

*N.J. Periodic*

# New Jersey *Outdoors*

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**August, 1972**

# The Environmental Quack

By Robert McDowell,

*Public Information Assistant*

For years those of us in the profession of wildlife management have been deeply concerned with the quality of our environment. We have seen wildlife retreat in the face of superior forces—the forces of “progress.” We have for a long time recognized the “miners’ canary” value of wildlife. It is evident that fish will not live in polluted water and the grouse is easily evicted by the bulldozer. Wildlife has been trying to tell us something about the livability of our environment. Finally, this information is sinking in and the general public is concerned about our environmental wounds.

On the scene there suddenly appears the quick-cure artist, the “Environmental Quack,” peddling salves, elixers, and tonics to cure the ills of our wildlife populations. One of these tonics that the public so easily swallows is, “Ban Hunting and Wildlife Will Flourish.” This cure is well advertised in the popular press, on television, and by word of mouth. This “sure cure” is based on the false theory that predation in any form is the limiting factor in wildlife populations.

Another cure for our wildlife ills is the salve of kindness labeled “Ban the Steel Trap.” This medicinal cure-all blames the trap for the “decline in beaver,” and has its roots deep in misinformation and emotional incoherence. The facts are that in 1920 the beaver was all but extinct in New Jersey. Through a program of stocking and transplanting, paid for by hunters and fishermen, the beaver now flourishes in the **clean** waters of New Jersey. Now that the population is established the wildlife professionals prescribe a trapping season to keep the beaver and his habitat healthy.

The professional views hunting and trapping as instruments to harvest excesses in animal populations which would die or would adversely affect the environment for themselves or other species. The one fact clouded by the mumbo jumbo of our environmental witch doctors is that the key to wildlife abundance is habitat. All the cures suggested by the quick-cure artists overlook this basic environmental fact. Many laws based on sound scientific investigations guide and control the harvest of wildlife with gun and trap. Few laws exist and those that do are not enforced or supported by the public to control the destruction of habitat.

*Continued on page 31*

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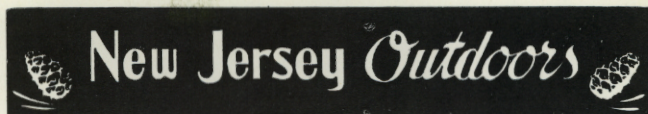
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How to

# Catch Jersey Smallmouths

By Gordon Sze

Mist was rising from Round Valley Reservoir, as Bill Benson and I set out one day at dawn in search of some of the lunker smallmouths that roam the depths of this lake. When we arrived at the rocky point, which had been a hotspot many times before, the summer sun was already making the heat searing, and the light breeze helped little.

I cut the motor, and eased down the anchor. Bill and I knew from past experience that the bass would be lying off the dropoff in about twenty feet of water. Plop! Bill's black plastic worm and mine splashed into the water almost simultaneously. Slowly, we started to creep the worms up the ledges, full of expectation. Minutes later, a smallmouth sucked in my plastic worm. Slowly, I counted to three, then I rammed the hook home. "Wow, look at him go!" I shouted to Bill as the bass surged powerfully, headed for the opposite end of the lake. The fish's solid weight

throbbed at the end of my line. Furious at the bite of the hook and steady drag of the reel and the restraining monofilament, this bass knew all the tricks. First, a gill-shaking leap, then a sudden dive to the bottom to slug it out. Line whirled off my reel, and the drag screamed loudly in protest. Gradually, the fish was losing vigor, and I began to feel confident that he was headed for the icebox.

"Ready with the net?" I asked nervously.

"Yeah," Bill answered. "Take your time with this fish. Don't hurry him."

The bass was near the boat, but my troubles were not over. In the first landing attempt, this pugnacious bass rolled on the surface just beyond reach of Bill's outstretched net, with the lure hanging loosely at the corner of its mouth, a powerful flip of its tail, and the bass surged under the boat. My hopes crashed, and I immediately lowered my rod tip. By all rights, I should have lost that fish, but the persistent pressure of the rod and reel had taken its toll. One last surface flurry, and the bass

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Gordon Sze is a successful New York City fisherman who has been specializing in angling for New Jersey smallmouth bass.

## . . . Smallmouths

was finished. Gingerly, I led him toward the mesh. I felt real fine as Bill lifted nearly five pounds of smallmouth muscle out of the water.

Luck certainly played a big part in my catch, but I had a lot more than luck going for me. First, I was fishing on fantastic Round Valley Reservoir, where the bassing is phenomenal. Second, I was fishing with an expert, Bill Benson. Bill, and a very few other anglers on Round Valley, consistently bring home the pot-bellied lunkers, the kind that are displayed wherever fishermen gather. So the obvious question? How do Bill and the others like him manage to catch these smallmouths week after week, throughout the summer.

To find the answer, I fished as often as I could with Bill, observing his methods closely. I also spoke with fisheries biologists in this state. My conclusion: All good bassers know the waters they fish intimately and understand the factors that control a bass's life. Take Bill as an example. Living near Round Valley, he was familiar with this lake even while the dam was still being constructed, less than a decade ago. When the reservoir filled, Bill knew the lake bottom thoroughly, and was able to pinpoint the hotspots from his knowledge of bass habits.

Bill had learned by experience

that summertime bass spend most of their non-feeding hours schooling in small areas of the lake. As New Jersey fisheries biologists have professed most bass in a large lake are concentrated in a small percentage of the water. Therefore, Bill reasoned that his job, as a bass fisherman, was to recognize **why** the bass prefer this part of the lake. If he knew the reasons, he would be able to find the fish. What Bill learned is that bass school in the areas of the lake that offer them comfortable water temperatures, adequate cover, and dim light.

Bass, as cold-blooded creatures, are strongly affected by temperature—the temperature of the water surrounding them is even more important to them than the temperature of the air surrounding us in our comfort.

All species of bass have temperature preferences—temperatures at which they are most comfortable and at which they function with the greatest efficiency. A smallmouth prefers a temperature from 65°F to 70°F. If water temperatures in a lake are considerably below these ideals, bass become semi-dormant. If a lake is too warm for the bass, they tend to become sluggish.

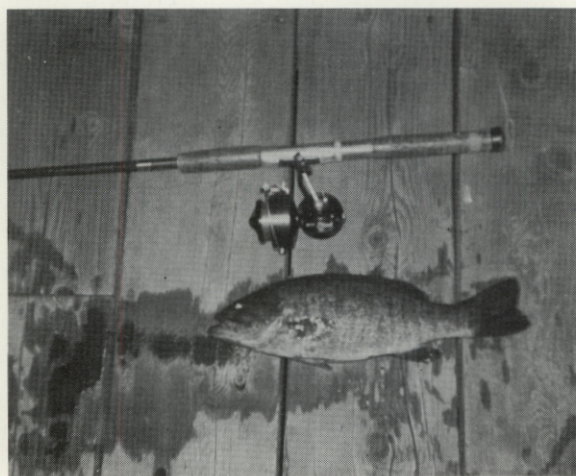
In the spring, bass are scattered in the shallows, where the water temperatures suit them best. Fishing for the average angler, with average efforts, is great now, because the bass are precisely where

he's fishing. It's as simple as that. As the water warms to an uncomfortable degree for the bass, they move to deeper, cooler water. This is when the average guy, fishing the same stretch of shoreline that produces a limit in the spring, gives up. The water he pounds to a froth is devoid of big bass.

