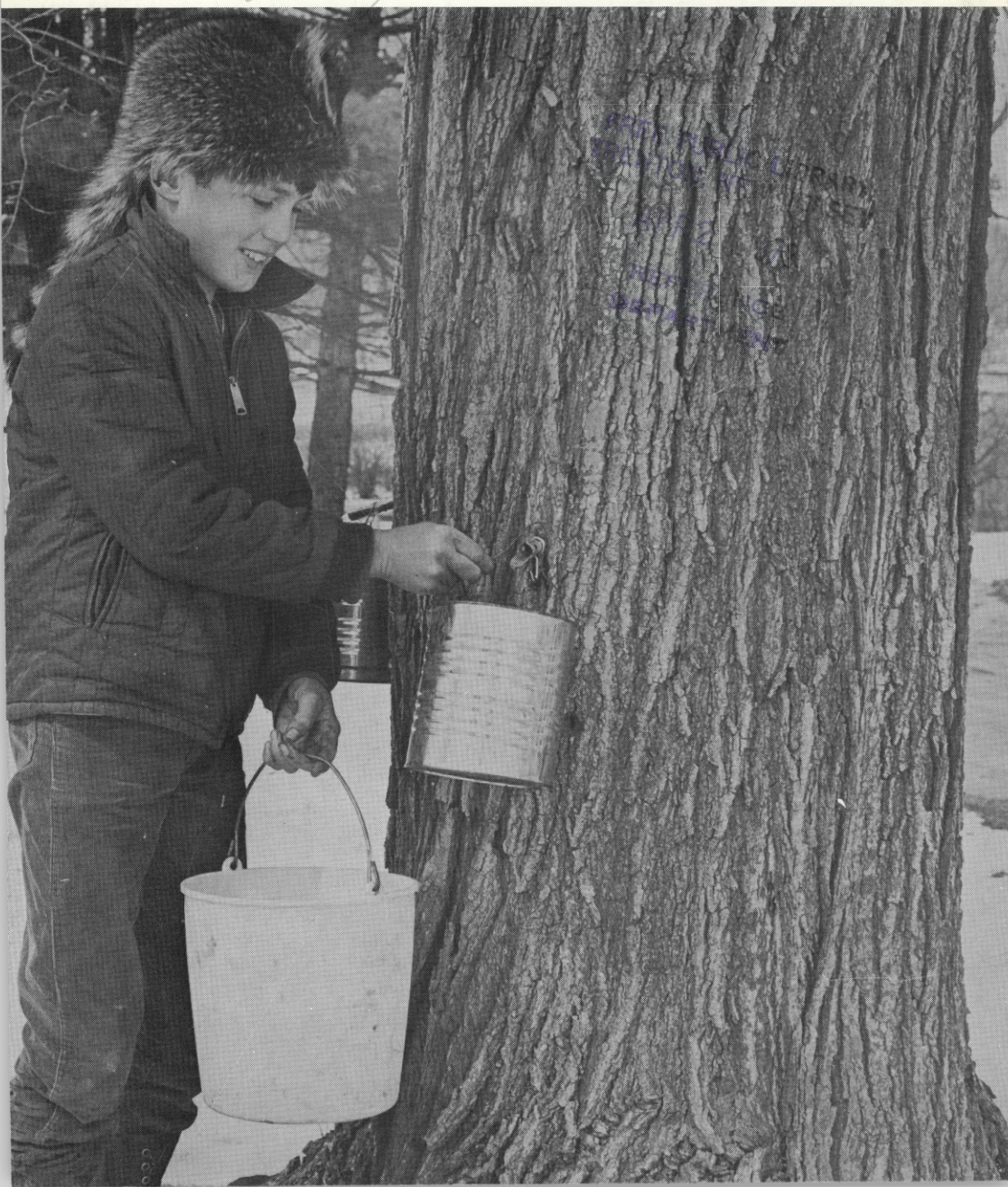
New Jersey Outdoors

W. Balcony

February, 1972



Behind the Scenes

By Russell A. Cookingham, *Director*

Wildlife management has a special meaning to each individual and usually takes on the connotation of habitat improvement, wildlife propagation, land acquisition, wildlife survey, law enforcement, and wildlife refuge, to name a few.

