

N.J. Periodicals

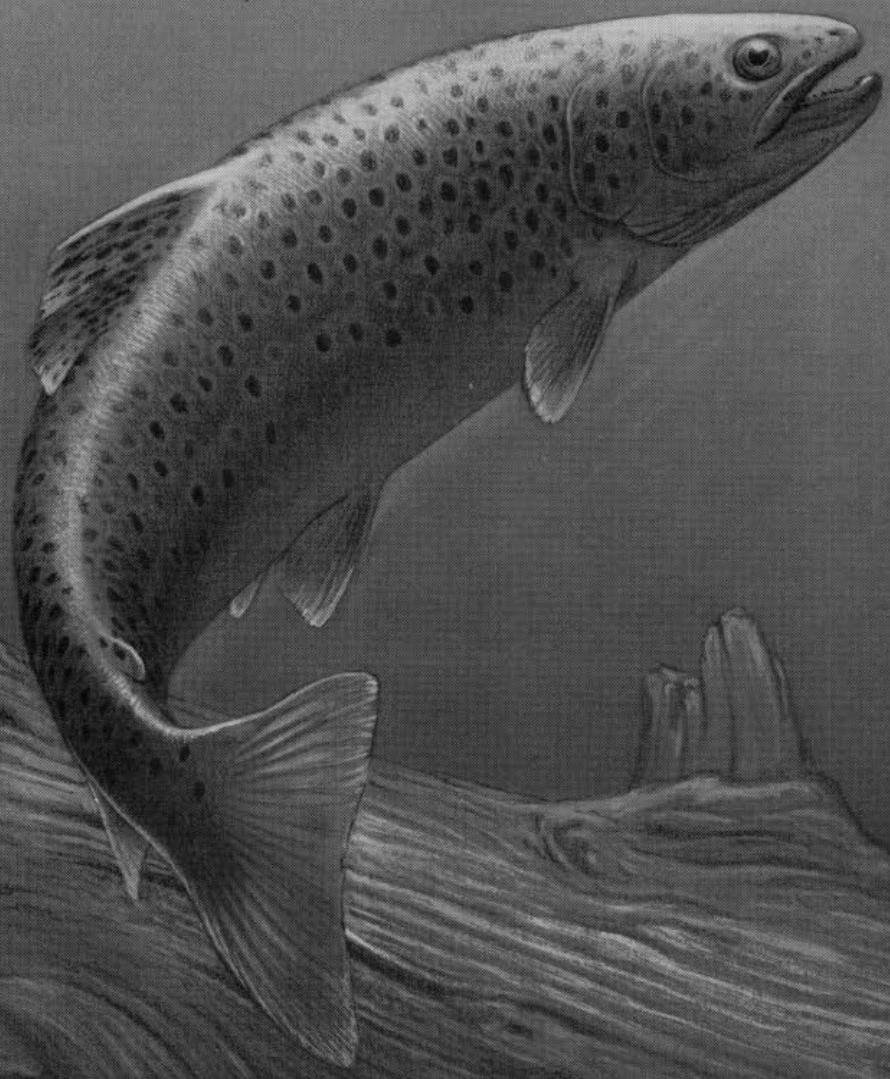
New Jersey

Outdoors

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AUG 21 1967

REFERENCE
June 1967
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NEO SMITH

DU's 30th

Ducks Unlimited Anniversary

During 1967 Ducks Unlimited will be celebrating its thirtieth anniversary of pioneering progress in practical waterfowl conservation. Ducks Unlimited, Inc., is a private, non-profit membership organization dedicated to the conservation and propagation of North America's waterfowl as a valuable natural resource. The organization was founded by a group of far-sighted sportsmen and incorporated by them in Washington, D.C., on January 29, 1937.

The National Headquarters of Ducks Unlimited are located at 3158 Des Plaines Avenue, P. O. Box 8923, Chicago, Illinois 60666. Ducks Unlimited maintains an East Coast Regional Office at 60 East 42nd Street, New York, New York 10017. The organization publishes quarterly the magazine **Ducks Unlimited** and sends it to all members.

The State Committee Officer of Ducks Unlimited for New Jersey is John T. Dorrance, Jr., 375 Memorial Avenue, Camden. John H. Ewing of Peapack is a Vice President in the national organization.

In the Winter 1967 issue of **Ducks Unlimited** the New Jersey State Committee report notes that a splendid record of cooperation between six area chairmen to coordinate the state's final drive to raise its money quota by staging a series of dinners, was a major reason given by State Chairman Dorrance for the realization of the state's goals for membership and money. Starting with H. W. "Pappy" Deacon's Burlington Chapter dinner on October 12, the affairs included the Princeton (Mercer County) dinner on October 14, headed by Arnold Pierce; the Brant Beach dinner, under the direction of Dr. M. A. Todd, Jr., and Chairman John Finley, on October 22, when **Field and Stream** editor Ed Zern was principal speaker; and finally the state dinner at the Bay Head Yacht Club on November 4, under the direction of Pete S. Brown, where National Trustee Irving Feist was the auctioneer to raise some \$2500 for DU and one of the nation's best known writers, Nelson Benedict (dec.), was toastmaster. Each dinner added more funds and members to put the final total well beyond the state's assigned quotas.

On January 13 the newly organized Somerset-Morris County DU Committee, headed by B. Danforth Ely, held its first dinner to start off the state's DU program for 1967.

#

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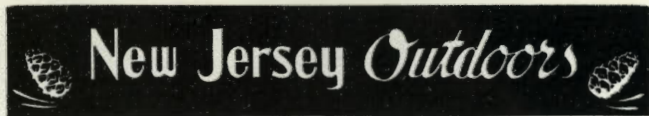
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Published monthly by the State of New Jersey Division of Fish and Game
in the interest of conservation and restoration of wildlife and
the betterment of hunting and fishing in New Jersey.

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Cover—"The Brown Trout"—Ned Smith

The brown trout, New Jersey's welcome immigrant from Europe, is now present in most all of the trout waters of the state during much of the trout season. The brown is a handsome fish with more than enough brains to match its good looks. It is considered to be the most difficult to catch of all the trout and is the fly fisherman's favorite. Starting on page three of this issue is a revision of a popular article on the brown trout and two on dry fly fishing.

Vol. 17, No. 12

June, 1967

Publication Office: The Division of Fish and Game

P. O. Box 1809, Trenton, New Jersey 08625

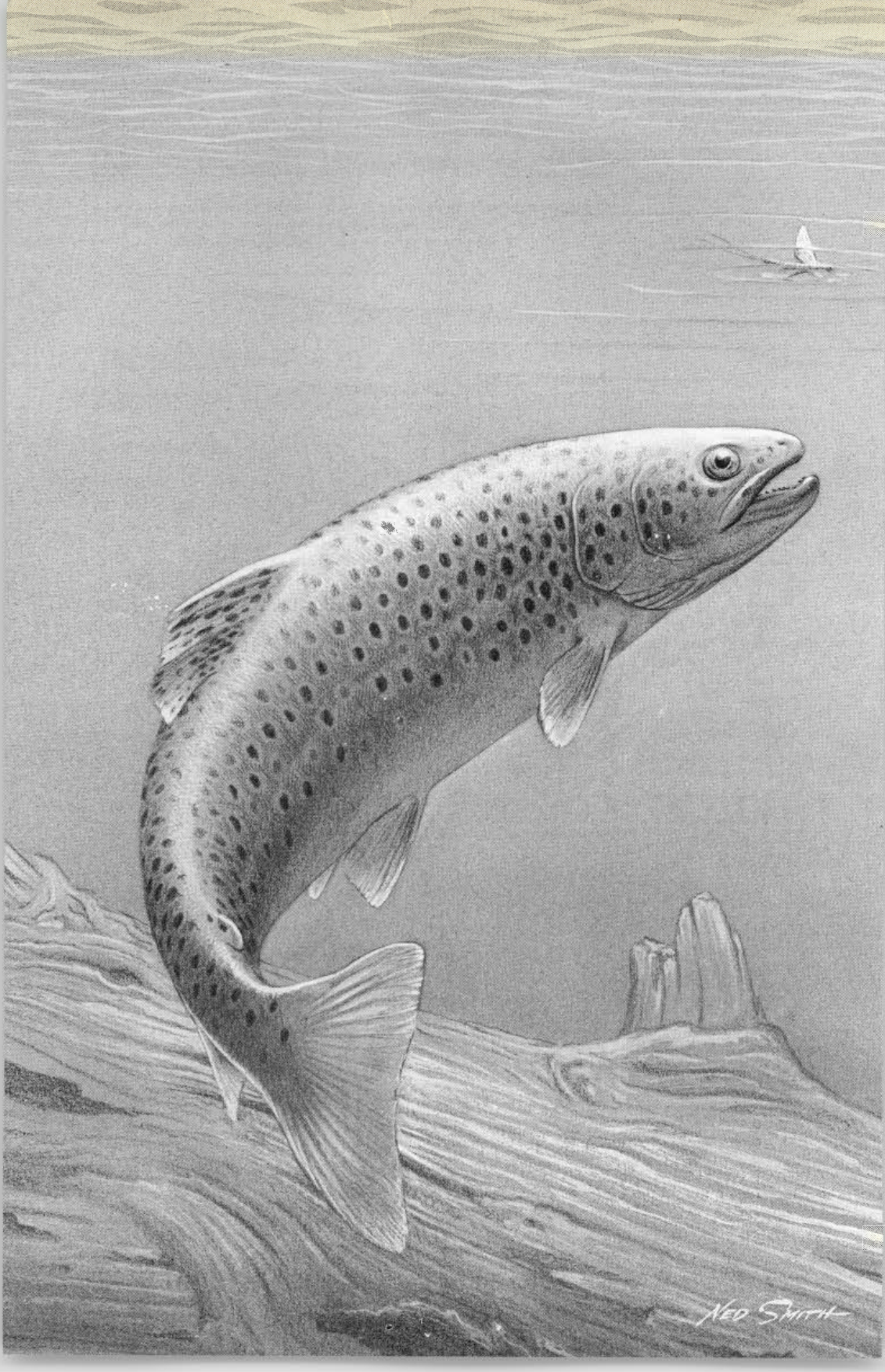
Editor: R. Adams

Second class postage paid Trenton, N. J. 08605, and additional mailing office.

Subscription: \$2.00 a year, by check or money order, payable to Division of Fish and Game. Cash is forwarded at sender's risk. No stamps please.

Change of address: Should be reported directly to the Editor. Send both old and new address. The Post Office will not forward copies unless forwarding postage is provided by subscriber. Copies not delivered through failure to send change of address six weeks in advance cannot be replaced.

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NED SMITH

Brown Trout

New Jersey's European Prize

By Harry Goodwin

THE BROWN TROUT is New Jersey's prized immigrant that came over to us from Europe. The brown trout was originally found in the cooler lakes and streams of the Continent and the British Isles; it was not a native of North America. The brownie now present in our state is descended from stock brought over chiefly from Scotland and Germany during the 1800's and developed here in fish hatcheries.

The places of origin of the brown trout have largely influenced the choice of common names given the fish—Loch Leven, Scotch brown trout, Scotch sea trout, English brown trout, German brown trout, European brown trout, European brook trout, and European lake trout. Less frequently used names are von Behr trout, gold trout, yellow trout, green trout, and bull trout. The scientific name by which the brown trout is now known is *Salmo trutta*.

Description

Because of dietary, environmental, and racial influences adult brown trout tend to be remarkably variable in appearance. Neverthe-

less, certain external characteristics prove to be quite dependable for identification in New Jersey. The sides of the fish generally have a brownish color, the back olive shades, and the belly whitish or yellowish tints. Large-lake or sea run fish may be very silvery and have pale markings while beaver pond specimens may be almost black.