Years ago, I remember casting to the shoreline at all times of the year. Knowing that bass lived near steep banks or under canopies of lily pads, I would fish these spots, even when they did not produce. My excuse? "Sun's too bright" or "Barometer's falling" or "Wind's

In Bill's first efforts to find the depth which has a temperature comfortable for the smallmouths, he bought a cheap water thermometer. By lowering it into the water, the temperature could be taken. Finding this too troublesome and inaccurate, he later purchased an electronic water thermometer. It enabled him to read the temperature from a dial, and as he says, "It's saved me from many headaches." Now, Bill can easily find the 65° water.

I soon found out, however, that even when I was fishing in the water with the right temperature,



*Knowing the temperature preferences of smallmouth bass often is the key to catching the big ones*

too strong." Actually, I wasn't too sure that these were the real reasons other anglers bring in bass.

After fishing with Bill, I finally learned that the key to summer smallmouth fishing is simply to fish where the fish are—in the depth of water which is about 65°F to 70°F. How to find this water?

bass action was still slow very often. I learned from Bill that, just as important as water temperature, a bass prefers to be near an edge, which is an area of the lake bottom, which to a fish, is distinguishable from nearby areas. The secret of summertime bassing is to find the depth of the 65° water,

## . . . Smallmouths

and then to concentrate lures around edges at this depth.

Picture this: Five or six lunker smallmouths finning quietly by a rocky shoal. They're not very hungry (lunker bass never are), and they don't want to move very far for a meal. But put a bait or lure right next to Mr. Bass, and he might decide it looks good enough to eat.

To find the edges where the lunkers lurk, Bill bought a sonar depth locator, or fathometer. This invaluable aid to sportsmen sends high-frequency sound waves through the water. These sound waves bounce back to a receptor, when they hit the bottom or an object suspended in the water, and are registered as neon tracings on the dial. . . . Because bass usually are near the bottom, Bill found that it was difficult to locate bass directly on the fathometer, because their signals combine with those of the bottom. Nevertheless, the fathometer did help immensely. It takes only a short time of cruising about a lake for an angler to be able to find the bassy edges, if this device is used.

But for those fishermen unwilling to purchase a depth indicator, all is not lost! An old guide passed on to me this secret. If you watch the shoreline carefully, you can find the spots where smallmouths gather. Points of land usually betray the presence of submerged

bars which extend to deeper water. If this bar is rocky, it's a sure bet that smallmouths will school there. Steep hillsides sloping into a lake indicate an underwater dropoff parallel to shore—another good place for bass. And when small islands are near each other, underwater reefs will usually connect them.

When we are fishing, Bill and I rely heavily on maps, that show the underwater contours of the lake bottom. New Jersey's Division of Fish, Game and Shell Fisheries has provided these maps for the



*These smallmouths were caught from Lake Hopatcong at dawn*

benefit of sportsmen. Using these maps, Bill and I locate the potential edges where bass might gather. Then, we use the fathometer to pinpoint the exact areas.

I can recall one day last August, on Round Valley, when Bill and I had been searching for bass most of the day, with nothing to show, except for a pair of one pounders and a few bluegills. As I was watching the depth locator, the neon tracings leapt from 60 feet to 40, and then to 15. I stopped the boat. "Hey!" I said to Bill, "We're right over a ledge. Let's try it here."

Bill impaled a four inch saw-belly herring onto his no. 2 hook. I chose that old standby, the plastic worm.

"Guess who's going to get the first fish," Bill chided.

I only grunted in reply. As a matter of fact, Bill did get the first fish—an 11 inch smallmouth that did its best to imitate its elders.

I glanced at his bass, and said, "I'm not after small fry." I moved the boat to the 25 feet level—a few feet deeper than before. "Maybe now we can hang something with a little more weight," I announced, as I made a cast. Bumping my worm down the incline, the unmistakable tap of a bass alerted me. I paused, lowered my rod, and struck . . . nothing. As I worked the lure farther, another tap on my line signalled "bass". I struck immediately, and bass no. 1 began stretching line off my reel. But he was soon on the stringer. Bill and I put seven in the boat that day, the largest of which was a fat 3 pound, 18 inch smallmouth. Nothing to sneer at on a boiling summer day.

Like Bill Benson, Russell Johnson is an expert basser who takes his fishing just as seriously as his work (if not more so). One of the many things he taught me about bassing is that light is another factor that affects the location of lunker smallmouths. Because fish do not have the ability to regulate the amount of light that enters their eyes (our pupil performs this function), they shun intense light and prefer dimness. Shine a flashlight into a bass' eye and you'll notice that its pupil does not contract. Bass find light intensities comfortable to them by taking refuge around cover that offers shade. A neophyte angler soon learns to cast to the shady side of an object he can see, like a partly submerged fallen tree. This side, he soon finds, is more likely to produce bass than the sunny side, because bass rest in the shade the fallen tree provides. What many anglers fail to note that "Always fish the shady side" is a rule that applies even when the bass are in deeper water, as they are in the summer in our Jersey lakes.

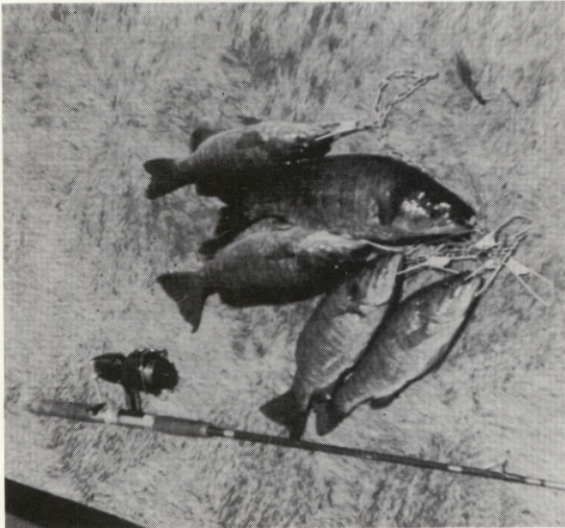
Several years ago, on Lake Hopatcong, Russ positioned me over a shoal. He finally anchored, after intently studying the flashes of the depth finder as they revealed the contours of the river bottom. At the first stop, when only rock bass were caught, he lifted the anchor, and moved the boat about 15 feet away. To my uneducated eye, this spot seemed identical to the stretch we had just left. But a grin swept

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Russ' face, as he checked the depth finder. Something obviously pleased him, so I questioned him. Patiently, Russ explained to me, "See the angle of the sun. Now, imagine the ledge below us. That ledge will cast a shadow, and the bass will be holed up in this shadow." Squinting at the sun, Russ

mouth. The short move of the boat's position had made all the difference.

All of the wide selection of bottom bumping lures will produce in this type of fishing. I usually use plastic worms, because they are cheap and come in a variety of colors. When using plastic worms, strikes are frequently difficult to feel. A few rubbery plucks may be



*Bumping plastic worms off ledges in Round Valley Reservoir accounted for this fine catch of smallmouths*

told me that we had been fishing in the sunlit side previously, and that was the reason why only bass had attacked our minnows. Now, he instructed me to cast my herring bait into the area which he had shown me was in the shade. Keeping my rod tip high, in order to feel the light taps of the bass as they investigated my bait, I soon connected with a stubborn small-

your only sign that a bass has sucked in your lure. I hold my rod loosely above the cork grip, in order to feel the difference between a snag and a bass.

While plastic worms are great bass lures, a bait that can't be beaten is the sawbelly herring. In many of our larger Jersey lakes, such as Round Valley, Spruce Run, Greenwood, and Hopatcong, these

forage fish swarm. Bass love' em, and when all else fails, herring usually bring in the smallmouths.

