

New Jersey *Outdoors*



May, 1971

**Earth and water
can be used**

Over and Over

if they are not abused

The entire earth is our "resource." We live both on it, and off it.

Whether certain resources come under the heading of "renewable" or "nonrenewable" is often determined by the refinements and growth of technology.

Earth and water, if not too blatantly abused, can be made to produce again and again for the benefit of all mankind. The key is wise stewardship.

Once we fished the seas and streams without regard to the effect on fish populations; we milked our rivers of fresh water to slake our thirst, to irrigate our crops and to flush our wastes. We gave little or no thought to preserving the freshness, the life-giving properties of a health milieu for fish and fowl and plant life. We tore our food out of the soil with no idea that the earth might some day rebel in exhaustion.

Today we view both earth and water as "renewable" resources. Given thought and consideration and care, they can be made to serve man indefinitely—at least unless man by sheer weight of numbers overruns the boundaries of even that flexible term—renewable.

The above item is quoted from the Department of Interior Yearbook, entitled, "The Population Challenge—what it means to America," one of the yearbooks published by the Department of the Interior.



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Cover—"Fishing and Eating"—Kiekhaefer

When two boys get together in a boat on a fine spring day, what more could they want than good fishing and plenty of food to eat.

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CANNED

By BETTYE BREESER

Photographs by the Author

IN SPITE OF ALL the fancy fishing plugs, trick bait, and live minnows that freshwater anglers choose to use, never is there a fishing haunt that doesn't show the remains of "canned" fishing habits. Why tomato cans seem to be the choice container is a mystery, but out of every dozen discarded cans it seems that the majority at one time served as a receptacle for the red skinned vegetable.

Littering the countryside is one of the grave sins of some fishermen, who, through thoughtlessness or lack of education on good outdoor manners fail to pick up their equipment completely. And, since worm bait seems to travel to fish-

ing sites via cans, the rusting remains were at one time important equipment—at least so at the start of the trip.

The art of worm digging isn't always easy as some might believe who have read tales of Huck Finn and Tom Sawyer in their youth. There are days when the coy segmented wigglers can be as evasive as a greased pig, and that, of course, is the very time when one finds free to fish. Worms can neither see nor hear, we are told, but they do have brains!

How worms have the ability to be so spade-shy is quite a mystery, when all a hungry robin has to do is to scamper over a lawn, tilt

If a choice were given, this worm would no doubt prefer to be a robin's dinner rather than a waiting morsel for a fish



There are days
when the coy
segmented wigglers
can be as evasive
as a greased pig



his head and strike with speed in the ground to pull up a good sized tidbit. Unfortunately man does not have the agility, nor the hearing, to go through such contortions, and since the spade is his tool, birds must chuckle in their beaks at his frantic digging. It is quite fortunate that the birds do not repeat, parrot fashion, the angry words of a fisherman who digs without success for worms!

No worm that has ever experienced a fish hook has revealed its reactions. A few do escape watery death, however, and perhaps these frightened few bore and push into sweet cool darkness again to tell tales of their "canned" tour of the earth above. The heat of a can,

whether it be a tomato container or any of the many possible varieties, must certainly be the main complaint of any unfortunate bait. Threading on a hook soon ends in watery numbness, but their hours in drying earth warmed by the sun must be murder for worms. If a choice were given they would no doubt prefer to be a robin's quick dinner rather than a waiting morsel for a fish.

As humans we marvel at the fact that when trout, bluegills, perch, and bass are biting, the worms are alerted by some strange signal and seem to dive to deep depths in the earth. What is this system that says "lie low?" There are times, we acknowledge, when worm dig-

. . . *Canned*

ging isn't too bad, and that must be when the population underground is at its height and all thoughts of safety forgotten.

Feeding on decaying vegetable matter, their burrowing and chewing activities delight agriculturists for worms are credited with making soil porous as well as building up top soil with their castings. Naturalists explain that the old saying that worms "rain down" after a shower is false, since the half-dead, water soaked critters simply crawl out of the ground for oxygen when the rain has filled their openings in the soil. The dying condition is due to the cold and light on their tender skins, not from a tumble from the sky. Seems like such a sneaky trick when sportsmen plod at night for crawlers. If there is any transparency at all in the earth, these wigglers must wonder at the small circle of light that moves from place to place in the grass. Night crawlers, being blind, should not be annoyed by flashlight beams, but they do seem to sense the light and zip for their burrows. Their confinement in a can must be a grueling experience. Fat and meaty, their full length cannot be attained in a confined area and it must be rather alarming to them to find

themselves tangled and interwoven with many others in a mat of slimy movement. Adventures in the cool dew dripping grass at night were never like "canned" living!

There are many artificial tricks to harvesting a worm catch for a day's fresh water angling. Seems that a warm bucket of detergent water thrown on the ground will hustle the cylindrical bodies to the surface in most any season. Others have found that burying garbage in a garden patch has its rewards, for around these moist areas can be found bait foraging for the decaying vegetable diet. Worms will remain alive in containers kept cool and moist with moss and leaves, but as to their comfort one has never yet preferred this to his home in the ground. Moist coffee grounds are often offered as an added attraction to these confined worms, but whether they enjoy the remains of yesterday's coffee is a question!

Acknowledging the fact that many sportsmen prefer worm bait, it is entirely proper to suggest that they think kindly of their harbored ground loving crawlers. Small helpless things that they are, they cannot pick up their tin can prisons and remove them from the water's edge. Perhaps in their spade-dodging acts they say—"I think I CAN." #

*Deviation from
Nature is deviation
From happiness*

—Samuel Johnson

Popularity of Hunting and Fishing is Being Surveyed

Hunting and fishing obviously are popular activities in New Jersey and all of America, and the Interior Department's Bureau of Sport Fisheries and Wildlife is having a survey conducted to find out just how popular they are.

On BSWF's behalf, the Bureau of the Census is obtaining data on the number of men and women and boys and girls who hunt and fish, their ages, the number of days they spend in the field, and the amount of money they contribute to the economy in pursuing their pastimes.

The last survey, in 1965, revealed that almost 33 million American sportsmen spent about \$4 billion during 709 million days fishing and hunting. The average sportsman spent 19 days and \$123 engaging in these activities during the year.

The present survey is intended to update the 1965 data, although some new types of information also are being sought. The information is invaluable to fish and wildlife administrators as well as to commercial enterprises.

These surveys are financed from Federal-aid funds obtained from excise taxes collected on sporting arms and ammunition and on certain types of fishing tackle.

A publication on the results of the survey will be published by BSWF later in the year.

Earlier surveys were conducted in 1955, 1960, and 1965. #

Trout Unlimited Begins Un-litter Campaign

Trout Unlimited, a Denver based national organization with New Jersey chapters dedicated to better trout fishing, has announced a new idea in litter elimination. It is a litter creel which is made by Levi Strauss Company. It will soon be widely advertised in New Jersey and most trout states.

The litter creel is a loosely woven sack about 15 inches x 25 inches with a shoulder strap. It bears the prominent message: "Bring Back a Limit of Litter" and the Trout Unlimited seal of TU and a leaping trout.

Levi Strauss, makers of Levi's, is underwriting the cost of the litter creels, and Trout Unlimited of 5850 East Jewell Avenue, Denver, Colorado 80222, has undertaken the task of distribution.

New Jersey's trout streams suffer from an overdose of litter, and a litter creel campaign such as TU is sponsoring could be put to good use here. #



CHUCK

By JOE LINDUSKA

COME THE heat and drought of late summer, he dozes in the cool confines of his burrow. That's estivation—of a sort. The winter he spends in deep sleep. That's hibernation. And on his own day in February he reveals the nature of spring weather to follow. That's long-range prognostication.