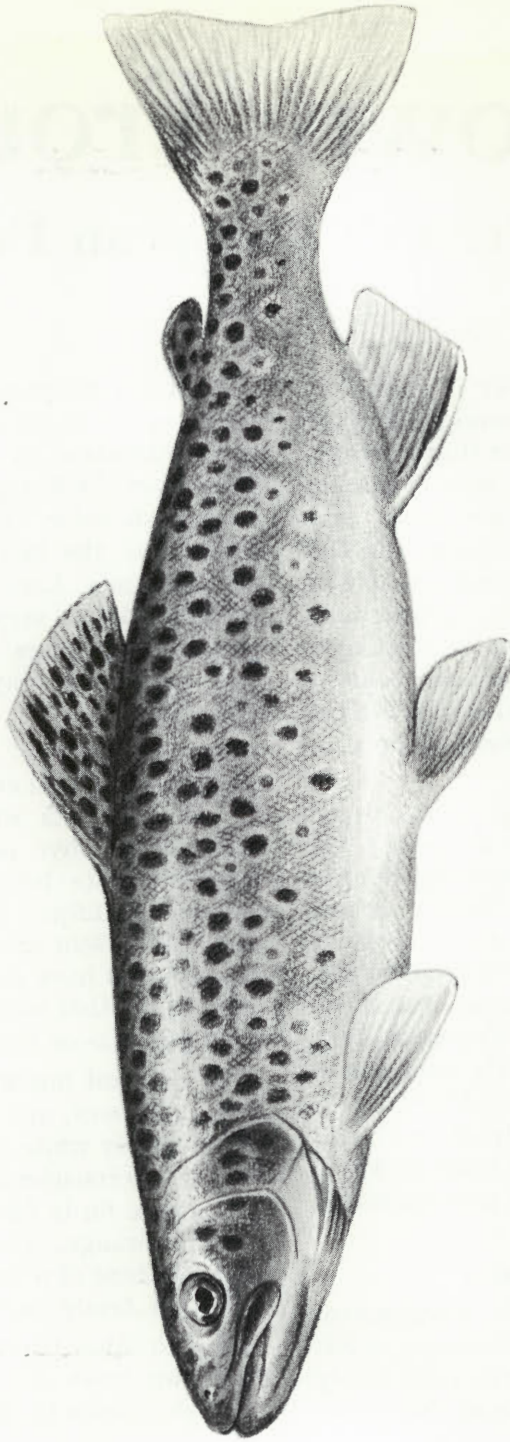
The background hue of the brown trout is light compared with that of the spots which may be black, brown, olive, or purple. The spots are quite large and either x-shaped or diffuse, and they are practically absent from the tail fin. Some browns have red, orange, or yellow spots that may be ocellated with light blue or gray.

The pectoral fins are noticeably large and heavy, and all the lower fins are either white or pale yellow without any conspicuous markings. The adipose fin is fairly large and is often orange. The scales are large for those of a trout, but they are rather firmly embedded.

As with other trout the color of the brown trout may range from very pale shades to virtually black

Body—Brown or gold shades
Sides—Light background color

Sides—Dark spots on light
Sides—Possibly reddish spots



Belly—Whitish or yellowish
Sides—Spots quite large

Tail fin—Spots usually absent
Lower fins—Whitish or yellowish

How to Identify the Brown Trout

. . . *Brown Trout*

tones in response to environmental effects. Some of the big brown trout from Lake Hopatcong and Greenwood Lake are extremely pale and silvery, large brownies from Mountain Lake are often a rich golden hue, while the big browns from the deep pools of the Hackensack River are as dark as salmon kelts. Once again, the color alone may not be indicative of the species of trout.

The brown trout may be easily separated from the Atlantic or land-locked salmon since it does not have the pronounced "wrist" at the junction of the caudal peduncle and the tail fin. The rainbow trout, unlike the brownie, has many dark spots on its tail fin. And, the brook trout, but not the brown, has the distinguishing worm-track marks on its back.

As the breeding season approaches mature male brown trout become more colorful and brightly marked. The head of the male is quite pointed and long, and a vicious looking hook is often developed on the lower jaw. The big males usually become razor-backed and have fins that look almost gnarly. Female brownies tend to be less highly colored and more subdued. Their heads remain somewhat rounded, their mouths smaller, their fins normal, and their bodies more cylindrical. These differences of the adults are more noticeable in the larger fish. Pan-sized individuals are not so obviously differ-

ent unless they happen to be old, slow growing fish from less favorable habitat.

Brown trout from the hatchery are surprisingly variable in color and shape in keeping with the food, pool, and strain influences. While one batch of ten-inch fish may be almost like peas in a pod, the next group of fish examined may almost appear to be an entirely divergent variety. Even the flesh of the fish fresh from the hatchery may range in color from deep orange to white.

Much of the variation in appearance, and incidentally habits, of the brown stems from the fact that for many generations both here and abroad brown trout have been handled in hatcheries. As a result of promiscuous mixing and planned crossing of the various varieties of browns, it is most unlikely that we now have any truly pure varieties. Although the Loch Leven trout from Scotland was introduced to this country about 1884, it was soon interbred with browns from the Continent and quickly lost its identity. Characteristics of the Loch were a slender body, x-shaped spots, and the absence of red spots. The German brown, with a more robust body and well-defined red speckles, was intermixed with the Lochs. Thus, present day browns usually evince features of both ancestors.

Truly wild brown trout, of which New Jersey has an astounding abundance, may be distinguished from hatchery trout by experienced persons. In general, these

. . . Brown Trout

browns that are born in the streams have a decided golden color and have very definite markings. They seem to blend into the surroundings of their home waters and have a sort of metallic sheen. The flesh is almost always very firm. However, the means of telling which is a wild trout and which is a hatchery product are rather nebulous to most fishermen.

Immature browns, which in streams may be almost invariably considered to be wild fish, are practically miniatures of the resident wild fish. The adipose fin is characteristically orange without dark spots or border. Very small wild brownies have an almost transparent appearance. In very cold streams or in waters with scant food supply, fingerling-sized browns may actually be old fish that just never did grow large.

The size attained by wild brown trout is basically in proportionate ratio to water temperatures and available food. In a typical mountain brook a one-year old fish may be 2 or 3 inches long, a two-year old may be 5 to 6 inches, a three-year may be as much as 8 inches, a four-year old 12 inches. In ideal water with a bounteous food supply the lengths of the fish at the respective ages may well be just half again as great. Conversely, in submarginal waters brown trout may never grow to be over 4 or 5 inches in length no matter how many years they live.

The size of the brown trout liberated by the Division of Fish and Game depends, of course, on the size produced at the hatchery. Most of the brownies stocked last season were 7 to 14 inches long with a substantial number of "sugar" fish of 14 to 18 inches also stocked. The numbers of catchable brown trout by sizes in inches distributed last season are listed in Table I.

The huge hold-over brown trout caught from such waters as Lake Hopatcong show enormous growth rates in many cases. Even fish that have been in the lake for only about

TABLE I. Size and number of catchable state brown trout stocked in New Jersey during the 1966 stocking period.

Size in Inches	Number Distributed
7-8	17,728
8-9	38,202
9-10	44,582
10-11	40,680
11-12	18,785
12-13	6,364
13-14	1,869
14-15	276
15-16	167
16-17	100
17-18	8

a year have made very rapid gains in weight and length. For example, one brown trout 10 inches in length stocked on April 11 of one year was 18.0 inches when caught on June 7 of the following season and another 10 inches in length stocked on the same day was 18½ inches when taken May 29 of the next year. Results in other similar lakes which also contain herring, the feed ingredient that produces the big ones, are equally gratifying.

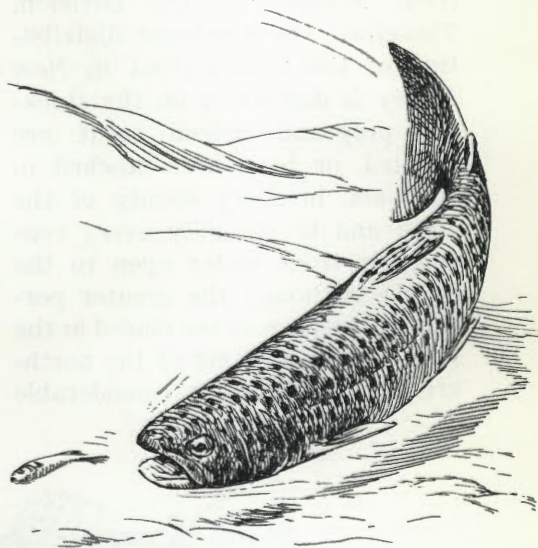
The state record brown trout was a fine 16-pound, 11-ounce fish caught from Greenwood Lake by Howard Devore in 1964. An amazingly large number of 5- to 10-pound browns have been taken in New Jersey and reports of fish being seen that must have exceeded the record are not uncommon. (The world record brown trout, 39 pounds and 8 ounces, was landed from Loch Awe, Scotland, in 1866).

Distribution

Since the brown trout is not native to New Jersey, its distribution is artificial in origin. Nevertheless, there is a very substantial population of wild brown trout that is quite widely distributed in the state. In addition to the wild resident populations that maintain themselves, there are also many resident fish in various waters that are the direct result of previous stocking. Some of these resident fish, actually a minority, are hold-over fish from plantings of catchable fish during a previous season; others are the yield from liberations of fingerlings in suitable waters, especially in spring brooks and reclaimed lakes and ponds.

The truly wild brown trout are of notable importance in New Jersey. Evidence is mounting up to indicate that a preponderance of the splendid 14- to 24-inch brown trout taken from many of our trout streams are actually the offspring of wild parents which spawned in tributary brooks. The monster browns of the Delaware River are also thought to be resident wild

fish. Apparently the wild fish ascend relatively small brooks to spawn where the young fish remain until they are about 5 or 8 inches long. At this length and usually during the month of May a great majority of the fish drop down stream to larger streams where they mingle with the stocked trout. If the wild fish are caught while still small, they are usually passed off as small hatchery trout. (This, incidentally, commonly gives rise to the frequent complaints of too-small trout being stocked.) The wild trout that do escape the hook,



Browns that eat herring often grow large

and other adversities of stream life, grow and prosper to become those prize fish that seem to come from nowhere.

The range of wild brown trout in the state is fairly wide. Sussex and Warren Counties have the bulk of

. . . Brown Trout

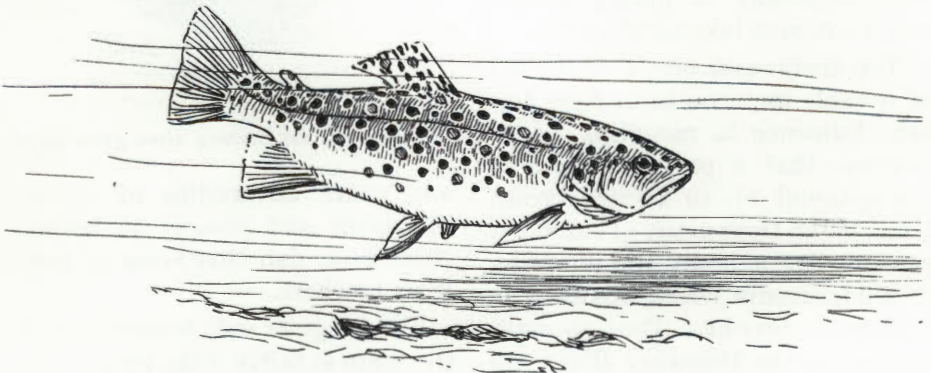
the better trout waters suited to these fish and consequently have the most wild browns. Sections of Hunterdon, Morris, Bergen, and Passaic Counties also have year-around trout waters that hold and produce sizeable populations of browns. Even Ocean and Monmouth Counties have some streams that are populated with wild brown trout.

Despite the presence of appreciable numbers of wild brown trout, the major proportion of brown trout available to the angler are trout stocked by the Division. Therefore, the dominant distribution of the brown trout in New Jersey is dependent on the stocking program. Brown trout are stocked, or have been stocked in the past, in every county of the state and in virtually every conceivable trout water open to the public. Although the greater portion of the browns are placed in the major trout streams of the northern part of the state, considerable

numbers go into smaller and medium streams and park ponds to provide extended periods of fishing. A list of the waters of the state stocked with brown trout was published in the past April issue of *New Jersey Outdoors*.

Occasionally brown trout are encountered far from waters that either harbor wild fish or are stocked. Such fish are usually in the lower reaches of a watershed that is stocked, however, and are probably stocked fish that strayed afar. Among the places in which brown trout have shown up under such apparent circumstances are Delaware Bay, tidal portions of the Hackensack River, Barnegat Bay, and the Raritan River below New Brunswick. These down stream wanderers may be brownies with strong traces of sea run trout ancestry.