As important as these fish and game activities may be, possibly the most important contribution now being performed by professionals of the New Jersey Division of Fish, Game, and Shell Fisheries is that of technical surveillance of man's physical activities affecting wildlife environment.

Such activities under continuing review include the planned or operational programs of public and private organizations such as the Corps of Engineers, dredging companies, power companies, highway departments, municipal sewage commissions, mosquito commissions, agricultural agencies, municipal planners, and land development companies.

Today, most such organizations or agencies, either voluntarily or under duress of legal requirements, make an effort to conduct environmental impact studies prior to implementing their programs. The influences of such activities on air, water, and land are of major public concern. Of equal importance, but usually less understood, is the effect of such alterations on fish and wildlife populations and habitat. Fish, birds, and mammals are all products of the way land is utilized. Their future welfare hinges completely on present land use programs and future land use planning.

The fish and wildlife scientists and conservation officers of the Division of Fish, Game, and Shell Fisheries expend thousands of hours

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New Jersey Outdoors is published monthly by the New Jersey Division of Fish, Game, and Shell Fisheries of the Department of Environmental Protection in the interest of the natural resources of fisheries and wildlife and the betterment of hunting and fishing in New Jersey.

In This Issue

Cover—"Sugaring Off"—*Harry Grosch*

The sweet of the year for some folks is late winter or early spring when it is maple syrup time in the sugar bush. Although it is pretty much a thing of the past in New Jersey, a few hardy individuals continue the annual ritual of "biling down" the 40 or so gallons of maple sap required to obtain each gallon of pure, sweet maple syrup. For more on maple syrup see page 8.

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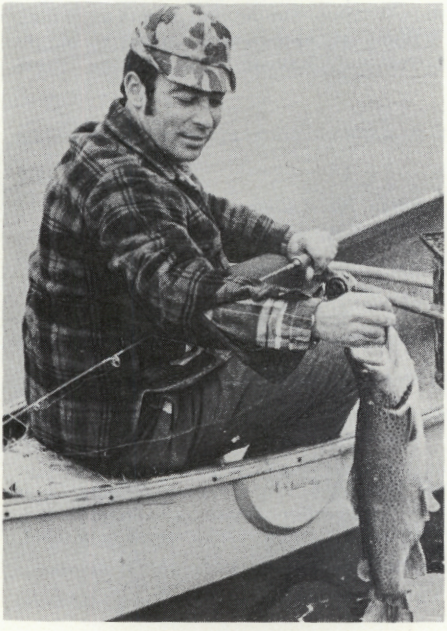
A couple of happy anglers on Round Valley reservoir with two-year old rainbow trout which average about three pounds



This angler struck pay dirt with a six and one-half pound brown trout which was the result of a three-year stocking program in Round Valley Reservoir in Hunterdon County. Trophy-size brown and rainbow trout are there for you if you can catch them

Trophy Trout

By P. D. McLain, *Federal Aid Coordinator*

Garden State anglers presently find more and larger brown and rainbow trout in their waters than at anytime in the history of New Jersey. Fishery research studies conducted by Biologist Robert H. Soldwedel of the Bureau of Fisheries Management on the Round Valley and Spruce Run Reservoirs in Hunterdon County indicate that growth rate and present size of the brown and rainbow are providing "trophy" size trout after only two years of stocking.

Under a Federal Aid to Fisheries Research Project, Biologist Soldwedel has been investigating the stocking technique, species introduction, and waters which may have potential for increasing the trout fishing in New Jersey. This work includes the establishment of a trout management program for Round Valley and Spruce Run Reservoirs and the investigation of the trout potential in these newly created impoundments.