But the ground hog's more than a prize sleeper and prophet. He's a liability and an asset, nuisance vermin and prized game, a builder of homes for indigent rabbits and a razer of homes for indignant vacationers.

First off, he's a top-flight engineer and a soils expert of no small skill. It's not often you'll find a drowned-out woodchuck den. They pick their sites carefully—well-drained sidehills with a view. And where they have a choice, they select their soil type with even greater wizardry. A survey of woodchuck excavations showed they were unerring in the selection of sandy loam. The accuracy of their judgment in this department was short of amazing since the area was a patchwork of soil types.

After deciding on the place, time is no problem to a woodchuck. He has all summer and digs a little now and again as his mood moves

him. Some are shiftless and settle for basement apartments of utility size with a single opening. Others are like folks converting old barns. They add a room here and a door there with the result that some deep-down dwellings are elaborate affairs. One excavated den had over 56 feet of tunnel and five entrances. Some go down over six feet but the average maximum depth is nearer four feet.

A little super structure appears desirable with the result that brushpiles are favorite spots for a tunnel entrance. Abandoned buildings the same. And summer cottages frequently turn up with adjoining basements that weren't in the plans.

Like country folks in summertime, the woodchuck has lots of company, too—except his come in the dead of winter. Skunks, opossums, and rabbits aplenty all drop in. But the proprietor doesn't mind—in fact, he doesn't even know they're there. He's in deep sleep in private quarters sealed off from the den proper. His normally rapid heart beat (up to 200 per minute) is slowed to a chug—chug of four to five beats per minute. And his body temperature is reduced, too, from a normal 37°C. to eight. It

all tends to conserve energy during the long six-months sleep and abstinence from food.

Dig out a woodchuck den in winter and you're likely to find most anything—anything, that is, except the owner and regular tenant. The hibernating cell is so skillfully sealed off that it's seldom you can spot it from the main tunnel. But skunks you'll find, sometimes a dozen or more, huddled together in deep sleep. Mostly they're all females.

Rabbits, too, will take to "holing-up" in rough weather. In a study made to determine the extent of den use by cottontails, ferrets were run through 181 woodchuck burrows and rabbit occupancy was correlated with temperatures.

In spring—even early February in some places—ground hogs begin to surface. They breed soon after emerging from dens and 31 to 33 days later, they have four to six young 'uns. They eat, and lie in the sun, and eat and eat.

They're not what you'd call fussy eaters and will try most anything green. Alfalfa, clover, dandelions, and my cantaloupes are favorite foods. Most any garden vegetable suits them fine—even onions.

For a burrowing critter that spends more than half his life underground you might expect him to be ungainly on the ground. He's not. Like the overweight executive type, his gait's a little ambling. But he can make good time under pressure. And he can shinny up trees and do a fair job

of swimming. I've seen them—of all places—sitting on a fence post. And this summer we thought we had a beaver in one of our duck ponds. It turned out to be a well-larded 'chuck leisurely paddling across the ten-acre pool.

More than any other animal, the ground hog has led to the development of that special breed of rifleman—the "varminter." In advanced classes of this select school the challenge lies not in numbers bagged but in 'chuck to rifle distance. The result is stalking in reverse.

Upon spotting his quarry, the purist walks or drives *away* from it until it all but fades from the naked eye. Then he hauls it back up with a ten-power scope, and with sandbags and careful reckoning of wind, trajectory and other variables he squeezes, hoping for that shot he'll remember. First it's 400 yards, then 450—500—.

On a first exposure to the sport, mine came last spring, 550 yards if a foot. For a week I was elated. Then questioning glances forced an exact measurement. Well, it was still enough to add a convert to the cult. #



Spoons are for Fishing

Anglers who fish with spoons have fought long and hard to win recognition among fly fishermen and light tackle enthusiasts. An indication of the problems spoon fishermen faced is seen in a brief discussion of the relative merits of fly fishing and bait fishing taken from a book published in 1897. The author concluded “. . . spurning always the spoon, for it is as barbarous to kill a trout so, as to eat him with one . . .”

Now those are stiff fighting words to a dedicated spoon angler.

Spoon enthusiasts weren't discouraged by such talk, however, and the development of spoons as effective fish catchers went ahead. Today, they are popular lures, and almost every New Jersey angler's tackle box contains several spoons.

Contributing to their increased popularity has been the development of lighter, more dependable fishing tackle.

Rods have changed a lot since the early days of trolling spoons for trout, muskie, pike, and bass. Old-time trolling rods tended to be thick and had little action. The only way you could tell when a fish hit was to note the added weight. Then you hauled back to set the hook, and started cranking the reel. The fish didn't have much chance to fight. Modern rods are lighter in both weight and action, and you immediately feel the fish's strike.

Monofilament lines have added to the enjoyment of spoon fishing. And, with the recent development of new heavy-test lines that have less diameter than present monofilament, spoon trolling will become even more fun.

Old-time trolling reels were big and heavy. If the reel had a drag mechanism, it usually didn't work. And level winding was done by working the line with your thumb. Today, improved drags, lightweight metals and level wind mechanisms have all helped bring trolling reels out of the dark ages.

Check out the new equipment at your favorite tackle shop, and adding spoon fishing to your list of fun things to do. #

Tasty Shad Recipe

Place two halves of boned shad (skin side down) on sheet of aluminum foil. Bend four sides of foil up to prevent spilling over. Squeeze the juice of a lemon into deep dish and add half cup of wine. Marinate shad by brushing blended lemon juice and wine into flesh. Lay three strips of bacon lengthwise on each fillet. Slowly pour remaining half cup of wine on fish and allow it to marinate for at least one hour. Then broil for 15 minutes and serve. #

Take Trash:

There's A Way To Dispose Of It, And Save Money As Well

By Jane Reed

This article from *Kentucky Happy Hunting Ground* is not just for the girls. Even though the ladies will probably be better able to make the most of the suggestions, all of us should be able to make use of parts of the check list at home, at work, and, especially, in the woods. What did you do with your last empty salmon egg jar? Where is that box from the last shells you shot?

Girls might be made of "sugar and spice" but unfortunately some of the things they have to deal with are considerably less fragrant.

Take trash. Or, to get down to the nitty-gritty of it, garbage, a lot of which eventually becomes a blight on our countryside and a plague to all who enjoy the outdoors.

As surely as every woman will one day be responsible for bringing food and other household supplies into a home, just as surely will she be responsible for getting the refuse out. And the only thing that's rising more quickly than prices right now is the amount of that refuse.

Our mothers and grandmothers, who considered frugality a virtue,



were subjected to a lot of good-natured ribbing for their saving habits. No piece of string or scrap of paper was too small to keep; empty jars were carefully washed and used again; left-overs appeared regularly on the family menu.

By contrast, we gleefully "use it once and throw it away." Ergo the pocketbook gets emptier and the trash cans fuller.

There are ways (some a bit far out, to be sure, but worth a try) to cut the food and clothing budget; decrease the garbage "output" and, more than incidentally, alleviate the waste disposal problem. A satisfying by-product will be the knowledge that you're doing at least a little bit in the fight for a better environment.

. . . There's A Way

Anyhow, the money you save might mean a new dress, so. . .

