, perhaps the reason for its name. It rises to an elevation twice that of the terrain in any direction at its base, only a mile away. The hill, serving as a fire lookout station, lies three miles west of Chatsworth, "Capitol of the

Pines." It can be reached by any of several roads and trails. The well-known and well-marked Batona Trail, enjoyed by many individuals and groups, crosses the hill at the fire tower. From Carranza Memorial, four miles to the southwest, the trail winds through the pines, up over Apple Pie Hill, and on to Hedger House, it's about three miles to Pakim Pond in Lebanon State Forest. For camera fans Pakim Pond is virtually unmatched in natural photographic appeal. In addition, it is a popular swimming and picnic area, and it should be included when you're planning a hike or bike ride in the adjacent pinelands. At any season you will

find Pakim Pond totally delightful.

In April the diminutive pineland plant, pyxie, abounds along segments of the trail, and borders some of the sandy waysides. Sandmyrtle, too, is common; it reaches peak bloom about mid-May. Stop and examine petite pyxie's tiny white blossoms, and you will experience an aesthetic treat. Pyxie is one of the first flowers to appear in the pineland spring. As for sandmyrtle, the sight of a huge mass of its white lacy blooms may easily be likened to a covering of the ground with a late season snow shower. You will enhance your appreciation of nature a thousandfold by observing either of these unique species. All you have to do is bend over. As Henry David Thoreau put it, "The richest treasures are the cheapest."

Spring is signaled for many people by the appearance of robins on the lawn or by the incessant whistling of whip-oorwills in the woodlands. But for the Pine Barrens hiker an earlier messenger of the new season is the pine warbler, as it alights at eye level on the branch of a pitch pine. Although its cheery trill is not as elaborate as the delightful song of the common song sparrow, it is just as airy, clear, and pleasing to hear. Usually heard beginning in the third week in March, the voice of the pine warbler announces the vernal season at about the time that spring peepers begin their resounding choruses from the swamps and marshlands.

Hikers are not alone in their enjoyment of ascending Apple Pie Hill. Backpackers and drivers of four-wheeled drive vehicles both enjoy the woody sand roads for their own purposes. There are others, too, who seek such a panoramic overlook. Unfortunately, beer-drinking groups indicate their fervor by the number of bottles, cans, and cartons they discard. Groups like the Outdoor Club of South Jersey and the Boy Scouts periodically have workdays for clearing the environment of this litter.

Crossing the elevation is a satisfying experience. The panorama is virtually unsurpassed anywhere else in the Pine Barrens. Just climb the fire tower, even if only half way, for an awe-inspiring view. Continuing northeast from the tower, you may choose to head for Chatsworth, formerly Shamong, which gets its name from the town of the same name in Devonshire, England. On the route of the Jersey Central Railroad, now inoperative, Chatsworth was the principal community of the Pine Barrens in the nineteenth century. That was when the "forgotten towns" of today were the thriving towns of the era; when operating bog-iron furnaces and making charcoal were two of the chief occupations. Later

came the beginning of the blueberry and cranberry businesses.

Hikers and bikers can "pick-your-own" blueberries for a fraction of the retail price. Only four miles south of Chatsworth many varieties, ripening at different times beginning in late June, can be obtained at Lee Brothers, one of the largest operations in New Jersey. Lee Brothers fields are four-tenths of a mile below Speedwell, on Route 563. Blueberry picking begins about the Fourth of July and extends into late August. During this period it's a blueberry bonanza for the fruit lover, the baker, and the retailer. One of my favorite varieties, one of the largest and most delicious, is Blue Crop. When picking your own, this one's a cinch—it's so large that work is minimal. Your container (and stomach) fills rapidly. A more radiant name for Blue Crop, a veritable jewel among berries, could be "Blue Gem." Light blue in color, it's sweet and succulent. Others may prefer the smaller varieties, some with a sweeter taste, some with a tart flavor. In berry picking season it can become mighty hot and humid, especially at midseason. Picking near Speedwell has its benefits—at midday when the sun is high, picking stops for a refreshing dip in the Wading River, up the road at Speedwell.

Speedwell is an embarkation point for four to six hours of superior canoeing to Godfrey Bridge or to Evans Bridge. Hundreds upon hundreds of canoeists each summer, beginning in May, put in at Speedwell. Canoe rentals are available at Pine Barrens Canoes and at Mick's Canoes, on Rt. 563, and at Bel Baven Canoe Rentals, Rt. 542 respectively seven and nine miles below Chatsworth. River traffic on weekends is heavy, so a weekday is the best time to appreciate the quietness of a Pine Barrens stream. Nowadays the streams are simply overrun with people and canoes. "That's not the way it used to be," says Olin White, of the Division of Parks and Forests. In a phone conversation he told me, "When I first came to this job 20 years ago, I used to walk in the pines and be delighted to meet just one other person enjoying the peace and solitude of the Barrens."

If you venture on a bicycle south-eastward from Speedwell, and beyond the fluting of our "pie," you'll come to placid Lake Oswego, three and a half miles east of Rt. 563, on Penn Forest Road. A beautiful lake, framed by a border of towering white cedars, it is calm and unruffled. The waters are soft and pure; in fact, they're pristine. The current flows peacefully towards another canoe embarkation point, at the dam. The Oswego River run is about four hours through richness of beauty and botany, to Harrisville Pond. Cooling and

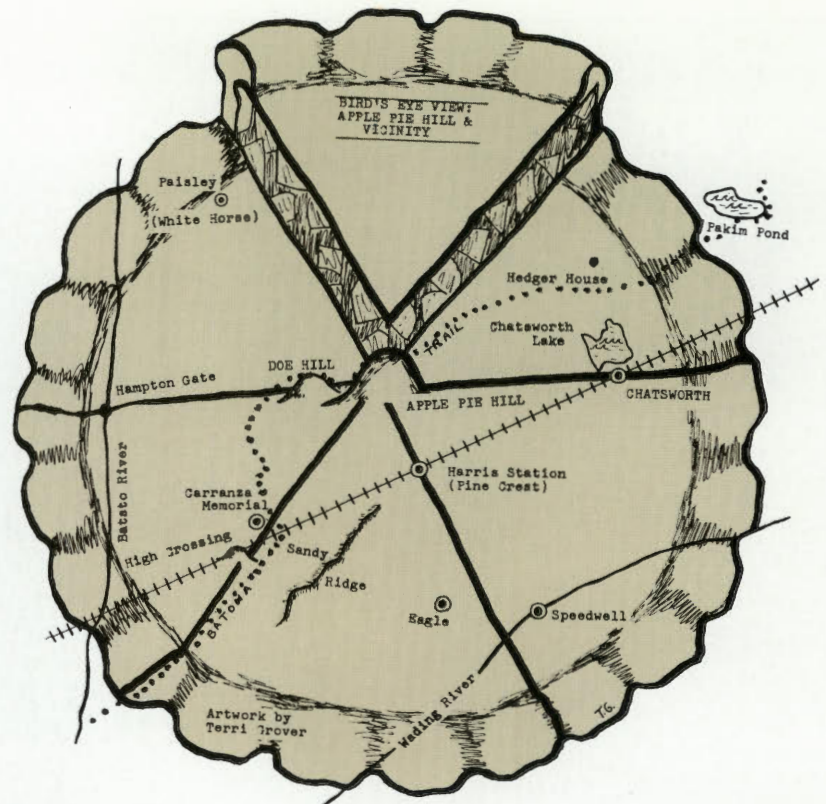
refreshing are understatements of the beneficial effects of a dip in Lake Oswego after a humid and sticky hour or two in the berry fields.

Speedwell, probably named for the wildflower which grew here in abundance in earlier times, is the site of a former bog iron furnace, dating back to 1773. It makes a fine starting point for another serving of our outdoor pie. Walk Harris Station Road northwest to the railroad and to a wide, open area in the otherwise thick pine woods. This is Pine Crest (formerly Harris Station), a five-point intersection of sand roads, one leading almost due north to Apple Pie Hill, a scant mile to the tower. Harris Station used to serve as a railstop for shipments of lumber and paper, brought by horse-drawn wagons from Harrisville, ten miles to the southeast. To hike the same route today you would have to cross the Wading River by walking or wading, an enjoyable summertime activity. Where the bridges used to span the aptly named Wading River, today only the pilings remain, protruding above the surface.

Following lunch from your daypack, you will veer off in a southerly direction where the road curves, three-tenths of a mile southwest of the former loading center. At the fork in the road, just beyond a widening of the Featherbed Branch, a widening which appears more like a pond or small lake (or in times of drought, like a bed of dried grass), you will stay to your left and continue to the

Speedwell-Friendship Road. Making another left you'll be a little more than a mile from where you started. Shortly before exiting onto Speedwell-Friendship Road, you'll see a small hill. This is the site of the former Eagle Tavern, important stagecoach stop and "watering hole" for tired and weary passengers. Still closer to Friendship Road is a small fenced-in cemetery, 12 feet by 12 feet. One headstone remains. It reads, "Ch. Wills 1839." Such cemeteries were the burial grounds used by itinerant ministers of the day.

Another elevation, about three-quarters of a mile long, lies between the Tulpehocken Creek and its Featherbed Branch. This hardly noticeable rise is known as Sandy Ridge. If back at the "pond" (widening of the Featherbed Branch), below Pine Crest, you had chosen the right fork instead of the left, you'd come out again on Friendship Road, but west of the old bog community of Friendship. Turning west of Friendship Road, now better called Carranza Road, you would turn northwest on the first sand road beyond the bogs. Here, for the better part of a mile, is typical bog country. Surrounded by a scenic backdrop of Atlantic white cedars, it offers some choice photographic possibilities. This area, as most places in this article, can be found on the Chatsworth quadrangle map of the United States Geodetic Survey. Other topographic maps useful in locating places mentioned are the quadrangles for Indian



Mills, Jenkins, and Lake Oswego.

The white cedars, or swamp cedars, as they are called locally, are the landmarks of low ground in Pine Barrens, as is the rich green sphagnum moss which grows under them in the "cedar swamps." Here in early June the heath-like *Hudsonia* often carpets wide expanses of exposed sandy areas with its bright yellow blooms. You can occasionally see a common fence lizard dart under the low growing *Hudsonia* and up a nearby pine tree. When startled by a passerby, its quick movement and its protective coloration, blending with the sand, makes the little creature a hard fellow to follow. Continuing northward, soon you'll again arrive at the railroad. Pine Crest is nearly two miles to the east, about midpoint on another interesting hiking route of seven miles.

Carranza Memorial lies three miles west of your last exit onto Friendship Road. Erected to the memory of Captain Emilio Carranza, Mexican goodwill ambassador who lost his life in a 1928 plane crash there, is a small obelisk. Each July on the Saturday nearest the thirteenth, date of the crash, the Mount Holly Post of the American Legion conducts a colorful memorial program.

Carranza Memorial, with ample parking space, can serve as the starting point for any number of hikes or cross-country ski trips, conditions permitting. Since our concern is primarily Apple Pie Hill, let's start walking on the Batona Trail, north through the primitive camping area, a short distance north of the Memorial. Fall, with reds and crimsons of huckleberry plants and sour gums, is an ideal time. Many persons consider autumn as the prettiest time of the year in the Pine Barrens. As we wind around and upward, gradually but definitely upward, we come to the elevation known to hunters as Doe Hill (elevation 139 feet). They claim that you can always see female deer in the valley below. I didn't. You can walk six miles by taking the first sand road south, beyond Doe Hill; then you will turn toward the west and follow a



Fire tower at Apple Pie Hill

sand road more or less paralleling the tracks. You can cover nearly 10 miles by going directly from Doe Hill to Apple Pie Hill, a mile ahead. You can always depend on the trail from Carranza to Doe Hill for finding nice stations of the pyxie plant. Atop Apple Pie Hill is a good place to rest and get a drink of water from the trusty canteen.

From the summit, or from the tower, you gain a marvelous panorama of the pineland vastness. To the northwest lies what was perhaps New Jersey's biggest real estate catastrophe, Paisley. While quenching dryness from walking and the climb, the story comes to mind that in the 1800s a doctor from New York reportedly bottled water from Apple Pie Hill and shipped it to the big city, possi-

bly claiming rejuvenating effects. Other claims at the same time came from a venture to create a "super city" at Paisley, later known as White Horse. Luring advertisements boasted a dance hall, a gambling casino, and Paris-like living, in attempts to attract buyers. Some purchasers, mostly speculators, created huge profits for the sellers, but only for a time. Eighteen hundred lots were sold; but Paisley never developed. Things just didn't work out, and the entire venture flopped miserably. Great for the hiker!

Today Paisley is marked by a yellow building on the bend in the road, three and a half miles west of Chatsworth. This is the lodge of the Bordentown Deer Club. Several routes, beginning at the deer club, lead to Apple Pie Hill. Hikes of from three and half to seven miles or more can be taken within the area surrounding the focal point of our story. In winter you will find the region superbly suitable for cross-country skiing, while in spring you can hike or casually walk west from the deer club and have the accompaniment of an "amphibian chorus" of quonkers, screechers, screamers, and croakers. Especially following a heavy rain, toads and frogs of several species offer an aural experience not to be forgotten. It's Nature at her purest when this "concert in the wild" is performed. It's eerie, wondrous, even euphoric!

By contrast, a moonlight hike in winter over Apple Pie Hill from Paisley, via Pine Crest or High Crossing, in newly fallen snow, or when the snow is falling, is no less euphoric. Stark silence. No frogs. Nothing. The curtain of nature's show has fallen. Dormancy now. It's been a glorious off-broadway performance for a full year. A slight breeze may rustle the oak leaves still clinging, clinging til spring growth pushes them to the ground. Snowfall in the pines is impressive. You get the feeling that you're tramping through the great north woods. Night is absolute. As the sky begins to clear you obtain an occasional glimpse of the full moon. Stars appear. And when there's no moon, a clear sky with all the stars resembles millions of diamonds displayed upon a black velvet cloth.

Apple Pie Hill is the best, liked by everyone. Every wedge at any season is nature's dessert. Nature's baker came up with a delectable creation. Try it.

The author will personally conduct an Apple Pie Hill Moonlight Hike of 7 miles Saturday evening, March 26. Participants will meet at the Bordentown Gun Club, 3.3 miles west of Chatsworth, on Rt. 532, no later than 5:45 p.m. For more info, call 609/267-7052. Bring snacks and hot thermos. Dress for conditions. NJ



Clean-up group from Outdoor Club of South Jersey

The Charcoal Industry In New

By Deborah A. Boerner

Photographs and background information provided by George Pierson, New Jersey Bureau of Forestry

This is the second and final article in a two-part series on charcoal-making in New Jersey. The first article, in the preceding issue of NJO, outlines the early history of charcoal production in the State. This article explores the question of whether charcoal can become an alternative energy source in New Jersey today.

Not all the colliers gave up producing charcoal when the iron forges and furnaces of south Jersey closed down. Those who stayed in business still managed to secure markets. Charcoal was used for heating in the less affluent sections of some New Jersey cities as recently as 1937. During the World War years, charcoal was in such great demand as a fuel in war production plants that the United States Forest Service printed pamphlets urging farmers to produce it in their farm woodlots. Figures from 1955 indicate that 192,000 bushels of charcoal were still being produced each year in New Jersey.

By 1955, much (and perhaps all) of the charcoal produced was from large

commercial producers, not from individual colliers tending a pit-kiln in the woods. The commercial producers charred wood in huge, dome-shaped kilns made of brick. The coaling process was easier to control in the brick kilns, which could be made absolutely airtight when all the air-flow controls were closed.