Following three years of research which involves about 50 man days a year on the Round Valley Reservoir, some significant findings have been worked into a management program to produce both quantity trout fishing for the many anglers who use this area and also some surprisingly good trophy trout fishing for the specialists who really like to work for their sport.

The Round Valley Reservoir totaling 2,350 acres is administered by the Division of Water Resources and is open to public fishing. It was completed in 1965 and represents the second largest man-made lake in New Jersey. The land prior to flooding was mostly farm and woodlands and there was no significant fish population when the lake was completed.

Alewife (herring) soon became established and the population flourished and provided a tremendous forage fish potential.

The Bureau of Fisheries Management decided to work with the brook, brown, and rainbow trout to determine the best stocking dates from the standpoint of survival, annual holdover, and angler catch. Each year about 4,500 brook, brown, and rainbow were stocked. A representative number of these fish were carefully measured, tagged, and released in the Round Valley Reservoir during the November to May period.

Tag return studies on trout caught by the anglers during the three years of this investigation showed that the brook and rainbow trout yielded a 40 to 50 per-

cent return. The angler cooperation on returning the tags was about 75 percent.

Growth rate studies showed that the 10- to 11-inch trout stocked from November to March had grown to 13 to 14 inch fish (about ¾ of an inch a month) by the opening day of the trout season in April. The carry-over rate of the brook trout was poor, but the second year brown and rainbow trout reached 17 to 18 inches and averaged 3 to 4 pounds. By the third year they were 23 to 24 inches and weighed 5 to 8 pounds. This is considered an excellent growth rate for New Jersey trout and it is attributed to the tremendous herring population on which the trout feed.

Fishery Technician Charles Masser measures and tags a ten-inch rainbow trout which was stocked in December. Within three years this trout may be a trophy eight-pounder

The brook trout presently do not appear to carry over from one year to the next, but the browns and rainbows have been pleasing the anglers with quality trout fishing. The rainbows apparently are easier to catch than the browns.

The highest tag return rates are made on the April and May stockings, but the best holdover is from stockings made during the January — February and late May — early June period when fishing pressure is less and they have a chance to acclimate to their environment.

Just why is it that the Round Valley Reservoir is one of the few trout waters in New Jersey where there is a rainbow trout hold over from one year to the next? Why is it that the browns and rainbow trout have flourished in this particular reservoir?

First, there is an immediate supply of available forage fish on which the trout can feed. Secondly, Round Valley maintains a year-round dissolved oxygen and water temperature combination essential to trout survival. Even during the hot summer months there is sufficient dissolved oxygen on the bottom of the lake to support trout life. This is due to stripping off the

organic matter from the bottom of the lake during construction resulting in little decomposition which maintains a suitable dissolved oxygen level. In addition, while the water temperature of Round Valley may go to 76 degrees on the surface during the summer months, in the thermocline and below it is in the 60 to 70-degree range which is ideal trout water. Bottom water temperatures in the summer may be as low as 46 degrees at the maximum depth of 160 feet.

Fishery biologist Robert Soldwedel prepares to release jaw-tagged, ten-inch trout as a part of the continuing study of survival and growth of trout in Round Valley Reservoir

What does this mean to the New Jersey angler?

Fishery research under this Federal Aid to Fisheries Project has provided information on the best technique to stock this lake for holdover fish which will, within three years, become trophy size brown and rainbow trout. Biologist Soldwedel showed that trout stocked in the fall and winter months will grow up to 3 or 4 inches by opening day to provide larger fish for the early season angler. The work indicates that the brook trout are strictly a one year put and take fish but the rainbows and browns will adapt and carry over for at least three years and probably longer.

These preliminary findings will be backed up with additional research on stocking rates, techniques, growth rate, and survival. However, based on three years of research, the New Jersey angler now has trophy size brown and rainbow trout in the Round Valley Reservoir and a fishing opportunity which did not exist prior to the construction of the second largest lake in New Jersey.

When Biologist Soldwedel is asked about the fishing potential of the Round Valley Reservoir, he says that he fully expects new state brown and rainbow trout records to come from it. You may be the one to catch it. #

What Good Is a Luna Moth?