- √ Don't use paper plates and/or cups. If you absolutely don't have time to wash dishes, hide the whole mess in the oven. Even your nosiest guest won't look there.
 - √ Don't buy beer or soft drinks in disposable bottles or cans. Buy your drinks in old-fashioned glass bottles, pay your deposit and return the bottles for more drinks or your money back.
 - √ Return extra coat hangers to the dry cleaners. If everybody would, dry cleaning costs would surely go down a little.
 - √ Forget paper napkins and placemats. Wash and iron cloth ones you used to save for company dinners and watch the pennies grow.
 - √ If you have clothing that nobody in the family will wear, give it to the Salvation Army, the Good Will Industry or somebody. If it's absolutely not useable, take the buttons off (even the ugly purple one might look great on a Halloween or tacky party costume), save the zipper and use the rest for a cleaning cloth. Why spend your good money for those paper cleaning cloths when you have the real thing right in your dresser drawer or closet?
 - √ Try using a newspaper instead of paper towels for window washing. Not quite as handy but
- adequate. Don't buy that window-washing liquid in an aerosol container. It's cheaper to buy a refillable bottle with a spray attachment. Still better, is ammonia with water. Works just as well, too.
- √ Carry a shopping bag, tote bag or basket when you shop. You won't have nearly as many sacks to throw away and fewer packages to carry, too. If you buy only one or two items, your hands alone will do the job, would you believe, no sack needed. Maybe the money the store will save by buying fewer sacks will eventually be passed along to you, in the form of lower prices.
 - √ Save plastic bread containers. They work just as well as the plastic bags you buy. Ignore the advertising and think of the money you've saved.
 - √ You can probably cut your aluminum foil consumption by a third, if you take time to check it and use pieces more than once when possible.
 - √ Wrap the remains of your dinner (the part you can't save and use tomorrow, of course) in newspaper, tied securely with that piece of string or rubber band you've saved. No need to buy special plastic bags for that.
 - √ Pass your magazines to someone else. Surely somebody wants them. Try a hospital, nursing home or orphanage, if all your friends buy their own.

- ✓ Unsolicited, unwanted "junk" mail can be marked "refused" and the postmaster will return it to the sender, at no charge to you. Word travels fast in the mailorder world and you'll soon be taken off a lot of undesirable mailing lists.
- ✓ Check with your local organizations, especially youth groups, about old newspapers. Many collect them for resale to junk dealers.
- ✓ If you have two or more perfectly good stockings, except that the shades don't match, put

them all in a pot of water and boil them a few minutes. Somehow they all come out the same color and can be used at least once more. When they're past wearing, keep them a while longer. They make excellent stuffers for small pillows, children's toys, etc.

* * *

These are just a few ideas. You probably have or will have many more of your own. Most important—kick the throw-away habit and maybe you can think and afford, Chanel No. 5. #

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From



Yes there is a

Striper Nursery

in the Delaware

By Mat Hogan

Have you ever wondered, as I have, just where the fish you have been fishing for, and maybe even catching, may have been spawned?

Well, for years I have been fishing the lower Delaware River for striped bass and often speculated whether or not the stripers actually spawned in the area. Although the big stripers were there, I never did see any real small ones and I do not believe that I would know a striped bass egg even if I did see one.

Being just another fisherman I was not at all sure of how to go about finding out about if the bass did spawn there or not. Fellow fishermen did not seem to have the answers, nor did the outdoor writers I contacted. The local libraries were of little help.

Then a recent visit to the Trenton office of the Division of Fish, Game, and Shell Fisheries brought results. I found that a study concerning the very subject had been made by the Division. Although the report of the study proved to be pretty scientific and way over my head, it gave me many answers. Not only do I now know for sure that the stripers spawn in the area, but also when and under what conditions.

The study was conducted by Walter S. Murawski, formerly Biologist, at the Division's Bureau of Fisheries Nacote Creek Research Station near Absecon. The report is titled "The Distribution of Striped Bass, *Roccus saxatilis*, Eggs and Larvae in the Lower Delaware River"

← As other Delaware River fishermen, I knew that the big stripers were in the River. But, I did not know if they spawned there

. . . Striper Nursery

and contains much information about the water itself as well as about the eggs and young stripers—about 28 tables, as I recall.

By the way, never let those scientific names bother you. The fisheries biologist needs them for sure. But, I just mumble past them.

At any rate, here is the way Biologist Murawski summarizes his findings, along with some background information.

The Delaware River and its estuary has been known historically as a commercial fishing area for striped bass, *Roccus saxatilis*



It is relatively easy to check what kind of fish anglers are catching

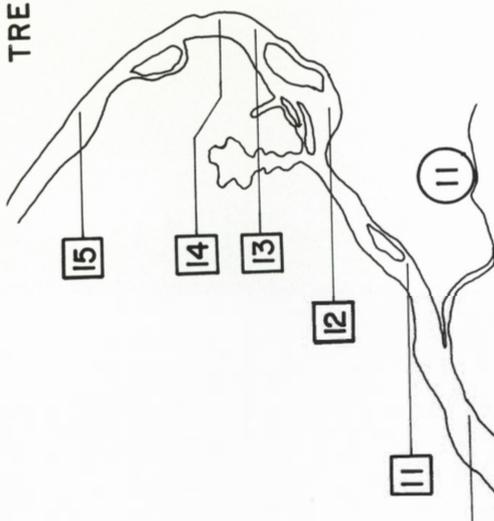
(Walbaum) [*Morone saxatilis* (Walbaum)]. It has been considered a spawning ground for striped bass, or rockfish as they are known locally, because of the abundance of fish of all age classes including the young. C.C. Abbott in 1878 discussed the occurrence of striped bass in the



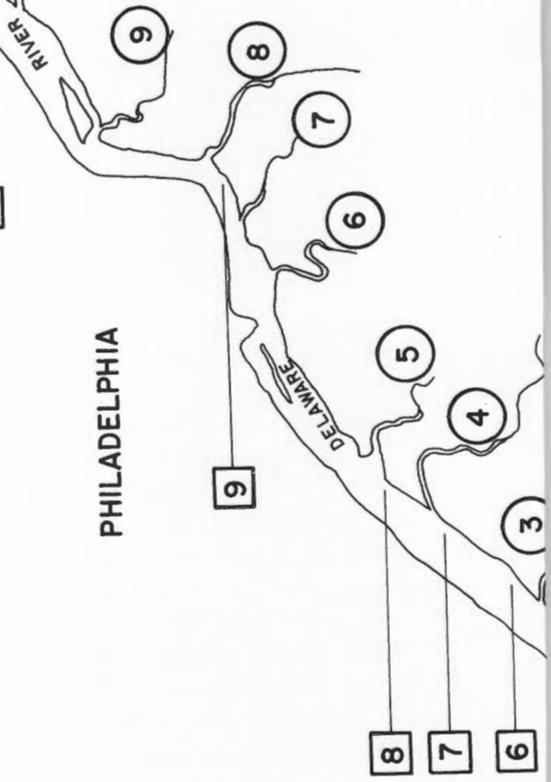
However, to determine what fish eggs and larval fish are present in a body of water, specialized gear, such as a plankton net, may be required

Trenton area in both the mainstream and two tributaries, Assunpink and Crosswicks Creeks. He felt that these fish bred in this area, especially in Crosswicks Creek, and supports his feelings with reference to specimens of one and one-quarter inches in length captured in June. E. R. Norny writing in 1881, claimed that Wilmington Creek in Delaware was a striper spawning area because of the presence of striped bass fry. The next reference to young striped bass in the Delaware River was not made until 1937 after which Daniel Merrimen reported the capture of a number of young and yearlings from a power plant intake at Pennsville, which is in the lower river. No records of young stripers were made during the 1940's. This may have been due to a reduction of fisheries research because of World War II. However, it is known that the lower Delaware River suffered its greatest pollution during that decade and it is possible that young fish production may have ceased during that period. Beginning in 1952,