When it was discovered that wood chemicals could be condensed from the gases emitted in charcoal production, many of the kilns became wood distillation plants. Ironically, charcoal became a byproduct of wood distillation and eventually, a waste product. Chemicals were needed and only a minute amount were collected in burning a kilnful of wood. However, with

the development of synthetic chemicals, wood distilleries met the same fate as the charcoal industry, and perhaps more quickly.

The last commercial charcoal producer in the state closed down in 1969. Its chief product was barbecue briquettes, and toward the end, consumer demand was simply not high enough to keep the kilns at West American Charcoal Company in Mays Landing operating. With the 1970's, however, came air quality standards which probably would have forced it to close down, anyway.

Does all this mean that the charcoal industry is not worth reviving in New Jersey? In an age when homeowners are trying to cut the cost of living by burning wood for energy, it's worthwhile to note that charcoal has a heating value about 1½ times the equivalent weight of the dry wood from which it is made. Hardwood charcoal has 13,000 BTUs per pound as compared to only 7,000 BTUs per pound for most air-dry woods. (BTU's or British Thermal Unit, is a unit used to measure the fuel value of various forms of energy.) Charcoal also weighs 30-40% less than wood, takes up less space, and, if a way could be found to neatly package it in briquette and log forms, might be more convenient for stoking the woodstove with than wood.

Of course, it would take an undetermined amount of energy to make the charcoal, which would reduce the effective fuel value of the charcoal somewhat. Thus, charcoal would not be able to compete in fuel value with anthracite coal (which also yields 13,000 BTUs per pound), or with bituminous coal at 12,000 BTUs per pound. However, the rising cost of conventional energy sources such as



A pit kiln in the Pinelands.

Jersey- Is It Worth Reviving?

coal, oil, and gas have already made wood energy an economically sound alternative.

The question thus becomes, can charcoal compete with wood as an energy source? Because charcoal has a fuel value almost twice that of wood, it would seem so. In addition to energy, however, it takes several pounds of wood to make a pound of charcoal. George Pierson, Chief, Bureau of Forest Management, believes that these two inputs, the energy and the wood, would reduce the effective fuel value of charcoal to or below that of wood. He therefore thinks that charcoal would not be an economically attractive alternative at this time.

Unlike fossil fuels, the burning of charcoal and wood produces little or no sulphur dioxide. Besides being an environmental advantage in itself, this makes charcoal an excellent candidate for blending with otherwise unusable coal to bring its high sulphur content to acceptable levels. To meet the air quality standards for other pollutants, researchers at Penn State College, Pennsylvania have developed a mobile, non-polluting, charcoal-making unit that chars sawdust and woodchips. Continued research could yield larger units that also meet current air quality regulations.

Certainly there is no scarcity of wood volume in New Jersey to be used as fuelwood. Gordon T. Bamford, State Forester with the N.J. Bureau of Forestry, states in a memo on the use of low-quality wood for heating:

The most recent forest survey data for New Jersey (1971) shows that there is a large volume of wood produced annually that would be suitable for fuelwood. This material consists of growth on cull trees 3,561,000 cubic feet; annual mortality 10,900,000 cubic feet; and removals other than forest products 3,367,000 cubic feet. It is estimated that this total wood volume produced and *unused* annually, has a heat value equivalent to 40,130,000 gallons of fuel oil.

These figures do not include additional wood wastes available from shade tree removal, unharvested logging residue



Worker inspecting charcoal pit.

(unmerchantable limbs and tops), industrial residue, harbor debris, right-of-way clearance and maintenance, and so forth.

While supplying energy needs, fuelwood harvesting can also help improve New Jersey's forests. Today, foresters realize that charcoal cutting in the 1800s could have contributed to forest management rather than being the destructive agent it turned out to be. Foresters have since dreamed of having a market for low-quality timber and inferior species, because removing them would certainly improve the stands. They've dreamed, too, of thinning the stands and still making a profit. We have never had opportunities like these—until now. This time, whether the wood is cut for charring or to be burned directly, let's do it right.

As nonrenewable sources of energy are depleted and thus become more expensive, renewable resources such as our forests will become even more attractive as energy alternatives. Many New Jerseyans have already chosen to

burn wood rather than pay the high cost of coal, oil, or gas. Charcoal has a fuel value almost two times higher than the wood itself, thereby making it the highest grade fuel derivable from wood. However, the wood and the energy it takes to make the charcoal does not make charcoal as economically sound an alternative as wood is today. It has other uses, though, such as blending with high-sulphur coal to make an environmentally acceptable fuel.

And like other fuelwood harvesting, charcoal cutting can benefit the forest by cleaning it of deformed and defective trees. Colliers of the 1800s cut the trees indiscriminately, which is one reason why the stands in south Jersey are in such poor condition today. Hopefully, woodcutters today will be more careful. Surely, we can have our wood and burn it too, but only if we burn the right trees and leave the right ones standing. The 19th century charcoal cutters found out only too soon that they had cut into the future and helped to destroy their own future as well. NJ

A Place to Watch Spring Unfold

By Betty McAndrews

Those who come to the Reeves-Reed Arboretum in Summit could well hear the last of winter's muffled sighs, sniff the first earthen damp of spring and discover the tender shoots of Jack-in-the-Pulpit or the fiddleheads of ferns nudging the old season aside.

Across sloping lawns the azaleas, crabapples, and dogwood will soon appear in pink and white ballroom dress. Colorful wildflowers will sprout in unexpected places, thousands of daffodils will nod their white and yellow trumpets and, somewhat later, lilacs will spice the air.

The Reeves-Reed Arboretum is a place where visitors can walk or sit quietly, alone or together, to witness nature's vicissitudes.

It is a place where artists sketch and paint; where photographers focus on the smallest petal or the largest vista; where children explore and learn, with trained naturalists, about worlds more tiny than they; where botanist and home gardener alike can study flora that excite their imaginations. It is a 12-acre landscape of public space that invites personal contemplation.


Located within a city at once cosmopolitan and suburban, such a halcyon parcel of woodlands and gardens

owes its preservation to a dedicated group of Summit residents who actively urged the city to purchase the property in 1974. The Arboretum includes a colonial revival mansion, circa 1889, with a basement cleverly converted into a Children's Nature Discovery Center. Bountiful perennial beds curve just beyond the front entrance and the formal rose garden ardently displays many old-fashioned varieties no longer commercially available.

The elegant landscaping was the inspiration of the property's second owner, Mrs. R.E. Reeves. The Reeves family, no doubt recalling the brilliant springs of their childhood in the South, planted such southern species as the Fringe tree, Yellowwood, and Silverbell. However, it was in the sweeping glacial kettle known as the "punch bowl" that Mrs. Reeves developed a spectacular arena for daffodils that has become the Arboretum's centerpiece. There in the dell, some 22,000 bulbs bloom sequentially throughout early spring.

The grounds of the Reeves-Reed Arboretum at 165 Hobart Avenue are open daily, free to the public, from 10 a.m. to sunset. The Wisner House, named for the original owners, is open

regularly on Tuesdays and Thursdays, 9 a.m. to 3 p.m. and at other times for special programs.

To reach the Arboretum, take Springfield Avenue (Summit's main street) to Hobart Avenue; or take the Hobart Avenue exit off Rt. 24 West, turning left over the highway. 

1. Vibrant red roses cling to the fence bordering the formal rose garden.
2. The formal rose garden is a major attraction in the later spring.
3. Daffodils hold their balance along a concave of the glacial kettle hole where they bloom by the thousands in early spring.
4. In relaxed solitude a woman gazes across an open vista.
5. Lilacs burst into full cluster.

1



2



3



4



5



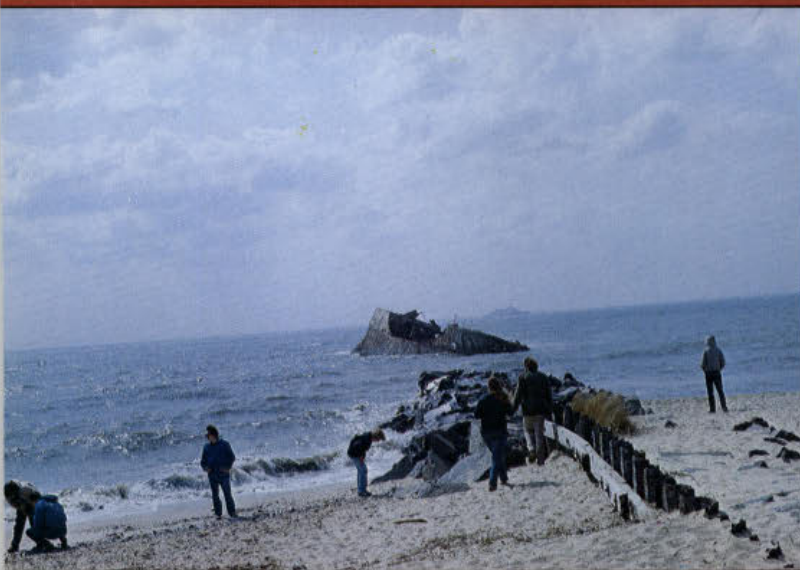
PHOTOS BY ANNE ROSS



Discover Cape May

By Betty J. Grossberg

The City of Cape May is a collage of Victorian homes, old hotels and other historical landmarks. But there is more to Cape May than history and Victorian architecture. The spot has been a favorite seashore resort for nearly two centuries. Situated between the Atlantic Ocean and the Delaware Bay, Cape May offers plenty of good fishing and boating. It is a quiet place to relax during lazy summer days, but there are also numerous activities. The resort offers excellent dining. And guest accommodations range from elegant modern motels to authentic Victorian hotels and guest houses.



Above left—The *Atlantus* at Sunset Beach is an experimental concrete ship built during World War I. It was sunk off Cape May Point in 1926. In the foreground, beachcombers search for Cape May “diamonds.” Right—Fishermen unload their catch at Fisherman’s Wharf at Cape May Harbor.

←
The Chalfonte (1876) at Sewell Ave. and Howard St. is Cape May's oldest hotel.

The City was placed on the National Register of Historic Places in 1970, following extensive urban renewal. And Cape May was designated a National Historic Landmark in April, 1972. Originally called Cape Island, the city is located near the southern tip of New Jersey, almost cut off from the mainland. It is bordered by Cape Island Creek, Cape May Harbor and the Atlantic Ocean.

From its earliest days, the people of the Cape depended on the sea. The first permanent settlers were whalers who came from New England and Long Island in the mid-1600s. Near the turn of the century, the whales left the area, a result of indiscriminate slaughter according to some historians, and the settlers turned to farming.

During the 1700s, physicians and other Cape May visitors attributed health-giving properties to bathing in the salty Atlantic. And in the early 1800s, when stagecoach, steamboats and other vessels opened travel between the city and populated areas like Philadelphia, Cape May hotel owners began to advertise Cape May as a "watering place." The proprietor of Cape May's first hotel, Atlantic Hall, was Postmaster Ellis Hughes. Hughes placed an ad in the Philadelphia *Daily Aurora*, noting that Cape May "is the most delightful spot the citizens can retire to in the hot seasons." Atlantic Hall was Cape May's only hotel until 1816. But by mid-century, large hotels had sprung up, and Cape May claimed to be the leading resort on the Jersey Shore.

To stroll down the shady streets of Cape May's historic district is to walk back through time. A few old hotels remain to remind us of the resort's early attraction. However, the earliest hotels were destroyed in two separate catastrophic fires—one in 1869; the other in 1878. Those hotels that remain were erected near the end of the century.

Congress Hall is one such reminder of the large hotels that existed over a century ago. Facing the ocean, overlooking the beach, the stately, columned building attests to the numbers of visitors Cape May welcomed in its early days. The Congress Hall that stands today was built in 1879 by Thomas Hughes, son of that first hotel proprietor, Ellis Hughes. The present hall replaced an earlier hotel built by Thomas in 1816 that was destroyed by fire.

Cape May's oldest hotel is the Chalfonte at Howard and Sewell streets. The Chalfonte, built in 1876, is the only



Fisherman's Wharf features nautical gifts.

hotel to survive the Great fire of 1878. It was built by Henry W. Sawyer, a carpenter who became a Civil War hero when he was captured by Confederate soldiers and involved in a famous prisoner exchange. The exchange, arranged by President Abraham Lincoln, was a swap of Sawyer for William Henry Fitzhugh Lee, son of General Robert E. Lee, who was being held by the Union army.

The Mainstay Inn on Washington Street, also known as the Victorian mansion, was a pre-Civil War gambling casino. Built in 1872, the mansion operates now as a guest house. The ground floor is open for tours and afternoon tea.

The Emlen Physick estate on Washington Street also is open for tours. The house, built in 1881, was designed by Frank Furness, a foremost Philadelphia architect of the day. Many of the house furnishings also were designed by Furness. The house was the home of Dr. Emlen Physick and his mother. Tour guides tell fascinating stories about the remarkable Dr. Physick.

The eight and a half acre Physick estate now is owned by the City of Cape May. It is leased by the Mid-Atlantic Center for the Arts which has restored it and now operates the estate as a community and cultural center.

There are dozens of other houses and hotels, most of them within walking distance. Each has its own story to tell.

During the summertime, Cape May's old-fashioned gardens, abloom with fragrant flowers, make it easy to drift back in time—to 1849, when Abraham Lincoln and his wife visited the Mansion House, twelve years before he became president of the United States.

Cape May had other famous guests. Two years earlier Henry Clay had stayed

at the same hotel. (The Mansion House burned to the ground in 1857.) Clay's visit was prompted by a need for a rest after his son was killed in the Mexican War.

Five American presidents visited Cape May: Franklin Pierce in 1855, James Buchanan in 1859, Ulysses S. Grant in 1869, Chester A. Arthur in 1883, and Benjamin Harrison spent summers from 1890 until 1896 at his summer cottage at Cape May Point. During his presidency, Harrison used Congress Hall as his working headquarters.

Henry Ford and Louis Chevrolet raced against each other and others on Cape May's wide sandy beach in 1905. Neither Ford nor Chevrolet won the race, and Ford was forced to sell his automobile to pay his hotel bill.

Today the beaches are considerably narrower, due to the sea's encroachment. In 1962, a hurricane took its toll on Cape May, destroying its boardwalk and causing considerable damage to the town. The city received a \$3.2 million federal grant for extensive urban renewal in 1966.

The boardwalk was replaced by an asphalt promenade.

Three blocks of Washington Street were closed off to traffic and the area converted into a mall. Washington Street Mall now preserves the Victorian look of Cape May while offering quaint shops, restaurants and colorful sidewalk cafes. At the south end of the Mall is one of Cape May's most photographed houses, the Pink House of Perry Street.

In addition to its large collection of Victorian architecture, the city offers numerous annual events. One of the earliest is an annual Easter Sunday parade on the promenade. Last year, in

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WHO WAS KEN LOCKWOOD?

By Marty Boa

The outdoorsman who is also a family man, often finds his fishing and hunting experiences limited to his own county or state. With limited time and budget I often had to forego fly-in trips to Maine, and be content to fish local waters. In place of the Battenkill I had Hockhockson Brook and while the more sophisticated fly fishermen plied the Ausable, I worked Yellow Brook, Ramanessan, or the Manasquan River.

Most of my trout fishing experiences have taken place on these small brooks of Monmouth County in Central New Jersey. Such little streams are usually choked with brush and lined with briars, making roll casting the order of the day and a six- to seven-foot fly rod almost a necessity. For 14 years, with trout-fishing companion and fellow educator Milt Belford, I made the most of waters that many fishermen would not classify as "real trout streams." We valued the quality of the experience in our fishing and rarely stressed the limit catch. This idea of quality experience was what helped us to evolve from worm and salmon-egg trout fishermen to fly-fishermen.