Since brown trout are able to tolerate higher temperatures than brook trout, they are often found in waters from which brook trout are absent during the warmer months. However, the brown is somewhat



Browns will frequent very shallow water

less tolerant of high water temperatures than the rainbow trout. The maximum the brownie seems to be able to stand is about 80 degrees. The distribution of the brown trout is also limited by pollution in many otherwise suitable New Jersey streams.

Browns in streams generally prefer a pool or run with substantial overhead cover. While they will freely move out into the open to feed in the evening or at night, most brownies are loath to expose themselves during bright daylight hours. If they do feed in the open they like to have a convenient undisturbed boulder, undercut bank, overhanging tree, or hollowed bridge abutment under which to beat a hasty retreat if danger threatens.

During the winter and early spring deep, slow pools are favorite haunts. As the season progresses, the brown trout often moves to shallower water. As long as a good hiding place is handy, browns will frequent waters that seem almost too shallow for the size of the fish. Once a brown trout selects a site for resting and feeding, it is apt to remain there indefinitely until it is caught or it moves off to the spawning waters in the fall.

Freshly stocked brown trout often congregate in the nearest large pool for a couple of days. Most of those that are not taken then move on abruptly to more desirable waters. The move is just about as likely to up as down

stream and may be for a considerable distance.

In lakes brown trout that are well acclimated gravitate to the most open, largest waters of the lake, especially if the staple food is herring. However, they very often cruise along the shores and about the shoals late in the evening and at night. In ponds brownies are unpredictable for the most part—some fish may stay put near an inlet, under a log, or beneath an overhanging tree while others may drift almost incessantly from one end of the pond to the other, both day and night.

Behavior

Brown trout in the wild seem to do best in well-oxygenated water that is between 55 and 65° F. When water temperatures drop below 45 degrees, they will continue to feed to an extent. But, they digest their food so slowly that it takes a long time for them to require another meal and they are difficult to get to bite. When the water is in the sixties, they are most active. Thus, May and June are usually the best months for brown trout fishing.

Rubble and rocky bottoms which offer the better feeding conditions are preferred bottom types. Nevertheless, brownies will thrive in water over most any bottom type as long as food is available and the water is suitable. Some of the best brown trout stretches on streams have mud or silt bottoms. The bottom conditions in large

. . . Brown Trout

lakes are usually not a limiting factor since lake browns generally subsist mostly on forage fish.

Except for the cold winter months and during the early spring, the brown trout is a fish of the evening and night hours. Whereas brown trout may remain in close hiding all through the day, practically dormant and not feeding, they move about freely in the dark and feed with downright abandon. Although small brownies may be coaxed to rise during daylight hours, it is the rare trophy-size brown that will even move from its lair until the shades of night fall.

Food and Feeding

The brown trout must be considered in separate groups as far as food and feeding habits are concerned. Pan-sized brownies are definitely, and sometimes exclusively, insectivorous fish during all but brief periods of the year. May flies, caddis flies, stoneflies, two-winged flies, and beetles comprise the staple diet of this size-class. Periodically, or in certain waters, leaf rollers, grasshoppers, or other insects may be of primary importance. Since a far greater percentage of these foods are taken at the surface by brown trout than by other trout, the brown trout is the trout of most consequence to the dry fly fisherman. To an extent all the usual trout foods, such as worms, crayfish, minnows, and salmon eggs are also taken.

The large browns are fish eaters for the most part. Once a brown trout attains 16 inches or so in most waters, it disdains insignificant tid-bits and demands large mouthfuls of food in the form of minnows or other small fish, except for sporadic and erratic feeding sprees when they acquire a taste for insects. In addition, big browns will take mice, frogs, birds, bats, snakes, eels, and salamanders.

Regardless of size, the distinctive feeding habit of the brown trout, in keeping with its general habits, is that of being nocturnal. During most of the popular trout fishing season, brown trout feed far more during the hours of darkness and near dark than during the daytime.

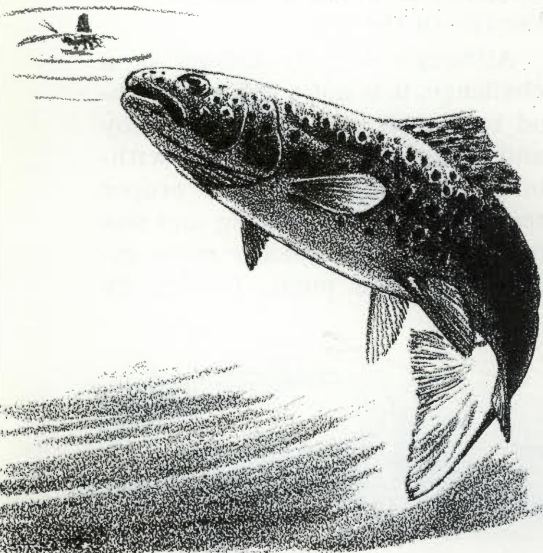
Preferred feeding locations are at the edge of a run, at the lip of a riff, at the very head of a pool or rapids, and alongside a log or brush. In large pools, ponds, and lakes brown trout often move about just below the surface on summer nights.

Reproduction

Brown trout are fall spawners that ascend clear, cold, normally permanent tributaries during October and November. The ripe female selects a gravel or rubble bottom in a riffle or tail of a pool and lays her eggs in the nest she digs. The brilliantly colored male, possibly after driving off a rival, fertilizes the eggs. Several nests or redds are usually used. The unguarded eggs hatch sometime during the following spring. This

takes about 35 days after the water warms to 55° F. The young are on their own from the start and suffer high mortality. Nevertheless, in many streams enough of the fish reach maturity to provide good sport and reproduce their kind.

In the hatchery the brown trout are produced by artificially stripping the eggs and milt and incubating the fertilized eggs in troughs.



The brown is the wariest of all trout

After they hatch, the young fish are eventually moved to ponds or pools and fed carefully regulated diets. Growth is excellent and survival is high so that an abundance of good-sized trout are available for stocking by the end of the first season.

Value

The brown trout is the subject of much controversy. Some fishermen esteem it as the acme for

fly fishing; others condemn it as being almost impossible to catch. Some dry fly men consider the brownie to be a fastidious, challenging riser to delicate dry flies; others hold it to be a devastating cannibal, ruinous of trout streams. But, all anglers that have come to know the brown trout admit that it is the most unpredictable, perplexing, and alluring of all the trout. On the one hand it has probably caused more fishermen almost to give up fishing and on the other drawn more anglers within the folds of the trouters' circle than any other trout.

The very fact that it is a trout makes fishermen cherish the brown trout. But even more, the brown is a decidedly handsome fish with its varied spots and trim form, it is a dogged and spectacular battler, and it is undeniably welcome at the table. It will thrive in waters unsuited to brook trout and will provide fishing long after the rainbow trout have been just about all caught out of a stream.

Essentially, however, the brown trout must be recognized as the savior of trout fishing as a sport in New Jersey. Without the brown trout, fishing for trout would long since have degenerated into opening day slaughter, early season bait dunking, and cyclic fish truck-following of some form. The brown trout has been able to hold its own against the odds of increasing fishermen and diminishing trout habitat to provide satisfactory and dependable trout fishing. #

*Some hints for the amateur and tyro on
what to use to catch trout with the*

DRY FLY

By Jack Phillips

THE MOST challenging and satisfying way to fish for trout, in our opinion, is with the dry fly. Other forms of angling may be more difficult, or some may be easier. But, dry fly fishing demands more of the fisherman in tackle, concentration, practice, and attention to details. In return, dry fly angling rewards the angler with the contentment and pleasure of meeting the trout where the fish's medium, water, and man's medium, air, come to-

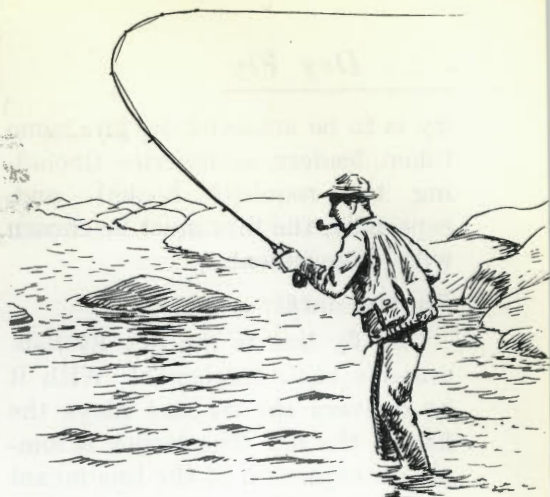
gether. And, the activity is all the more interesting and thrilling since the fisherman sees the fly at all times and may readily observe the rise of the trout.

Although dry fly fishing is a challenge, it is not a difficult method to master sufficiently to enjoy and with which to take trout within a reasonable time. The proper techniques of bait fishing and wet fly fishing are decidedly more exacting on the pupil. In dry fly



fishing the primary dimension involved is one, that of the surface water itself. Essentially, only one type of lure is employed—a fly representing the adult stage of some preferred trout food. For most conditions the cast is almost uniformly oblique, up and slightly across stream. Finally, during typical fly fishing periods the location of the rising trout, and even the identity of the insects upon which they are feeding, may be clearly seen.

Surprisingly, the requirements for the dry fly fishing beginner to make a good start may, for the most part, be met without any fishing experience whatsoever. The details, summarily, are a basic knowledge of aquatic insects and local fly patterns so that the natural fly may be matched properly or, conversely, so that an "attractor" fly may be used. This knowledge may be derived directly from entomology and fishing books. Practice involves two factors—casting and fishing. Satisfactory casting skill is required to present the fly to the fish; this skill may be acquired in a few hours on a lawn, preferably with a patient tutor. Workable fishing technique is needed to float the fly long enough over promising water to interest a fish; this performance may be reasonably mastered in a day on even a fishless stream. The concentration demanded of the successful dry fly angler is one of bringing the aforesaid factors together so as to be able to offer the proper fly to the trout in a natural



manner without scaring the fish. Or, putting it more simply, the trout should see the fly without seeing the fisherman.

Of all the needs of the dry fly fisherman that of equipment is most exacting. All of the above requirements depend to no small degree on the suitability of the tackle or accessory items. Even the basic knowledge desired should stem from books, illustrations, and collections. Therefore, we shall consider equipment item by item.

Tackle

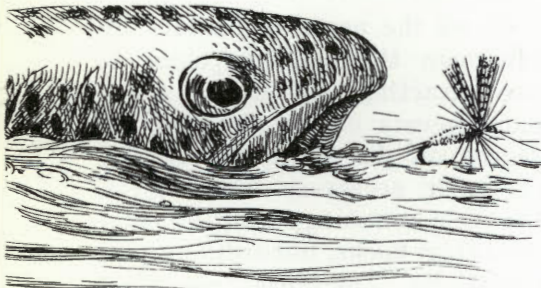
Casting is such an integral part of dry fly fishing that the line and rod used should be selected with care and be the best quality within the means of the beginner. This does not mean that you must start out by buying the most expensive line and rod on the dealer's shelf or that your selection must be one of perfection and finality. But, these two items must be well balanced and be expressly designed for dry fly fishing if any acceptable degree of casting and fishing abil-

. . . Dry Fly

ity is to be achieved. By the same token, leaders, accessories (including the requisite books), and, especially, the flies must be chosen with discernment.

Fly rod outfit:

The fly line is the dry fly fisherman's basic implement. With it he delivers the fly and plays the fish to the net. The leader is simply an extension of the line meant to be invisible, or nearly so, to avoid scaring the trout. The reel is merely a convenient receptacle for the all-important line while the



Conventional flies imitate May flies

rod, imprudently considered by many anglers to be the heart of the outfit, is simply the "spring" for propelling the line. In other words, in fly fishing it is actually the line that is cast and not the fly itself, which does not possess sufficient weight to carry itself far.

A tapered line is almost a must for dry fly fishing. Although a level line is adequate for wet fly fishing and is used by many expert dry fly purists, a good quality double tapered floating fly line is strongly

recommended for the tyro. With such a line more natural and delicate presentation of the fly is possible and longer floats of the fly are attainable. Color of the line is quite immaterial. For most New Jersey dry fly conditions a 6 or 7 line is appropriate.