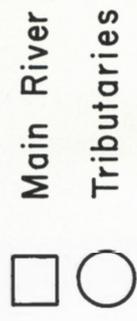
TRENTON

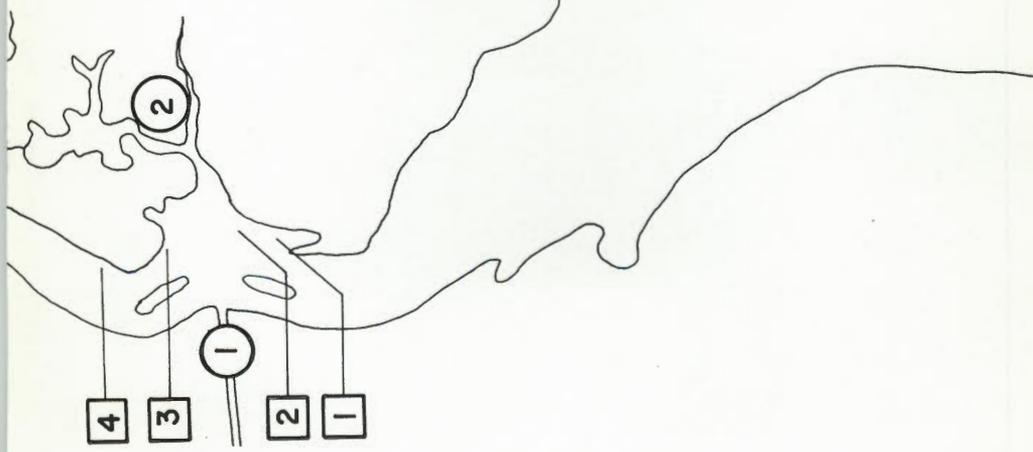


PHILADELPHIA



Delaware River and Tributary Sampling Sites





Legend

Main River

- 1—Reedy Island
- 2—Oakwood Beach, N. J.
- 3—Fort Mott State Park, N. J.
- 4—Kilkahook Wildlife Refuge, N. J.
- 5—Delaware Memorial Bridge
- 6—Penns Grove, N. J.
- 7—Oldman's Point
- 8—Bridgeport, N. J.
- 9—Westville, N. J.
- 10—Riverton, N. J.
- 11—Burlington, N. J.
- 12—Florence, N. J.
- 13—Newbold Island
- 14—Bordentown, N. J.
- 15—Trenton, N. J.

Tributaries

- 1—Chesapeake and Delaware Canal
- 2—Salem River
- 3—Salem Canal
- 4—Oldman's Creek
- 5—Raccoon Creek
- 6—Mantua Creek
- 7—Woodbury Creek
- 8—Big Timber Creek
- 9—Cooper River
- 10—Pensauken Creek
- 11—Rancocas Creek

. . . Striper Nursery

there is almost a continual record of young striped bass captured in the lower river to the present time.

The only reference made to striped bass larvae in the Delaware River is that by deSylva and Smith, who reported capturing them near Augustine Beach, Delaware, in 1960, in a National Science Foundation study of the fish eggs and larvae of Delaware Bay.

Due to an expanded interest in the striped bass as a sport fish in the 1950's a number of investigators examined young and yearlings from various estuaries for differences and all showed that the Delaware River population exhibited significant differences from other Atlantic Coast populations. Further, it was hypothesized that in at least certain years, the spawning population was augmented by fish from other estuarine areas, most probably the James River, Virginia, and/or the upper Chesapeake Bay.

The purpose of this study was to locate the spawning area of the striped bass in the Delaware River and to determine the periodicity of spawning and the water conditions under which the developing eggs and larvae occurred.



The samples collected are identified. Biologist Murawski

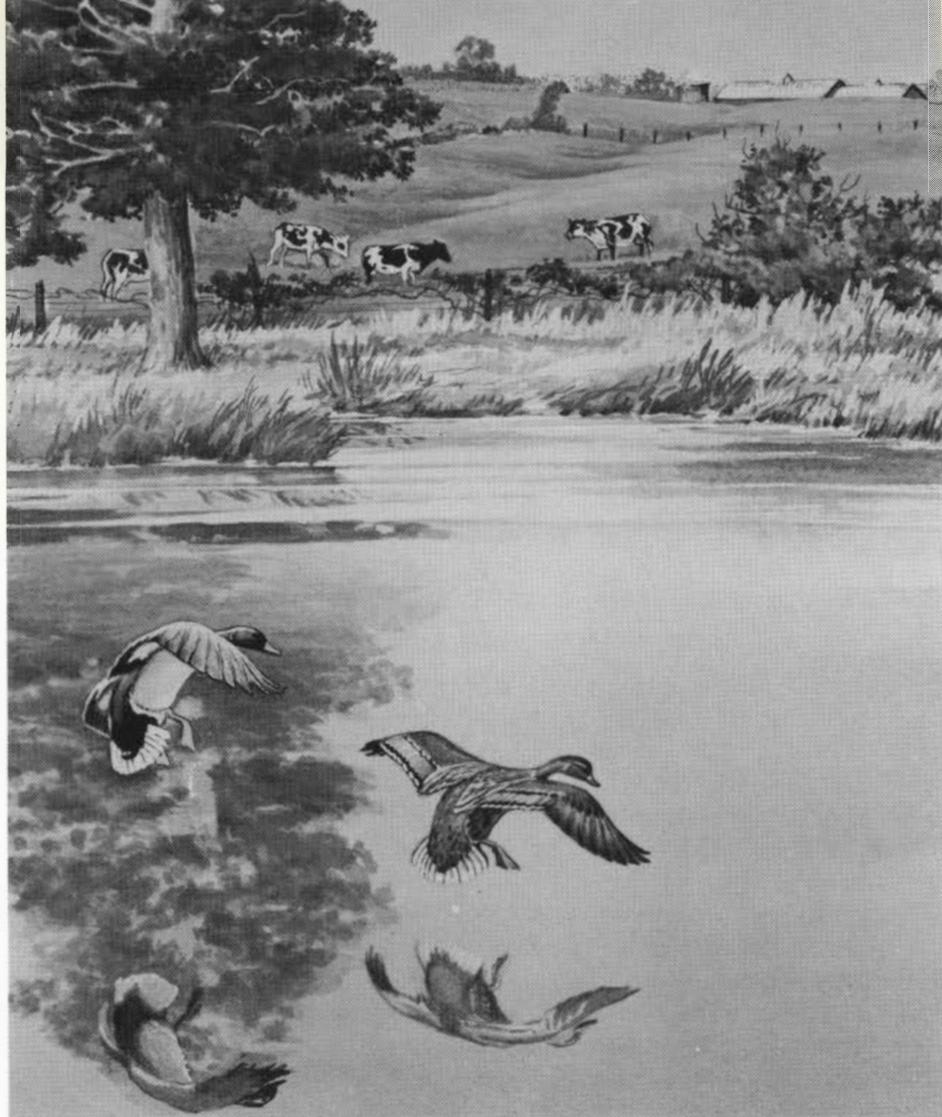


Fish and eggs are preserved for future studies and reference

The results of plankton net sampling in the lower Delaware River and eleven of its tributaries for striped bass eggs and larvae during the years of 1962-1966 are presented in the report. Striper eggs were found from Oakwood Beach (River mile 58) to Bridgeport (mile 79). And, the larvae were taken from Fort Mott State Park (mile 61) to Newbold Island (mile 125). In this latter range no larvae were taken at Westville (mile 94) nor at Riverton (mile 107). The low concentrations of dissolved oxygen that occur in this section of the river may explain the absence of eggs and larvae and may further explain the high percentage of dead eggs taken at Penns Grove (mile 73). In the main river, salinities where striper eggs were taken were negligible and all spawning may have taken place in water having a dissolved solid concentration of 180 ppm. or less. The spawning season begins as early as late April and extends for approximately one month with the majority of spawning occurring in water temperatures ranging from 54° to 67° F.