Yet, to be honest, there are times that our finicky bass refuse to feed no matter what you toss to them. After all, bass are bass, and Jersey bass are just as ornery as the rest of them. When the smallmouths develop a sudden case of lockjaw, even expert anglers get discouraged. But, as Bill Benson says, "At times like these, one thing keeps me going. I know that there are also times when the bass go on sudden, mysterious feeding rampages, and everybody catches his limit."

To prove this point, let me cite one example. Late last summer, on Round Valley Reservoir, Bill and I had one really great session with the smallmouths. We had been fishing all morning without a strike. We had probed ledges, shoals—everywhere that we reasoned a bass might be. Nothing. Then, as if somebody had rung the lunch bell, bass after bass began to inhale our plastic worms. It wasn't a change of place, technique, or lure that made the difference. The smallmouths had just decided to feed. If one struck and wasn't hooked, another would frequently

strike further on the retrieve. Bill and I were being treated to a rare feeding frenzy. The bass were easier to catch than the sunnies back at our local pond. In the next hour, Bill and I had the type of excitement that would cure all fishermen of bass fever (for the day, that is). We caught smallmouths on every cast. Then, suddenly, it was all over, and the bass seemed to dissolve into the green depths.

Yet, that was an exceptional day. As we all know, the smallmouth bass is 99 and 44/100% of the time a much trickier customer. Catching lunker smallmouths in quantity is an achievement to be proud of—anywhere, anytime, anyplace—especially when other anglers are just getting casting exercise and a sunburn. On a hot fishing day, the heft of a stringer of lunker bass makes the weather all the more bearable. All it takes is patience, persistence, and a little commonsense, smallmouth knowledge. And most important, remember this: ~~The bass~~ are ready and waiting for you in many waters, Round Valley, Spruce Run, Big Swartswood, Steenykill, . . . Hopatcong, Greenwood, Boonton, the Delaware River, . . . etc., . . . etc., . . . etc. #

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#### Initial Hunting License

All persons, adult or juvenile, applying for a Firearm Hunting License or a Bow and Arrow Hunting License must present to the issuing agent a previous year's license or a certificate showing that the applicant has satisfactorily completed the course in Firearm Safety or Bow and Arrow Safety and Proficiency, as the case may be, which shall be signed by an agent of the Division designated for the purpose.

# Wetlands, Waterfowl, and What We Can Do

By William E. Shoemaker  
*Assistant Wildlife Biologist*  
*Bureau of Wildlife Management*

Now that we are in the era of ecology, let us momentarily slow down and take the time to discuss a simple definition of the term. Basically, ecology is the study of the relationship between plants and animals and their environment—from the smallest living thing to man himself. To alter or change any environment will bring about

abundance of wildlife and existing wildlife habitat. Along the Atlantic Flyway, from Maine to Florida, New Jersey had the fourth largest wintering waterfowl population in 1971. Many of us fail to realize that New Jersey still has in existence today an excess of some 180,000 acres of coastal wetlands. In addition, many do not realize



—Paul D. McLain

*Author Shoemaker at work on one of New Jersey's wetlands*

a series of interrelated changes in both plant and animal communities.

Here in New Jersey, where we have eight million people, it is interesting to note the remaining

the importance of the role that these wetlands play in supporting our renewable natural resources.

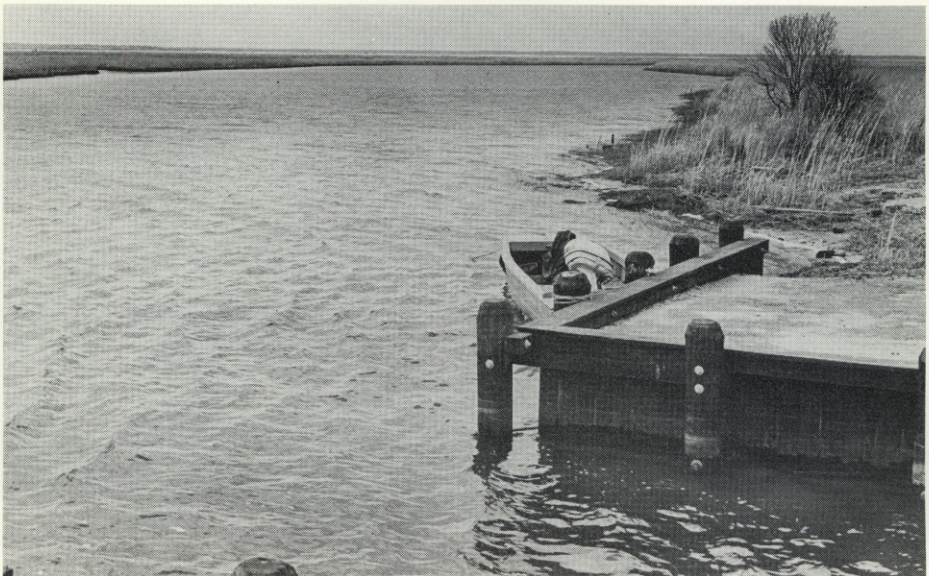
Our salt marshes of most importance to waterfowl are divided into three main categories or plant

communities. Each of these communities will overlap, and the existence of all are determined mainly by the combination of elevations, tidal inundation, and salinities. Any alteration of these factors will either change the plant and related animal communities or alter the quality of same.

Most important to many of our ducks and geese are the tall and short cordgrass marshes. The tall

marshes are of less direct value to waterfowl, they are most necessary in that they provide initial nutrients in the food chain upon which our waterfowl are so dependent.

Therefore we must endeavor to recognize the salt marsh types as an entity, interdependent upon each other. In addition, we must acknowledge the requirements of our waterfowl to maintain this important resource as we know it



—Harry Grosch

*New Jersey still has over 180,000 acres of coastal wetlands*

cordgrass marshes are flooded twice daily and are lowest in elevation of the three main types. Short cordgrass salt marshes are slightly higher in elevation and are flooded by some high tides and spring tides. Salt hay marshes are higher yet in elevation and are flooded only by occasional spring and storm tides. Although the salt hay

today. We must remember that when winter nutrients on our most productive salt marshes are inaccessible during heavy freezes, the birds are periodically dependent on areas of lesser quality. These areas, though not productive enough to sustain large numbers of waterfowl for more than short periods of time are most necessary

## . . . Wetlands

as units in the winter habitat as a whole. These areas too must be documented and preserved to maintain proper ecological balance of the total coastal wetland environment.

In the last 15 years, New Jersey has lost over 20 percent of its coastal wetlands. The vast majority of this loss can never be replaced or duplicated. The water-

gram. Now in a final effort to maintain the existence and quality of our remaining coastal wetlands, New Jersey has adopted the Wetlands Act.

The cooperation of everyone—sportsmen, conservationists, industry, boaters, builders, bathers, vacationers, every living soul—is needed to accept the responsibility for supporting, enforcing, and understanding the need for this legislation. If our children and our



—Joe Kleim

*We must all join together to preserve this natural heritage*

fowl resource has suffered proportionately. Recognizing this dilemma, the New Jersey Division of Fish, Game, and Shell Fisheries has, over the years, attempted to preserve as much salt marsh as possible through land acquisition with hunting and fishing license monies. In addition, the general public acknowledged the need for preserving our open spaces and supported the Green Acres pro-

children's children are to maintain and enjoy this natural heritage, we must all join together. #

This article is based on a paper originally prepared for **The Sportsmen's Newsletter**, the publication of the New Jersey State Federation of Sportsmen's Clubs, a statewide organization of clubs and associate members, and an affiliate of the National Wildlife Federation.