The trout waters of northern New Jersey offer a compromise between my small local brooks and the famous rivers of New York State, Vermont, and Pennsylvania. On several occasions I had fished the North Branch of the Raritan River where it flowed through lush green Hunterdon County cow pastures. In this area I enjoyed catching rainbow trout and smallmouth bass on the muddler minnow, in a rocky, fast-flowing, wide, clear stream. After fishing local streams, Milt and I often thumbed through the "New Jersey Summary of Fishing Laws" and read about the big-time waters—the Musconetcong River, Big Flatbrook, and the "Ken Lockwood Gorge."

The compendium listed the Ken Lockwood Gorge as a stretch of water for fly-fishing only, "a distance of approximately two and one-half miles." This description alone was enough for us to make the Lockwood Gorge the

destination of our next foray; it also led me into some very interesting research.

During our hour-and-a-half ride to the "Gorge," I wondered about how the fishing would be on this most famous stretch of New Jersey trout water. I also began to wonder about Ken Lockwood and why this part of the Raritan River was named after him. As we drove through the small town of High Bridge I asked Milt, "Who was Ken Lockwood anyway?" (When it comes to trout fishing I expect Milt to know all about the things that I don't.) Milt didn't know.

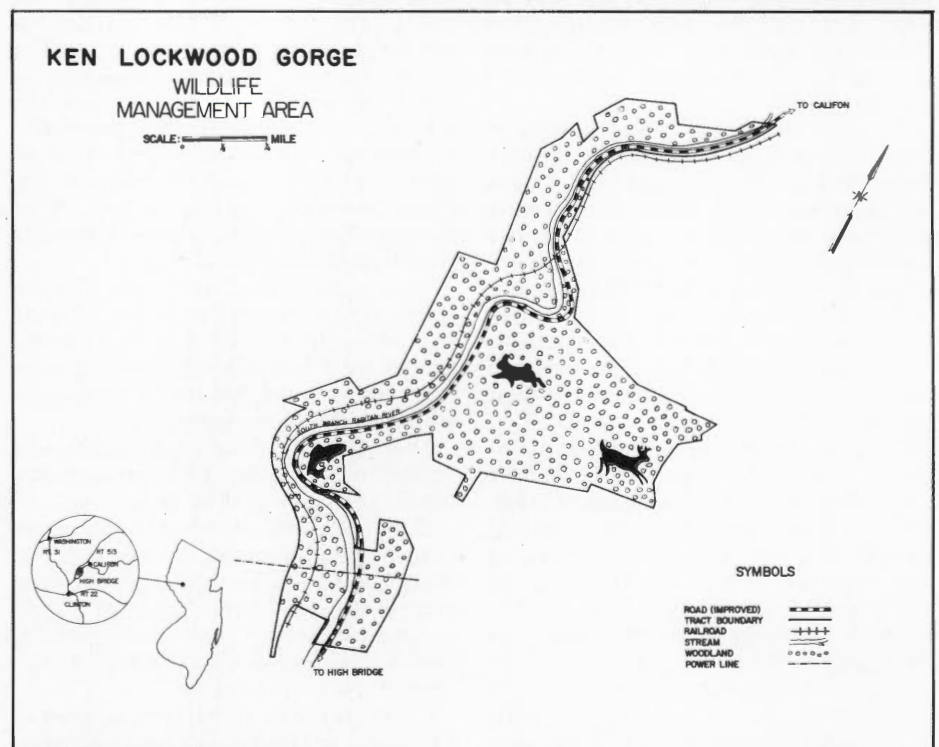
Using a narrow access road we followed the South Branch of the Raritan River through the town of Califon and into the area known as the Ken Lockwood Gorge. Here we encountered the "Fly Fishing Only" signs and knew we had come to the right place.

The river was clean, with a rocky bottom, and many depressions that would hold trout. The stream also contained many large boulders and islands of boulders that caused it to fork in

several places. Unfortunately a severe rainstorm that had occurred the week before resulted in difficult conditions which made the fishing nearly impossible.

Milt had obtained a fishing guide which included a map of the stream and upon studying it I learned that the most prominent holes in the stream had names. One of the largest depressions was located under an old Jersey Central Railroad bridge and was appropriately named "Trestle Pool." A little farther downstream another was designated "Monument Pool." Sure enough, Monument Pool had a monument located a short distance away from it and the monument was dedicated to "Ken."

As the sun started to go down, bats began to dart over the water. We headed for home and my mind burned with curiosity about Ken Lockwood. The same type of curiosity that in the past had driven me to explore mile after mile of salt marsh in South Jersey, and field after field of upland habitat would eventually lead me to read page





This picture, taken in 1912, is entitled "The Team-Conservation Watchdogs of the State Legislature 1918 through the 1930s."

Left to right: Jack Schwinn, Champion Surf Caster; Arthur Neu, Champion Fly and Bait Caster; Kenneth Lockwood, "Out In The Open"; Harvey Schoonmaker, Material Resource Person.

PHOTO BY AUTHOR

after page of literature written about and by Ken Lockwood.

In order to learn about Lockwood, I first questioned several long-standing members of my local sportsmen's organization, the Sunrise Rod and Gun Club of Red Bank. Since the club was established in 1928, some of the fellows knew about Ken Lockwood and a few had even met him. While quizzing our club's "life members," I learned that Lockwood was a noted journalist, having written the outdoor column for the once prestigious but now defunct *Newark Evening News*. He was also an avid hunter, expert fly fisherman and, above all, a dedicated conservationist. I also discovered that I would not have the privilege of meeting Mr. Lockwood, as he died in 1948.

Desiring to learn more about the great influence that this man had on the sporting community, I traveled back into time and read his articles as well as several pieces written about him. Mr. Lockwood's column on fishing and game was called "Out In The Open" and was featured by the *Newark News* for 35 years. "Out In The Open" was one of the earliest known outdoor columns. Over the years it grew from a semiweekly to a daily feature. In the 1940s his column usually contained timely news on fish and game, a write-

in question and answer section on outdoor topics, as well as information on tides and local fishing and hunting conditions. The articles frequently reported where the best New Jersey hunting and fishing action was. Unusual catches were reported, along with much news pertaining to the state and local sportsmen's organizations. The column often included material contributed by a guest columnist with special insights and unusual areas of expertise. "Out In The Open" was a "lighthouse" for conservation, stressing this aspect above all other outdoor topics.

Ken was a leader as well as a top journalist. He was a former president of the Fish and Game Conservation League, a trustee of the New Jersey Audubon Society, a former national director of the Izaak Walton League of America, as well as a two-term president of the Rod and Gun Editors Association of Metropolitan New York. In other related areas he was a member of the advisory board of the Atlantic States Marine Fisheries Commission and also a past president of the famous Newark Bait and Fly Casting Club.

Mr. Lockwood was an accomplished speaker and often addressed sportsmen's meetings and instructional classes. In November of 1947 the *New-*

ark News started a series of Friday night broadcasts over radio station WNJR. The broadcasts featured Mr. Lockwood along with important guest speakers as an extension of "Out In The Open."

Ken Lockwood was an enthusiastic trout fisherman and an accomplished fly caster. He contributed to the widespread popularity of the irresistible fly and even had another pattern named after him.

On Friday, April 2, 1948 Mr Lockwood died while enroute to his East Orange, New Jersey home from the studios of radio station WNJR, where he had broadcast a program on the opening of the trout season. He had been in poor health for some time.

Through his "Out In The Open" column Ken Lockwood introduced two ideas which were to have important effects on hunting and fishing in New Jersey. The first was the concept of stocking adult fish in trout streams. The adoption of this policy by the New Jersey Division of Fish, Game and Wildlife has made trout fishing available to almost everyone in the state. Because of this practice many new trout waters were created in brooks, streams, and lakes that previously had supported few, if any, native trout. The concept of public shooting and fishing grounds in New Jersey was also fostered by Mr. Lockwood. In an area of decreasing habitat where most private land is posted, the Wildlife Management Areas, as they are now called, are, in this writer's opinion, the salvation of hunting in New Jersey.

Thus it is fitting that one of the most beautiful of all the Wildlife Management Areas in New Jersey bears Ken Lockwood's name. The tract was acquired in 1948 and includes approximately 260 acres of woodlands and fields and a 2½ mile portion of the South Branch of the Raritan River. The area was purchased through the State Green Acres Program along with funds from hunting and fishing license fees. It is also maintained and supported by license money from New Jersey sportsmen.

The Ken Lockwood Gorge can be reached by traveling east or west on U.S. Route 22 and heading north on New Jersey State Highway 31. Next take Route 513 to either Califon or High Bridge. The tract lies between the two towns.

What's in a name? Sometimes a lot!

"The instructors
are qualified
and interesting . . ."

wildlife workshops for teachers

**Marine and Estuarine Wildlife-May 6,
7, and 8, 1983 at the Marine
Consortium, Seaville, New Jersey**

**Upland and Freshwater Wildlife-
June 3, 4, and 5, 1983 at the New
Jersey State School of Conservation in
Stokes State Forest, Branchville, New Jersey.**



These workshops are sponsored and conducted by the Department of Environmental Protection's Division of Fish, Game and Wildlife. These weekend workshops are designed to give teachers the background to teach environmental concepts using the wildlife resource. Rutgers University will award one graduate-undergraduate credit for those working on advanced degrees or wanting in-service training credit.

The courses are taught in the field by professional wildlife biologists. The May 6, 7, and 8 workshop will be held at the Marine Consortium at Seaville, New Jersey in Cape May County. It will concentrate on wildlife resources in the marine environment. The workshop on June 3, 4, and 5 will be held at the New Jersey School of Conservation and will emphasize upland and freshwater wildlife.

These wildlife workshops have been in operation for the past seven years and in that period over 1300 students (teachers) have taken the course.

**For further information and
registration forms contact:**

**N.J. Div. of Fish, Game and Wildlife
Wildlife Education Unit
Pequest Rd., R.R. 1, Box 389
Oxford, N.J. 07863**

NAME _____

ADDRESS _____

_____ ZIP _____

PHONE _____

SCHOOL _____

ADDRESS _____

_____ ZIP _____

GRADE _____

SUBJECT _____

Which workshop would you like more
information on?

_____ Marine & Estuarine

_____ Upland & Freshwater

Phone: 201-637-4173



Environmental News



Governor Kean recently awarded a \$1.2 million Green Acres grant to Gloucester County for the acquisition of 965 acres, including 76-acre Wilson Lake, for what will become Gloucester County's largest recreation area. The grant, administered by DEP, will be matched with county funds. Above, Mrs. William Zycinsky, wife of the county's director of Parks and Recreation, pins a boutonniere on the governor's lapel as DEP Commissioner Hughey and Assemblyman Thomas A. Pankok (Dist. 3, Salem) look on.

The Wilson Lake Park tract is located at the intersection of county routes 610 and 658 in Clayton Borough and Franklin and Monroe townships. Scotland Run, the major tributary of the Maurice River, flows from the tract. Its acquisition will help preserve the Maurice River watershed upstream of Union Lake in Millville. Wilson Lake will be used for boating, fishing, ice skating and swimming. Plans for open space use of the land area include a trail system, picnic areas, tot lots, ballfields and game courts. The Wilson Lake Park project is but one example of the many multipurpose open space projects made possible by the Green Acres local grant program.

'DOING ITS HOMEWORK' PAYS OFF FOR NEW JERSEY

An aggressive program to identify hazardous waste sites throughout the state has made New Jersey the national leader in the number of toxic sites targeted for cleanup under the \$1.6 billion federal Superfund program. Sixty-five (65) New Jersey sites are on the national priorities list of 418 hazardous chemical waste dumps which was released by the U.S. Environmental Protection Agency (EPA) in Washington on December 20 (1982).

Governor Kean remarked, "Only

Continued on page 16D

FISH EATERS, TAKE NOTE!

At a joint press conference on December 13 (1982) DEP Commissioner Hughey and state department of Health Acting Commissioner Dr. Allen Koplin released the results of a six-year study on the amounts of polychlorinated biphenyls (PCBs) in various types of Atlantic coast fish.* In accordance with federal and state laws, New Jersey was required to take two limited actions based upon the data: The commissioners issued a ban on the sale of striped bass and American eel taken from the Hudson-Newark-Arthur Kill re-

Continued on page 16C

PCB CLEANUP, COST REIMBURSEMENT AND PENALTIES SOUGHT FROM WITCO

The New Jersey Department of Environmental Protection (DEP) and the State Spill Fund on January 21 filed a complaint in Chancery Division of Superior Court, Middlesex County, before Judge Richard Cohen, against Witco Chemical Co., Perth Amboy, in connection with alleged releases of polychlorinated biphenyls (PCBs) into the environment.

DEP asks the cleanup by Witco of all PCB contamination caused by Witco and compensation for monies which the State has expended on the problem.

The action filed by Deputy Attorney General Kathleen B. McGill contains eight counts. It climaxes a DEP investigation dating back to January of 1981, when a sewer overflow in Perth Amboy revealed the presence of PCBs. It follows unsuccessful negotiations between the State and Witco, aimed at winning voluntary corrections.

"What transpired was one of the most lengthy and comprehensive investigations ever undertaken by DEP. It involved opening sewer manholes and removing samples for PCB tests. The testing began at the Perth Amboy sewage treatment plant and proceeded along the sewer lines of the city until it was established that PCBs came from the Witco premises," said DEP Commissioner Robert E. Hughey.

The State alleges that PCBs emanating from the Witco property come, at least in part, from dirt beneath heat exchangers containing mixtures of PCBs and oil in a closed circuit. Liquid from that circuit leaked onto the ground, causing contamination which escapes with stormwater runoff.

DEP and the Department of Health concur that there is no cause for alarm among the general population of Perth Amboy. Dr. Kenneth D. Rosenman, a physician who is director of Occupational and Environmental Health Services for the New Jersey Department of Health, stated, "Testing of city sewer workers has failed to show any elevated

Continued on page 16D



TIMES-BEACON PHOTO BY VIC SANFORD

Bass River Township's new solid waste transfer station—the first rural-type station in the state—is providing a cleaner, more environmentally sound method of solid waste disposal than the landfill operation it replaced, and is saving money for the township in the bargain! Mayor Floyd West (left), Township Commissioner T. Richard Bethea (center) and Township Engineer Ira Milovsky of McFarland-Johnson Engineers, Inc., agreed that since the facility opened in mid-November (1982), the township has saved about \$250 a week as compared with what it cost to run the landfill. It's easy to use: residents of the area "drive right up alongside the compactor, toss in their bags of household trash and garbage and drive off—the compactor does the rest," said Mayor West.

The \$35,000 facility, located on the site of a former landfill in New Gretna (Burlington County), includes (right to left, above) a leased 22-foot-high trash compactor, a building to house the hydraulic equipment, three bins for recyclables (glass, paper, aluminum), and since the photo was taken, a 250-gallon tank used for the collection of waste oil which is sold to a recycler of used oil. The facility, locked when not in use, sits inside a fenced 30' x 40' compound. It is open 20 hours a week and is staffed by township employees. To meet state requirements, an on-site well was constructed to monitor water quality and quarterly water tests will be conducted by the Burlington County Health Department. The transfer station was paid for on a matching grant basis: half the money came from a state Resource Recovery Implementation Planning grant, administered by DEP's Division of Waste Management, and half from local government funds.

PINELANDS COMPENDIUM PUBLISHED BY RUTGERS

The first easy access reference to scientific literature about New Jersey's Pinelands has been published by Rutgers University's Center for Coastal and Environmental Studies. The *Compendium of New Jersey Pine Barrens Literature* was developed to help planners and researchers quickly determine what published information is available on Pinelands botany, agriculture, forestry, geology and soils, hydrology and water chemistry, meteorology and zoology. The compendium costs \$7.25 per copy and is available from the Center for Coastal and Environmental Studies, Doolittle Hall, Busch Campus, Rutgers University, New Brunswick 08903. (Phone: 201-932-3080.)

