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The Future of CONSERVATION In New Jersey

Address by Jules W. Marron, Sr., Public Relations and Conservation Education Supervisor, Department of Conservation and Economic Development, at the New Jersey State Federation of Sportsmen's Clubs Third Annual Convention, Stokes State Forest, May 21, 1960

TWO YEARS AGO at this same camp, I had the pleasure of meeting with you on the occasion of your first state-wide Conference. I am gratified that sessions of this kind are planned to review the all-important question of Youth and Conservation. Your Conference theme "YOUTH—KEY TO THE FUTURE OF CONSERVATION" is most befitting and right down my alley. I am most thankful for the opportunity to discuss the subject as selected by your Conference Committee—"Future of Conservation in New Jersey."

Before I can speak of the future of Conservation in New Jersey, you should know what plans and programs were put into action years ago in this field, otherwise I could stop my discussion now, and say—It is too late to be concerned with the future of Conservation in our state, if we were to start only today preparing for tomorrow.

Right here I should clarify what I mean by a Conservation program.



Mr. Marron—"Conservation is Planning"

It is true that for the past thirty-five or more years of my association with Conservation I have always thought of it as "common sense planning." Each of you may

Please turn to page twenty-two

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Cover—"MATCHING THE HATCH"—Harry Grosch

Trying to match the hatch is one of the most
interesting aspects of dry fly fishing for trout

Editor: Bob Adams

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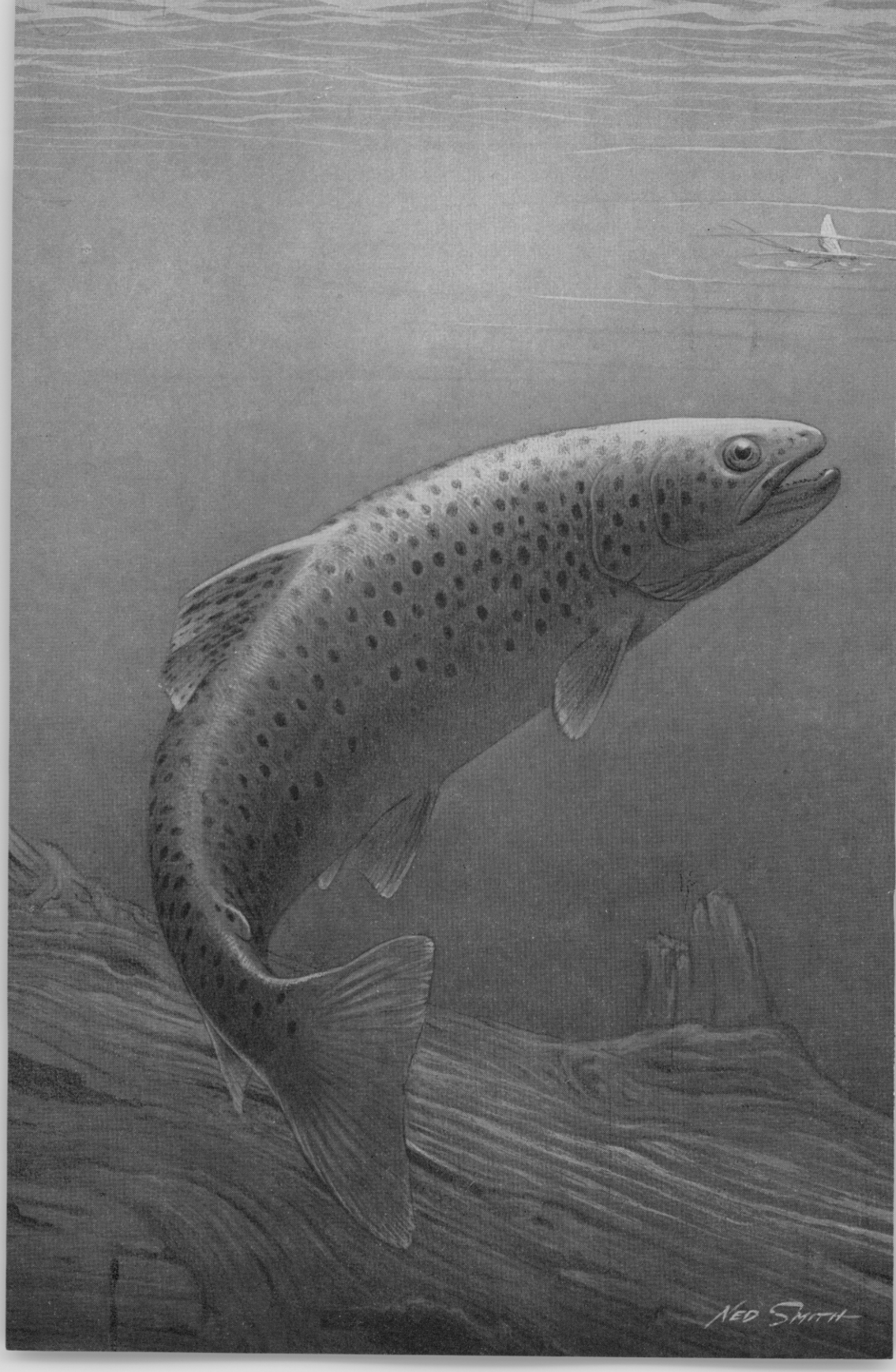
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Some notes of interest to anglers on the

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. Nevertheless, 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.