# The Iron Shot Story

Does iron shot, substituted for lead in shotshells in waterfowl hunting, do the job? Does it bag ducks and geese as effectively as lead? Does iron shot pose problems in terms of crippling losses? Is iron shot OK from a gun safety standpoint? And who will assume final responsibility for gun barrel damage and choke deformation caused by iron shot?

These and other questions need answers if proper steps are to be taken to reduce the reported incidence rate of lead poisoning in waterfowl that is attributed to spent lead shot picked up from some marsh bottoms by certain ducks and geese.

Some of the answers will come from controlled test programs with

iron shot in field hunting. One test conducted during late 1971 and early 1972 involved wild ducks hunted under federal regulations at Remington Farms near Chestertown, Maryland. A closely controlled field test using game farm mallards at Winchester-Western's Nilo Farms near Godfrey, Illinois, is being structured.

Existing knowledge gives assurance that iron shot (sometimes called steel shot, since metallurgically that is what the material is) can satisfactorily replace lead shot for duck hunting at ranges up to 40 yards. At longer ranges, in its present state of development, iron shot cannot ballistically match lead shot for "mortality effectiveness." As a result it may cause



*Considerable research has been done in the investigation of iron shot patterns and penetration. Now practical field tests are being conducted*

## . . . Iron Shot

more waterfowl crippling than lead.

In midsummer 1971, the Bureau of Sport Fisheries and Wildlife expressed an interest in conducting field tests with iron shot and hunting areas under its control. The Federal Cartridge Corporation was prepared to supply iron shot waterfowl loads and shotguns, but BSWF later decided against such tests for 1971.

The Remington Farms test used steel shot on half the hunting days. Lead loads were used on other days. Ducks were hunted 36 days in all. Each shot fired was observed by experienced hunting guides. To the extent possible, rangefinders were used to record ranges at which ducks were hit. This was done regardless of what type of load was used. Records were made of each hit or miss, whether clean-kill or cripple. Pellet hits on each bagged bird were noted for locations, wound details, and skeletal damage. This and other data developed in the test at Remington Farms is being studied and analyzed fully with the aid of computer technology.

Field tests with iron shot were conducted at Nilo Farms in the winter of 1964-65, involving random shooting of flighted mallards by typical hunters. BSWF conducted limited shooting tests with iron loads at its Patuxent, Maryland, research facility in 1968 utilizing

controlled birds. The 1972 Nilo Farms tests now being structured will follow the Patuxent pattern. These later tests eliminate human variables in gun handling and provide reproducible bird flight characteristics. They develop data needed to compare iron shots' relative effectiveness at different ranges in waterfowling.

BSFW officials have stated an intention to see lead replaced by iron in all shotshells used for waterfowl hunting in the United States, but no time schedule for promulgation of regulations has been announced.

Ammunition industry representatives have reported to BSWF about product liability and lead-time and other distribution problems that will confront them as they put iron shot loads on retailer's shelves. On the advice of counsel, individual industry members cannot exchange information on their plans and technology for iron shot loads. These and related difficulties will undoubtedly be taken into consideration by BSWF.

There are other problems beyond the matter of iron (steel) shots' availability and its effectiveness as demonstrated in various tests. On the basis of current information, iron loads will cost substantially more than conventional lead shotshells and they will not perform as well. Thus it is incumbent on BSWF to develop workable regulations for iron shot to require and to enforce its use by waterfowlers. #

## National Hunting and Fishing Day

September 23 of this year, National Hunting and Fishing Day, may well be the most important day in the lives of the hundreds of thousands of sportsmen in New Jersey and the 55 million hunters and fishermen in the United States. The continued welfare of fish and wildlife and many of our other natural resources could hinge on the public response to this nationwide environmental effort.

National Hunting and Fishing Day officially recognizes the role of America's sportsmen in conservation and outdoor recreation. Therefore, hunters and anglers on this day should lead the public in a rededication to the conservation and respectful use of our wildlife and natural resources. By working in your own community on a friendly person-to-person basis with your neighbors and business associates, you can show your friends that the American sportsman is the best friend fish and wildlife ever had. #

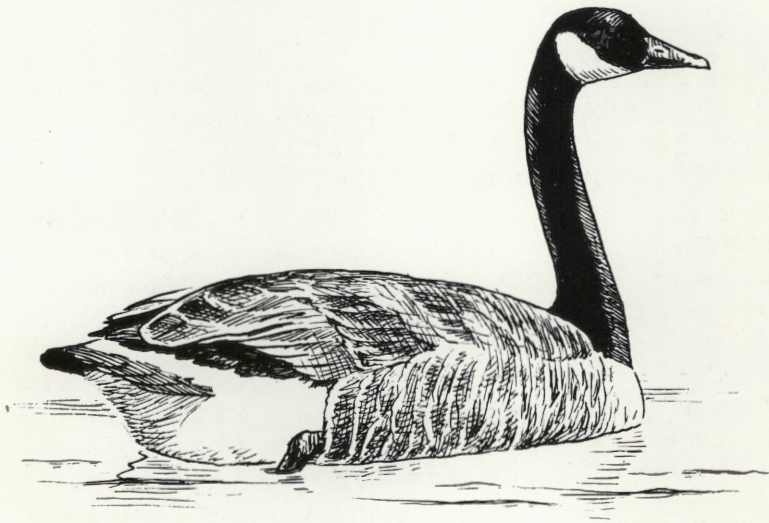


*Governor William T. Cabill signing his proclamation establishing National Hunting and Fishing Day in New Jersey last year. Seated, left to right, Senator Norman Tanzman of Middlesex County, primary sponsor of the resolution; Governor Cabill; and Director Russell A. Cookingham of the Division of Fish, Game and Shell Fisheries. Standing, left to right, William E. Peterman, Supervisor of Public Relations for the Division; Raymond Baker, Fish and Game Councilman; and Al Toth, Fish and Game Council Chairman*

# The Canada Goose

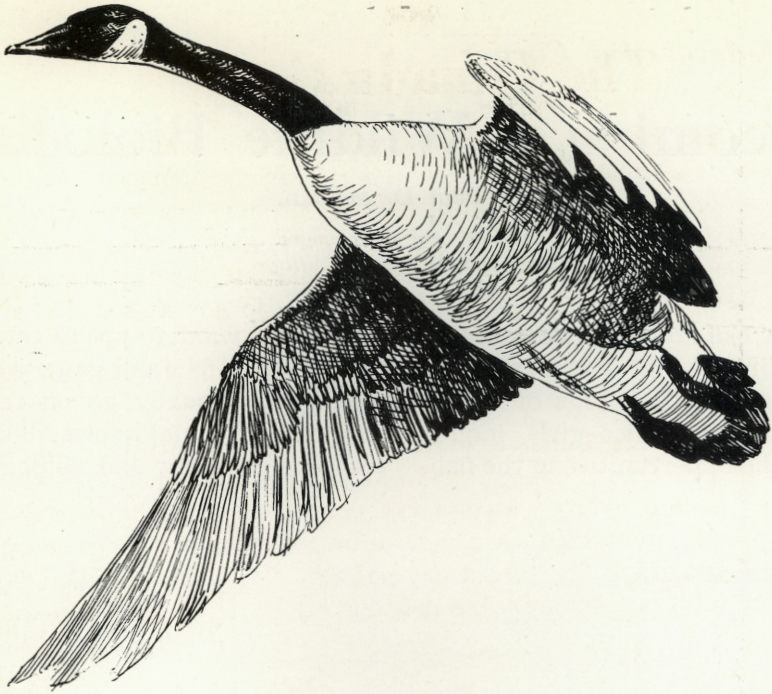
Considered one of the most highly prized waterfowl, *Branta Canadensis Canadensis*, is known by a wide variety of names, including wild goose, cravat goose, black-headed goose, long-necked goose, and just plain honker. He is best known, however, as the common Canada goose and he is more generally distributed than almost any other water fowl. His summertime range runs from the lower Yukon Valley of Alaska to Labrador, extending nearly to the Arctic coast. In the winter, his migration takes him to virtually every portion of the United States and down into the Gulf of Mexico.