Economical, convenient

'ALL-AROUND SPORTSMAN LICENSE' A SUCCESS

Legislation signed by Governor Kean this past November enabled DEP's Division of Fish, Game and Wildlife (FG&W) to make available to hunters and anglers the new "All-Around Sportsman License" in time for calendar 1983 activities. This new license combines into one unit permits for firearm hunting, bow and arrow hunting, and freshwater fishing (exception: it does NOT include a trout stamp). The cost, including handling, is \$43.25, which represents a savings of \$3.25 if the three licenses were purchased separately. This, in addition to the convenience of having three licenses in one, has resulted in an unexpectedly quick and favorable response

AGENDA FOR 1983

Each January the Governor delivers a "State of the State" message to the Legislature in which he presents proposals for the future and touches on accomplishments of the previous year. In his first Annual Message to the State Legislature on January 11, Governor Kean gave as his agenda for 1983—"Jobs for our people, government under control, and cities and towns full of their own vitality."

In the natural resources/environmental protection section of his address, Governor Kean detailed, and urged the Legislature to act on, among others, proposals that will revitalize the Delaware and Hudson river waterfronts; make it financially possible to rehabilitate deteriorating roads and bridges, water and sewer systems, and waste disposal facilities; and assure a better distribution of water supply. All of these programs, he said, will provide thousands of jobs, stimulate the economy and make our state a better place in which to live.

Leading the list of accomplishments for 1982 was the Governor's report that New Jersey had received more than \$13 million in commitments from federal Superfund for cleanup activities at toxic waste sites. Also, he said, "with the valuable help of our Congressional delegation, we may anticipate nearly \$9 million in federal assistance next year to continue our acquisition program in the Pinelands."

from the sporting community, according to FG&W.

Those eligible for the All-Around Sportsman License are New Jersey residents, above the age of 16, who have prior licenses for both firearm and bow and arrow, or proof of completion of the necessary hunter education courses.

Only a limited number of licenses are available for 1983 and they are being sold on a first-come, first-served basis. Once the supply is gone, no more will be available this year. The license may be obtained from license agents throughout the state (most sporting good stores); or through the FG&W main office in Trenton—in person, during normal work days, (address: 363 Pennington Avenue), or by sending in a request with a check or money order for \$43.25 to the division (mailing address: CN 400, Trenton 08625). **IMPORTANT:** Be sure to bring along, or include in a mailed request, copies of a prior license for firearm and for bow and arrow hunting, or proof of completion of the necessary hunter education courses.

LECHNER NAMED TO HEAD GREEN ACRES PROGRAM



Hermia Lechner of Clinton Township (Hunterdon County), appointed administrator of the Green Acres program by Governor Kean, assumed the post on January 10. Mrs. Lechner, a former mayor of Clinton Township

(1976-1981), is a nationally recognized authority on conservation of watershed areas. As administrator, she will oversee a program which, since 1961, has pioneered nationally in bringing about state and local government ownerships of open space and recreational facilities.

Mrs. Lechner was a member of the former state Water Policy and Supply Council from 1966 to 1981 and was its acting chairman in 1977 and 1978. In 1978 and 1979 she was a member of the New Jersey Clean Water Council. From 1970 to 1976 she was district supervisor for the Hunterdon County Soil Conservation District. She spearheaded formation of the South Branch Watershed Association, which represents sections of Hunterdon, Morris and Somerset counties where the South Branch of the Raritan River is located. Formerly its voluntary executive director, Mrs. Lechner is treasurer and trustee of the association.

In Hunterdon County, she was a member of the organizing committees for the county health department, and mental health board, the first fund drive for the Hunterdon County Medical Center and the citizens committee for a county park system. Mrs. Lechner was instrumental in putting together one of the first parcels of land acquired through Green Acres funding by the fledgling Hunterdon Park System 10 years ago.

At various times she has served on many DEP task forces, including those on environmental criteria for location of sewer interceptors, flood plain management criteria and standards, guidelines for stormwater management and creating a model erosion and sediment control ordinance.

Mrs. Lechner holds a B.S. degree in Education from Trenton State College.



The ceremonial silver service created for the USS Battleship New Jersey many years ago was returned to the custody of the Navy in time for its placement aboard the completely renovated vessel when it was recommissioned in Long Beach, California on December 28, 1982. The silver (70 pieces in all) was presented to Captain William M. Fogarty, commanding officer of the ship, by Governor Kean. Former state senator Joseph Azzolina (center), a retired naval officer and chairman of the state's USS New Jersey Battleship Commission, participated in the ceremony. (The 15-member USS New Jersey Battleship Commission was established in DEP by law in 1980 to provide for the preservation and exhibition of the battleship, when decommissioned, as a permanent historical monument in New Jersey.)

INCOME TAX CHECK-OFF FUNDS NONGAME PROGRAM

The state's Endangered and Nongame Species Program is now entirely funded by public donations through the Line 36B check-off provision on the New Jersey Income Tax Return. Through this line a \$2, \$5 or \$10 donation can be made toward the protection of 25 endangered species, such as the Bald Eagle and Pine Barrens Treefrog and 400 other kinds of wildlife including songbirds, hawks and turtles. All contributions go into a dedicated fund to be used only by the state's Endangered and Nongame Species Program.

Donations on Line 36B of the state income tax return will either decrease the amount of your refund or increase the amount of your tax payment. (See page 9 of the tax form's instruction sheet.) Those who contributed last year can deduct the amount from this year's federal income tax as a charitable deduction. (This year's contribution will be deductible on next year's federal income tax form.)

Continued from page 16A

FISH EATERS, TAKE NOTE

gion; and an advisory warning for consumers to limit consumption of white perch and white catfish from the Hudson-Newark-Arthur Kill region, of bluefish 24 inches in length, weighing six or more pounds and striped bass from that region plus from Barnegat north in the Atlantic Ocean, and American eel from anywhere in the state. They are the only species for which warnings were issued.

Dr. Koplun said: "To limit accumulation of PCBs in their bodies consumers should eat no more than one meal per week of the listed species caught in the designated regions outlined by the advisory. Persons of high risk, such as pregnant women and nursing mothers, women of child-bearing age and young children should further restrict their intake."

Bruce Freeman, DEP's administrator of Marine Fisheries, explained that PCBs tend to concentrate in the fatty portion of fish. "Therefore, when the above mentioned fish are eaten, careful preparation and cooking can reduce the possibility or degree of PCB ingestion," he said. This includes crimping off fatty areas, such as the belly flaps and dark meat sections, removing the skin, and baking or broiling the fish on an elevated rack which allows the PCB contaminated fatty portions to drip free and away from the fish, Freeman said.

*A full recap of the state report on PCB fish levels will appear in the May/June issue of NJO. The six-year study was conducted by DEP's Office of Cancer and Toxic Substances Research (OCTSR) and Division of Fish, Game and Wildlife. Copies of this report and the follow-up report (1981-82 data), maps of the designated areas and PCB Toxic Fact Sheet are available from DEP, OCTSR, Information Resource Center, CN 402, Trenton 08625. (Phone: 609-984-6072 or 609-984-2246)

DEP's 13th ANNIVERSARY

The New Jersey Department of Environmental Protection was created by law on April 22, 1970, the nation's first Earth Day. DEP remains dedicated to one goal—to assure a better quality of life for the citizens of New Jersey through the protection, conservation and preservation of our natural resources: air, water, land, flora, fauna and our historic heritage.



Smokey the Bear fire danger rating signs

Eye-catching Smokey the Bear "forest fire danger rating" signs have been placed at strategic locations along the roadways of the state to increase public awareness of the necessity for practicing fire safety while driving through woodland areas or visiting our forest and park lands. (More than 98 percent of all forest fires in New Jersey are caused by humans!)

The colored placards on the signs indicate five classes of fire message warnings. The forest fire danger rating system is based on a series of weather and other related fire behavior factors that give an indication of a forest fire's potential rate of spread and resistance to control. The higher the "Class Day," the greater the danger! Given below are the ratings and colors denoting them.

LOW (green)—Class I: Fires will not readily spread; their resistance to control is low and they can go out alone.

MODERATE (blue)—Class II: Fires spread slowly, resistance to control is moderate.

HIGH (yellow)—Class III: Fires spread rapidly in dry grass and slower in other fuels; resistance to control is high!

VERY HIGH (orange)—Class IV: Fires spread rapidly as fires increase in size, may crown fire in young conifers; the resistance to control is high!

EXTREME (red)—Class V: Fires burn fiercely, spread and crown rapidly. Spot fires are common. The resistance to control is extreme!

Forest fire danger in New Jersey is the highest between mid March and mid May, usually peaking in April. However, they can occur at any time of the year when the woods are dry enough to burn. Even after a rainfall, the forest floor is often dry or winds will dry out the zone in a few hours. *To report a forest fire by phone, dial "O" for Operator and say, "I want to report a forest fire."* You will be connected to the nearest firewarden.

Continued from page 16A

PCB CLEANUP

levels of PCBs in their bodies."

The four environmental statutes under which DEP seeks relief of \$66,000 per day since October, 1981, are the Solid Waste Management Act, the Water Pollution Control Act, the Fish and Game Act and the Spill Compensation Control Act.

DEP in October, 1981 issued a directive and notice of violation to Witco, which has its organic chemical manufacturing plant at 1000 Convery Ave., Perth Amboy. The directive gave Witco 10 days to solve its PCB problem.

The complaint states that the State Spill Compensation Fund expended \$60,246.97 to remove PCB sediment overflows from the municipal sewer system and to minimize harm being caused by PCB discharges. The State seeks to recover that sum in triplicate, as is authorized by the Spill Compensation Control Act.

The City of Perth Amboy has filed a claim for \$284,754 with the Spill Compensation Fund for costs of disposal of PCB-contaminated sludge from its sewage treatment plant. Recovery of that sum is also sought from Witco. The sum of \$259,421 which was given to Perth Amboy by the State for disposal of contaminated sewage sludge is also sought from Witco.

Specifics sought by DEP are:

- Remove and otherwise abate and remedy the discharge of all PCBs from Witco's premises.
- Remove blockage and all PCB-laden sediment found in the municipal sewer system.
- Clean up and remove all PCB contamination in and around the vicinity of all sewage discharges from the Perth Amboy sewer system.
- Remove all PCB contamination in Spring Creek which emanated from a permitted Witco plant outfall.
- Remove all PCB contamination in Crane Creek and the Arthur Kill which originated from overflows of the Perth Amboy combined storm and sanitary sewer system.
- Devise and carry out a plan to monitor the effects which exposure to PCBs on its plant site may have had on its present and former employees.
- Pay all costs which the Spill Compensation Fund may yet incur in connection with cleanups of the PCB problem.
- Reimburse DEP for all investigative costs.
- Reimburse the Hazardous Waste Health Care Task Force for costs of all diagnostic testing it may deem necessary or appropriate to identify potential victims of the PCB discharges.

• Pay costs of the legal action.

• Clean up vanadium pentoxide, a hazardous substance, which Witco reported to the U.S. Environmental Protection Agency (EPA) that it had buried on plant property between 1962 and 1966.

In any cleanup of PCBs ordered by DEP, legal disposal of the contaminated materials is required.

A sworn affidavit by Dr. Robert K. Tucker, which was filed with the complaint, stated that PCBs are known to cause toxic effects in humans. Animal studies have shown PCBs to be carcinogenic and that they have the capability to increase carcinogenicity of some other chemicals when they are combined.

PCBs are long-lived in the environment and thus retain their chemical identity for a long period. They are known to accumulate in body tissues of aquatic organisms at a rate more than 100,000 times greater than the concentration of PCBs in the water surrounding the organism. This causes PCBs to accumulate in the food chain and eventually be consumed by humans.

Dr. Tucker is a research scientist with DEP's Office of Cancer and Toxic Substances Research.

Another affidavit, also filed with the suit, came from Dr. Rosenman, who stated, "It is my recommendation . . . that the contaminated soil at the Witco Chemical Co. should be immediately cleaned up to protect the health of those in the area and to decrease the risk of exposure.

"In addition, I would recommend that all Witco Chemical Co. employees, who have worked in production and/or maintenance for at least 10 years, be evaluated to determine the extent of their exposure to PCBs."

Hughey praised the efforts of DEP investigators John Tomasiello and Richard DeNito and their superior, James E. Mumman of the Division of Water Resources' Region II enforcement unit, as well as Timothy S. Haley, a DEP regulatory officer who pursued the case.

Continued from page 16A

HOMEWORK PAYS OFF

through the efforts of DEP in early identification and prioritization of sites throughout the state, has New Jersey won the lion's share of Superfund cleanup target sites." He stressed that inclusion of so many New Jersey sites on the national priorities list "should not be construed in a negative fashion, but rather be viewed as a successful effort to deal with abandoned hazardous waste sites in the state. We've been pushing for action."



OPEN HOUSE AT STATE FISH HATCHERY

WHAT:

Open House

WHEN:

Sunday, March 27, 10 A.M. to 4 P.M.

WHERE:

State Fish Hatchery—Hackettstown*

WHY:

A Family Fun Day Outdoors

ACTIVITIES:

For the Young and the Young-at-Heart

- Free bags of fish food to youngsters so they can feed the fish in the raceways.
- Free issues of *New Jersey Outdoors* magazines.
- Guided tours of the Fish Hatchery.
- See the tens of thousands of fish of all sizes in the raceways.
- Display tanks of trophy fish for viewing and photography.
- The place to purchase your 1983 fishing license, trout stamp, etc.
- The place to find out everything you wanted to know about fish, fishing, and wildlife in New Jersey.

*The Fish Hatchery is located one mile south of Route 46 from the center of Hackettstown on Rockport Road.



Championship Field Trials at Assunpink Wildlife Management Area

WHAT: • Region II All Age Championship Field Trials.

- Open All Age Field Trials—open to professional handlers

WHEN: Starting day, March 25 for Region II All Age. Expect all stakes will be concluded by March 29.

WHERE: Assunpink Wildlife Management Area. This 5400 acre tract is located several miles southeast of the New Jersey Turnpike and north of the Bordentown exit. The trials will be held just off Route 524 between Allentown and Clarksburg, south of Stone Tavern Lake.



DIVISION OF FISH, GAME & WILDLIFE

Deer Roadkill Triples in "Closed" Township

By John Kuser

What happens when a township with abundant deer forage bans hunting? A timely example could be enlightening. In 1972, Princeton Township landowners concerned with problems of controlling hunting on their estates brought pressure on their Township Committee to ban hunting altogether. Because New Jersey law reserves to the State the right to set game seasons and control hunting, the Township committee took an end run around that law and passed an ordinance forbidding discharge of firearms (743,1972). This was justified on the basis of residents' safety, although police chief Anthony Pinelli states that

no person in the Township had ever been injured in a firearm accident involving a deer hunter.

Over the nine years following enactment of the no-discharge law, Princeton Township police department records of deer-car collisions show an increase to 342% of the pre-law level. In 1972, the last year with a legal shotgun season, there were 33 deer-car collisions reported in the township's 16.88 square-mile area. By 1976, the fourth year after the season was closed, there were 81; and in 1981, the ninth year, 113 were reported. According to wildlife biologist K. R. McCaffery, deer roadkill trends are

a good measure of population changes. Judged by this yardstick, Princeton's deer population increased between three- and fourfold in nine years.