With the line specifications in mind the rod may be selected. The rod should be two-piece and have the fast tip and stiffness of the so-called dry fly action. For smaller streams a 7½-foot rod may serve well. However, for larger streams where the fisherman may be wading in deeper waters or making long casts, the additional length of an 8-foot, or even a 9-foot, rod may be advisable to help keep the fly above the water during the many false casts needed to dry the fly. A hook keeper is handy for holding the fly between casts.

Most any standard brand single action fly reel, as long as the arbor is of large diameter to prevent kinking of the line, will suffice. However, since light leaders and long casts are frequently necessary, an adjustable drag on the reel is a handy, but not mandatory, feature.

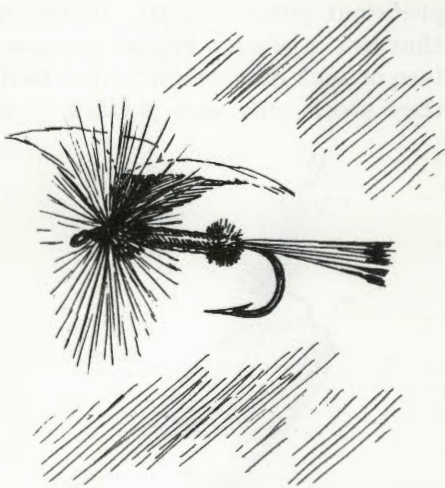
Leaders:

Under most early season conditions a nylon leader 7½ feet long and tapered to 3X will be right for dry fly fishing. For very heavy waters, large flies, and night fishing a leader tapered to 1X may be better. But, the small flies ordinarily used, and the low, clear waters prevailing during the regular sum-

mer dry fly period, usually require the use of leaders 9 to 12 feet long and tapered to 4X, 5X, or 6X. For fishing with very small flies the knotless, tapered leaders have distinct advantages.

Accessories:

Since the water is generally seasonably warm during dry fly fishing time, boots or waders are not



Fan-wings may represent adult moths

used by a good many fishermen who just wade right in with tennis or basketball shoes. The use of boots, or not, is a matter of preference. A landing net is a practical necessity since the tiny hooks and fine leaders often needed make landing a good fish very touchy. Warm weather makes extra care to keep the catch cool absolutely essential. The good old split willow or rattan creel fills this need nicely.

Boxes for dry flies should have compartments so that patterns and sizes may be kept segregated and protected from being crushed. Two

smaller boxes are easier to carry and provide some insurance in the event that one box is lost along the stream. A leader box, packet, or file is the feasible place to store spare leaders. The reliable combination fly fishing tool with disgorger, stiletto, and clipper should not be forgotten.

Although not indispensable for the new-type floating fly lines recommended, line dressing of the kind that helps to float the line, such as silicone or mucilin, is well worth having. This line dressing may also be used to treat flies for better floating, or a special dry fly oil may be employed for the same purpose. Leader sink is especially important to the dry fly angler. Since much dry fly fishing is at night, carry a flashlight. For the usual warm weather a vest is cooler than a jacket; for the inevitable insect pests an effective repellent is vital for comfort. Visit your local library to determine which books on entomology and fly fishing best suit your needs.

Flies

Dry flies are those flies that are meant to be fished while floating on the surface of the water. To achieve this floating attribute dry flies are tied on light hooks and dressed with stiff hackles and tails, where included. While other lures of plastic, cork, or wood may float, we do not here include them with flies but consider only true flies tied with feathers, hair, and conventional body material.

There are seven types of trout

. . . Dry Fly

dry flies generally recognized. In addition there are a number of specialty flies that imitate specific foods.

Upright wing flies:

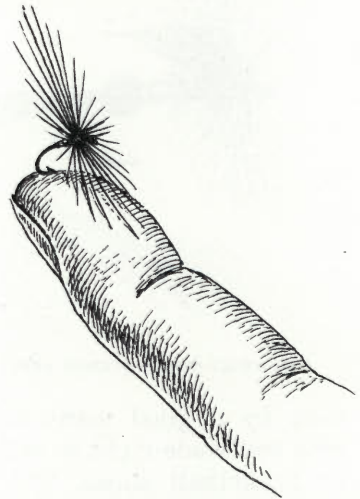
The upright wing flies are the conventional dry flies based on ancient origins and of classical use. By far the majority of trout flies fall into this category and hundreds and hundreds of color combinations and shapes, or patterns, have been tied. Most of these patterns were originally tied to represent a true insect and are known as naturals. Others were designed not to represent any particular organism but primarily to catch the trout's eye and are called attractors. (These two general breakdowns may be said to apply to most all fishing lures.)

Since upright wing flies are expected to imitate natural adult flies under most circumstances, the selection of sizes and patterns should be based on the study of the insects for the waters fished. As time goes on, most dry fly anglers acquire very definite opinions and credos concerning fly patterns. But, for the beginner a fairly simple assortment of flies will serve as a starter that will meet most situations on New Jersey streams and lakes.

Eight patterns are about the minimum suggested. These include light and dark Cahills, Coachman, Black Gnat, Iron Blue Dun, Quill Gordon, Royal Coachman, and

Wickham's Fancy. For more exacting matching of the hatch during the emergence of certain mayflies, the following four patterns may be added: light Hendrickson, Wallkill, Basherkill, and Paulinkill. From here on in the collection may be expanded almost indefinitely.

Size of the fly used can be of utmost importance. In fact many proficient purists stoutly maintain that size is of such import and pattern of such minor significance that they stock only one pattern in a



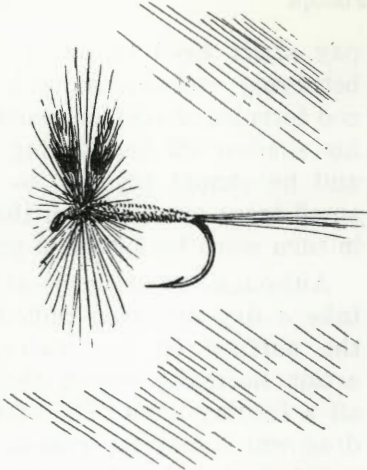
Spiders have long hackles sparsely tied

full complement of sizes. At any rate, all the above listed eight basic patterns should be carried in hook sizes 10 through 16. The four additional patterns may be included in sizes from 14 through 18.

Other wing flies:

Fan-wing flies have large, curved wings and may be said to be attractor flies or to represent moths or similar insects. Spent-wing flies

have smaller wings at right angles to the body and may be considered to be either specific imitations or spent, adult flies. Variants have long, sparse hackles and short wings tied on very light hooks.



Variants have long hackles, short wings

These flies may be added in any of the patterns and sizes listed for upright wing flies.

Hackle flies:

Hackle flies are dressed without any wings whatsoever. They are more properly classed as attractor flies with some exceptions that may duplicate caterpillars. The brown hackle and the gray hackle are old favorites that really take fish. Palmers are tied with the hackle extending the length of the hook shank and bivisibles are similar but are tied with contrastingly colored hackles. Spiders are tied sparsely with long hackles on short-shanked hooks and without tails. The last three types of flies are good in brown, gray, white, and black while orange and yellow are

also good fish getters. Sizes from 8 through 14 for all these types should be considered.

Specialties:

Included in this group are flies tied with conventional fly tying materials to represent particular trout foods such as grasshoppers, leaf rollers, dragon flies, inch worms, beetles, crane flies, ants, bees, alder flies, stone flies, midges, leaf hoppers, water bugs, frogs, and mice. This is an almost limitless category to meet definite conditions. In this section may be mentioned the advantage of carrying a half dozen or so very large dry flies of assorted patterns that may be used for taking monster trout, especially at night. Two such flies are number 4 Royal Coachman fan-wing and size 4 black and white bivisible.

In general:

Inquiry at reputable tackle shops in the particular area where fishing is to be done is one of the best ways to determine suitable patterns to carry. Tying your own flies to match natural insects collected on the stream is a doubly rewarding method of securing the correct selection to have on hand. The individual angler's eventual approach to the question of dry fly choice will mature and ripen with time. It is somewhat like personal preference for a pipe tobacco or an automobile—taste and desires are modified with concessions to practicability and common sense. In the final analysis, presentation of the fly is of prime importance. #

*Some hints for the amateur and tyro on
what to do to catch trout with the*

DRY FLY

By Jack Phillips

MUCH OF the know-how of what to do to catch trout with the dry fly is gleaned concurrently with the acquisition of the essential equipment. Refined use of the line, rod, and reel is derived by added practice. The correct selection of the fly is more than half achieved at the original time of purchase or tying. Thus, the actual stream techniques of presenting the fly are primarily what remain to be considered in great detail.

Fundamentals

To present the correct floating fly to a trout in a manner acceptable to the fish is the underlying principle of dry fly fishing. All other considerations of casting method, tackle, fly size, and pattern, and time are subordinate. First and foremost of the conditions to be met is that of not scaring the trout. Keeping out of sight, moving quietly, using a light leader, and casting with finesse each contributes to help meet this fundamental want.

Since trout rising to natural floating flies are apt to be in very shallow water or just beneath the surface of the water, it is expedient that the fisherman take extreme care to keep himself and his waving rod out of the direct sight of the trout. In addition, he should

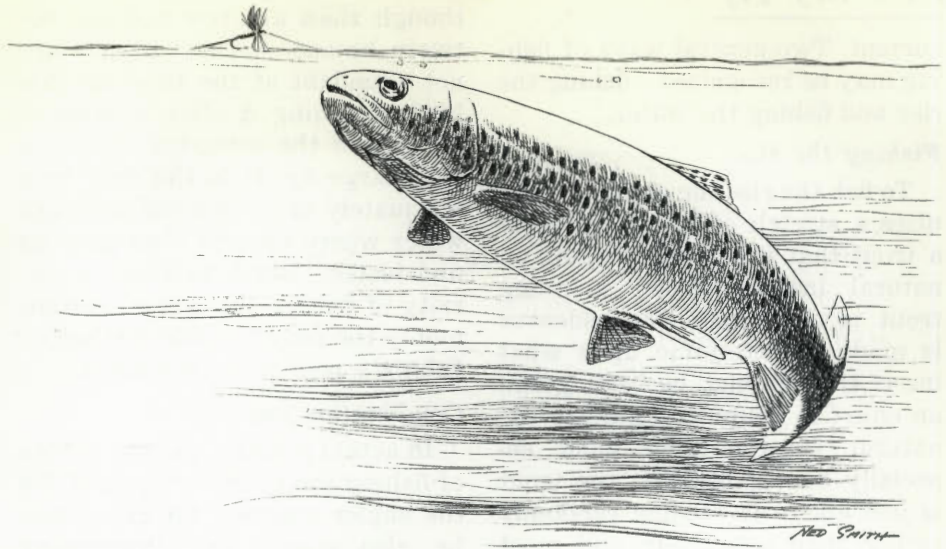
pay strict heed to avoid making betraying reflections with shiny rod ferrules or reel, he should keep his shadow off the fishing water, and he should try not to startle small trout or other fish that may in turn warn his intended prize.

Although trout may at times take a dry fly being pulled along the surface of the water, such action normally scares the scales off a feeding trout. Therefore, the drag which may be created by the resistance of the line and leader in the water must be assiduously avoided by allowance for water currents and by judicious casting and manipulation of the line during the time the fly is being floated.

A peculiarity of dry fly fishing is the false cast that is required to dry the fly. In order to dry out the fly and make it appear natural after being wet by a previous cast, false casts, (several repeated, incompleting casts while keeping the fly moving through the air) are made each time the fly is retrieved following a float. During this interval the plan of continued attack is made or more suitable water is selected for a try.

Rigging the Tackle

The leader is best attached to the line with a simple knot in the line rather than a large loop. The



fly should be tied directly to the leader with a tight knot, omitting any gadgets or snells. Even though a float line is used, it is usually helpful to dress the line before fishing, depending on the brand.

The standard 7½-foot leader tapered to 3X is suitable for general conditions. However, for low, clear waters or when using small flies a 9-foot leader tapered to 4X should be considered minimum with the addition of a 5X tippet advisable. Except for very rough water or when using leaf rollers or inch worms, the leader should be treated with leader sink, or rubbed with mud or fish slime, to help make it sink.