Both sexes of the Canada goose have the same coloration. The head and neck, which are called a "stocking," are a shiny black, broken only by an oval patch of white which runs from ear to ear under the throat. The upper body and wings are a gray-brown while the underside of the wings is a light gray. The breast is a pale gray with white-tipped feathers and the tail feathers are white. The gander (male) varies in weight



from 8 to 15 pounds and his body may be from 35 to 40 inches in length. His wingspread is often more than 6 feet. The female averages slightly smaller, both in size and wingspread, and is usually 1 or 2 pounds lighter.

During courtship the gander indulges in some fancy necking, caressing his mate with his silky "stocking" which he has curved gracefully around her body. Nests are usually built on the ground, near water, and



are lined with grass, moss, twigs, and down from the female's breast. Incubation period for the eggs is from 28 to 30 days. Once the goslings leave the nest, both parents stand a vigilant guard over them and will fight to protect their young, even to the death.

Canadensis is a strong bird and he can both walk and swim long distances. His flight speed ranges from 45 to 60 miles an hour and, like the diving duck, he generally runs a few steps on the surface of the water before taking off. If frightened, however, he is capable of zooming into the air with a single bound. But, unlike most birds, he does not always depend on flight to escape danger. Oftentimes he will lie absolutely motionless with his long neck stretched out in front of his body. He usually uses this method of escape while he is on his nest or while he is on a beach or sandbar or in marsh grass. At such times his coloring so blends with the surroundings that it is virtually impossible to detect his presence. He does not move a feather until the danger has passed and then he moves only with great caution, sneaking to better cover rather than breaking into flight.

Like the groundhog, the appearance of the Canada goose is a portent of the changing seasons. One of the first waterfowls to migrate to the North after winter, his honking flight in V-shaped formation is a sure sign of spring.

#

# Becoming a Wildlife Biologist

By Paul D. McLain,  
Federal Aid Coordinator  
*Photographs by the Author*

Every fish and game department in the United States is bombarded annually with hundreds of letters from boys, and also girls, inquiring on the opportunities in the fish-

doors, and want to spend the rest of my life in fish and game work." The letters usually go on to say that the individual knows all about trapping, hunting and fishing and



*An interest in hunting and fishing is often the prelude to a desire to enter the wildlife profession*

ery and wildlife fields and asking how do they get a job as a field biologist.

Almost every letter starts the same way: "I am interested in hunting and fishing, like the out of

has helped on various conservation projects and feels that the wildlife profession is exactly what he has in mind.

When he mentions "profession" he hits the nail on the head and

almost answers his own question without knowing it. Fish and wildlife management is a profession where you need the scientific training and experience available from a four year course in an accredited

will at times thwart your desire and ability to conduct the research and management you would like to pursue. Promotions are frequently few and far between and if you elect to stay in the "field," they



*A wildlife biologist must have a love for the out of doors, a knowledge of wildlife, and be willing to work long, hard hours*

college or university offering a degree in wildlife or fishery management.

True, you must have a love for the out of doors, a knowledge of wildlife, and be willing to work long, hard hours. Your salary will be low compared with that of a chemist, engineer, or other members of your college class. You'll probably work either for federal or state conservation agencies and find that routine "bureaucracy"

may not occur at all. Still, it's a highly rewarding profession where you'll be doing the work you like and contributing materially to the conservation and management of our natural resources.

The best advice a youngster can receive from a veteran wildlife biologist is to begin preparing in grade and high school by maintaining a high academic average. Competition to get into the better colleges is intense, and your high

## . . . Wildlife Biologist

school grades will largely determine if you will have the opportunity to even study to be a professional wildlife biologist.

The days of working your way up through the ranks to a professional title are fast disappearing. Civil service regulations, the demands for specialized training and a broad background in the arts and sciences have almost precluded, even the best field workers, from joining the ranks of the college trained biologists. The competition is just too great, and the odds are against "working your way up."

The state game departments receive many letters asking about the correspondence type of course in wildlife or fishery management. Some of these courses provide some basic instruction and information, but nothing will take the place of four or five years of college study.

Field experience with a fish and game agency is invaluable not only in providing an insight into the duties, responsibilities, frustrations and rewards of a wildlife career, but also to determine if a person is sincere in wanting to enter the field as a lifetime occupation.

Many newcomers to the field are disappointed to find that the professional biologists spend less time hunting and fishing than a dentist or a car salesman. The fact is that the biologists are frequently at their busiest during the hunting and fishing seasons providing the recreation and gathering information and data on the sportsmans activities. There are wildlife biologists who give up their hunting and fishing simply because they do not have the time available.

If you are interested in a career in fish and wildlife management, first determine if you are really interested in it as a profession and lifetime occupation. Next, obtain the very best education you can acquire, and this is usually from a college or university offering a degree in wildlife or fishery management. Finally, ask yourself if you and your family will be satisfied with a salary considerably lower than that of most other professional and college educated citizens.

If you have any doubt, don't enter the field. If your answer is "yes," then you will be entering one of the most interesting and satisfying professions. You may even find time to hunt and fish a little. #

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## A Tribute to John M. Pancoast

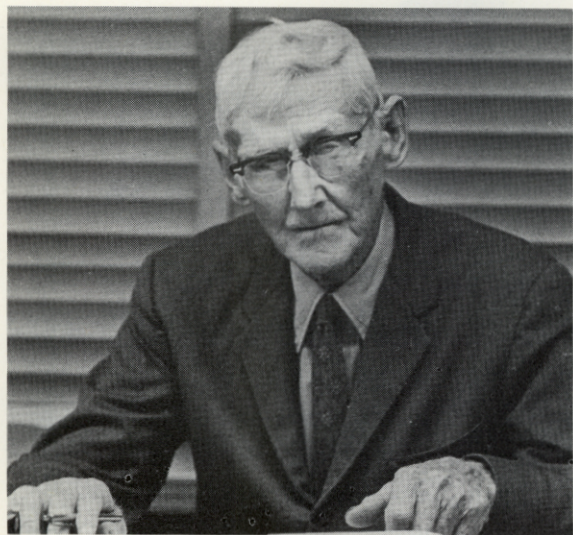
At the age of 87, John M. Pancoast, roving member of the Shell Fisheries Council of the Division of Fish, Game, and Shell Fisheries, has decided his age and physical condition will no longer enable him to do the job he would like to do. Thus, he has resigned as Councilman from the Shell Fisheries segment of the Division.

Councilman Pancoast has served in this capacity since 1948 and no public servant has ever served more conscientiously, capably or more faithfully than he.

This work required meetings on both sides of our state's coastline, and even in his last year's service his attendance record, as well as his devotion to the job, has been superior.

Mr. Pancoast has spent most of his life as a lover of nature, particularly fishing, trapping, hunting and shellfishing. His knowledge in these fields is remarkable and never did he hesitate to spend his time and effort in their behalf.