What happens to a deer and a car when the two meet at high speed? When a car comes to a sudden stop after hitting a deer, or swerves and hits something else, people can be injured. In 1978, a woman was killed in nearby Hopewell Township when a deer deflected by her car hood came through the windshield. Another driver had a narrow escape in 1975, when a Montgomery Township deer glanced off a Volvo and went through the windshield of a Lincoln,

sending the driver to the hospital. While a cross-check of Princeton's deer-car ledger and police docket injury reports for the last three months of 1981 disclosed no injuries attributable to deer-car collisions, in the absence of such data the following two assumptions seem reasonable: (1) the probability of human injury in any deer-car collision is independent of the frequency or total number of such collisions, and (2) the total risk equals the probability of injury in any collision multiplied by the total number of collisions. In short, triple the collisions means triple the risk. If this is so, the effect of the no-discharge ordinance on public safety has been exactly the opposite to what was purportedly intended. Another effect has been increased vehicle damage (and inconvenience of repair) proportional to the increase in deer-car collisions. Of 1972's 33 incidents, seven resulted in vehicle damage estimated at more than \$200 whereas 1981's 113 incidents produced 24 instances of vehicle damage estimated at more than \$250. As I was writing this, two township patrol cars were in the shop for repairs of deer-collision damage estimated at \$1,500 and \$500 respectively, both sustained the same week. Seventy three of 1981's 113 were classed dead-on-arrival. Sometimes deer were able to escape after being hit, but many of these limp away and die later in the woods.

An average deer has about 55 pounds of good, nutritious meat on it, equal in quality to a like amount of beef costing \$1.60 to \$3.10 per pound depending on cut. It can be cooked in many tasty ways—have you ever tried deer teriyaki or smoked venison strips? In today's lean times, a deer can mean the difference for some families between enough meat to eat or less. It seems wasteful to me to take 4,015 pounds of such meat (73 deer x 55 lbs.) and send it to rot in the dump.

Princeton's deer population explosion has produced other side-effects besides deer-car collisions. I've lived on the same place there most of the time since 1960, and remember growing tomatoes without a fence for years. Around 1974, deer began nibbling them, and by 1981 they were eating fruit, leaves, vine and all. I put up a fence (posts \$4.50 each, wire \$1 per foot). In the winter of 1981-2, there were deer around all the time. They browsed cedar trees and yews by our back door, ate the buds off dogwoods, crisscrossed the snow with tracks every night, and by spring had left piles of droppings every few feet across the back lawn.

What caused this population explosion? The answer is simple: biotic potential to increase. According to Dr. Leonard Wolgast of Cook College, deer



DIVISION OF FISH, GAME & WILDLIFE

on good range can increase 40% yearly. If you wonder what that does to a deer herd in five or ten years, take a pocket calculator and start with 100 deer. Multiply by 1.4, then multiply the new total by 1.4, then that by 1.4, and so on. I tried it and got 538 deer after five years and 2,892 deer after 10 years. Because of mortality caused by automobiles, Princeton's deer are not multiplying quite that fast, but they are still on the increase.

Deer population is in dynamic balance with environmental factors such as food availability and hunting pressure. By controlling these factors we can hold the deer herd anywhere within a wide range of desired levels. Ideas of optimum level naturally differ among deer hunters, preservationists, drivers, gardeners, and wildlife biologists. But if we can ever reach agreement on desired herd level in different areas, we then have the task of finding a method of control to maintain that level against the pressure of the 40%/year biotic potential. It is obviously not feasible to reintroduce cougars and wolves, nor would they be that effective. We could poison excess deer as the New Zealanders do, but that would be as wasteful of the meat as our present practice. Trapping excess deer to restock areas with low deer population, is out for two reasons: (1) deer are difficult and expensive to trap, and can be caught only when just short of starvation, and (2) there are no low-population areas left within the entire range of white-tails. The best solution seems to me to use regulated hunting by shotgun and bow-and-arrow, with seasons and limits adjusted

to maintain desired herd levels.

Research is currently underway regarding some other possible future solutions to deer overpopulation. Ms. Ki Brush, a Rutgers graduate student, cites four possible approaches: (1) sterilization of females by ovariectomy, as has been done experimentally with elk; (2) lacing feed with birth-control chemicals; (3) implanting birth control steroids (which last two years) into does' forelegs; and (4) changing carrying capacity of the range by eliminating brushy edge habitat and converting areas into tall forest or open fields. Solutions 1 through 3 are either applicable only to captive herds or would require periodic trapping of wild animals, and the fourth would be impossible to apply to a suburban residential area. So alternative solutions, desirable as they may be to many, do not seem to be ready today.

If we can't agree on any control method, we might try moving out of our deer-filled township for about a hundred years. Without mowing and pruning, our lawns and gardens would eventually revert to high forest with no browsable understory. The deer would then go away by themselves. But I, for one, don't plan to move, so I expect that in the meantime, we will have not just a hairy problem but lots of hairy problems running around until we decide what to do with them.

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The author thanks Patrolman William Potts, of the Princeton Township Police Department, for the data on deer-car collisions and automobile repair estimates.

Washington Crossing State Park

by Arline Zatz



PHOTOS BY AUTHOR

Afraid of spiders? Don't be. The next time you see a spider, perhaps you should sit down beside it, and unlike "Little Miss Muffet," observe this scary-looking but misunderstood creature. If you find it difficult to locate one, the exhibit on spiders in the Nature Center at Washington Crossing State Park will fascinate you. Did you know, for example, that in Madagascar, textile silk is drawn right out of the living spider's body and then woven into cloth? Or, that here in our country it is used for the cross-hairs of telescopic sights? Only 10 to 12 people are involved in the highly specialized field of raising certain spiders, including the feared Black Widow, for the production of silk.

There are many different types of spiders—some poisonous, some weavers, and others ordinary garden varieties. It has been estimated that there are more than 11,000 spiders per acre in the East, and one of the most beautiful sights is an "orb" web, glistening with early morning dew.

Tips on finding such a web and how to capture it permanently on paper are given here at the Center. Also explained is how a web is initially spun, the effect of gravity on its position, and how spiders compensate for any changes occurring during their construction.

In addition to this exciting display, you'll find an assortment of electric matching games on identifying honeybees, grasshoppers, ants, leafhoppers, etc. The Nature Center, located in the northwestern part of the park, contains 807 acres which extend about one mile east from the historic riverbank where the Revolutionary Army made the historic river crossing on Christmas night in 1776.



Any season is ideal to enjoy the easy trails located throughout the park.

A large tank at the Center houses an eastern painted turtle. If you're there at feeding time, you can watch it devour insects, crayfish, and other goodies. The red-bellied turtle, found in ponds, rivers, and other large bodies of fresh water, is here too, along with bullfrogs.

If you like guessing games, try your skill at matching up "bone skulls." On display are those of a black bear, coyote, and various rodents. Ever wonder why a determined mouse can seemingly chew through anything? All rodents have two upper incisor teeth and two lower ones which keep on growing unless the rodent gnaws consistently. You'll have the opportunity to observe them also and solve the mystery. Perhaps we should be more forgiving when one sneaks into the attic and chomps away!

It doesn't matter what time of year you visit the Center, for there is always something going on. Park Assistant Gretchen Bicking can usually be found feeding an abandoned or newborn animal. Recently she displayed a rare white squirrel found in the park, and she's always willing to show a visitor the outside "zoo" which houses animals which have been brought in for care. One such resident is a blind screech owl, who has to be hand-fed live mice. The other is a raccoon, recovering from an illness.

Children are always interested in the live bee exhibit and also the demonstration on how to grow grapefruit, oranges,

lemons and tangerines. Visitors get useful tips on how to save seeds from the fruits we eat and the proper way of soaking and then planting them to grow a free house plant.

The Nature Center operates a small gift shop, where one may purchase handmade jewelry, stationery, and t-shirts, at very reasonable prices.

While you could spend an afternoon inside the Museum, stretching your legs is a good idea as well. The new "Trail of Five Senses," designed for blind persons, starts just outside the building. A cassette tape is available to aid the handicapped on this fascinating $\frac{2}{10}$ mile walk. A staghorn sumac with its velvety bark feels delightful to the touch. Midway along the walk is a bench, for relaxing to the sounds of the birds.

On the other side of the building is an herb garden, and if you're planning to plant one, you can get an idea of what fullgrown herbs such as mint, lavender, tansy, and tarragon—just to name a few—look like.

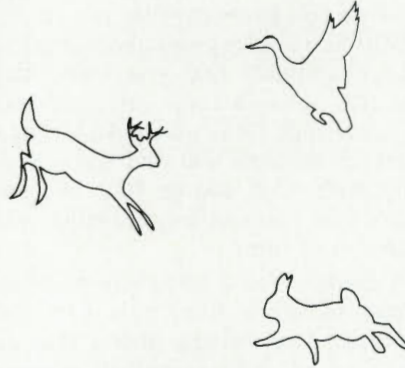
If "getting away from it all" is what appeals to you, choose from among the five trails here, which range from $\frac{1}{2}$ to $\frac{1}{10}$ miles in length—all just a few yards from the Nature Center Building. All are easy walking (It takes from 15 to 50 minutes to complete each loop.) and sneakers are fine.

The area is rich in wildlife, and visitors

Nature Center And Trails



This albino squirrel is a resident at Washington Crossing State Park. The naturalists at the Nature Center will explain why it is solid white.



Bones, bones, bones. A young visitor at the museum tries her hand at guessing which animals these bones came from. In case she can't, the signs will tell her and explain the facts of each as well.



may see white-footed mice, cottontail rabbits, white-tailed deer, and a variety of birds. You're certain to see squirrels doing their acrobatic dances, using their tails as rudders when jumping over branches—and perhaps as parachutes when they misjudge and fall! If surprised, they'll climb a tree trunk, but always keep to the opposite side, thus keeping the tree between you and them. Each of these active creatures consumes more than 100 pounds of food a year. Red and gray foxes, raccoons, chipmunks, woodchucks, moles, and opossums also are abundant.

A trip to this section of the park is invaluable in understanding a "natural community" and its changes. In the early stage of what is called ecological succession, change is rapid, but late stages of growth are extremely slow. Beginning with, for example, an abandoned agricultural field, various kinds of plants and animals will be replaced by others, until eventually a more stable community is established.

Four sections of the Nature Center, marked with large yellow stakes numbered 1 through 4, may be examined to see the different stages of succession. The first area, marker #1, is the lawn. This is not "natural" succession, as mowing controls the natural advancement, by cutting back plants which would otherwise grow. There are other ways to hold back the normal process of succession:

the American Indians used burning to halt it, and plowing and clearcutting can also be used.

Area #2 is a "natural" area now, but in the 1940s was used for farming. Grasses and shrubs were allowed to replace the corn field and become established approximately three years after farming ceases. If you look closely, you'll find the grass called "broomsedge." Colored bright red in the fall this type of grass was popular for making brooms. Lespedeza, a bush clover, and Daisy Fleabane also grows here.

Further on is area #3, where the succession dates from 1925. Here you'll see the green columns of eastern red cedar, one of the first trees to appear on abandoned fields. Browsing deer have cut down many of the trees, and cardinals have stripped the bark for nests. If you come just before sunset, there's a good chance of spotting a busy deer. Still further along, the deciduous trees begin and flowering dogwoods and sassafras are numerous as well as a few white ash, oaks, and shagbark hickory.

By the time you reach area #4, you'll notice the absence of all red cedars. This is because taller trees, such as red maple, have intercepted the sunlight. In this last and latest community, the dominant species are oak and hickory. Present, too, are a few white ash and beech.

It is interesting to observe the sun-loving plants versus the shade-loving

ones, and here at the Nature Center and trails, an appetite for more knowledge about the outdoors is awakened.

Bring along a blanket and plan on a picnic lunch. If you prefer, several fast food and other restaurants may be found on Route 29 not too far from the park. Near the Open Air Theatre is the General Knox Grove for picnics, and the new comfort station is open from April through October. For a pretty spot along the river, just down the road from the Center, try Washington Grove.

SPECIAL NOTES—The Nature Center is open from 10 am to 4 pm.

December 1st to March 31st

Saturday and Sunday

April 1st to May 31st

Wednesday through Sunday

June 1st to Labor Day

Seven days a week

Labor Day to November 30th

Wednesday through Sunday

There is a \$1.00 fee per car on weekends and holidays from Memorial Day to Labor Day.

HOW TO GET THERE

The Nature Center is located in Titusville. Off Route 546, follow signs which lead to the main entrance of Washington Crossing State Park Nature Center.



35mm Films & Their Selection

By Robert J. McDonnell

Spring—the season the infects a young man's fancy with amorous fever while overwhelming the remainder of us with daydreams, wanderlust, and *joie de vivre*—is, as they say, upon us! In addition to other picturesque scenes, this equinox usually projects vivid images of multicolored tulips, yellow daffodils, and purple crocuses onto a photographer's "mind screen." It also instigates writers of photographic columns to plunge headlong into a discussion of closeup photography.

Surprise—although I'm tempted, I'm not seduced! Now's an inappropriate time to discuss complexities of closeup photography because, before a photographer can realize the goal of capturing an image, knowledge of available films is mandatory. The conscientious photographer selects a film to suit subject matter. I'm not only referring to color films, but black-and-white films as well.

Black-and-white? Yep. Did you ever realize that some subjects are *color* subjects while others are *black and white*? For example, *beautiful colors* displayed by a tulip can just as easily be viewed as *intriguing patterns*. If the tulip is photographed in black and white, the print's lack of color amplifies that pattern's appearance. Although black and white is generally considered easier than color photography, I believe the opposite. Lack of color modifiers in a picture means a picture's subject matter must be strong enough to stand alone.

Now, let's examine some color and black-and-white films then determine when a photographer might choose a particular one.

COLOR SLIDE & PRINT FILM

If we polled readers, we'd probably find that users of color film are equally divided: half fancy color slides, half prefer prints. Photographers purchase film accordingly, and I'd bet most purchases are simply ones of habit—that is, a photographer casually strolls into the nearest drug store and says, "I'd like a roll of color slide (print) film

for an XYZ camera, please." I ask: How do you know the film you receive is your best choice given photography's many variables? Did you know that one film manufacturer offers at least six color slide films whose ASA ranges from 25 through 400 and color print films with ASA 100 or 400? Did you know that you can buy a mailer with each roll of film?

A mailer? Yes—when you purchase a roll of color film, you can also purchase a processing mailer that allows you to mail the roll of exposed film directly to the processing laboratory. Once film is processed, you receive results by return mail! Kodak owns a processing laboratory in Fairlawn and this facility operates quickly during nonholiday periods. If you use a mailer, you generally receive results in less than a week.

Which film should you select?

Kodak's K25 (ASA 25) Kodachrome has long been a favorite emulsion known for its rich color saturation—colors that appear true and life-like. One disadvantage of K25 is its low speed, which makes the use of a tripod mandatory in "low-light" situations.

An ASA 64 film is a little more than one f-stop faster than ASA 25 film. Kodak markets two slide films of that speed. One is K64, another Kodachrome; the other is Ektachrome 64. Ektachromes provide different color rendition from Kodachromes: "blues" are more vivid with Ektachromes. Furthermore, Ektachromes can also be processed in the home darkroom, whereas Kodachromes cannot.

A good all-around color slide film is K64. This film's speed of ASA 64 covers most photographic tasks—electronic flash, outdoor, and even "low-light" indoor—but on occasion you'll need a tripod to hold your camera steady during long exposures.

If your photographic activities on a given day involve capturing subjects in "low-light" conditions or, if you are photographing sporting events that require use of long telephoto lenses and

fast shutter speeds, a fast film is needed. Here's where Ektachromes shine because you may select emulsions with speeds of 160, 200, or 400. If I were photographing under similar conditions, I'd select the 400 Ektachrome—the fastest Ektachrome available.