By Stephen W. Kress
The Field Biologist

If a survey were conducted to discover the most common question asked by participants of field trips, I am sure it would be the inevitable query "What is it?" People have a strange fascination with names. They may forget the name seconds later, but for the moment the name acts as a tag, it is a way of dividing nature into neat categories, and an example of the very human quality of attempting to create order from seeming chaos.

I once captured a luna moth on a field trip. Members of the group were curious to see it and crowded close. Many asked "What is it?" and I replied that it was a luna moth, one of the larger members of the silk moth family. We examined it closely and talked about it for some time before someone asked another question which I have heard many times before. "What good is it?" an inquisitive voice asked. I paused for a moment, looked at the person who had asked the question and replied "What good are you?" The usual "Well, uh" followed, and then silence.

It's true that some animals are used by man and that many of these have economic and recreational significance. Certainly these animals are good for man and this part answers the original question.

But the root of the question remains. What good are animals which have no obvious value to man? What good is a luna moth, a Nashville warbler, or a spotted turtle? Do these animals have a value at all?

One might argue that these animals are part of the delicate "balance of nature" and to tamper with the Nashville warbler population would be to disrupt the balance of things, perhaps initiating a plague of insects or worse. But the balance that exists in nature is not a delicate thing. It's a tough, elastic system that is seldom shaken and usually capable of recovering when jarred. An absence of Nashville warblers and spotted turtles would probably have little effect on the community of which they are a part. Their niches would probably soon be filled by other species.

Another common argument for protecting little-known species lies in the very fact that they *are* largely unknown. Researchers hold that life history, physiological, and anatomical studies may reveal significant facts concerning evolution,

comparative morphology, and even control of disease. Must we justify the existence of a luna moth? Need we find a reason why it is good? Is it not reason enough that these seldom-seen creatures are, with us, co-inhabitants of the earth. They are products of the same evolutionary trends and trials that have delivered man to his lord-like position. I would like to think that this reasoning would suffice and that men would think of themselves as stewards of the land accepting the obligation to preserve the earth in such a state that it will always produce not only pheasants and cottontails, but also the luna.

Most people have never heard of a luna moth, a rainbow darter, or brown creeper. They have never seen the courtship antics of spotted salamanders or watched a rough-legged hawk hover against the wind. How can we expect people to accept a blind obligation to preserve what they do not even know exists?

When financial decisions are made between preserving the environment of the luna and allotment of funds for other modes of progress, the luna usually loses. It loses because the question "What good is it and why should we save it?" is yet largely unanswered.

I hold that the luna *is* good for man and that its value lies not in maintaining nature's balance or in helping to find a cure for cancer, but within man's ability to see and appreciate beauty. Where this exists, there will be interest and initiative to preserve the luna and its natural environment.

If justification is necessary, I believe it exists simply in the potential of the luna and all little-known species to provide a source of enjoyment and beauty from their form and behavior. #

Maple Syrup Time in Sussex

By Harry Grosch

Warm days and cool nights are good weather to make the sugarbush sap start running and sugaring time to begin for Ted Spinks of Bevans, Sussex County. One of the signs Ted looks for—icicles forming as a result of sap dripping, by day, from a wound on a limb of a sugar maple and freezing at night

Ted taps the sugar trees with a brace and bit, inserts a hollowed sumac spile or metal spout, and hangs a bucket on the hook. Then, as the warming sun rises higher in the sky, the sap runs from the tree and fills the pail

Ted collects the clear sap that has filled the buckets on the sunny side of the tall, dark sugar maple trees. The early settlers learned the technique of sugaring from the Indians

After chopping wood to feed the fire, Ted pours the thin, cold sap into a large pot wherein the sap boils and bubbles. Clouds of steam rise as the sap slowly thickens and sweetens to become syrup. If there is still snow on the ground, he spoons hot maple syrup on the snow. The thick syrup quickly hardens into sweet maple sugar candy

Washington's Guns

By Ashley Halsey, Jr., *Editor, The American Rifleman*

Like so many other gun owners, G. Washington, Esq., wanted the best shotgun his money could buy. He wrote to his factor or business agent in London, Robert Cary & Co., from Mount Vernon on July 25, 1769, for "as handsome a fowling piece 3½ feet in the Barl. as can be bot. for 3 Guins."