Mr. Pancoast is revered by all who know him and is particularly



*John M. Pancoast, roving member of the Shell Fisheries Council of the Division, is retiring after serving in this capacity since 1948*

admired by his fellow Council members who often seek his advice and guidance on the most perplexing problems.

Councilman Pancoast will be missed by his colleagues in the Shell Fisheries segment who wish, by this medium, to pay him the highest tribute; to wish him many years of rest and relaxation, and want very much to have him know how much his contributions have meant. #

## 1972-73 Duck Stamp To Feature Emperor Geese

The 1972-73 Federal Duck Stamp will show two emperor geese landing in overcast Arctic surroundings. The winning entry, a full color wash drawing, was created by artist Arthur M. Cook, 40, of Bloomington, Minn.

Cook, an industrial art director and long-time resident of the Minneapolis area, had never finished higher than second in several previous tries in the duck stamp contest.

Second place this year was a tie between Lee LeBlanc of Iron River, Mich., who drew spectacled eider, and Stanley Stearns of Stevensville, Md., who also drew emperor geese.

The latter species will be appearing on the duck stamp for the



*Emperor Geese by Arthur M. Cook*

first time. The bird inhabits Alaska and the Aleutian Islands and has occasionally been seen along the coasts of Washington, Oregon, and California.

"I was particularly pleased when I learned of the judges' choice," said Interior Secretary Rogers C. B. Morton, "because 90 percent of the

world's emperor geese come from the Yukon Delta, and one of our major priorities right now is to protect the Alaska habitat that is vital to millions of wild waterfowl."

Bureau officials said 213 entries were received in the 23 Federal Duck Stamp Event. Artists from 33 States and the District of Columbia competed in this year's contest. Minnesota had the most entries—39. Maryland was second with 26.

Selection was based on anatomical accuracy, artistic composition, and suitability for engraving. The winner receives no financial prize—just the honor and recognition of having his drawing appear on the duck stamp.

Judges were Larry Jahn of the Wildlife Management Institute, Fred Evenden of the Wildlife Society, Tom Kimball of the National Wildlife Federation, Carl Scheele of the Smithsonian Institution, and Richard Bower of the Treasury Department's Bureau of Engraving and Printing.

A new duck stamp is issued each year by the U. S. Postal Service. The 1972-73 stamp will go on sale July 1, 1972. Every migratory-waterfowl hunter 16 years of age or older must purchase this stamp with a state hunting license. All revenue from duck stamps, except the cost of printing and distribution, is used for acquisition of wetlands for waterfowl.

Information on other designs since the stamps were first issued in 1934 is contained in "Duck Stamp Data," a publication available for 30 cents from the Superintendent of Documents, U.S. Government Printing Office, Washington, D. C. 20402. #

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## Hatchery Anniversary Prize Fish Awards



*Chief Robert A. Hayford of the Division of Fish, Game, and Shell Fisheries, Bureau of Fisheries Management, congratulates three of the lucky "gold tag" anglers and recipients of several awards: rod and reel, saltwater fishing trip, certificate, and subscription to the Division's publication New Jersey Outdoors. These anglers and two others unable to attend the special presentation at the Charles O. Hayford State Fish Hatchery in Hackettstown caught fish specially tagged commemorating the 60th anniversary of the hatchery. In the usual order are Richard Cramer of Beverly, Mr. Hayford, Mrs. Hildegard Smith of West Collingswood, and Ronald Biederstadt of North Brunswick*

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Please fill out this form and send it to NEW JERSEY OUTDOORS, P. O. Box 1809, Trenton, New Jersey 08625, so that you will continue to receive your copies of the magazine without interruption. (NEW JERSEY OUTDOORS cannot be forwarded by the post office; therefore, we need your new address in advance. Allow six weeks for processing.)

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## Homeowner's Pest Control Handbook

Many pest problems of the homeowner may be solved with a booklet—**Pesticides and Your Environment**—published by the National Wildlife Federation.

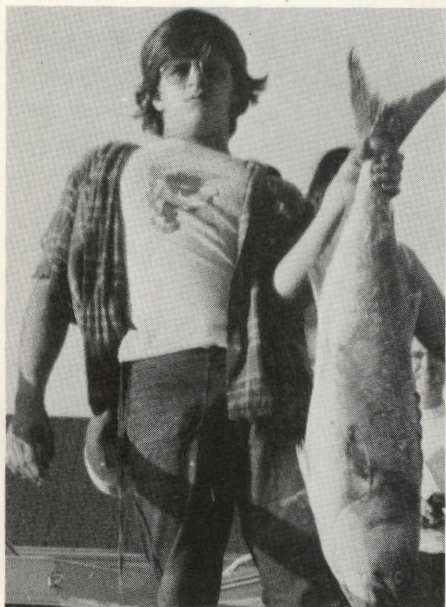
The publication is a practical how-to-do-it handbook designed especially for the home gardener who is interested both in "growing his own" and protecting his home environment. It contains a number of suggestions for controlling pests without pesticides. For example, by cultivating flowering parsley in the yard, the home gardener can encourage predatory insects which in turn will help control aphids and other soft "bugs."

For problems where a pesticide seems necessary, the booklet suggests materials which the National Wildlife Federation believes are most acceptable and have the least damaging effect, along with a summary of insects each helps to control.

In addition to a brief overview of pesticide problems, the booklet also tells the safest way to apply pesticides. Another section gives methods for disposing of unwanted pesticides.

Free single copies of this valuable 20-page handbook are available by writing to:

THE NATIONAL WILDLIFE FEDERATION  
1412 Sixteenth Street  
Washington, D.C. 20036



### New Record Bluefish

*William DiSanto, of Norristown, Pennsylvania, left, with his new state record bluefish which weighed 23 pounds and 14 ounces. The fish was 40 inches in length and 28 inches in girth. Mr. DiSanto caught the prize while fishing with mullet off Cape May on August 8, 1971*

The double-crested cormorant, which is the common cormorant of the Atlantic coast, is a large, black-looking bird that is often seen perched upright on a rock or piling over the water.



## Fishing is for the Birds

Some of the best fishermen in the world wear wings!

They are large, tethered birds whose angling ancestry dates back 1300 years. Cormorants, tied to a long cord, are still used to fish rivers and lakes in some parts of the Orient. A metal ring fastened around the bird's neck keeps it from swallowing the catch. A cormorant may fetch its owner 100 to 150 fish per hour; a good catch ratio, anywhere.

Actually, birds of all kinds are important to fishermen, even here in New Jersey, for birds are helpful in finding fish, and in some instances are beneficial in reducing undesirable species of fish.

Not everyone can have a trained cormorant to do his fishing, but the role birds play in aiding salt-water anglers is well-known. A flock of diving, wheeling gulls is often better than some of the new electronic equipment when it comes to locating schools of fish offshore and inshore.

Studies have shown that few warm-water game fish are taken by birds. Herons and other wading birds do their fishing along the edges of lakes and streams. Here they catch sluggish, shallow-water fish such as carp, missing the more alert game fish.

Not all bird-fish relationships are beneficial to man. In some coastal areas, merganser ducks are a menace to salmon populations and in some cases have needed control to halt their excessive predations.

Another place man and birds tangle over fish is around fish hatcheries. Hatchery holding tanks are favorite feeding grounds for birds such as the kingfisher and great blue heron.

Now that you have been informed about the birds and the fish, the next time someone says fishing is for the birds—smile and agree. After all, are not there times when a cormorant would come in handy? #

# New Jersey Hunter Safety Course Application

(please print or type)

Name ..... (Last) ..... (First) ..... Age ..... Date of Birth .....