Stream Fishing

Fishing the dry fly on a trout stream is the most engrossing and pleasant of all forms of fishing, in our humble opinion. It is the way

of fishing that has captured the hearts and endeavors of a multitude of anglers, both famous and anonymous, who have earned the controversial, but nonetheless, enviable title of purist. In New Jersey dry fly fishing is of concrete value in taking fish during the summer months for very good reason. Most of the hold-over trout and resident populations of wild trout in the major trout streams are brown trout. During the summer months brown trout can be very selective feeders and may be taken most regularly with dry flies, and only dries. Thus, the complete, all-season angler must master dry fly fishing to take trout consistently.

While the dry fly may be fished up, across or down the stream, most casts are made obliquely upstream so that the fly may float downstream naturally with the

. . . Dry Fly

current. Two general ways of fishing may be recognized—fishing the rise and fishing the water.

Fishing the rise:

To fish the rise the angler scrutinizes a stretch of water to locate a trout that is actively feeding on natural insects. When a rising trout is observed every endeavor is made to determine upon what insect the fish may be feeding and an effort is made to duplicate the natural. On the other hand, especially during midday, the trout is just apt to be feeding randomly rather than selectively and most any reasonable pattern and size may interest it. Fishing the rise can be a thoroughly absorbing campaign that may require hours or even days to outwit a fussy fish. It is the usual method of fishing during hatches.

Fishing the water:

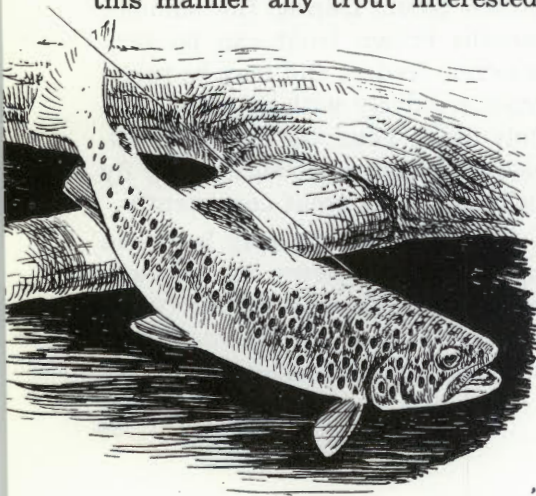
Working up a stream while casting the fly to float over each likely spot that may harbor a trout, without necessarily seeing the trout rise, is called fishing the water. In this manner any trout interested

in a morsel may be attracted even though rises are few and far between because natural insects are not abundant at the time. In this kind of fishing it often is wise to try one of the attractor flies or a very large fly. It is the only way adequately to cover a riff or rough water where natural rises may go undetected. Blind casting, a variety of fishing the water, is commonly the only feasible method of fishing a pool on a dark night.

Combination system:

In actual practice the two modes of fishing are mostly combined. As the angler searches for rising fish he also covers any intervening water in hopes of finding a trout. By doing this he not only takes more fish but he also intercepts trout that may otherwise spook and dart up into other waters to scare rising fish.

Probably the key to proficiency in stream fishing the dry fly lies in casting ability and knowledge of water currents of the stretch. The two must be harmonized to place the fly in the precise spot indicated so that it will float over the fish naturally and without the fish-scaring drag of line and leader. Practice and experience are the stepping stones to the required expertness. The fly is almost invariably cast a couple of feet upstream of the trout, often with a J-shaped hook in the leader to present the fly to the fish before the leader arrives. The line is deftly fed or retrieved to postpone the inevitable drag until the fly is well past the trout, or, more happily,



taken by the fish. To allay the likelihood of scaring the fish if it refuses the fly on the cast, the fly should not be lifted from the water until it is beyond the vision of the quarry.

Other methods:

Under certain circumstances modified systems of offering the dry fly may be employed to advantage. Among these systems are dapping whereby the fly is dropped directly on the surface of the water while using only enough line and leader to reach the water. In a high wind the fly may be permitted to blow and drift out over the water and similarly the fly may be floated downstream on the current or with the wind if water conditions are favorable. At times it pays to fish a tiny midge fly in conjunction with a large fly, most likely a bivisible, to enable the angler to keep track of the diminutive fly.

Although drag is ordinarily to be avoided, there are situations in which the fly may be actually pulled along the top of the water, even creating a V-wake on the surface. This may hold true when fishing leaf rollers or when fishing at night. Likewise, it sometimes is profitable to impart some motion to flies that imitate grasshoppers, beetles, or similar active foods.

Lake Fishing

Lake fishing with dry flies for trout is sadly neglected in New Jersey. Nevertheless, dry fly fishing in lakes can be fruitful and interesting. The casting techniques, and modifications of stream fishing

are for the most part applicable in lakes. Either system, fishing the rise or fishing the water, may be used.

The most significant factor to recognize in lake fishing with dry flies is that the location is half the battle. The knowledge of where to fish a lake with dry flies can be derived only by observation or with the help of one who knows. In general, however, particular attention should be given to areas where "dimples" are seen at the surface (possibly feeding trout), where streams enter or leave the lake, where breezes deposit insects, where a rock or point of land obstructs the wind, or where insects are seen to emerge during hatches. The other key areas are spring holes, gravelly shores, collections of flotsam, under trees infested with leaf rollers, or other food, and the very middle of the largest section of the lake.

Needless to say, lake fishing may be done from boat, canoe, raft, shore, or dock, or by wading, each approach with its own advantages. Best of all is night fishing.

During dry fly season beaver ponds and cold-water farm ponds should be visited on warm evenings. It is surprising to discover the trout rising in numbers and of a size that would belie the expectations of the early season fisherman. To take such fish can be either disquietingly easy or exasperatingly difficult depending on the unfathomable whims of the fish and the fisherman's ability to match the hatch and fool the trout. #

Large Northern Pike Taken

An 18-pound, 13-ounce northern pike was caught during the ice fishing season this past winter in New Jersey's Shepherd Lake, Thunder Mountain. Richard Vezirian of 109 Glen Wilde Ave., Bloomingdale, caught the big pike while ice fishing at about 9 a.m. on Sunday, January 22. It measured 40 $\frac{3}{4}$ inches in length and 19 $\frac{3}{4}$ inches in girth and was weighed on certified scales. Its identification was confirmed by state fisheries biologist James Barker.

Mr. Vezirian is an avid fly fisherman for trout who took up ice fishing for the first time this winter. He and a companion, Joseph Ford of Haskell, had just arrived at the state-owned lake to try out a new set of tip-ups.

He set up his first tip-up, baited with a large golden shiner, and was chopping a hole for the second when the flag sprang up to show that a fish had struck. He dashed over and found it surprisingly easy to bring the huge pike through the hole in the ice.

Successful introduction of northern pike into New Jersey waters took place only during the current decade. They were released in



Richard Vezirian, right, was pretty happy to find that the big northern pike that he caught weighed over 18 pounds. Commissioner Robert A. Roe has recognized the fish as a state record

Shepherd Lake in the early 1960's by the private recreation group from whom the state purchased Shepherd Lake State Park. The excellent fisheries potential of the lake was an important factor in the Green Acres acquisition of the Thunder Mountain recreation area.

More recently, the Division of Fish and Game has stocked northers in Lake Wawayanda and Pompton Lake. A number were caught in Lake Wawayanda last summer, and an 8-pounder was reported caught there on the same day as Vezirian's record catch. Wawayanda was bought through Green Acres at about the same time as Shepherd Lake. These catches indicate that excellent fishing opportunities for this fine game fish can be found in both these state-owned lakes. #



Your Voice Is Heard

Public Hearings on Fish and Game Regulations

Under New Jersey law (RS 13: 1B-29 through 34), the Fish and Game Council is charged with the responsibility of setting seasons, limits, manner, and means for the taking of game and fresh water fish. These regulations must be based on scientific investigation (RS 13: 1B-31 and 32). Finally it is stipulated in RS 13: 1B-33, "Prior to final adoption of any regulation . . . the Council shall hold a public hearing thereon."

The Council takes these hearings seriously and wants to learn the views of sportsmen at the hearing, or earlier. Although they can choose the time and place, the Council has always held the major hearings in the evening when most of the public can attend. They are held in Trenton, which is centrally located. And, a large room, such as the 13th floor auditorium of the Labor and Industry Building, is used.

By the time you read this, the exact time and place of the hearing on the Game Code for this fall will probably have been set. This is held in late June or early July to permit the fullest possible scientific investigation.

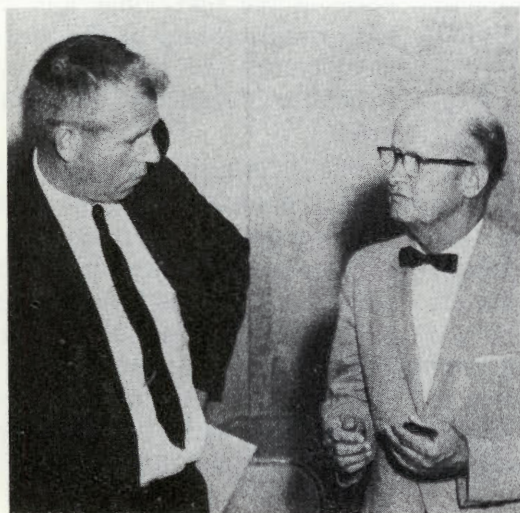
The Fish Code hearing usually takes place late in the summer. Although the only requirement is filing of the text, time, and place with the Secretary of the State 20 days before the hearing, this information is publicized through the press.

The hearing shown here was held a couple of years ago on fishing regulations. Virtually all the anglers present were opposed to a change in seasons that had been put forward for consideration. Their arguments convinced the Council to maintain year-around fishing for warm water species, clearly demonstrating that the sportsman's voice is heard.



Chairman Hart answers a question. Seated at the Council table are (left to right) the late Councilman Lillian B. Godown, Councilman Joseph Alampi, Administrative Assistant Helen B. Musick, Councilmen George H. McCloskey, Fred Totten, and Fred Space, and former Councilman William Lunsford

. . . Your Voice Is Heard



Fish and game experts, such as Robert A. Hayford, Chief of the Bureau of Fisheries Management, are on hand to provide technical or legal advice

*The views of sportsmen,
as well as farmers,
landowners, and interested
citizens, are seriously
considered by the Council
at the public hearings*



The expressed opinions of this group convinced the Council members to maintain year-round fishing for warm water species of fish showing that the sportsmen's voice is heard

The Woodchuck

(Groundhog)

Species:

Marmota monax

General Characteristics:

Size 22 - 26 inches long; male larger; heavy and thick-set; short legs and rather short, bushy tail; color grizzly or yellowish-gray varied with black and rusty; feet black; forefeet with four well defined toes and hind feet with five; nails strong and well-adapted to digging.

Dentition:
$$\frac{1-0-2-3}{1-0-1-3} = 22$$

Range:

All of state, but mainly in areas of better soils; few in sandy areas; found in open land rather than heavy woods.

Life History:

Usually digs its own burrow, frequently in pastures and agricultural land, earning the farmer's antagonism, but sometimes found in stone rows or under buildings. The burrow may be several feet



The woodchuck is usually a grizzly or yellowish-gray color varied with black and rust. It seldom ventures very far from the safety of its burrow

deep and have extensive passages, with one or two main entrances and another rather well-hidden "escape" hole. A sluggish and somewhat stupid animal, it usually does not venture far from its burrow. Has no call, but in close quarters will chatter its teeth and occasionally will utter a low whistle. Feeds upon grasses, clover,

and other succulent plants, including various cultivated plants. Stores up fat and hibernates during winter. Only one litter is born each year, with from three to nine young born late in April or early in May. They are blind and helpless.

Environmental Resistance:

Weather—Avoids most problems of cold by hibernating underground.

Precipitation—Extensive rain may occasionally drown young woodchucks, but usually the burrow is well designed to avoid this.

Predators—Eagles, hawks, foxes, and dogs.

Disease—May get distemper and a hepatitis-like disease, which may decimate the population over a wide area.

Effects on other animals—Little direct effect, except to provide food for predators. Indirectly, the burrow provides excellent shelter and escape cover for cottontails, and occasionally a pheasant will be found in a "dig."

Hunting: The woodchuck is not a particularly sporting animal to a shotgun hunter, as it is quite alert and quickly enters its burrow at the first sign of danger. For the rifleman, however, it is a prime target. Woodchucks are out sunning or actively feeding on warm summer days, and offer the rifleman a number of challenging situations calling for stalking skill as well as good marksmanship. Current regulations provide an open season on woodchucks from mid-March to the end of September, with no bag limit. #

Outdoor

Cracks and Tracks

"This must be the oldest camping area in the state—look, fossilized beer cans!"