While the gun for which Washington stood ready to pay the English equivalent of $200 in Virginia provincial money apparently has been lost to sight, at least one of his long shotguns and no fewer than 9 or 10 of his pistols have survived to this day as treasured relics of our first President.

There are evidences in Washington's private diary and in contemporary accounts that he may have owned as many as 50 firearms during his vigorous career as frontiersman, military leader, and sportsman hunter. Authentic records of his buying arms go back at least as far as 1760, when at 28 he ordered "a Prussian dragoon" pistol.

An inventory of his personal possessions at Mount Vernon, made within 3 months of his death there Dec. 14, 1799, lists 15 firearms not including the "Prussian dragoon." His writings indicate he presented a number of others to comrades-in-arms and kinsmen. Like so many gun owners through the ages, he was plagued by thievery. His best pistols were found, after his death, double-locked in a heavy iron strongbox that is still on display at Mount Vernon.

After Washington's death, his pistols passed through hands as diverse as those of Lafayette, Robert E. Lee and a son of John Brown, leader of the anti-slavery raid on Harper's Ferry Arsenal, before finding their way into museums or private collections in Virginia, Arizona, and New York State, and France.

All of the authenticated Washington firearms that survive are single-shot muzzle-loading flintlocks typical of his period. All are British made, as were most firearms used in colonial America under the British Crown.

In one fairly typical peacetime year, 1768, Washington's diary is studded with references to hunting.

Feb. 24—"Went a ducking between breakfast and dinner and killd 2 Mallards and 5 bald faces."

Feb. 25—"Killd 2 Ducks, viz., a sprig tail and Teal."

May 13—"Went after Sturgeon and a Gunning."

May 19—"Went a shooting and hare hunting with the Hounds, who started a Fox, wch. we catchd."

Oct.8—"Went Fox hunting in the forenoon. Started but catchd nothing; and in the afternoon went up the Ck. (creek) after Blew Wings. Killd 7 or 8."

Dec. 17—"Rid out with my Gun but killd nothing." #

Snowy Egret

Species:

Snowy egret
Leucophoyx thula

General Characteristics:

A medium sized (20-27 inches) white heron with black bill, black legs, and yellow feet. Usually found singly on the salt marsh on edges of pools or creeks, but sometimes is seen in groups where minnows or shrimp are exceptionally abundant.

Range:

Breeds in southern United States, Central America, South America, and as far north as Long Island. In New Jersey there are several

The snowy egret is a medium sized heron with a black bill

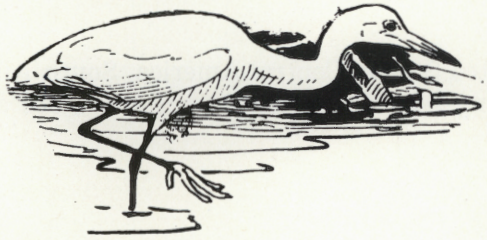
heronries (such as at Stone Harbor and Margate). Occasionally wanders in summer north to southern New England. Winters from southern United States to Argentina.

Life History:

Nearly exterminated in the United States (and elsewhere) in the early 1900's by ruthless plume hunting. This bird has increased under protection until it is widespread on its summer range and is

readily observed on many of the New Jersey salt marshes. It is a very attractive bird to watch on the marsh, while standing motionless awaiting a luckless minnow or shrimp, or while chasing fleeing minnows across shallow flats, with its plumes waving and its wings flapping. The snowy egret's diet is quite varied, taking minnows, shrimp, small crabs, snails, insects, and, in fact, nearly any animal life small enough to be readily eaten.