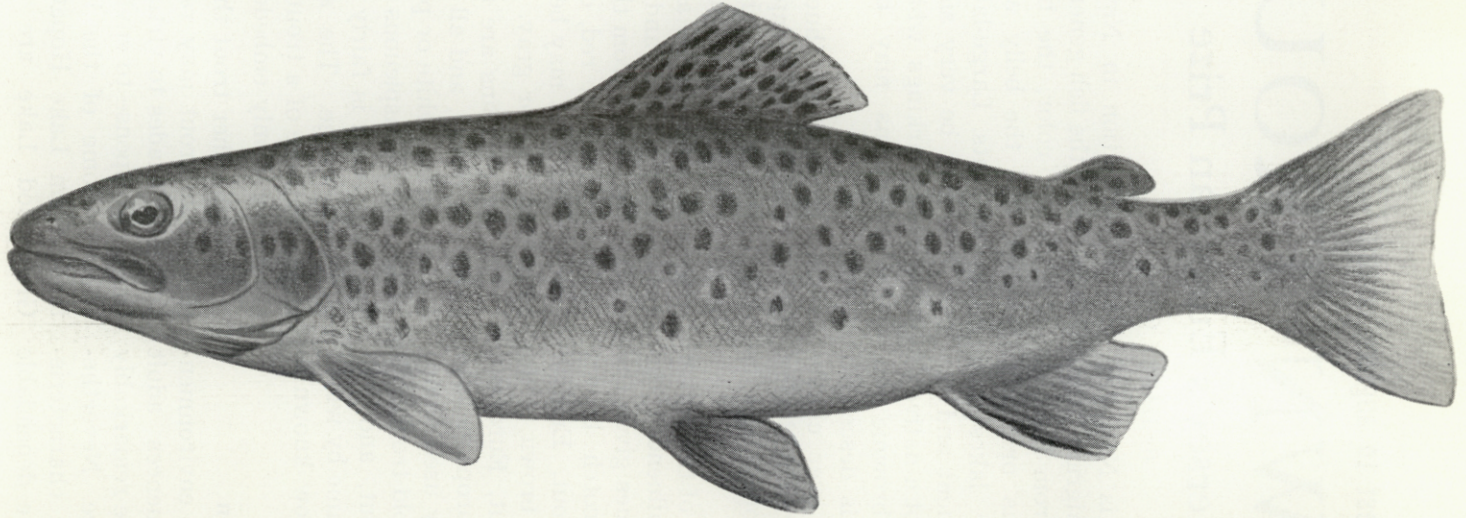
The background hue of the brown trout is light compared with that of the spots which may be black, brown, olive, or purple. The spots are quite large and either x-shaped or diffuse, and they are practically absent from the tail fin. Some browns have red, orange, or yellow spots that may be ocellated 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 tones in response to environmental effects. Some of the big brown trout from Lake Hopatcong and Greenwood Lake are extremely

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*

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 different 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 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.

. . . *Brown trout*

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 to large size.

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 to 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 10 inches, and a five-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 20 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 browns 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 Brown Trout stocked in New Jersey during the 1960 stocking period.

Size in Inches	Number Distributed
6-7	1,311
7-8	9,317
8-9	42,901
9-10	45,682
10-11	37,883
11-12	17,925
12-13	7,905
13-14	2,419
14-15	775
15-16	183
16-17	111
17-18	36
18-19	38
19-20	14

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 13-pound, 2-ounce fish caught from New Wawayanda Lake by Joseph Todaro in 1956. 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.)

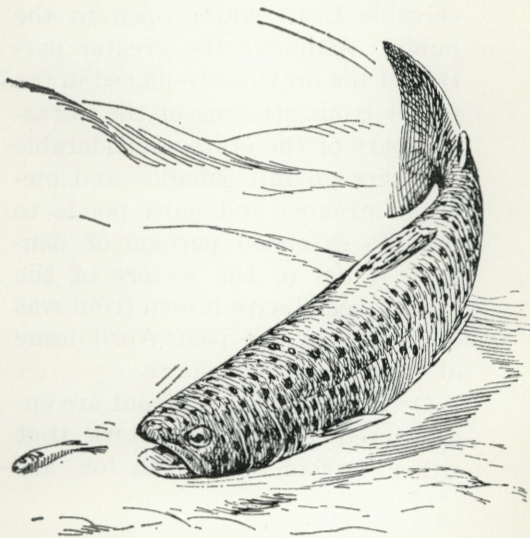
Distribution

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, gives rise to the frequent complaints of too-small trout being stocked.) The wild trout that do escape the hook, 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



Browns that eat herring often grow large

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

. . . *Brown trout*

browns. Even Ocean and Monmouth Counties have some streams that are populated with wild brown trout.