Striped bass eggs and larvae were taken in four tributaries, Raccoon Creek (mile 80), Oldmans Creek (mile 77), Salem River (mile 60), and the Chesapeake and Delaware Canal (mile 60). However, because of the few occasions on which they were found in the former three tributaries, it is probable that they may have only been artifacts brought in by the flooding tide and that spawning does not actually occur in these streams. This does not appear to be the case in the Chesapeake and Delaware Canal. The smallest eggs found in this study were taken in this Canal along with the highest water salinity values.

#



Mallards On The "South 40"

Modern man is perverse. In the northern states and prairie provinces, he's been draining marshes and potholes by the hundreds. At the same time, over nearly all the United States, he's been beaver-busy digging and flooding thousands of reservoirs and ponds.

So what's the difference? Don't the new waters equal the lost wetlands to the north? Not for waterfowl and waterfowl hunters! Most prairie potholes and northern marshes are prime production areas for ducks. But many new stateside impoundments are desert-

ed in the breeding season. Those that do hold ducks in spring usually have little natural nesting cover. Further, the number and variety of nest-robbing predators builds up to the south, so waterfowl that do attempt to nest here are in double trouble.

Can the myriad man-made ponds and lakes ever become duck factories? Possibly so. Experiments have been conducted which hold out hope for farm-pond waterfowl production.

One answer may lie in convincing the birds to use elevated man-made nest boxes. The artificial structures provide nest sites where natural cover is in short supply. When elevated on posts, such nests are beyond the reach of many ground predators. Climbing nest robbers, including raccoons, can be kept out by placing large, inverted metal cones, metal downspouting, or similar devices on the posts. And, if the nest structures are enclosed so that the eggs are hidden from view, that arch enemy of duck nests—the crow—won't cause much trouble.

Will ground-nesting ducks like mallards use raised, darkened nest boxes? Yes, providing there are some incubator-hatched hens present. It seems that the experience

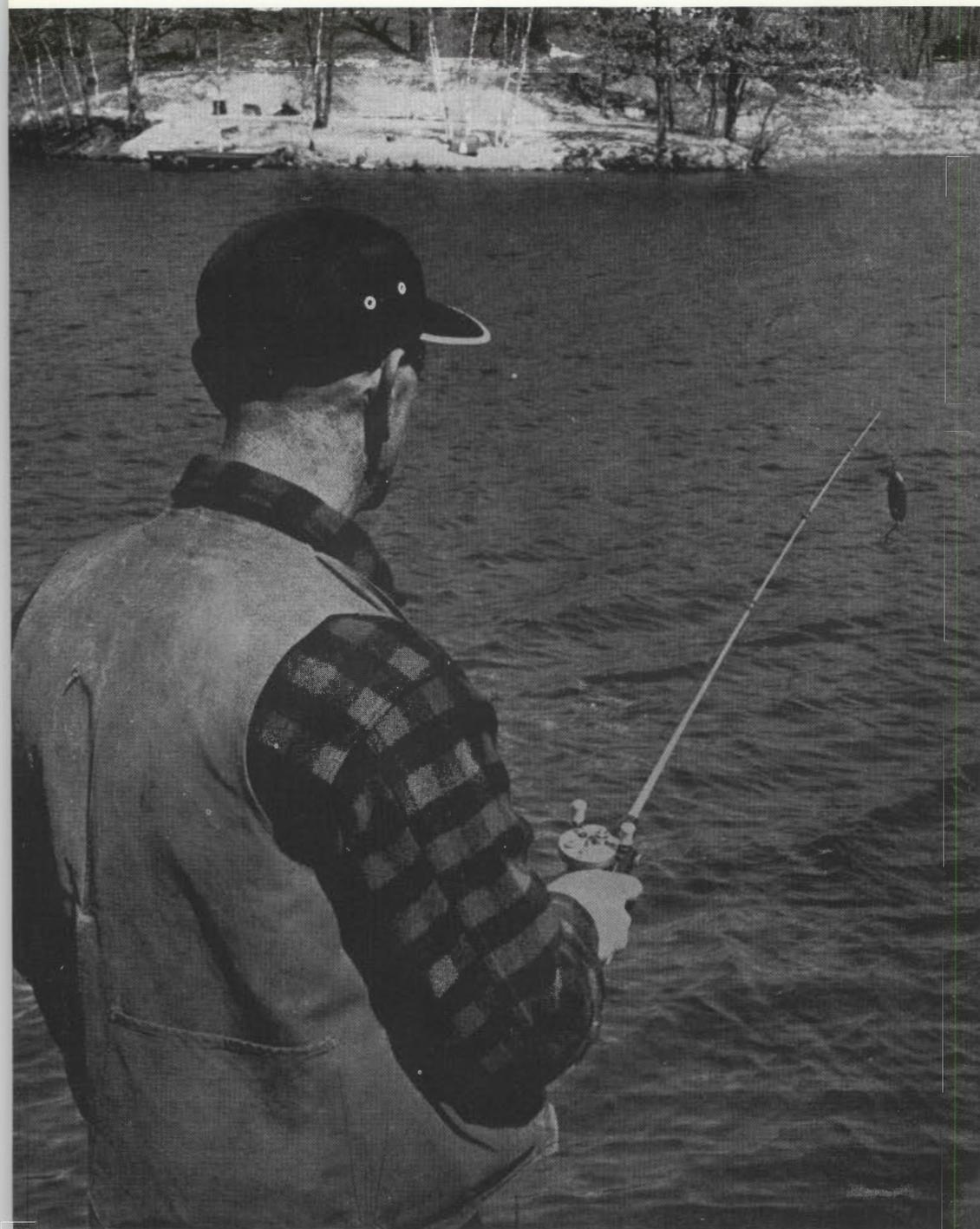
of hatching in an incubator may condition ducks to choosing enclosed, dark nest sites when they nest. Ducklings hatched in boxes likewise seek out similar sites when they reach breeding age. So, once there's an initial, successful use of nest boxes by mallards on a pond, a self-maintaining population can result.

Suitable nest boxes can be made from nearly any type of material. The main requirement is an enclosed nest space with minimum measurements of about 14x12x10 inches. Old grease drums, sections of furnace pipe, old crates, and wire-and-roofing paper cylinders have all been used successfully. They're slung on steel posts, or atop wooden posts, 4-5 feet off the ground or water. "Motel" groups of as many as four nest boxes on one post get good use, too. Each post is equipped with a shield to keep out climbing varmints.

If man-made nests can bring even a small percentage of new man-made waters into duck production, they'll have made a big contribution. Studies hope to point the way for a new technology in duck production. Who knows, the "potholes" of tomorrow may be those stock ponds on the old "South 40." #

*When you defile the pleasant streams
And the wild bird's abiding place,
You massacre a million dreams
And cast your spittle in God's face.*