Before leaving this discussion of color slide films, I'd like to mention two facts. First, color slide film demands accurate exposure; its exposure latitude generally is plus or minus ½ f-stop. Color negative film, however, exhibits wide latitude—about one f-stop under and about two f-stops overexposure being typical. Second, all color slide films mentioned and color negative films to be listed are balanced for "daylight" which includes electronic flash. The designation *daylight* means you'll observe true colors if film is exposed under sunlight conditions or by electronic flash. If you expose film under different lighting conditions, color rendition will be affected unless you use a filter on the camera's lens. When you expose a *daylight* film in a room lit by standard lightbulbs, resulting pictures will show a yellow shift (which is sometimes pleasing in portrait work). Other slide films, designated as Ektachrome, Type B for example, are intended for exposure under "yellow" light bulbs. Type B, however, can't be used outdoors unless a filter is used on the camera's lens. I suggest that you obtain more information about Type B films and filters by ordering inexpensive pamphlets listed in Kodak's yearly index of publications, available at no charge from most camera stores.

Now let's discuss color print films (a misnomer—I should say *negative* film). You're probably familiar with two films offered by Kodak: Kodacolor II (ASA 80) and its faster companion, Kodacolor 400 (ASA 400). All guidelines mentioned for color slide films also pertain to print film. So, I'm going to tell you about a film you probably haven't heard of, but might want to use; namely, Kodak's Vericolor Professional (also known as VPS 135-20 or VPS 135-36). This ASA 100 film is used by professionals who spe-

cialize in portraits or weddings. Don't let the term *professional* scare you. Except for a few quirks, VPS is no different than any other color negative film. VPS is intended for short exposures, faster than $\frac{1}{30}$ second, and it produces beautiful "flesh tones." You can buy VPS at most reputable camera stores. The only caution, aside from the shutter-speed restriction mentioned above, pertains to film handling before and after exposure. The camera store's proprietor will usually fetch VPS from a refrigerator. You too should keep the film refrigerated until 24 hours before use and once VPS is exposed, it should be delivered for processing via mailer or camera store as soon as possible. If you can't meet this constraint, put exposed film back in the refrigerator until you can.

VPS is a wonderful emulsion worthy of serious consideration if "people pictures" are your bag. If you don't shoot an entire roll of film in a short time, however, VPS IS NOT for you; Kodacolor is a better choice.

BLACK-AND-WHITE FILMS

This section will be short because I'm certain that users of B/W films own their own darkrooms and are familiar with processing and B/W jargon.

I'm a strong advocate of standardizing in B/W by selecting two films—a slow and a fast one. I don't endorse experimentation with a host of different films and developers because your results will be inconsistent. Then you'll find it difficult to feel confident when shooting in B/W. What do I recommend? For the casual darkroom worker, one who processes film occasionally, I suggest Ilford's Pan F film developed in Rodinal diluted 1:100. Pan F is a fine-grain film whose ASA is 50; it produces sharp prints with good contrast when developed in Rodinal—a compensating developer.

My selection of a fast film is HP5, an ASA 400 film manufactured by Ilford. I develop this emulsion in Kodak's D-76, diluted 1:1, but feel free to substitute Ilford's ID-11 developer for the D-76.

Have you heard about the "new" B/W films? Well, I've just had the pleasure of testing two "newer" B/W films and their companion developers. I can suggest their use only by experienced B/W workers, however.

When the cost of silver went sky high a few years ago, some manufacturer's of B/W film looked for ways to reduce the silver in their emulsions. The resulting emulsions are called *chromogenic*. Chromogenics form images by using color couplers and, after processing, resulting images consist of dye layers. In short, chromogenics are B/W equivalents of color negatives.

Ilford and Agfa market chromogenics: Ilford's XP-1 400 and Agfa's Vario-XL. Both films are nominally rated at ASA 400, but they can be both over- and underexposed considerably. For example, XP-1 can be exposed over the ASA range of 50 to 1600! Moreover, when the film is overexposed, say at ASA 50, the grain of

continued from page 13

DISCOVER CAPE MAY

April, a tulip festival was held which will become an annual event. The festival featured live music, Dutch costumes and dancing, followed by street washing.

Last year, over 13,000 tulip bulbs were planted throughout the city. Many appeared in time for the festival, bringing bright color to the city's public gardens, parks and the Mall, as well as to many private gardens. The tulip festival, sponsored by the Greater Cape May Chamber of Commerce, is a tribute to Capt. Cornelius Mey, a 17th Century Dutch explorer for whom the city was named.

Other annual events include an old house tour, arts and crafts show, art shows, antique automobile show, a foot race and a variety of other events. Cape May's convention hall, located on the promenade, is the site of dances and balls, church services and other activities all summer long.

A trip to Cape May would not be complete without a visit to the commercial fishing wharf on Cape May Harbor. Here, commercial fishing boats come and go, often staying out to sea for up to two weeks at a time. The boats, docks, seagulls and fishermen unloading their catch create a colorful panorama.

A few moments away is Cape May Point State Park, site of the Point Lighthouse. The present lighthouse, erected in 1859, replaces earlier lighthouses built in 1823 and 1847. Both former lighthouses had to be moved as the sea claimed the beach.

Cape May Point State Park is a former Military base. It was used as a coastal defense base and as a radio relay station for the U.S. Navy's Atlantic Fleet. In 1962-63 it was deactivated and trans-

ferred to the State of New Jersey for recreational purposes. A former magazine for the coastal artillery defense system still lies at the ocean's edge. Also at the park is a visitors center, museum, picnic shelter and self-guided nature tour.

Not far away, at Sunset Beach, the *Atlantus* lies partially submerged just off shore. The *Atlantus* was one of several experimental concrete ships built during World War I. It was sunk here in 1926. It is said the ship was to have been used as an anchor for a ferry terminal. A ferry terminal finally materialized in 1964. However, it was located further up the beach. The Cape May-Lewes Ferry now provides regular service between Cape May and Lewes, Delaware. The 16-mile ferry trip takes 70 minutes.

Near the concrete ship, beachcombers follow an old tradition—searching for Cape May "diamonds." The diamonds are clear quartz stones smoothed by the action of the sand and sea. Samples of the polished and cut stones are in many local gift shops, including one at Cape May Point. They also are on display at the museum at Cape May Point State Park.

Most tourists visit Cape May from early spring and into fall, but there are old house tours as late as Christmas. Regardless of the season—whether visitors bring bathing suits, fishing gear, bicycles, boats or walking shoes, most bring cameras. Camera buffs love Cape May and can be seen traipsing around the historic district or snapping seashore sights almost any time of year.

There is one more thing about Cape May. A visit to the town may be addictive. One trip to Cape May can lead to another and another and another. After their first visit, many join the crowd, singing that old South Jersey song, "On the Way to Cape May," year after year.

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FIVE IS ABOUT RIGHT

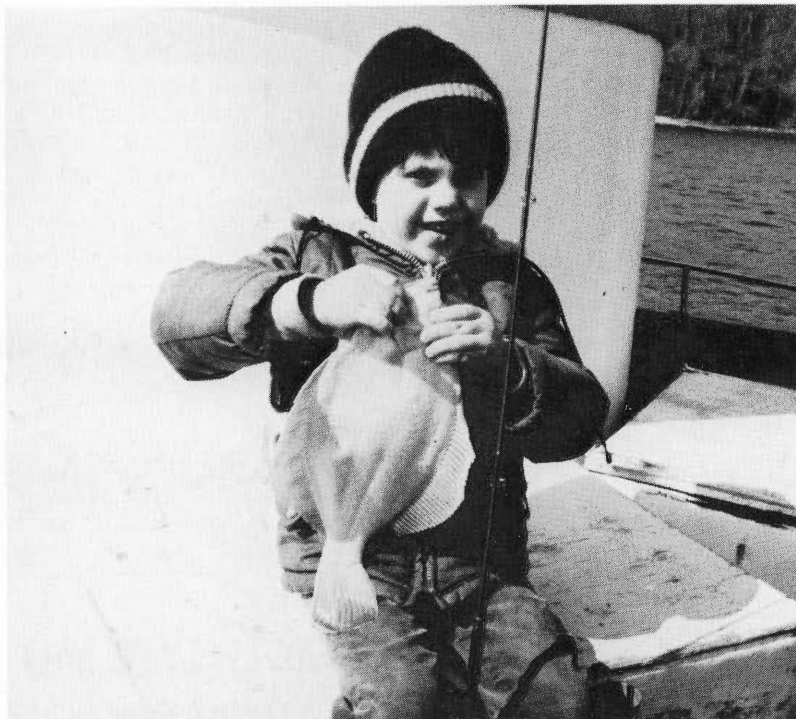
By Ferd DiPalma

One of New Jersey's most popular fish is that small, scrappy, ever-so-tasty member of the flatfish family of fishes, the winter flounder. And rightly so! This ubiquitous little fish with the formidable scientific appellation *Pseudopleuronectes americanus* would be well liked if only because of its attributes as table fare. One of my special friends has a light touch with fresh flounder fillets, broiled or fried. A touch that retains the delicate flavor of the cutlets, yet imparts a subtle hint—a blending of other flavorings melded together with a judicious choice or two from the family's arsenal of spices. So this little favorite can, if necessary, stand on its quality as food; excellent, as opposed to merely very good or good.

But there is another dimension to this crowd pleaser that cannot be overlooked. The species is not only abundant during the spring and fall months of the year; it is widely available and readily taken from the shores of rivers and the bulkheads of bays. It is captured from rowboats and small private craft. Party vessels seek them out in river and bay and sometimes pursue these tasty one-to-two- and a-half-pound specimens as they leave their sheltered waters and begin their seasonal migration to wherever it is that flounder shelter during the off seasons.

But one of the chief reasons for the universal popularity of the small-mouthed flattie is the fact that this is truly the fish for family fun. There are not many species of fish that can be pursued by youngsters not long out of the toddler stage fishing right along with dad and grandpa. But on New Jersey's flounder packets it is no novelty to observe small apple-cheeked youngsters competing fish for fish with fond fathers and doting grandfathers, grateful for the opportunity of participating in the making of a fisherman.

The question is: At what age do we start off the young tyke?.



Happiness is a five year old with a two pound flattie taken from a shallow flat of the Shrewsbury river. Young Glenn Coats had four others of three quarters to one and a quarter pounds.

Four proved to be too young. When little Glenn Coats was taken to the banks of the Pequest the day following the opening day of the trout season he promptly fell in the water. Now this might sound faintly amusing to the non-initiate but the true trout buff is aware that a dunking during the chill days of early April is nothing to be sneezed at—no humor intended.

So it was back to the drawing board!

The answer came up—five is about right!

The following spring—late March—young Glenn, a year older and wiser, appeared at the Highlands dock with his dad and granddad. He looked every bit the fisherman complete with flotation jacket in deference to his mother's wish, and a freshwater spin-casting outfit; OK for the winter flounder that were beginning to really feed after the hiatus of winter.

Not only was the day bright with the sunshine of early spring but the tide was going to be just about right. At 8 a.m. the tide was just two hours short of flood stage and rising. This meant that we would have a couple of hours yet of moving water and still be able to catch the greater part of

the falling tide when the warmer waters upriver would begin to move down toward Sandy Hook Bay. This warmer water should further stimulate the appetites and stir the curiosity of the flatties that were emerging from the mud in force.

And so it proved to be!

I continue to be impressed with the rapidity with which the small fry grasp the elements of handling very lightweight tackle be it spinning or spin cast. As soon as the vessel set anchor in midstream about a mile or so upriver of the Highlands bridge, plump flatties began to come over the rail at a fairly good clip. Our five-year-old required some help with his first two flounders. After that he was pretty much on his own.

Oddly enough the two fishermen aboard with the lightest of freshwater gear were the youngster and the writer, who was using an ultralight 5 ft. rod and a freshwater spinning reel filled with 6-pound-test line. The fishing was fast enough to sustain the interest of the youngster, who rated a few rounds of applause from nearby railbirds as he succeeded in landing several average-sized flatties. His spin cast outfit was barely OK; many of these rods and reels made for children are little

more than toys. The lad began to have trouble with the reel handle, which would stick occasionally. But persistence paid off and the boy got the job done. This is of the utmost importance when introducing any youngster to the pleasant pastime of catching a fish on rod and reel. He must be able to manage on his own. The quarry sought should be eager feeders and fairly easy to bring in. The winter flounder fills this bill and is an excellent fish with which to launch the child on his or her way. Mackerel, too, will give the five- or six-year-old kids enough incentive to keep interest at high pitch.

But with winter flounder especially the young neophytes are not only learning the rudiments of delicate, light-tackle fishing technique. The seeds of sportmanship are being planted and nowhere will they germinate better than in the minds of the very young.

Here on a flounder packet they will learn that the fishing is not always as good at one time as it is at another.

Here they learn that the smaller fish are to be carefully removed from the hook and returned to the water—to live and grow and possibly to be caught by yet another youngster in some future season.

Too many flounder buffs continue to pursue the recreation with tackle that could stop a jumbo bluefish in its watery tracks. To each his own! Yet if those fishermen could only experience the difference that very light or ultralight tackle makes they would most certainly leave the heavy gear at home. After all, these little fish rarely exceed a pound and a half or two pounds in weight, and two and a half pounds is rare indeed. So for a species averaging only a pound or so taken from shallow water only two to four feet deep—go very light.

Another word about tackle. Too often the very young anglers are burdened with equipment that is little more than a toy. Light, yet inexpensive adult tackle is available and this is the kind of equipment with which to start off the young hopefuls.

Forget the so-called fishing machines that are trotted out every holiday season that “really catch fish,” and are often more expensive than good-quality sporting tackle. Well, so does the cane pole, a length of string and a hook catch, but hardly anyone uses such an outfit anymore.

I know one thing. Young Glenn Coats 3rd is going to get a new rod and reel either on his next birthday or Christmas, whichever comes first.

Aluminum Recycling Program Raises Money for Trout Stocking

The Round Valley Trout Association is a private, non-profit organization, incorporated in the State of New Jersey. Round Valley Reservoir is an area of 2,300 acres, with a maximum depth of approximately 145', and approximate average depth of 70', located near Lebanon, N.J. Round Valley Trout Association was organized in Sept. 1980 for the purpose of creating a supplemental trout stocking program in addition to the trout stocked by the New Jersey Division of Fish, Game and Wildlife.

Since the inception of the Round Valley Trout Association in the fall of 1980, we have stocked between 6,000 to 7,000 trout in Round Valley Reservoir.

Round Valley Trout Association has also instituted an aluminum recycling program. A storage shed was purchased and erected on the property of Sabo's Bait Shop, Rt. 22 West, Whitehouse Station, N.J. Members and friends collect and save “ALL” aluminum cans and bring them to Sabo's for deposit. When the shed is full, the Recycling Committee picks up the aluminum and takes it to the recycling center. We believe this program will raise a substantial amount of money for our stocking fund.

Round Valley Trout Association also holds a spring and fall clean-up at the Reservoir to help keep the area clean.

Round Valley Trout Association holds its meetings on the third Tuesday of the month at 7:30 P.M. at the Polish/American Citizens Club, Liberty Hall, Kline Blvd., Whitehouse Station, N.J. For information on the organization or if you are interested in becoming a member, call **Dennis Knerr, President, (201) 859-4752.**

The Osprey Film on NJ Public TV

Once among the endangered wildlife species in New Jersey, the Osprey, or Fishhawk as it is also known, has been successfully restored to the state's wildlife population. The degradation of the blackish, white-breasted bird's food supply in 1950 placed it in the endangered species category. “The Osprey—A New Jersey Success Story” tells how state biologists restored the Osprey through egg transplants from Maryland, as well as the transplantation of chicks.

The film, produced for the New Jersey Network by Lowell Shaffer, is hosted by Paul D. (Pete) McLain, Deputy Director of the New Jersey State Division of Fish, Game and Wildlife, with Jo Ann Frier, Director of the Endangered and Nongame Species Program DEP's Division of Fish, Game and Wildlife. The film traces the transplantations through banding operations enabling biologists to track the birds along migratory routes. The biologists jump from helicopters to high nests, climb trees and power line poles in their efforts to control the restoration procedure.