Trout Opener '67



On opening day of the trout season, April 8, officials, above, take time out from the trout tour to look over Pat Duffy's catch at Saxton Falls, 8:12 a.m. From left to right, John Davis, Assemblyman from Salem County; L. G. MacNamara, Director; Pat; John O'Dowd, District Conservation Officer; and Douglas Gimson, Assemblyman from Hunterdon County

Action, and congestion as usual, at the great circle at Saxton Falls, left

Photographs by Harry Grosch

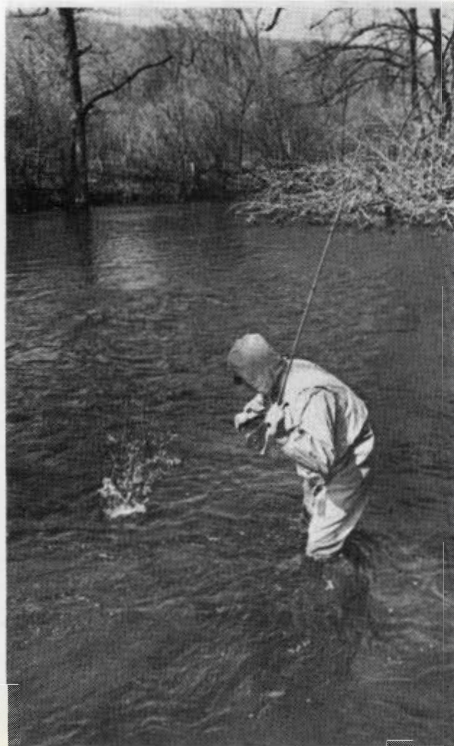
New Jersey Outdoors



Spruce Run Reservoir, above, at 7:00 a.m. April 8. Waiting to launch boats



Harold Carey of Washington, above, with six nice Donaldson rainbow trout he took on salmon eggs and worms at Spruce Run Reservoir



Action, and elbow room, on the no-kill stretch on the Musconetcong River on opening day, left. Steve Farich of Hopelawn estimated that he caught and released about 60 fish in the stretch on that day

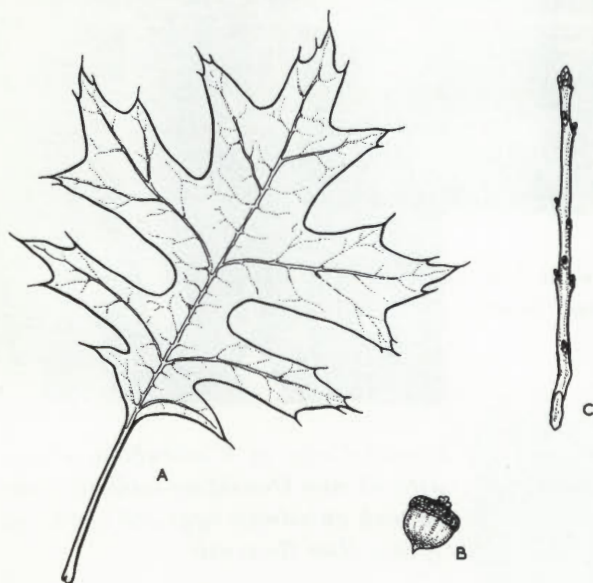
Pin Oak

(*Quercus palustris*)

Pin oak is most commonly found growing in poorly drained soils and along the edges of swamps and streams. It will grow well, however, on well-drained land. This tree may be found growing with red gum, red maple, and other swamp hardwoods. Other common names for this tree are Spanish oak, swamp oak, and swamp Spanish oak.

Range:

Massachusetts through southern New York and southern Ontario, south and southwest through Michigan, northern Illinois, southern



Pin Oak

A. Leaf

B. Acorn, in cup

C. Twig, with buds

Iowa, and central Arkansas, east through Tennessee and North Carolina, and north along the Atlantic coast.

Leaves:

Alternate, simple, 3 to 5 inches long, and 2 to 4 inches wide. The leaves have five to nine bristle-tipped lobes separated by broad, deep, round sinuses that usually extend two-thirds of the way to the leaf's midrib. Leaves are shiny, dark green on top. They are pale green and smooth on the bottom. Frequently they have small tufts of hair in the axis of the veins. Leaves resemble those of the scarlet oak except that they are smaller. (See figure A.)

Twigs:

Slender, reddish brown, small rounded buds, terminal about one-eighth inch long, laterals slightly smaller. (See figure C.) Twigs make a thorn-like appearance when viewed from a distance. Bark on young trunks is smooth and light brown to reddish. On older trees it becomes darker and roughened. The drooping, dead, lower limbs often remain on the tree for many years.

Flowers:

Male and female flowers appear on the same tree. Male flowers develop in the leaf axils of the previous year, and the female flowers occur in axils of leaves during the current year. The male flowers are borne in catkins, and the female flowers grow singly or in two- to many-flowered spikes.

Fruit:

An acorn that requires two years to mature. It is light brown, often striped with dark lines, about one-half inch long, and borne in a tiny saucer-shaped cup, which is about one-half inch across. The cup encloses about two-fifths of the acorn. (See figure B.)

The acorns ripen from September to November. They are bitter to the taste and pale yellow inside.

Uses:

Pin oak is a medium-size tree, 60 to 80 feet tall, and 2 to 3 feet in diameter. The tree is good for rough lumber, ties, piling, and pulp. It is often used for the same purposes as other members of the black oak group. Because of frequent knots, it is not desirable for finishing purposes; however, it is extremely desirable as a shade tree. When used for fence posts, the tree should be treated with certain chemicals to increase durability. #

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

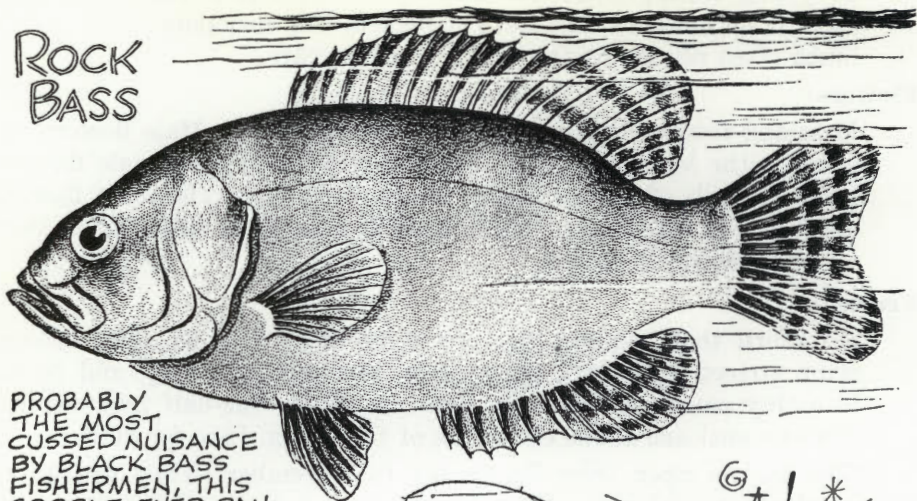
Although the acorns of the pin oak are bitter, many forms of wildlife, especially deer, do eat quantities of the immature and mature fruits. Pin oak trees, because of their characteristic persistent limbs, provide excellent wildlife cover.

The Bureau of Fisheries Management has been tagging shad in the Delaware Bay and River in an effort to obtain information that could be used in fisheries management to improve fishing in the Delaware. Any fishermen who catch tagged shad, or recover tags from shad by any means, are requested to send the tags with data on the size of the fish, and date and place of recovery, to the Division of Fish and Game, Bureau of Fisheries Laboratory, Lebanon, N. J. 08833.

Fur, Fin ^{and} Campfire

By JACK SORDS

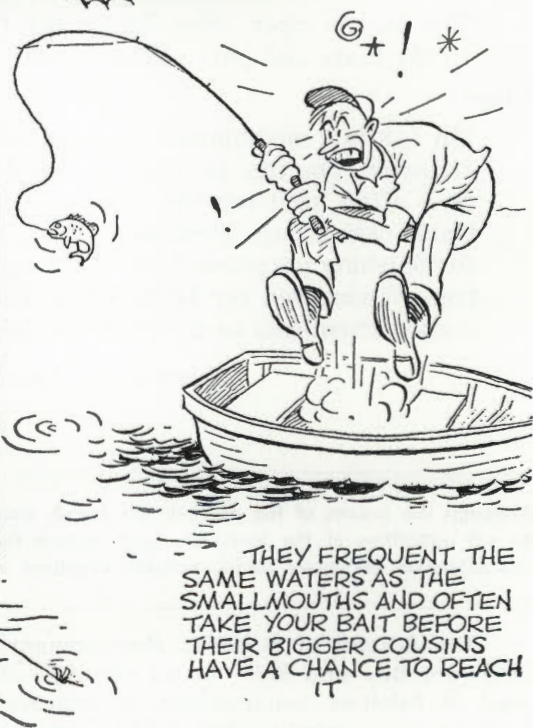
ROCK BASS



PROBABLY THE MOST CURSED NUISANCE BY BLACK BASS FISHERMEN, THIS GOGGLE-EYED PAN-FISH CAN OFFER SPORTY FISHING IF YOU KNOW WHERE THE BIGGER ONES ARE. THEY OFTEN REACH A POUND IN WEIGHT



LIKE MOST BIG-EYED FISH, THEY DO MOST OF THEIR FEEDING AT NIGHT. THEY'RE ON THE TOP THEN AND WILL GIVE YOU FAST ACTION TAKING DRY FLIES



THEY FREQUENT THE SAME WATERS AS THE SMALLMOUTHS AND OFTEN TAKE YOUR BAIT BEFORE THEIR BIGGER COUSINS HAVE A CHANCE TO REACH IT

Some of the very best smallmouth bass, largemouth bass, and pan fish angling is available during the month of June.

Council Highlights

March Meeting

The regular monthly meeting of the Fish and Game Council was held at the Charles O. Hayford Fish Hatcheries in Hackettstown on March 14. In addition to the Council members and Division personnel present, the following persons attended the session: Henry Schaefer, Bill Backus, Carl Richardson, Earl Stultz, and Charles O. Hayford.

Chairman Hart announced that Director MacNamara was not at the meeting since he was attending the National Wildlife Conference and related meetings in California.

Power Boats on PH & FG

Director MacNamara had requested the Council for policy on use of boats powered by small electric motors on Public Hunting and Fishing Grounds. Upon request for information of past procedure, Chief Alpaugh stated that the policy had been to prohibit outboard motors at Colliers Mills until recently when the Council gave permission to one individual to use electric motors because he was an invalid.

Upon a suggestion by Councilman Space that we should carry on with past policy of not allowing power motors, Councilman Alampi brought out the fact that they were being used for raccoon dog trials and the practice has not been questioned by the conservation officers. Councilman Allocca then made a motion that no type of outboard conveyance be used on lakes or ponds under control of the Division of Fish and Game other than with special permission which may be granted by the Council. Motion seconded by Councilman Marron and passed.

Control of Estuaries

Councilman Richardson reported on a bill in Washington affecting the estuaries of all states and the possibility of their coming into Federal control. The Director had received a copy for review. At the Atlantic States Commission meeting at Virginia Beach, they did not have enough votes to take a stand on the bill and felt they would not be justified since they did not have enough time to study it. The bill will probably be amended and at that time the Commission can take a stand.

Councilman Richardson also stated that while at that meeting, the matter of the Advisory Committee to the Commission was discussed. It has a definite function and should be reactivated, although the Atlantic States Commission cannot pay their expenses. Captain Hart added that the membership from New Jersey is very old and that the Council should select three names to submit to the Commissioner for appoint-

. . . Council Highlights

ment to the Advisory Committee. The Council was requested to present suggested names at the next meeting, bearing in mind that the Atlantic States Commission cannot pay their expenses to attend meetings.

On the Dingell Estuary Bill, H.R. 25, Captain Hart stated the opinion seemed to be that the bill should be amended. No action has been taken and they agreed to give the Atlantic States Commission more time to make a statement on it. This bill would give the Federal Government blanket authority to acquire the estuaries and manage them.