—John Drinkwater

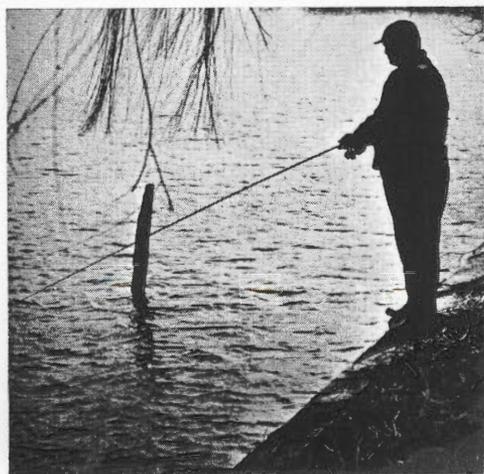




PICKEREL FISHING

by JACK PHILLIPS

Photographs by HARRY GROSCHE

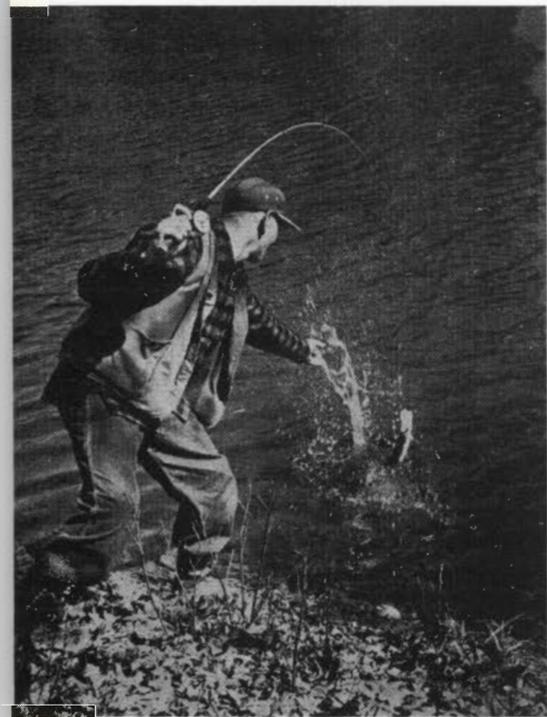


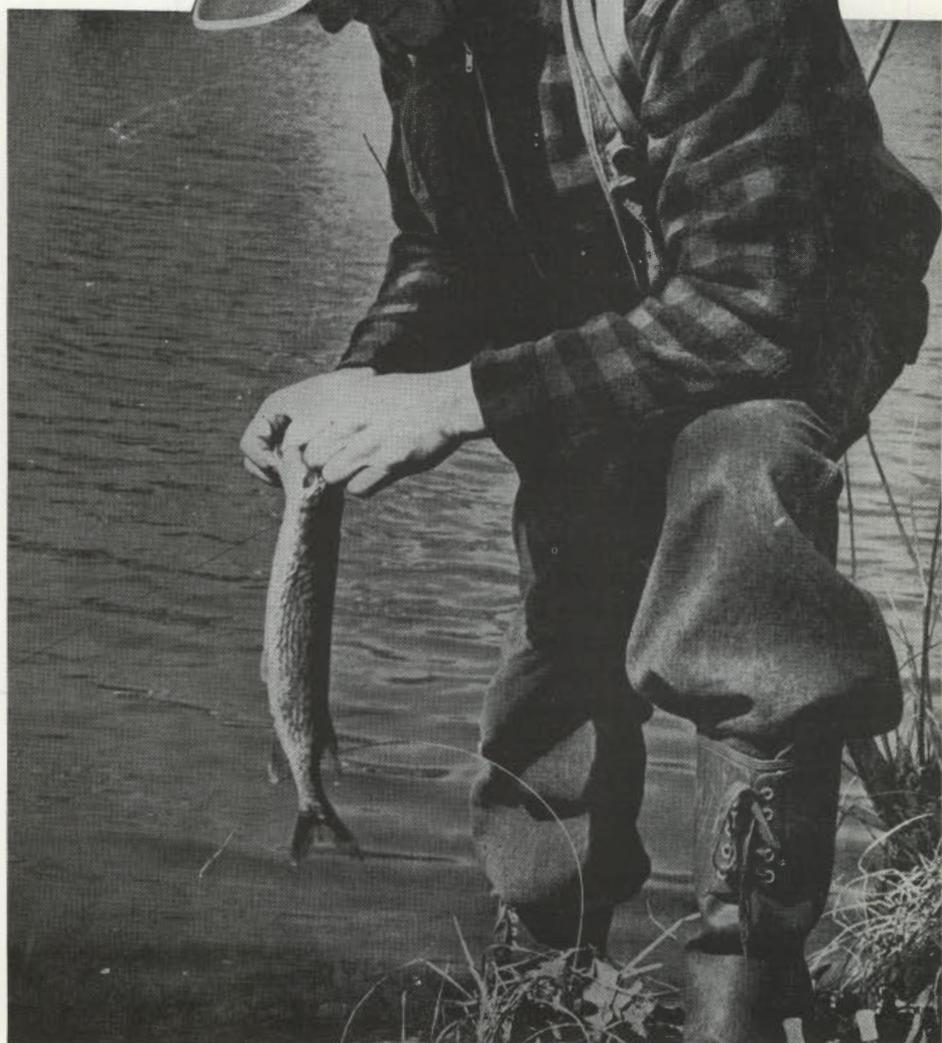
May is the traditional month for pickerel fishing. The weather is generally pleasant, the weeds are not yet thick in most waters, and, best of all, the pickerel are usually hungry and obliging. Pickerel are astoundingly cosmopolitan, are found in many kinds of waters throughout New Jersey and can be taken by various types of fishing.



Pickrel Fishing . . .

Since the most important natural foods of larger pickrel are small fish, lures representing fish are ordinarily the best to use. Metal wobblers, especially brass or red and white, are excellent. Fluted spoons with red and white feathers or bucktail are old standbys, and porkrind baits are universal favorites. Imitation frogs are frequently effective as are fish-like plugs. And, many popular, underwater spinning lures are good producers. Lures of suitable size and type may be fished with flyrod, casting tackle, or spinning outfit. Old-fashioned skittering with perch or pickrel cut-bait still accounts for good catches while live minnows, herring, and shiners take pickrel most consistently.





May, 1971

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Fish-Finding With a Thermometer

A thermometer is one of the best "lures" a man can own.

Water temperature, as much as any other factor, governs the habits of your favorite game fish. It determines when and where they feed, and often sends you home empty-handed.

Fish have definite needs. Principally, they require oxygen. This vital element escapes into the atmosphere as the water warms. That's why summer fishing is best at considerable depths while fall fishing need not be so deep.

To check water temperatures, use a minimum-reading thermometer attached to a line with knots tied at three-foot intervals. Probe the depths until you reach the preferred temperature belt. When you've determined the proper fishing depth, you'll save your casting arm, and you'll catch more fish.

Ask your local conservation officer for specific information on the temperature preferences of the fish you seek, as different species favor different water temperatures. The next time you inventory the tackle box, jot down a thermometer along with new plugs needed. #

Edward G. Bevan Passes Away

The Department of Environmental Protection, Division of Fish, Game, and Shell Fisheries and the Bureau of Wildlife Management lost one of their distinguished Wildlife Managers with the untimely passing of Edward G. Bevan on January 29, 1971.

Ed was born on December 10, 1911, in Vineland, New Jersey. He started his career in the field of Wildlife Management as a Wildlife Conservator in 1938. He held the titles of Wildlife Manager, Jr. Wildlife Manager, Assistant Wildlife Manager, and Senior Wildlife Manager. During World War II, Ed was acting Superintendent of Wildlife Management.

In 1961 with the start of the Green Acres Program, he was placed in charge of the Division's land acquisition program. Through his endeavors, the Division is today administering 127,775 acres of land of which 36,000 acres were purchased under the Green Acres Program. These lands are open to the sportsmen for multiple use.