The Osprey is a member of the hawk family and feeds exclusively on fish, swooping down on its prey. The Osprey, according to producer/director Shaffer, has been restored to a viable part of the New Jersey wildlife population. Air time for this film will be March 15 and 17 at 11 p.m.



Green Brook bridge washed away

Emergency Flood Control Bond Funds At Work

By Cliff Ross

Funds from a \$25 million Emergency Flood Control Bond Act approved by the voters in November, 1978 have been helping to construct local flood control projects in the State over the past three years. At the last accounting the Bureau of Flood Plain Management was screening 16 projects covered by applications that had been received in the third year of the program. The eligible projects would share in the remaining \$10 million of funds still available.

In all, 67 applications have been received over the past three years, covering some of the most troublesome local flooding situations in the State. While the review process of projects continues, a careful evaluation has been completed of a Statewide Flood Control Master Plan—a plan that cost \$300,000 which came out of a special \$3 million pool set aside from the 1978 bond issue. Some of the \$3 million, according to Narinder Ahuja, program coordinator, is earmarked for future preparation of detailed flood control plans for areas of the state with very serious flood problems.

According to Ahuja, the big idea of the Master Plan is to point out the critical areas and prepare the way for a long-range program designed to correct the chronic flooding situations that have cost millions of dollars in property damages and economic dislocation over the past 30 to 40 years.

Many of the acute problems of flooding, according to the Master Plan, developed out of the post World War 2 period of growth when frequent encroachment on the flood plains was commonplace—new housing developments, new shopping centers and the big blacktop parking areas that surrounded them. Nature's storage areas lost out to these "commercial successes." In terms of environmental equations, the flood retention values of flood plains along major river systems suffered impairment.

What did the Master Plan look at? According to Ahuja, the Plan investigated:

- The nature and extent of flood damage in the State.
- The severity of recently ex-

perienced flooding (1955-1980) in comparison with the potential for flooding.

- The effectiveness of existing and proposed flood control projects within the State.
- The need for further structural and non-structural flood control projects within the State.
- Priorities for flood control projects by river basins and sub-basins.
- Ways to improve coordination between the various levels of government for the planning and implementation of flood control projects.

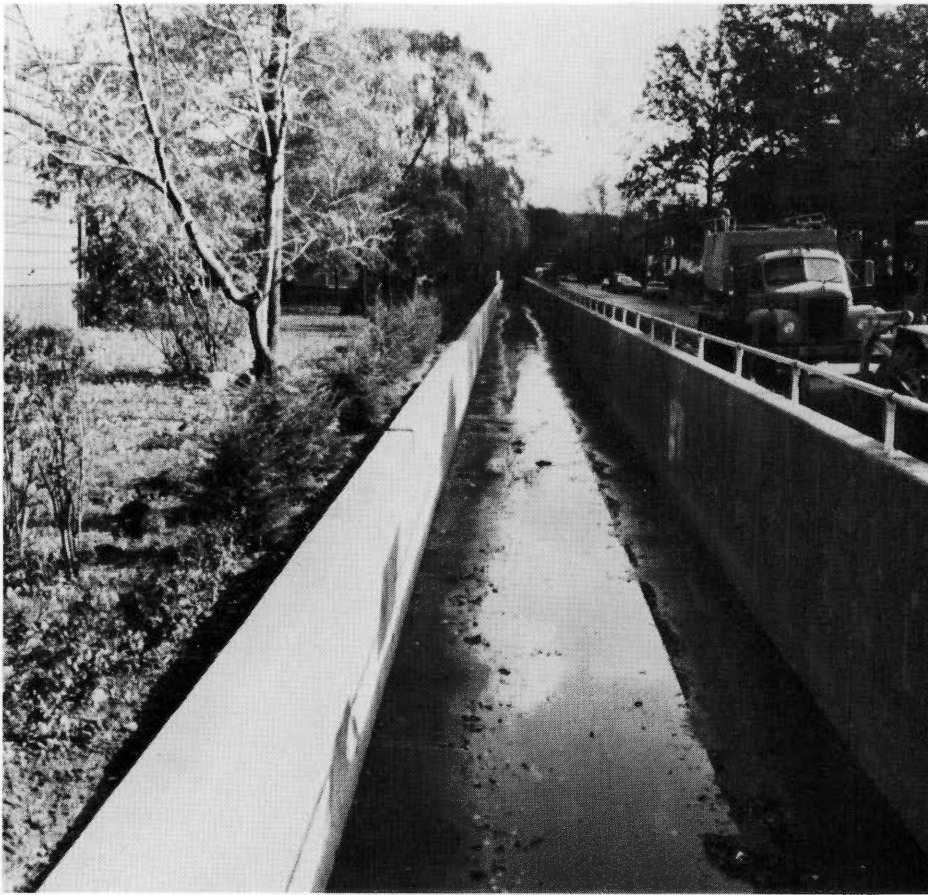
The fact that a flood control program and a Master Plan eventuated is seen as another case of public focus on an environmental issue that was already taking shape in Trenton. The Legislature was wrestling with flood plains protection legislation. Bond issue approval in 1978 showed a public willingness to finance a program of flood control where there had never been one before. It was left up to the Department of Environmental Protection (Division of Water Resources) to develop guidelines and fix criteria for projects. And from the beginning, the approval process had to take into account data showing:

- The frequency of damaging floods in an area;
- the number of people residing and working in the area;
- the true value of the properties in the area to be protected; and
- the roads and railroads disrupted by each flooding at the site to be protected.

None of the projects can cost more than \$1 million in State funds and must be matched by a local share. There is one exception where more than one municipality benefits from the project.

Under the 1978 Bond Act, \$6 million was committed in the first year for 11 projects; \$2 million on four projects in the second year and about \$4 million for five projects has been committed for the third year, with \$10 million left over for a final round of approved projects—among them 16 that came from municipalities in Essex, Bergen, Union, Passaic, Mercer, Middlesex and a couple other urban counties.

In the first year of the program, municipalities aided were Roselle Park, Rockaway Township, Englewood, Cranford, Westfield, Scotch Plains,



Concrete flume downstream from Brookside Place/Cedar Street Culvert

Mountainside, Springfield, Lyndhurst, Woodbridge and Livingston. The counties became involved—many times it was a matter of rebuilding or replacing bridges. In Middlesex County, for example, a good case was made for a heavily used county road and the flood project was designed to protect a water filtration plant and a firehouse in East Brunswick as well as impassable road conditions at times of flooding.

The approved projects included a variety of engineering features—new culverts, detention basins, new channeling for floodprone streams, flood wall construction, etc. All of them offered protection for large numbers of homes in residential areas and in some cases major commercial centers.

One of the earliest approvals was a \$3 million project in Cranford. It involved correction of a long-time flooding of the Gallows Hill branch of the Rahway River. Union County became involved since the project called for the replacement of four bridges over the stream by the County's Roads and Bridges Department at a cost of \$1.1 million.

The project essentially consisted of

excavation of a new detention basin and the realignment and channelization of a 5,000 foot reach of the stream according to Gregory Sgroi who notes "the project had been on the drawing board at least five years but didn't move forward because of a lack of funds."

The Gallows Hill Branch has a drainage basin of 715 acres, 570 of them outside Cranford in Westfield and Garwood. As for the history of the flooding of the Gallows Hill stream, Sgroi says: "It's been happening for years, since Cranford's earliest beginnings, I'd guess. Heavy rains always have flooded the streets, home basements and other properties in the known flood area. At least 150 properties were affected."

Pointing out the hydraulic problem, Sgroi notes that "in some cases the capacity of the brook was from 6 to 30 percent short of the stream flow capacity required of a 100-year storm." Contract work on the project started in May, 1980 with excavation of the Brookside Place detention basin. Today, a flood control project is in place.

In the second year of the program,

some of the municipalities helped included West Orange, Pohatcong Township (Warren County), Sayreville and the City of Paterson. In Paterson's case, the project approved replaces existing combined sewers in the flood-prone area. The old, antiquated brick sewers were grossly inadequate during periods of heavy, sustained rainfalls according to Ahuja. The result: elimination of frequent backup of stormwater and sewerage into surrounding industrial sites, homes and busy streets.

Other projects approved more recently involved flood prone areas of some of the larger cities—New Brunswick, Perth Amboy, Woodbridge and Elizabeth.

The Elizabeth project focuses on a serious flooding situation in the downtown heart of the city. The State's flood control program helps the city in meeting its share of the financial arrangements. "We're helping the city meet its share of the cost of a \$33 million project on the Elizabeth River," says Ahuja. The project involves enlarging the channel, replacing bridges, constructing a concrete flume for the river as it snakes through downtown Elizabeth around the courthouse and municipal buildings and through a heavily developed part of the city. Nearly 1.5 miles of the stream channel will be rehabilitated in a project being constructed under direction of the U.S. Army Corps of Engineers. It is largely funded by federal dollars and tentative completion date is June, 1986.

Dirk Hofman, Deputy Director of the Division of Water Resources, sees the program as a two-part effort—the strategy of the Master Plan on one hand which could entail further State funding, and on the other hand the application of a set of storm water regulations which will help alleviate flood problems through such techniques as on-site detention basins and proper drainage systems.

As for future funding if the program is to be continued, it seems to be an open question. If it is to continue as an ongoing effort of the Division of Water Resources, taking into account the chief recommendation of the Master Plan for long term programming, then says Hofman "It is up to State government to determine the financial sources to deal with these problems. The program so far has been given wide support. It's popular at the local level."

a tree grows in new brunswick and elizabeth and califon...

By Jane M. Farrell

New Jersey's outdoors is often thought of as mountains, meadows, and pinelands—the rural parts of the state that are coveted by both environmentalist and developer. But there is a New Jersey outdoors that is frequently overlooked, often misunderstood, yet seemingly ripe with opportunity. These are the urban areas of our state and they are as important to the future of New Jersey as a mountain lake or a sandy beach.

In 1979 the state budget provided monies for a unique program which allocated funds to qualifying municipalities for neighborhood beautification projects. The enabling bill appropriated \$100,000 for projects such as art-in-public-places, flower gardens, streetscaping, sitting areas, and recreation areas. Known as the Urban Neighborhood Environmental Assistance Program (UNEAP), it was funded in coordination with the existing Environmental Concerns Program created in 1972 and administered by the Department of Environmental Protection's Green Acres Program. The total cost of each neighborhood grant was not to exceed \$10,000. This represented as much as 80% of the total costs with the local units providing at least 20%. To be eligible a local unit must have qualified under either the Urban Aid Act of 1978 or the Depressed Rural Center Act of 1977.

In all, 11 applications were submitted for funding from 10 municipalities. Ten



A gazebo along the Delaware River in Beverly.

were ultimately approved by the Governor, representing \$87,294 in grant funds.

In the spring of 1983, Perth Amboy will honor James Drummond, the Earl of Perth. Drummond was a Scottish military leader appointed by King George I of England to administer the area of Ambo Point. In a compromise worked out between grateful Scottish immigrants and the local inhabitants, the area became known as Perth Amboy. Using funds provided through the Aid for Urban Environmental Concerns Act, the city will erect a statue of James Drummond, some 300 years after he left his mark, and his title, to the area.

In the City of Beverly in Burlington County, the Neighborhood Preservation Program sponsored the development of a gazebo along the Delaware River,

within Veterans Memorial Park. Its location was chosen in coordination with the comprehensive waterfront development plan for the area between the cities of Burlington and Camden.

The changing face of New Brunswick has resulted in new life and vitality for its downtown area. A meeting with the residents and store proprietors of the French Street neighborhood determined that proper landscaping of the road would provide a more pleasant atmosphere for those working, living, or just traveling through the neighborhood. Trees and waste receptacles have been placed along a section of French Street according to a landscape plan drawn up by the city.

Califon Borough in Hunterdon County used their funding to streetscape two of the main streets in their central business

There is no wonder drug that can cure our cities' problems. But the improvement of something as small as a traffic island can help in fostering civic pride.



After



South Warren Street in Trenton.

Before

district. The area is designated as a historic district by local, state, and national statute. In addition to planting trees along Main and Academy streets, the borough improved the sidewalks and constructed small sitting areas. These improvements provide a safe access to local business and complement the existing 18th- and 19th-century architecture.

The city of Elizabeth was the only municipality to submit more than one proposal for funding. Following the established rules and regulations for the program, only one project per municipality could be considered for funding during fiscal year 1979. The city chose their number one priority to be the improvement of Olympia Square. Although small, this traffic island had been an eyesore to the surrounding shopping

area for many years. In renovating Olympia Square, the city promoted a positive business image and living environment for the surrounding area. The square now includes a sitting area and raised flower beds with a historic monument situated in the center.

Cherry Street Mall in Rahway was partially funded from the Urban Neighborhood Environmental Assistance Program. Cherry Street had previously run between the two main thoroughfares of Rahway and was realigned to create a pedestrian mall. New walkways, old-fashioned light standards, benches, and landscaping now enhance the mall area. Even the asphalt paving was removed to expose the old brick underneath.

Hampton utilized their grant to add a tot lot, picnic area, and sitting areas to their borough park.

High Bridge improved a deteriorating sitting area in their central business district with UNEAP assistance.

Camden's Seventh Street Mall became possible when Seventh Street was relocated. A portion of the old street was closed to through traffic and a pedestrian mall was designed and constructed with landscaping, sitting areas, and low-level lighting.

Finally, the City of Trenton received a grant to help restore and renovate the South Warren Street area. The monies were used to upgrade the facades of a number of the business places along South Warren Street. This is only a small portion of the city's effort to improve the general appearance of this area. Since this UNEAP project was completed, several other stores have improved the appearance and new businesses have been attracted to the area.

There is no wonder drug that can cure our cities' problems. But the improvement of something as small as a traffic island can help in fostering civic pride. The Urban Neighborhood Environmental Assistance Program wasn't designed to create any earthshaking changes. Its projects were generally small in scope, but effective. Though the program was funded for only a year, the results have become an integral part of a brighter New Jersey future.



URBAN BIRDING IN BRANCH BROOK PARK

You can catch the Newark subway in time for the pre-sunrise song of the Phoebe flycatcher.

On a mellow spring day, Branch Brook Park in Newark communicates a language of visions and sounds. It's a universal language, beckoning all, but only truly perceived by a "bird watching" few.

On the coat tails of March, in defiance of ceaseless city sound, come the Ring-Billed Gulls and the Killdeer.

On a spring bird walk, the Killdeer is often seen running about Branch Brook's openness in search of food, braving the springtime strollers and little leaguers. There's an egotistical bravado to its chant: It repeats its name ("kill-deer," "kill-deer"), seemingly unconcerned by the encroachments of city life.

As we walk through the Park on a spring morn, we wonder if the Eastern Phoebe before us has just touched base, or if it's stayed the winter. A seasoned bird watcher reasons that since the winter was a long, cold one, this flycatcher has probably just arrived. We watch it. It takes flight, ascends, and reaches a "plateau"; then it momentarily flutters backwards. This ability, we are told, is nearly exclusive to the flycatchers and is exhibited usually when they have overshot their "flying insect" meal.

The long plaintive "wheep" of the Great Crested Flycatcher is heard. We respond to the signal in joyful subservience. Binoculars are propped in unison as we catch sight of the bird sitting vertically on a branch. It has adapted well to the intrusion of civilization—recent records indicate that it often abandons its forest habitat for the openness of parklands.

Our bird-walking course continues along the shrub- and tree-lined paths, over a modest concrete bridge that links a narrow end of the Park's namesake, Branch Brook. Our walking course is somewhat predictable; we search out the least traveled parts.