Wildlife Management

Chief Alpaugh reported on his current year's program, under the long-range plan presented to the Council some time ago, and indicated that priorities had to be placed on the work to be done in view of the fact that the Division has one-third more land as a result of the Green Acres Program. He stated he would send to the Council the program of work as planned for each area this year. For instance, at Black River there are five parking areas to be prepared since there are presently none and the tract will be open to hunting this fall. This was a commitment to the local authorities at the same time of acquisition by Green Acres. At the Assunpink tract which is also a new area, there are 700 acres of cleared field that cannot be allowed to grow into obnoxious plants but must be planted and priorities must be set on these jobs since manpower and equipment are limited.

Councilman Alampi questioned the report that an attempt was made to take a helicopter census of deer in Burlington County. Chief Alpaugh explained this was to be an experiment in technique in South Jersey to see whether it could be done by helicopter.

Councilman Alampi also questioned the discontinuance of food patch planting for private clubs and it was explained that under the Federal Aid-to-Wildlife Program, under which this activity was carried on, the work is now limited to areas which are open to public hunting.

Law Enforcement

Chief Coffin stated his men were working with trout stocking and trying to clean up cases. He inquired of the Council whether there is to be any change in the Hunter Safety Program for this year or whether to continue past procedure in having the conservation officers review instructor listings. No change was indicated at this time.

Fisheries Management

Chief Hayford reported that it appeared there will be 475,000 to 500,000 fish for distribution and that water conditions were better than in a long time.

Councilman Marron inquired as to when the long range plan for fisheries would be ready and suggested to Chief Hayford that the Council should have it as soon as possible.

Finance Committee Recommendations

Councilman Wilson, Chairman of the Finance Committee, reported on the special meeting held on February 28. Seven Councilmen were present and approved the following measures: \$5.00 pheasant stamp on Public Shooting Grounds; \$5.00 fee for special deer permit; a change in the Delaware netting laws setting up fees; and all the other financial bills not passed last year; increase in fine for a loaded gun in car from \$20 to \$50. Councilman Richardson, seconded by Councilman Alampi, made a motion that recommendations of the Finance Committee be approved. Motion carried.

Coastal Patrol

Captain Mathis stated that there was very little trawling activity along the coast except outside the three-mile limit. Night patrols were made and a large fleet of clam boats operated close to the beach on the south end. Due to ice and snow, there was no trouble in the rivers during February. No cases were filed but 16 are still pending due to postponements and death of one attorney. All boats were in good operating condition except the "Weakfish", one of the 28-foot garveys.

Captain Hart inquired about the fishing in Mullica River and a report that all party boatmen in this area were told that they were liable to prosecution. Mathis stated that the Mullica at the time had the heaviest concentration of bass in many years, small bass under 18 inches. He stated that he served notice, went aboard party boats and private boats, contacted different docks such as Oyster Creek and Motts Creek and had the help of newspapers. He fully intended to enforce the law and patrolled the river every day with Captain French but found no violations. He tried to get one violator to make a test case but the party boats and private boats all did away with the gang hooks and he felt the problem was solved for the time being.

Public Relations

Supervisor of Public Relations Peterman stated that most of the unit activities for the month were routine. Speaking engagements increased considerably and personnel also worked at Stokes. The first exhibit for the year was set up in Atlantic County and was fairly well received. Forms have been prepared for registering record fish, which will be sent out to conservation officers and will be made available to other facilities.

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Active sportsmen attend the fish and game code hearings.

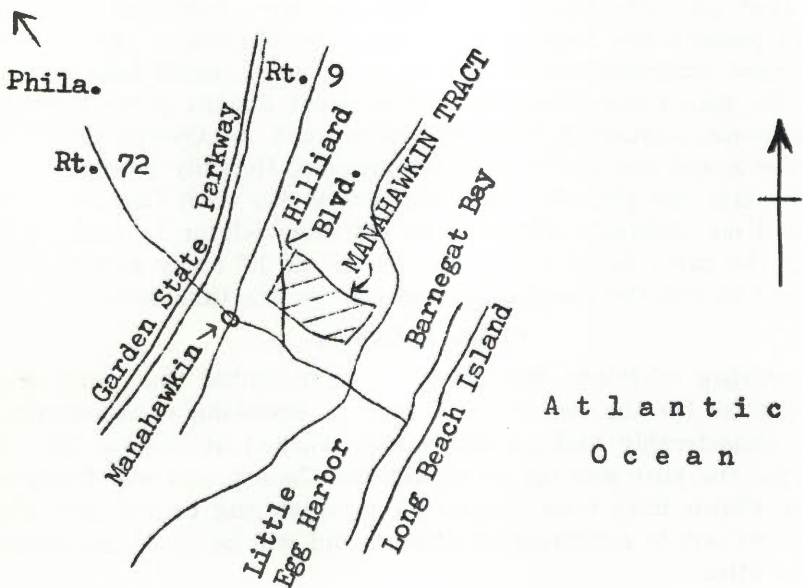
Manahawkin Tract

The Manahawkin Public Shooting and Fishing Grounds comprises 965 acres of mostly tidal marsh and is located adjacent to Barnegat Bay in Ocean County. The tract is bounded on the north by property owned by the American Telephone and Telegraph Company and on the east by Cedar Creek. Its southern boundary is close to Route 72. The western boundary is a wooded line west of Hilliard Boulevard.

The Manahawkin Tract provides good duck hunting on the managed ponds and on the open tidal marsh. Rabbit and quail hunting is excellent. Pheasants are stocked during the hunting season. In addition, excellent woodcock hunting is available when the flight birds arrive.

To reach the Manahawkin Tract, proceed down the Garden State Parkway to the Manahawkin Exit; or down Route 9 to the cut-off of Hilliard Boulevard to the left; or down Route 9 to the town of Manahawkin. Follow Route 72 east toward Long Beach Island for about 1.8 miles from the Route 9-Route 72 intersection. Turn left on Hilliard Boulevard. The entrance to the tract is the first gravel road on the right.

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Scale - 1 inch is 5.3 miles.

Violators Roundup

<i>Defendant</i>	<i>Offense</i>	<i>Penalty</i>
LaSalle M. Olsen, Jr., 79 Maple St., Paterson	Have rifle in poss. wrong season	20
Emory H. Bolton, 18 No. 18th St., Hawthorne	Have rifle in poss. wrong season	20
Lawrence Baker, Jr., 21 Sixth Ave., Cherry Hill	Hunt no license	20
Aaron Nelson, Airport Rd., Hightstown	Hunt no license	20
Aaron Nelson, Airport Rd., Hightstown	Illegal firearm	Jail—7½ days
Aaron Nelson, Airport Rd., Hightstown	Loaded gun in auto	20
Lionel W. Robinson, Rt. #9, R. D., Cape May	Illegal poss. least bittern	20
Joseph Salfi, 302 Washington Ave., Woodbine	Illegal poss. lesser yellow legs	20
Stanley Langowski, Eldora R.D., Woodbine	Hunt deer closed season	100
Stanley Langowski, Eldora R.D., Woodbine	Poss. deer closed season	100
Larry Creamer, Eldora R.D., Woodbine	Hunt deer closed season	100
Larry Creamer, Eldora R.D., Woodbine	Poss. deer closed season	100
Robert Sweiderk, 20 Glenside Ave., Pennsville	Hunt no license	20
Robert Eichelberger, 398 Hook Rd., Pennsville	Hunt no license	20
Namon Wilson, Box 215, Parrish Manatee, Fla.	No fish license—non-res.	20
Marvin Johnson, R.D. #2, Bridgeton	No fish license—non-res.	20
Charlie Harmon, Jr., Washington St., Swainsboro, Ga.	No fish license—non-res.	20
Earl Forsher, 504 Rodman St., Wilmington, Del.	No fish license—non-res.	20
Wm. H. Foraher 1307 N. Scott St., Wilmington, Del.	No fish license—non-res.	20
Richard Smith, 775 S. 11th St., Newark	Fish no license	20
Herbert Hooks, 15 Parker St., Bridgeton	Attempt to kill protected bird	20
James Dunnigan, 38 N. Franklin Ave., Berlin	Angle closed water	20
Eugene Perkins, 5229 Pennsgrove St., Philadelphia, Pa.	Fish no license	20
Nubia Wingfield, 6157 Chestnut St., Philadelphia, Pa.	Fish no license	20
Robert J. Fitzgerald, 229 S. 32nd St., Camden	Fish no license	20
Barry Class, 9 Falmouth Rd., Chatham	Poss. wild bird illegally	20
Charles Pearo, 134 Mifflin St., Philadelphia, Pa.	Fish inland waters w/o license	20
Philip F. Johnson, 680 A. Chelton Ave., Camden	Fish no license	20
John L. Baylor, 246 Adams St., Paulsboro	Fish no license	20
David W. Ross, 9 E. Monroe St., Paulsboro	Fish no license	20
William Craig, 832 W. Delaware St., Paulsboro	Fish no license	20
Reo Gore, 122 S. Cook Ave., Trenton	Fish no license	20
Sylvester Adams, Jr., 15 Parker Ave., Trenton	Fish no license	20
Cardoza Lyles, Monroe Blvd., Monroe Twp.	Poss. great horned owl	20
William M. Crawford, 69 Mercator Lane, Willingboro	Fish no license	20
Dominic P. DiGregorio, 1514 Tasher St., Phila., Pa.	Gun on Sunday	20
Mario A. Triolo, 2415 S. Jessup St., Phila., Pa.	Gun on Sunday	20
Carmen J. Woynor, 2334 S. Broad St., Phila., Pa.	Gun on Sunday	20
Chester Dockery, Pemberton	Procure license false information	20
Sarah Dockery, Pemberton	Procure license false information	20
Eugene Williams, Jr., 2621 No. 6th St., Phila., Pa.	Fish no license	20
Ervin Hicks, 73 E. High St., Philadelphia, Pa.	Fish no license	20
Calvin Jones, 938 W. French St., Phila., Pa.	Fish no license	20
Daniel Johnson, R.D. #1, Palintine	Fish no license	20
John McCusher, Jr., R.D. #1 Box 115, West Chester, Pa.	Fish tidal waters w/o license	20
Richard Conyers, 2233 N. 10th St., Phila., Pa.	Fish no license	20