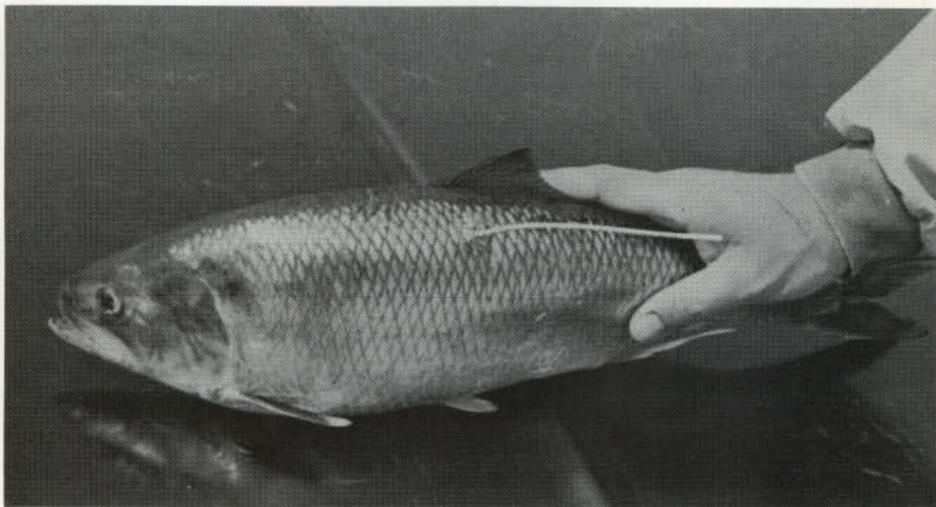
Ed Bevan will be missed by the sportsmen of the state and his co-workers in conservation. It is not likely that anyone can fully take his place. #

**Delaware River Fishermen —
Be on the Lookout For
Tagged Shad and Striped Bass**

The Bureau of Sport Fisheries and Wildlife, in cooperation with the state game and fish agencies of Delaware, New Jersey, New York, and Pennsylvania, is conducting a study of the American shad in the Delaware River. The purposes of the tagging study are to estimate the numbers of migrating shad and striped bass and to trace the spawning routes of these fish.

Shad and striped bass will be netted between March 1 and May 15 in the lower Delaware River, in the vicinity of the Delaware Memorial Bridge. Fish will be tagged and released to continue their spawning run.

Tagged shad and striped bass will be easily recognized. A tagged fish will have a 3.0 inch long, bright orange plastic streamer, looking



Tagged fish will have a three-inch long, bright orange, plastic streamer

much like a piece of spaghetti, attached on its body next to the large fin on the fish's back. Each tag will be stamped with a number and mailing address information.

It is very important to know about each tagged shad and striped bass, therefore, every fisherman is urged to report tagged catches to: Coordinator, Anadromous Fish Study, P.O. Box 95, Rosemont, New Jersey, 08556. The finder should give information on tag number, location caught, gear used, date caught, plus name and return address. A reward of \$1.00 will be paid to successful fishermen for this information.

#

How to Choose Your Fishing Partners

You can learn a lot about a man from the books he reads, the people he associates with, and what he carries in his tackle box. And perhaps the tackle box is the best clue of all.

Beware of the man whose tackle box contains only bright new, unscarred lures. He does not go fishing often enough. Search for the man with the box crammed full of old battle-scarred plugs tangled together. He may not know what he's doing either, but at least he has been at it a long time.

If his selection of lures includes some for fishing all depths, bottom, medium-running, and surface, chalk up a point in his favor. Are there bright colors for bright days, and dark plugs for dark days? Give him another point.

If he doesn't have a pair of needle-nosed pliers tucked away in a handy spot, strike off a point. He will always be asking you to pass him yours. Does he carry along his own selection of swivels and snaps? And some place in his collection of fishing aids should be a lubricant for his reels. And if he carries an extra rodtip and guides for field repairs, give him a bonus point.

While you're peeking into your buddy's tackle box, make a special check to see if he included soap for washing his hands before fishing. If so, disregard any disturbing condition of the tackle box, and take him fishing. He knows what he's doing. #

National Conservationist Named

The 2½ million member National Wildlife Federation has named James Morrison, Jr. of Atlanta, Georgia, National Conservationist of the Year.

The Federation awarded Morrison its top honor in tribute to his gutty fight against channelization of Georgia streams from 1963-1970 when he was Chief of the Georgia Fish and Game Department's Information Section.

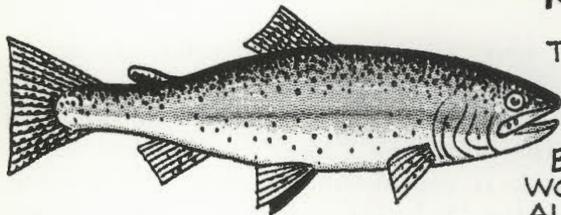
Morrison, now with the Bureau of Outdoor Recreation, alerted Georgia citizens to fish and wildlife destruction accompanying channelization projects through a hard-nosed campaign waged amidst severe political and economic pressures which ultimately cost him his job.

Announcing the award, Federation Executive Director Thomas L. Kimball said, "By presenting him with our highest national award, the Federation honors Jim Morrison and simultaneously pays tribute to all Americans who have put the cause of conservation above their own comfort and security." #

Fur, Fin ^{and} Campfire

By BILL BERO

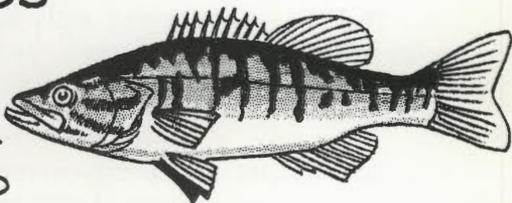
FOUR TIPS FOR FRESH-WATER FISHING RAINBOW TROUT



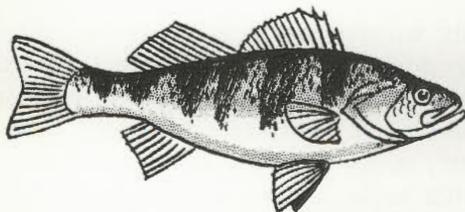
TRY FLY CASTING IN THE STREAMS WITH WET FLIES, DRY FLIES OR STREAMERS. LIVE BAIT FISHING WITH WORMS AND MINNOWS ALSO GOOD.

SMALLMOUTH BASS

WHEN THE TROUT ARE NOT HITTING, TRY FISHING FOR THIS MIGHTY SCRAPPER. HOOK A LIVE HELLGRAMMITE THROUGH THE COLLAR. TOSS IT INTO THE CURRENT AND LET IT SWIRL AROUND ROCKS AND BOULDERS.



YELLOW PERCH

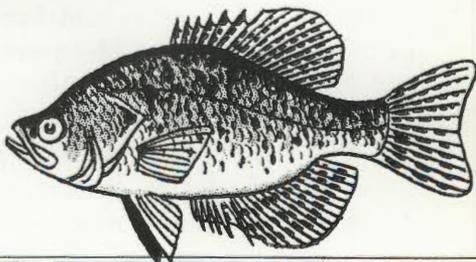


BEST METHOD IS STILL FISHING WITH LIVE MINNOWS. TRY FLY CASTING WITH SPOONS, STREAMERS AND SPINNER FLIES.

CRAPPIES

STILL FISHING WITH SMALL MINNOWS IS BEST.

FLY FISHING IS ALSO GOOD WITH STREAMERS.



*You never miss the water till
the well runs dry.*

—Rowland Harris

The Goshawk

Species:

The goshawk—*Accipiter gentilis*

General Characteristics:

A large (20-26 inches), long-tailed hawk with relatively short, rounded wings (spread 40-47 inches). The adult is pale gray, with the back blue-gray, paler than the smaller Cooper's hawk. The immature is similar to the immature Cooper's hawk, but somewhat larger. The goshawk is considerably larger than a crow. This bird has been called the "bold brigand of the north woods, the largest, the handsomest, and the most dreaded of the *Accipiter* tribe—." It does not hover or soar as do the broadwing hawks, but alternately flaps and sails rapidly. It is seen in the woods more often than in the open, as this is a bird-hunting hawk. It is becoming rare, possibly due to sterilizing effects of pesticides.

Range:

Eastern Canada and north-eastern United States, rarely nesting in northern New Jersey. Some southward movement may occur in winters of food scarcity.