In our bird watching group is a man of about 70. He wears a faded beret



A bird watcher responds to the voice of a Red-eyed Vireo. Struggling for a glimpse, he spots the olive-green bird well-hidden in a jungle of leaves.

and striped slacks. His accent is pronounced. Scandinavian? Maybe German. He sights a Cedar Waxwing by its yellow tail-tip and its topknot feathers. He tells us that the bird is classified in guidebooks as an erratic permanent resident—sometimes found at Branch

Brook in the thick of winter.

The sight of a familiar red bird with a fluffy crown uplifts the first-time walker. Here the fledgling birder need not depend on the adeptness of the more experienced. Something new is learned; the Cardinal calls and its sound is committed to memory.

At this stage in our walk, experienced birders have implicitly identified themselves. There is the beret-clad graying gentleman; a female lawyer, who for a few hours each week becomes a consummate birder. There is the group leader, Dick Ryan, who is the director of Turtle Back Zoo in West Orange as well as a leading New Jersey ornithologist.

One of the "regulars" delights at a sudden distant tapping. Novices wonder why. We walk in the direction of the sounds, and at once the fascination is shared by all. It's a downy woodpecker, who despite our blatant stares, continues his tapping ritual.

The walk nears its end. We have sighted 35 bird species. It's been unforgettable, and we know that when we return to Branch Brook again, all will be changed for us. For the sequence of birds spotted, their antics, their calls, and their songs will all be different.

We've enjoyed our walk. Our senses for a time were united. Keen listeners learned from sympathetic watchers, and the reverse was also true.

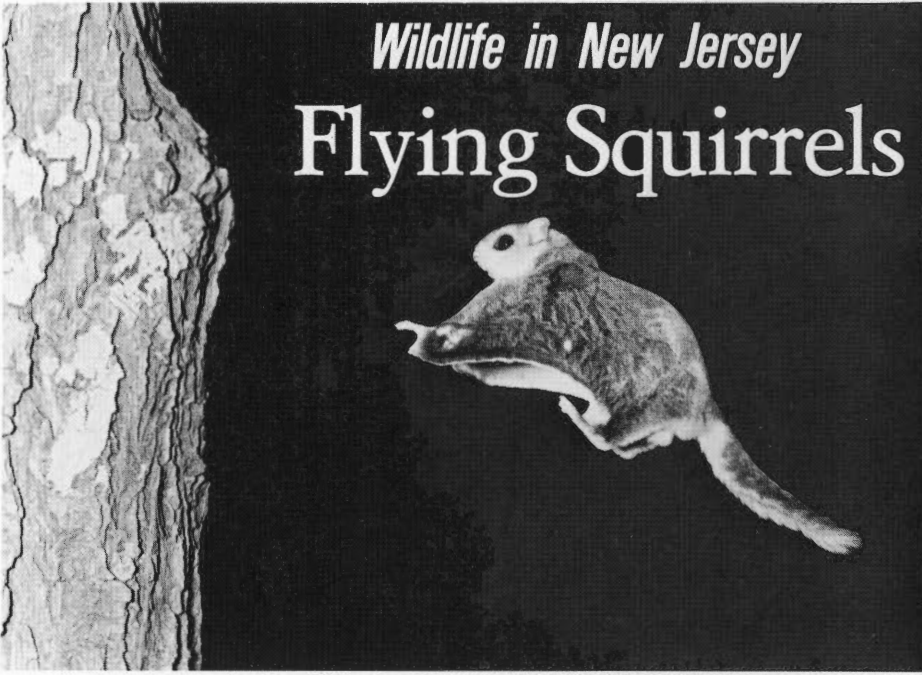
We agree that there is something unique about the "urban odyssey." Perhaps it is the poetic contrast: the nearness of looming skyscrapers; the victory of the meekest bird song over the deafening city cacaphony.

We walked the same grounds as hundreds of other strollers that day, but we saw a different reality. We traveled a different dimension. We learned a new language. We could not have asked for more.

*For information contact
Marilyn Maxwell
Essex County Park Commission
284 Beaufort Ave.
Livingston, N.J. 07039
201-992-2201*

Wildlife in New Jersey

Flying Squirrels



By Robert McDowell

Practically everyone knows Rocky and Bullwinkle, the spicy cartoon pair that darted about the television world on Saturday mornings, foiling the dastardly deeds of Boris Badenoff and his villainous wife Natasha.

We all chuckled at the antics of the hero moose Bullwinkle and his squirrely sidekick. But, did you know that Rocky was a flying squirrel?

Unlike their cartoon image, real flying squirrels do not wear a pilot's helmet and goggles and, in fact, they do not really fly. The flying squirrel would more properly be called a gliding squirrel for its unusual ability to jump from high places and glide off to another landing spot. A flap of cape-like skin that attaches from the rear leg to the front leg and then to the neck forms a shape not unlike a hang-glider when the squirrel extends its front and rear legs. In addition, the flattened tail forms a long paddle-like rudder nearly as long as the animal's body. This small squirrel, somewhat larger than a chipmunk and not quite as big as a red squirrel, is a very common critter in New Jersey's woodlands. However, because they are only active at night, they are seldom seen.

According to Peterson's Field Guide, New Jersey has both the Northern and Southern variety of flying squirrels. However, the South-

ern is the most common and is found throughout the state. The only obvious difference between the two varieties is size; the Northern is slightly larger and has a proportionately longer tail.

Flying squirrels prefer a hardwood forest habitat where they find their preferred nuts and other seed foods. They build their nests in natural tree cavities and woodpecker holes. If these tree holes are not available, they will construct a leaf and twig nest, much like their gray squirrel relatives. However, in winter, the hollow tree is a much preferred site, and as many as 20 of these rodents will be found in one nest. In warmer weather they disband, and females seek their own nesting areas where they raise their young. They normally birth 2-6 young and have a litter in April-May and again in August-September.

During these warmer months there are normally one to two flying squirrels per acre in the preferred hardwood habitat. However, higher numbers have been reported. This illustrates that these small creatures are fairly common in New Jersey's woodlands.

Occasionally, flying squirrels select the attic or walls of a cabin, house or farm building for a home. This is where they run into conflict with people. Their habit of gnawing

and scurrying around at night makes them unwelcome housemates for people.

Recently, one of our Conservation Officers completed a log cabin home building project. During the family's first night in the new house, they were awaked by scratching and scrambling sounds from the rafters of the cathedral ceiling. The pajama-clad officer arose to investigate and was greeted by little gray bodies gliding from the rafters to the loft, from the loft to the kitchen, and from the kitchen to the living room. It seemed that a group of flying squirrels had also moved into the new house. After removal of the squirrel hang-gliding troop, the problem was solved with a little creative hole plugging near the roof top.

Some people would suggest that flying squirrels would make "neat pets." I can testify, from personal experience, that they bite and their nocturnal nature makes them a pest to keep in captivity. I captured a flying squirrel after cutting down his den tree for firewood. After the little glider landed on my head while the tree plunged to the ground, I put him in my lunch pail and took him home, "for the kids to see." The squirrel was housed in an old hamster cage, the kind with an exercise wheel. After three nights of exercise on that squeaky wheel, we decided to put our friend back where all wildlife belongs, in the wild.

Human activities affect this animal's habitat in both positive and negative ways. We cut down old trees with nesting cavities. But, our buildings and other structures are also utilized for raising young and for winter shelter. This is true for many species of wildlife adaptable enough to live with people.

It is difficult to observe these critters in the wild, but not impossible. The next time you are on a camping trip or taking an evening walk in a wooded area, listen for a high-pitched chatter way up in the trees. Shine a light and you might see the reddish-orange of the squirrel's large eye. If you can find one in the beam, you might be lucky enough to see the launch and glide that makes the flying squirrel the unique creature it is.

LAKES MANAGEMENT CONFERENCE ON APRIL 23

A Lakes Management Conference is planned for April 23, at Camp Hope, West Milford. The conference is supported by the Greenwood Lake Watershed Management District Inc., the Lake Hopatcong Regional Planning Board, and the Department of Environmental Protection's Lakes Management Program.

The theme for the conference will be, *The New Federalism: Its Effects on Lake Management in the 80's*. Featured speakers already confirmed include U.S. Congressman Robert Roe, Chairman of the House Subcommittee on Water Resources, and Robert Johnson, past director of the U.S.E.P.A. Clean Lakes Program and current President of the North American Lakes Management Society. In addition, perspectives on lake management strategies, creative financing, organizational alternatives and stormwater control will be offered by state, municipal and consulting scientists experienced with lake management problems encountered in New Jersey. A demonstration of weed harvesting equipment will also be presented at nearby Greenwood Lake.

The conference will serve as a forum to inform the public in the changes being made in public policy and to encourage increased local involvement in achieving water quality goals.

An agenda is available and can be obtained by contacting Debra Hammond of the Lakes Management Program at the following address:

New Jersey Department of
Environmental Protection
Division of Water Resources
CN-029
Trenton, New Jersey 08625
Telephone: (609) 292-0427

STATE FEDERATION POSTER CONTEST FOR NATIONAL WILDLIFE WEEK MARCH 20-27, 1983

The New Jersey State Federation of Sportsmen's Clubs is pleased to announce their third annual special poster contest to celebrate National Wildlife Week. This year's theme is "This Land is Your Land." This theme was selected to remind us of the need to conserve all our public parks, refuges, and recreational areas.

Contest Rules

1. All New Jersey residents through the age of 18 may enter.
2. The poster or drawing must relate to the theme: This Land Is Your Land.
3. Paper should be 8½ by 11 or 12 by 18.
4. Crayons, colored pencils, ink crayons, marking pens, poster paint, water colors, charcoal or colored chalk may be used.
5. If a source is used, the name of book or magazine, and year must be given as the source and listed on the back. (No tracing, pre-drawn posters or magazine cutouts will be acceptable.)
6. On the back of each drawing or poster, please list: Name, Address, Phone Number, Age.
7. Deadline for entries must be post-marked by April 15, 1983.

Prizes

SENIORS (Ages 14-18) and JUNIORS (Ages 11-13): First Place: \$100.00 Savings Bond; Second: Wildlife Family Album; Third: One year membership to *National Wildlife Federation*. ELEMNTARY (Ages 7-10): First Place: \$100.00 Savings Bond; Second: *Ranger Rick's Answer Book*; Third: One year membership to *Ranger Rick's Nature Club*. PRESCHOOL (Up to 7 years): First Place: \$100.00 Savings Bond; Second: *Ranger Rick's Answer Book*; Third: One Year subscription to *Your Big Backyard*.

All winners will be notified by mail. All prizes will be awarded by the BOARD OF DIRECTORS at the Federation Annual Convention. Other prizes may be awarded by the judges at their discretion.

HISTORY, CULTURE AND ARCHEOLOGY OF THE PINE BARRENS



Understanding Pine Barrens folklife, current directions in Pine Barrens prehistory, and genealogical research in the Pinelands are three of the many subjects covered by the Center for Environmental Research in their just-published book, "History, Culture and Archeology of the Pine Barrens."

The book is a collection of essays presented at the Third Annual Pine Barrens Research Conference held at Stockton State College in March, 1980.

Commenting on publication of the book, Dr. John Sinton, editor and associate professor of environmental studies at Stockton State College said: "The publication should serve as a basis for future research and planning efforts in the New Jersey Pine Barrens. It is hoped that readers of this volume will better understand our prehistoric and historic cultural heritage and will help further its preservation."

To order a copy of the book, "History, Culture and Archeology of the Pine Barrens," send \$8.00 (includes postage) to: Center for Environmental Research, Stockton State College, Pomona, N.J. 08240.

FRONT COVER

Trout Angler in the Flatbrook—Photographed by Harry Grosch.

INSIDE BACK COVER

Flying Squirrels—Illustrated by Carol Decker (See article on page 31).

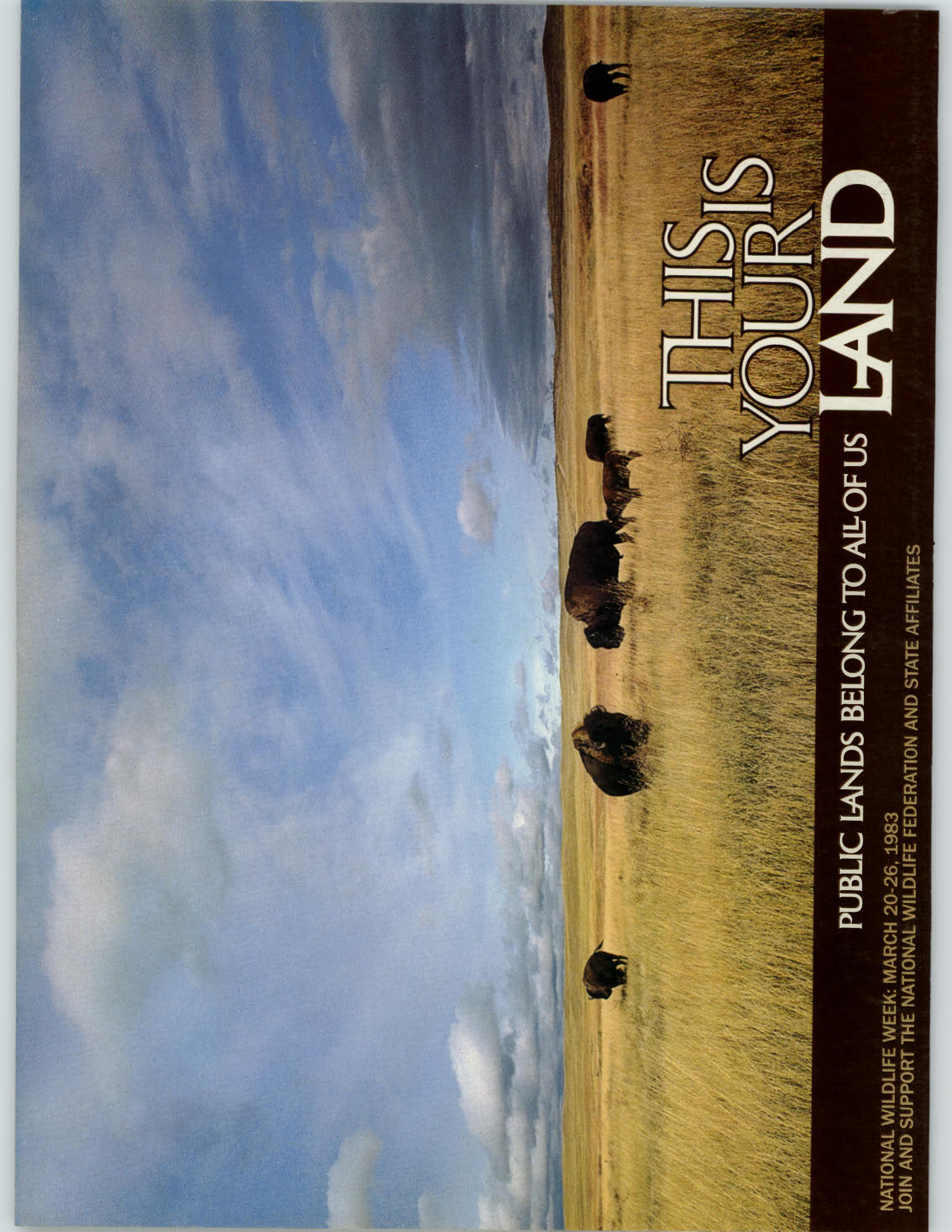
BACK COVER

The bison grazing on our great plains symbolize the "This Is Your Land" theme of National Wildlife Week, March 20-26, 1983.



Carol Decker

New Jersey State Library



THIS IS YOUR LAND

PUBLIC LANDS BELONG TO ALL OF US

NATIONAL WILDLIFE WEEK: MARCH 20-26, 1983
JOIN AND SUPPORT THE NATIONAL WILDLIFE FEDERATION AND STATE AFFILIATES