. . . Violators Roundup

<i>Defendant</i>	<i>Offense</i>	<i>Penalty</i>
Beatrice Harvin, 1109 W. Colonia St., Phila., Pa.	Fish no license	20
Beatrice Lewis, 40 W. 135 St., New York, N. Y.	Fish no license	20
Rebbac Watts, 817 W. Oxford St., Phila., Pa.	Poss. undersize large mouth bass	20
Edward Tate, 1201 W. 7th St., Chester, Pa.	Non-Res fish w/o license	20
Robert Alston, Jr., 305 W. 9th St., Chester, Pa.	Non-Res fish w/o license	20
Patrick J. McCalary 39 Court Dr., Shrewsbury	Fish no license	20
Mary Corrigan, 60 Peters Place, Red Bank	Fish no license	20
Paras Glantzis, 295 Lakeview Ave., Ershine Lk., Ringwd.	Fish no license	20
Lester Jacobi, 232B-14th Ave., Paterson	Fish no license	20
Raymond Lempicki, 384 Chestnut St., Kearny	Fish no license	20
Erick H. Fritz, 382 Chestnut St., Kearny	Fish no license	20
Stanley R. Moczydowski, 64 Prospect Ave., No. Arl.	Fish no license	20
Robert J. Feranac, 130 N. Howard Dr., Bergenfield	Fish no license	20
Harry E. Stoeffers, 221 Fitzherbert St., Bloomfield	Fish no license	20
Louis Liptak, 642 E. 6th St., Erie, Pa.	Fish no license	20
John H. Beeks, 207-16th Ave., Newark	Loaded gun in auto	20
John Wunsch, 102 Center Ave., Atlantic Highlands	Use rifle w/o permit	20
Frank B. Springer, 307 Stone Harbor Blvd., Cape May Court House	(1) Clapper Rail over limit	20
Arthur Long, Box 16, Green Creek	(1) Clapper Rail over limit	20
Robert McCauley, 264 Shore Rd., Seaville	(1) Clapper Rail over limit	20
Stephanie Ganz, 95 Pacific St., Garfield	Fish no license	20
Kevin S. Hockey, 47 Ridge Road, Rumson	Poss. yellow leg snipe closed season	20
Paul E. Weldon, Rt. 47, Delsea Dr., Dennisville	Uncased weapon	100
Paul E. Weldon, Rt. 47, Delsea Dr., Dennisville	Hunt deer closed season	100
Paul E. Weldon, Rt. 47, Delsea Dr., Dennisville	Poss. illegal missile	100
Paul E. Weldon, Rt. 47, Delsea Dr., Dennisville	Hunt w/aid of lights	Jail—90 days
Paul E. Weldon, Rt. 47, Delsea Dr., Dennisville	Hunt on Sunday	Jail—90 days
Paul E. Weldon, Rt. 47, Delsea Dr., Dennisville	Fail to exhibit license	20
Daniel T. Trice, Rt. 47, Delsea Dr., Dennisville	Uncased weapon	100 Prob.
Daniel T. Trice, Rt. 47, Delsea Dr., Dennisville	Hunt deer closed season	100 Prob.
Daniel T. Trice, Rt. 47, Delsea Dr., Dennisville	Poss. illegal missile	100 Prob.
Daniel T. Trice, Rt. 47, Delsea Dr., Dennisville	Hunt w/aid of lights	20 Prob.
Daniel T. Trice, Rt. 47, Delsea Dr., Dennisville	Hunt on Sunday	20 Prob.
Daniel T. Trice, Rt. 47, Delsea Dr., Dennisville	Fail to exhibit license	20 Prob.
Sylvia Blizzard, 1546 Park Blvd., Camden	Poss. short striped bass	10
Justin R. Speer, Rt #50, Greenfield	(1) Clapper Rail excess of limit	20
Stephen F. Dansberry, 32 William St., Trenton	Hunt no license	20
Haakon Andersen, 1508 Waverly Ave., N. Beach Haven	Poss. undersize lobster	20
Haakon Andersen, 1508 Waverly Ave., N. Beach Haven	Poss. undersize lobster	20
Haakon Andersen, 1508 Waverly Ave., N. Beach Haven	Poss. undersize lobster	20
Arthur R. Myers, 6th St., Barnegat Light	Poss. lobster w/spawn	20
Arthur R. Myers, 6th St., Barnegat Light	Poss. lobster w/spawn	20
Arthur R. Myers, 6th St., Barnegat Light	Poss. lobster w/spawn	20
Arthur R. Myers, 6th St., Barnegat Light	Poss. lobster w/spawn	20
Arthur R. Myers, 6th St., Barnegat Light	Poss. lobster w/spawn	20
Arthur R. Myers, 6th St., Barnegat Light	Poss. lobster w/spawn	20

<i>Defendant</i>	<i>Offense</i>	<i>Penalty</i>
Arthur R. Myers, 6th St., Barnegat Light	Poss. lobster w/spawn	20
Arthur R. Myers, 6th St., Barnegat Light	Poss. lobster w/spawn	20
Arthur R. Myers, 6th St., Barnegat Light	Poss. lobster w/spawn	20
Arthur R. Myers, 6th St., Barnegat Light	Poss. lobster w/spawn	20
Arthur R. Myers, 6th St., Barnegat Light	Poss. lobster w/spawn	20
Arthur R. Myers, 6th St., Barnegat Light	Poss. lobster w/spawn	20
Arthur R. Myers, 6th St., Barnegat Light	Poss. lobster w/spawn	20
Arthur R. Myers, 6th St., Barnegat Light	Poss. lobster w/spawn	20
Arthur R. Myers, 6th St., Barnegat Light	Poss. lobster w/spawn	20
Arthur R. Myers, 6th St., Barnegat Light	Poss. lobster w/spawn	20
Morton B. Reeves, Front St., Mauricetown	Poss. striped bass closed season	10
Morton B. Reeves, Front St., Mauricetown	Poss. striped bass closed season	10
Morton B. Reeves, Front St., Mauricetown	Poss. striped bass closed season	10
Morton B. Reeves, Front St., Mauricetown	Poss. striped bass closed season	10
Paul F. Revok, Box 69, Tuckahoe	Poss. illegal missile	100
Paul F. Revok, Box 69, Tuckahoe	Uncased weapon	100
Paul F. Revok, Box 69, Tuckahoe	Hunt w/aid of lights	20
Joseph S. Reeves, Front St., Mauricetown	Poss. striped bass closed season	10
Joseph S. Reeves, Front St., Mauricetown	Poss. striped bass closed season	10
Joseph S. Reeves, Front St., Mauricetown	Poss. striped bass closed season	10
Joseph S. Reeves, Front St., Mauricetown	Poss. striped bass closed season	10
John Harquist, 1601 Bay Ave., N. Beach Haven	Poss. undersize lobster	20
John Harquist, 1601 Bay Ave., N. Beach Haven	Poss. undersize lobster	20
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John Harquist, 1601 Bay Ave., N. Beach Haven	Poss. undersize lobster	20
Charles W. Cammann, 226 Cedar Grove Rd., Toms River	Shoot 1 'Wood Duck' closed season	20
Philip W. Genarie, 611-B Willow Way Glenolden, Pa.	Procure license wrongfully	100
Andres Hernandez, 414 West Street, Camden	Poss. (1) undersize bass	20
Michael P. Simpkins, 300 Pitney Rd., Absecon	Fish no license	20
Richard Larwa, 765 Ave. East, Bayonne	Loaded gun in auto	20
Robert Litzinger, R.D. #3, Daretown	Fail to display tag	5
Margaret Lightfoot, 2343 Syduham St., Phila., Pa.	Fish no license	20
Charles E. Carr, Zanesville, Ohio	Fish no license	20
James Carr, 631 Cantrell St., Phila., Pa.	Fish no license	20
John T. Bundy, R.D. #2, Woodstown	Hunt no license	20
John T. Bundy, R.D. #2, Woodstown	Kill squirrel closed season	20
Lonnie Wall, 1731 N. Willington St., Phila., Pa.	Fish no license	20
George Cannell, Jr., 47 Helmetto Rd., Jamesburg	Illegal missile	100

. . . Violators Roundup

<i>Defendant</i>	<i>Offense</i>	<i>Penalty</i>
George Cannell, Jr., 47 Helmetto Rd., Jamesburg	Hunt no license	20
Richard Borcsak, 11 Lincoln Ave., Carteret	Fish no license	20
John G. Ruckelshauz, Jr., 110 Pomeroy Road, Madison	Uncased weapon	100
Dennis Connors, 104 North St., Jersey City	Loaded gun in auto	20
Paul Filipponi, 4 April Lane, Nannet	Hunt on Sunday	20
Tom Parsons, 719 Raritan Road, Clark	Fish closed waters	20
Michael Codis, Henry Street, Oxford	Fish closed waters	20
Richard Ditaranto, 1026 Ledgewood Rd., Mountainside	Fish no license	20
Anthony Stirali, 275 Essex Ave., Bloomfield	Fish no license	20
Frank Guarino, 363 Clifton Ave., Newark	Fish no license	20
John K. Brockmann, 63 Orton Rd., W. Caldwell	Fish no license	20
John E. Oliver, 9 Hollywood Dr., Woodbridge	Fish no license	20
Matthew Landano, 662 Lngdon St., Orange	Loaded gun in auto	20
John C. Fennimore, R.D. #1, Box 187, Califon	Fish no license	20
James V. Thomas, Box 349, Aberdeen Rd., Matawan	Hunt no license	20
James V. Thomas, Box 349, Aberdeen Rd., Matawan	Illegal firearm	20
Celanese Plastics Co., Box 1000, Belvidere	Pollution	200
Frank Riley, 30 Cavell Avenue, Trenton	Discharge firearm w/in 300 ft. of dwelling	20
Carl Derry, 110 Race St., Trenton	Discharge firearm w/in 300 ft. of dwelling	20
Eugene F. Harper, Rt. 1, Box 1467E., Browns Mills	Loaded gun in auto	20
Eugene F. Harper, Rt. 1, Box 1467E., Browns Mills	Hunt on Sunday	20
John Evans, 1405 N. Lakeshore Dr., Browns Mills	Loaded gun in auto	20
Joe Dews, 169 Pierson St., Orange	Fish no license	20
Edward R. Drake, 35 Manner Dr., Newark	Fish no license	20
Edward Moever, 60 E. Blackwell St., Dover	Fish no license	20
Stephen Hackett, 307-6th Ave., Newark	Fish no license	20
Lauri A. Konka, 11th Ave., Dorothy	Hunt w/aid of lights	20
Lauri A. Konka, 11th Ave., Dorothy	Possession wild deer	100
Lauri A. Konka, 11th Ave., Dorothy	Possession illegal missile	100
Joseph J. Burns, 53 E. Cumberland Ave., Estelle Manor	Hunt w/aid of lights	20
Joseph J. Burns, 53 E. Cumberland Ave., Estelle Manor	Possession wild deer	100
Joseph J. Burns, 53 E. Cumberland Ave., Estelle Manor	Possession illegal missile	100
Russel Jones, Jr., 1304 Monroe Ave., Wyomissing, Pa.	Poss. (5) ducks in excess of limit	100
Clarence H. Pierce, Jr., 9 Park Place, Mays Landing	Poss. wild deer unlawfully	100
Richard M. Smith, 13 Elber St., Glassboro	Hunt w/aid of lights	20
Richard M. Smith, 13 Elber St., Glassboro	Hunt deer closed season	100
John W. Fidler, Rt. 533N, Steeprun Rd., Haleyville	Uncased weapon	100
Julius Watson, 315 Spruce St., Camden	Fish no license	20
Stephen R. Kopycinski, 277 Griffith St., Jersey City	Kill a dove	20
William C. Kerley, Cumberland Rd., RD #2, Millville	Hunt aid of lights	20
Fred H. Shroder, 22 Johnson St., Clifton	Gun on Sunday	20
John DeLello, 769 Humboldt St., Secaucus	Hunt no license	20
Howard J. Cossaboon, Hesstown Rd., Millville	Illegal poss. deer	100
William J. Holmes, 1143 Union Ave., Vaup Hall	Hunt no tag displayed	5
Allen Morgan, 2 Harvest Ave., Hanover	Hunt on Sunday	20
Allen Morgan, 2 Harvest Ave., Hanover	Hunt no tag displayed	5
Benjamin J. Iradi, 12 Stimis Lane, Hanover	Hunt no license	20
Richard Levin, 7670 Sherwood Rd., Philadelphia, Pa.	Fish no license	20
Stanley Griffin, 24 Juniper St., Metuchen	Fish no license	20
John Redmond, 256 A Fleet Ave., Edison	Fish no license	20

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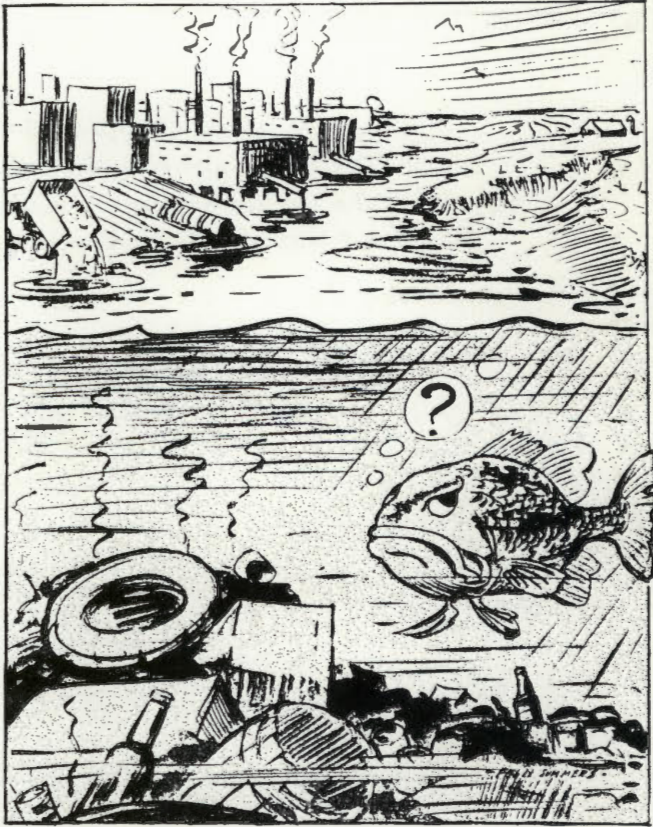
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