This egret is a colonial nester, laying three to six, but usually four or five, pale bluish green eggs on a crude nest of sticks and twigs. The nests are usually found in bushes and small trees, sometimes in groups of four or five in each tree, and located mostly on our



The snowy egret shuffles about with its yellow feet to stir up its food

New Jersey beach islands, in company with several other species of long-legged wading birds. It takes about 18 days for the eggs to hatch, and both parents share in the incubation of eggs and care of the young. The young begin to leave the nest in 20 to 25 days, returning at night. After fledging, the young move out, and both adults and immature birds may fly miles away from the rookery to feed during the day.

The fall migration is not consistent from year to year, apparently dependent on the weather. During a warm fall and winter, the southern flight may be delayed, occasionally so long that some birds are caught in a freeze, and suffer as a result. Usually, however, these birds are not severely affected by bad weather, as they are only present in New Jersey in the late spring, summer, and early fall, a period when bad storms are not usually present. High winds may cause losses, blowing flying birds into power lines over marshes, breaking wings or killing birds. High winds also occasionally blow nests from their place of attachment, or scatter individual eggs which may not have been protected by the parents. Crows also eat unprotected eggs and young birds.

The best and most practical management of this very attractive marsh bird is based on protection of nesting areas (such as has been done in Stone Harbor, and should be done at Margate), and protection of feeding areas (which, hopefully, will be accomplished by the Wetlands Act). #

Beaver Harvest

A total of 109 beaver were reported harvested by 65 holders of special permits during the 1971 New Jersey Beaver Trapping Season February 1 through February 28, 1971. The statewide permit quota set by the Fish and Game Council for 1971 was 100 permits, 65 of which were applied for and issued.

Weather conditions at the start of the season were poor with very low temperatures and considerable ice curtailing beaver movement and the activity of trappers. Conditions moderated toward the middle of the month and most beaver harvested were caught from the middle to the end of the season.

Beaver were reported trapped in nine counties by the thirty trappers who were successful in catching at least one beaver. A total of 19 counties were represented in the list of trappers residences with Sussex again leading the list with 15. The 1971 ratio of beaver harvested per trapper of 1.7 plus the 46 percent success ratio of permit holders compares favorably with recent beaver harvests. 59.8 percent of the 1971 harvest was made up of males, 40.2 percent females.

About 91 percent of the pelts examined were graded as good to excellent with 4.6 percent fair and 4.6 percent poor. Fifty-nine beaver or 54.1 percent of the harvest, were caught on privately-owned lands with 45.9 percent coming from lands in public ownership. A breakdown as to the ownership of public lands involved was 38.6 percent state, 6.4 percent county and municipal, and 0.9 percent federal.

A review of the results of the 1971 permit-type beaver trapping season would seem to support the decision of the Fish and Game Council in recommending this type of season last year. The harvest of 109 animals was in line with the Bureau of Wildlife Management's predictions and the inclusion of certain beaver colonies throughout the state, in a system of Division controlled beaver refuges, exempted these colonies from trapping this year. The type of season adopted allowed sport trappers to assist in the control of nuisance and surplus animals while at the same time assuring an adequate beaver population for the future. Survey results this spring in primary beaver range counties indicate that the population present following the season will provide adequate numbers of beaver to occupy suitable range present and at the same time provide for a controlled harvest in 1972. #

George P. Howard, Jr., *Principal Wildlife Biologist*
Russell A. Spinks, *Assistant Wildlife Biologist*
Bureau of Wildlife Management

Two Big Deer

Either one of these two bucks pictured here would be life-time trophies for most hunters. Both of the prizes were taken this past season by Jack Sliker of Newfoundland—the upper buck during the bow season and the lower buck during the firearm season.

The bow season deer was bagged in Sussex County on October 16 at 9:45 a.m. It weighed 201½ pounds dressed and sported 12 points

The gun season buck was downed with a 10 gauge in Sussex County on December 6 and weighed 193 pounds

. . . **Behind the Scenes** *Continued from Inside Front Cover*

each year in reviewing the increasing multitude of man's land changing activities. They work closely with other divisions of the Department of Environmental Protection, as well as with municipal, state, federal, and private agencies, reviewing and submitting recommendations for altering, enhancing or outright prohibiting certain programs, depending on their immediate as well as long term impact on fish and wildlife habitat.