Address ..... City ..... Zip ..... County .....

Type of course requested (please select one):

Shotgun ..... Bow & Arrow ..... Rifle .....  
(18 yrs. of age or over)

## INSTRUCTIONS TO APPLICANTS

The above portion of this form must be filled in by the applicant or the parent of the minor (under 21 years of age) requesting the course.

The completed form is then to be forwarded to the Conservation Officer of your County, whose name and address may be found on the back of this application.

The applicant will be notified by an instructor when and where to report for class.

\* \* \*

The following consent must be executed by the parent or legal guardian of applicants under 21 years of age.

I am the parent or legal guardian of the minor whose name appears on this application. He or she is enrolling in an official New Jersey Course with my full consent and knowledge.

\* \* \*

Signature ..... Date .....

Address ..... Zip .....

Phone Number ..... County .....

\*(Following section to be completed by instructor)

## Instructors Report and Student Evaluation

Date class scheduled ..... Class location .....

- Understanding of purpose of course?
- General knowledge of bow or gun?
- Demonstrated self control?
- Attention to instruction?
- Proper bow or gun handling?
- Demonstrated shooting ability?
- Knowledge of the responsibility of sportsmen?

YES	NO

Instructors Comments

Certificate No. .... Certificate Date ..... Final Grade .....

Instructors Signature .....

**Hunter Safety Coordinator**

District 1 &amp; 2

North Jersey

George M. Aber, Sr.  
P.O. Box 5121  
Clinton 08809

- Bergen** Matthew Ferrigno  
89 Hope Rd., Eatontown 07724
- Essex** Frank Glotta  
P.O. Box 70, Fanwood 07023
- Hudson** Matthew Ferrigno (see Bergen)
- Mercer** Lentho Burns  
Princeton Arms, North 1, Apt. 2  
Cranbury 08512
- Middlesex** Gary Sawhill  
45 Kenlen Drive, Edison
- Monmouth** Carlton Smith  
2565 Algonquin Trail  
Manasquan 08736
- Karl Kristiansen  
41 Sunnycrest Ct.  
Little Silver 07739
- Passaic** Arthur E. Wendelken  
RFD #3, Newfoundland 07435
- Union** Frank Glotta (see Essex)
- Hunterdon** Norman Gebhart  
Hollow Road, Skillman 08558
- Morris** Harold Chitwood  
Box 37, North Rd.  
Chester 07930
- James Parrish  
10 Jennings Rd.  
Hamburg 07419
- Somerset** Robert Troisi  
Nimitz St., Box 669  
Somerville 08876
- Sussex** Parrish (see Morris)  
Harry J. Morrison  
14 Bank St., Sussex 07461
- Albert L. Wilbert  
100 Signal Hill Trail  
Sparta 07871
- Warren** Edward J. Davis  
Box 70, RD #4,  
Washington 07882
- Robert Burns  
Ext. Locust Lake Rd.,  
Box 89A RD #1,  
Blairstown 07825

**Hunter Safety Coordinator**

District 3 &amp; 4

South Jersey

William D. Nevins  
Box 131, Hand Ave.  
Cape May Court House 08210

- Atlantic** Joseph F. Gallo  
Weymouth Rd., Box 196  
Mays Landing 08330
- Edward F. Cartier  
Somers Pt.-Mays Landing Rd.  
Box 216, RD #1,  
Mays Landing 08330
- Burlington** Raymond Fennimore  
Ridge Rd., Vincentown 08088
- Camden** Wm. R. Hutchison  
White Horse Pike, RD #1  
Box 38, Berlin 08009
- Cape May** Francis L. Jones  
10524 Second Ave. P.O. Box 128  
Stone Harbor 08247
- Cumberland** Hershel Beebe  
Eldora Road, Woodbine 08270
- Gloucester** Walter Mabey, Jr.  
3 Cherry Lane, Greenfield Vill.  
Woodbury 08096
- Austin Perrone  
412 Florence Ave.  
Williamstown 08094
- Ocean** Thomas J. Mulvey  
401 Tudor Ave., Pine Beach  
08741
- Charles Torluccio  
614 Willow St., Lakehurst  
08733
- Bruce D. Young  
6 Chestnut St., RD  
Parkertown 08087
- Salem** Marco S. Busnardo  
Willow Grove-Deerfield Rd.,  
Olivet, RD #1 Elmer 08318
- Winfield Jess, Jr.  
29-B W. Grant St., Woodstown  
08098
- Cumberland** Kenneth Arnold  
P.O. Box 51, South Vineland  
08360

# Common Persimmon

(*Diospyros virginiana*)

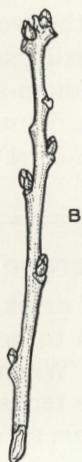
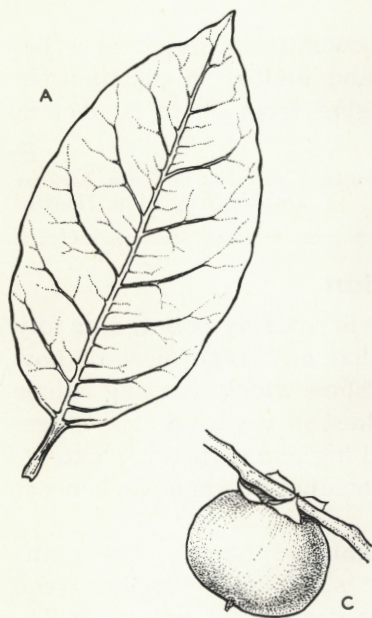
Sometimes this tree is called possum-wood. It grows along fence rows and in open areas, or you may find it scattered among other hardwoods. It will grow on light well-drained soils or on rich bottom lands.

## Range:

Connecticut and southern New York, west to Missouri and central Kansas, and south to eastern Texas and central Florida.

## Leaves:

Simple, alternate, entire margin, 3 to 6 inches long, wedge-shaped



Common persimmon

- A. Leaf
- B. Twig
- C. Fruit

to heart-shaped at the base, usually oblong, dark green on top, pale green and pubescent on the bottom, leaf veins somewhat curved. (See figure A.)

## Twigs:

Slender; grayish brown; usually pale pubescent; large pith, which is sometimes diaphragmed; terminal bud lacking; leaf scars are lunate in shape with a single bundle scar. (See figure B). Bark on

### . . . Persimmon

older trees is dark gray to black, very rough, and broken up into small squarish blocks, with cinnamon red color at the bottom of the fissures.

#### **Flowers:**

White to greenish yellow, urn shaped, occur in May or June with male and female flowers on different trees. Male flowers occur in clusters of 2 or 3, whereas female flowers are single and borne on a short stalk.

#### **Fruit:**

Orange, juicy, globose berry about 1 to 1½ inches in diameter. The fruit, if eaten before it ripens, is astringent and causes "puckering of the mouth." It usually becomes edible after the first frost. Each fruit contains from 3 to 8 seeds. (See figure C.)

#### **Uses:**

The fruit is edible but the wood lacks commercial importance because the trees are usually scattered and limited in distribution. The tree is small to medium-sized, ranging from 30 to 50 feet in height and 12 inches in diameter. #

—Austin N. Lentz, *Extension Specialist in Farm Forestry*  
*Drawings by Aline Hansens*

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## "Average" Pollution

If a beach or a source of drinking water is severely polluted on any one day it presents a hazard to health on that day, regardless of how clean it is at some other time. When samples show widely varying values from one day to the next, this tends to be hidden in any kind of average. An arithmetic average conceals an occasional high value to some extent, a logarithmic average hides it much more, a median average can conceal it completely.