Life History:

This hawk nests in the heavily wooded parts of northern states and Canada, the nest frequently found in a hardwood tree, located in evergreens, from 20 to 80 feet from the ground. The nest is large, from three to five feet wide and one to two feet deep, made of twigs and branches apparently many of which are broken from trees by hawks and topped with bark, leaves, and feathers. The goshawk ordinarily lays three to five eggs, sometimes two and rarely five, in April to mid-June. The period of incubation is said to be about 28 days. The young are fully fledged between three and four weeks, and soon after, leave the nest. The juvenile plumage is worn for about a year.

The food of this raptor is nearly all taken alive, and includes game birds (ducks, grouse, pheasant, quail), game mammals (rabbit, woodchuck, muskrat, squirrel), poultry (chicken and duck) small birds (sparrow, snipe, blackbird, robin, jay), small mammals (mice, weasel, red squirrel, chipmunk) as well as others. When hunting, it flies rapidly through woods, along field edges and margins of ponds and streams, so that it surprises its prey,

. . . The Goshawk

frequently on the ground, but when in the air, the goshawk can quickly overhaul nearly any bird. It strikes with claws extended and, grasping its prey, falls to the ground. If the prey is too large, it is eaten on the spot, but if manageable, it is carried to a nearby location to be consumed, or perhaps back to the nest to feed nestlings. Apparently because the goshawk glides on motionless wings, it is much less visible when approaching its victim, and may not even be noticed until too late for escape.

These birds are becoming rare, and should under no circumstances be killed. #

Letting 'Em Off Easy

It's difficult to condemn any man who deliberately releases some of his catch. But, too frequently, the end result is the same as if these particular fish had been kept for the skillet.

"Good intentions" in releasing fish are not enough. Knowing how and when are equally important.

Fish should never be freed after being deep—or foul-hooked in such a manner that serious wounds result. As a rule, the use of bait causes most incidents of deeply imbedded hooks that cannot be extracted without inflicting injuries to vital organs.

Even hooks that are down in the gullet can be removed without damage, provided the angler exercises care and uses a hook disgorger. A pair of long-nosed pliers, common in many tackle boxes, will usually do the trick. When such pliers are not carried, a disgorger is mandatory.

An efficient disgorger can be made from a strip of metal or plastic with a vee-shaped notch cut in the end. A hacksaw blade works well, and an old toothbrush handle is equally effective.

To use the disgorger, simply slip the notch into the bend of the hook, push down and back.

Opinion is divided over whether one's hands should be wet or dry when grasping fish. Regardless of the school of thought to which you subscribe, always handle the fish gently, being careful to avoid excessive squeezing or scraping.

Some species are less susceptible to rough treatment than others. Trout are relatively tender; bass bruise less easily.

Regardless of the fish involved, if you intend to release him, make certain he has a good chance of recovering. #

Hainesville Tract

The Hainesville fish and wildlife management area, located in Sussex County north of Hainesville and east of Rt. 206, at Shaytown, is one of the smallest areas owned and managed by the Division. The tract was acquired by the state in 1933.

Today the area is being managed for many game species, including upland game, waterfowl and deer.

The area contains 282 acres, mostly fields, hedgerows and woodlands. In addition, there is one pond of 30 acres located on the tract.

Upland Game

The management program consists of plantings, hedgerows and cover crops to provide food and cover for the upland game species. Principal native species of game are rabbits, grouse and squirrels. The Division's stocking program also provides pre-season and in-season pheasant releases for additional hunting recreation.

Deer

This area has a growing deer herd offering hunting opportunities for both the bow and shotgun enthusiast.

Fishing

A 30 acre impoundment on the tract provides good trout, sunfish and catfishing. The Little Flat Brook and the impoundment are stocked with trout throughout the fishing season.

Waterfowl

The species of waterfowl most commonly harvested on the area are black ducks, mallards and wood ducks. Excellent early season hunting is enjoyed by the sportsmen using this 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. #

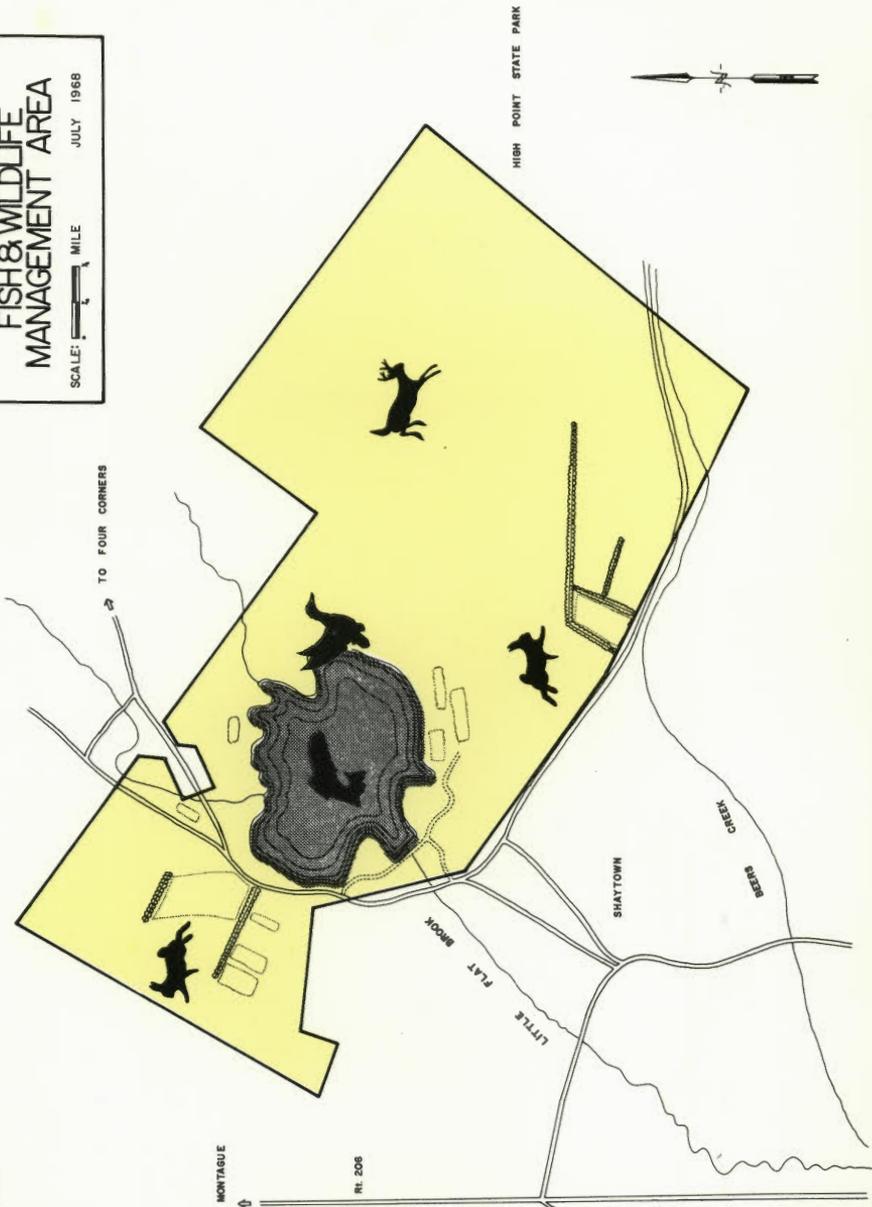
Firearms Transportation

Montana Senator Gale McGee and one colleague would like to simplify the red tape involved in getting sporting firearms back and forth across state lines. Senate Bill 142 would amend the Gun Control Act of 1968 to permit interstate transportation and shipment of firearms used for sporting purposes and in target competitions. The legislation has been referred to the Senate Committee on the Judiciary. #



**HAINESVILLE
FISH & WILDLIFE
MANAGEMENT AREA**

SCALE:  MILE JULY 1968



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