The results of these efforts are often obscure and sometimes to little avail, representing the price of residing in the country's most populous state. However, positive results are frequently achieved and accumulatively represent significant benefits to New Jersey's wildlife resources.

The sportsman who pays the bill for professional wildlife surveillance, as well as all citizens concerned with the future of the state's wildlife, should be pleased with the tremendous contribution the Division scientists and officers are making to the long-term conservation of New Jersey's fish and wildlife resources, both game and non-game species alike. #

A Shotgun's Point of Impact

Anyone who shoots trap or skeet knows that the spread of a shot charge permits some individuality of style in the pointing of a shotgun. The mounting and pointing of the gun, the speed of tracking and the follow-through are rarely done in exactly the same way by any two shooters. But when it comes to determining a shotgun's point (or center) of impact, concentration and exactness of procedure are as absolutely necessary as they are in sighting-in a rifle.

Whenever possible a bench rest should be used, with the hand or arm—not the barrel—of the shotgun resting on a sand bag. The gun must be aligned so that the barrel and the line of sight are parallel and at a 90° angle to the target. The point of aim must be at six o'clock on the target bull, and to avoid visual distortion, the front sight must not enter the circumference of the bull.

Any size shot can be used, but 7½, 8, or 9 shot fired from 25 yards (with guns choked improved cylinder) or from 40 yards (with guns choked modified or full) at a target sheet at least 40 inches square will print a very readable pattern. The center of the greatest concentration of shot on the target sheet is the shotgun's point of impact. #

Guide to the

Wanaque Tract

The Wanaque Fish and Wildlife Management Area, located in Passaic County south of Sterling Forest, N. Y., is one of the newer areas acquired by the Division.

This area contains 1,412 acres. Over one-half of the tract, 770 acres, was acquired in 1964 under the State Green Acres Program. The rest of the area was purchased with money from hunting and fishing license fees.

The area today is being managed primarily for trout fishing and upland game.

Upland Game

Certain areas of the tract are being managed for upland game species, with the two most important being natural populations of rabbits and grouse.

Deer

This area is natural deer range, and a large herd is found on the tract. Bow hunters and shotgun hunters find it to be an excellent area.

Fishing

The principal fishing area on the tract is the Wanaque River. This is primarily trout fishing water. As a result of the Division's pre-season and in-season stocking program, the trout fishing is excellent.