To show how this happens take four numbers: 2-3-4-5. The arithmetic average is 3.5; the logarithmic average is 3.3 and the median (the number which has half these numbers above it and half below) is 3.5. As long as all the numbers are close together, any of these three calculations will produce a similar result. Now add one very high number to the series: 2-3-4-5-100. The arithmetic average rises to 22.8, the logarithmic average to 10.5 and the median only to 4.

A median, therefore, is a useless device as part of a water quality standard. Instead of providing information about pollution it conceals it, and a logarithmic average is not much better. An arithmetic average, though better, also conceals what may be vitally-critical extremes. #

Environmental Quacks come in all shapes, sizes and sexes and are difficult to recognize. Here are some ways to identify one of these healers.

1. Look for someone who has no training in the subjects on which he speaks.
2. This person frequently asks questions like, "How would you like your foot in a trap?"
3. These peddlers of the quick-cure often talk at great length of the suffering animals.
4. Be alert for someone who is only concerned with some types of animals and not others. These persons very seldom speak of reptiles, amphibians, or fishes, but oh, "those mammals."
5. Beware of someone exhibiting symptoms of "Bambi-ism" brought about by viewing a cartoon which gives animals human characteristics.
6. These persons frequently speak loudly about conservation issues, but are unable to define the word "conservation" and seldom contribute anything more tangible than lip service.
7. Beware of an "Environmentalist" who lives in the past, uses the word "preserve" loosely and seldom suggests anything constructive for the future.
8. Environmental healers seldom give animals credit for their instinctive ability to survive; and often refer to wildlife as "poor dumb animals."
9. These "eco-charlatans" often have large repertoires of facts and figures of mysterious origin such as, "fifty percent of all deer shot by hunters are wounded and maimed."
10. The only credential these "wildlife specialists" exhibit is "many years' experience in being kind."

These are but a few of the characteristics that label the Environmental Quack. #

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*Note:* This editorial is aimed at helping people, genuinely concerned about wildlife and the environment, to identify those who mislead and misinform. There are many well meaning but misinformed persons who feel frustrated about our current environmental problems and are thus easily lead by those who make a "profession" out of misleading. We encourage people to become aware and active in constructive environmental work.

# Pequest Tract

The Pequest Fish and Wildlife Management Area, located near the town of Pequest, White Township, Warren County, is one of the better trout fishing areas in the state. The area is managed primarily for upland game and fishing. There is good access to the tract along the road and from the railroad.

Acquisition of the tract began in May 1956. Today the area totals approximately 260 acres of woodland and fields. With the exception of 55 acres purchased through the Green Acres Program and assigned to the Division, the area was purchased with money from hunting and fishing license fees.

## Fishing

The Pequest River flows through the tract. In this area the river is approximately 60 feet wide, having a maximum depth of six feet. There are over twenty species of fish found in the river. Those species found in greatest abundance are brook, brown, and rainbow trout, grass pickerel, sunfish, bullhead and rock bass. The stream is managed primarily for brown and rainbow trout. Fishing is excellent early in the season, as approximately 12,000 fish are stocked in the Pequest. Some holdover trout are available, but most of the fishing is on a put-and-take basis.

## Deer

A growing deer herd presently offers the bow and shotgun enthusiasts ample hunting opportunities.

## Upland Game

The principal native species of upland game found in the area are rabbit, grouse and squirrel. Excellent hunting opportunities exist for those species found on the tract.


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. #

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



No person in any county of the first or second class (Essex, Hudson, Bergen, Morris, Union, Passaic, Middlesex, Mercer, Camden and Burlington), and no person under 14 in any other county, shall use a steel-jaw leghold type trap.

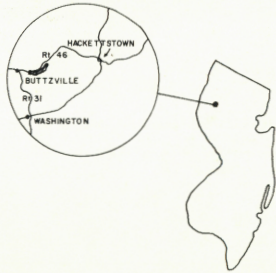
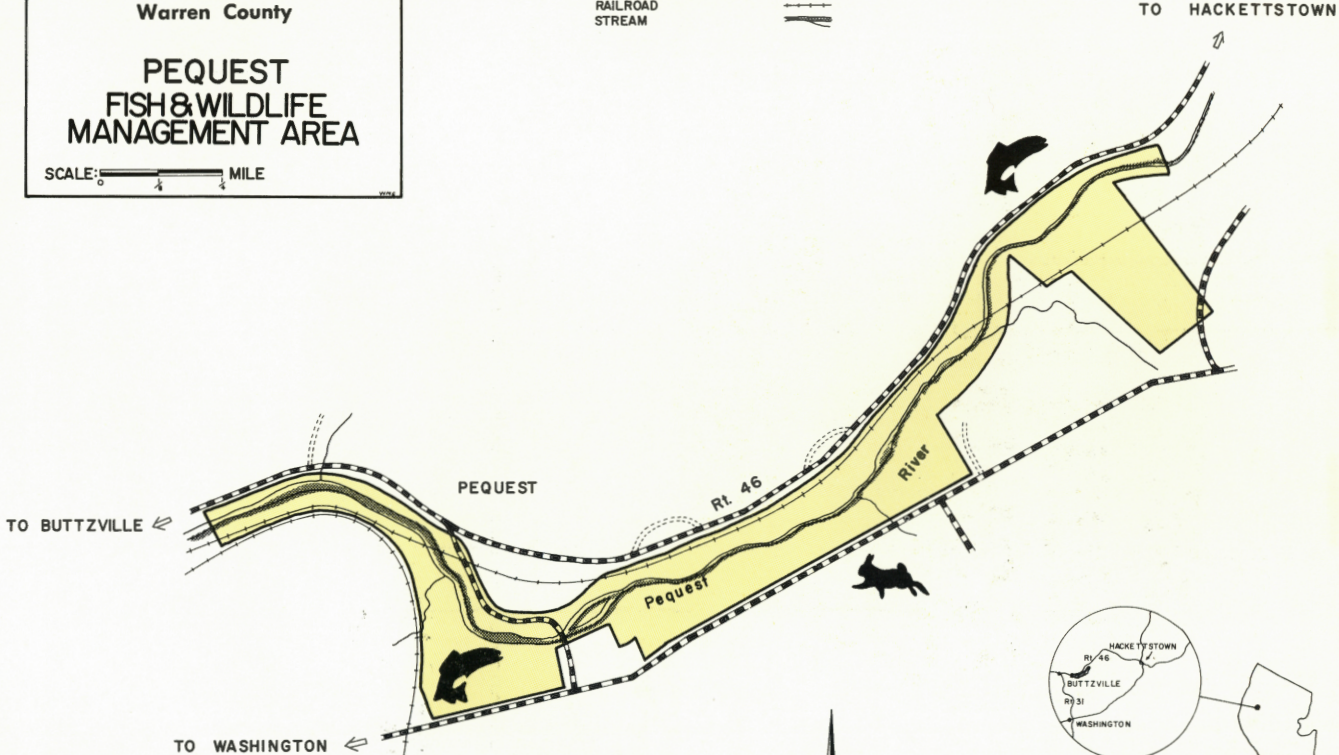
**Warren County**

**PEQUEST  
FISH & WILDLIFE  
MANAGEMENT AREA**

SCALE:  MILE

**SYMBOLS**

- ROAD (IMPROVED) 
- ROAD (UNIMPROVED) 
- TRACT BOUNDARY 
- RAILROAD 
- STREAM 



# **NATIONAL HUNTING & FISHING DAY**

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