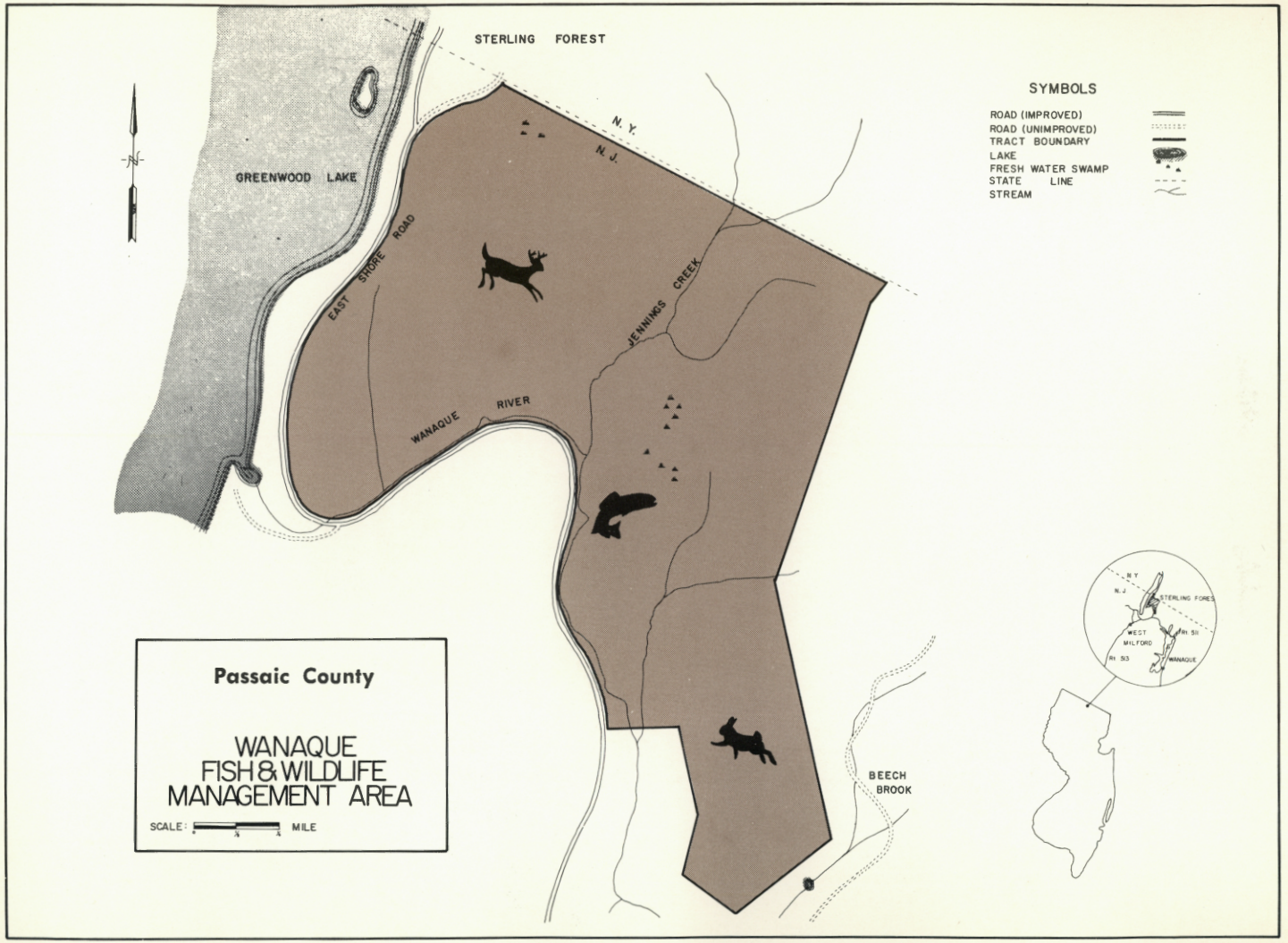
This area is being maintained for the licensed sportsmen of the state, although many citizens make use of it for other forms of outdoor recreation. Its program is financed by license money of the sportsmen. #

Firearms Accidents Among Lowest

Many believe that firearms mishaps are a major cause of accidental deaths. This is a misapprehension, according to an accident study recently issued by the Metropolitan Life Insurance Company.

The study revealed that the rate of fatal firearms accidents is among the lowest of all accident rates. In fact, the Metropolitan Life report indicated that firearms cause fewer accidental deaths among men than all other sources listed. While the firearms accident rate for men per 100,000 was put at 2.1, fire ran twice as high at 4.4. Drowning was listed at 5.1, falls at 9.5, and motor vehicles once again topped the list at 47.2.

Firearms accidents were not even listed by Metropolitan Life as a cause of accidental death for women, although listings were given for poisoning, falls, fires, and drowning. #


STERLING FOREST
GREENWOOD LAKE
N. Y.
N. J.
EAST SHORE ROAD
JENNINGS CREEK
WANAQUE RIVER
BEECH BROOK
SYMBOLS
ROAD (IMPROVED)
ROAD (UNIMPROVED)
TRACT BOUNDARY
LAKE
FRESH WATER SWAMP
STATE LINE
STREAM
Passaic County
WANAQUE
FISH & WILDLIFE
MANAGEMENT AREA
SCALE:
MILE
N. Y.
N. J.
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