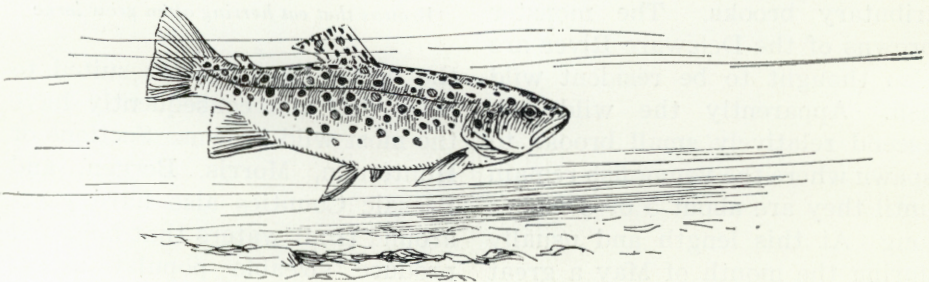
Despite the presence of appreciable numbers of wild brown trout the major proportion of brown trout available to the angler are trout stocked by the Division. Therefore, the dominant distribution of the brown trout in New Jersey is dependent on the stocking program. Brown trout are stocked, or have been 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 downstream 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 less tolerant of high water temperatures than the rainbow trout, and the maximum it 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,

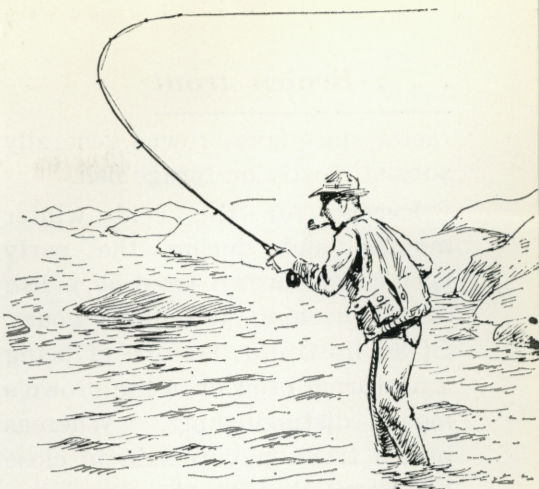


most brownies are loath to expose themselves during bright daylight hours. If they do feed in the open they like to have a convenient undermined boulder, undercut bank, overhanging tree, or hollowed bridge abutment under which to beat a hasty retreat if danger threatens.

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



Browns will frequent very shallow water

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 lakes are usually not a limiting

. . . *Brown trout*

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. Of all its traits this one of being a nocturnal prowler is the brown's most distinguishing. 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 foods and feeding habits are concerned. Pan-sized brownies are definitely, and sometimes practically 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, grass hoppers, or other insects may be of primary importance. Since a far greater percentage of these food 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, cray-

fish, 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 mouthfulls 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 move about at below the surface on summer nights.

Reproduction

Brown trout are fall spawners that ascend clear, cold, 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 strip-

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 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.

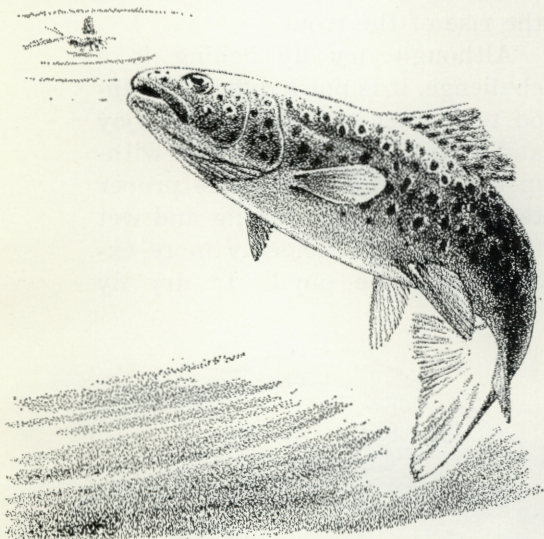
Essentially, however, the brown trout must be recognized as the savior of trout fishing as a sport in New Jersey. Without the brown trout, fishing for trout would long since have degenerated into opening day slaughter, early season bait dunking, and cyclic fish truck-following of some form. The brown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

The brown is the wariest of all trout

ping the eggs and milt and incubating the fertilized eggs in troughs. 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



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 insect 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 best 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 over promising water long enough 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

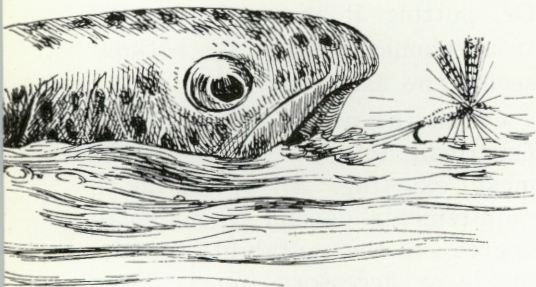
Casting is such an integral part of dry fly fishing that the rod and line used should be selected with care and be the best quality within the means of the beginner. This does not mean that you must start out by buying the most expensive rod and line on the dealer's shelf or that your selection must 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



Conventional flies imitate May flies

is merely a convenient receptacle for the all-important line while the 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 an HCH or an HDH 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.

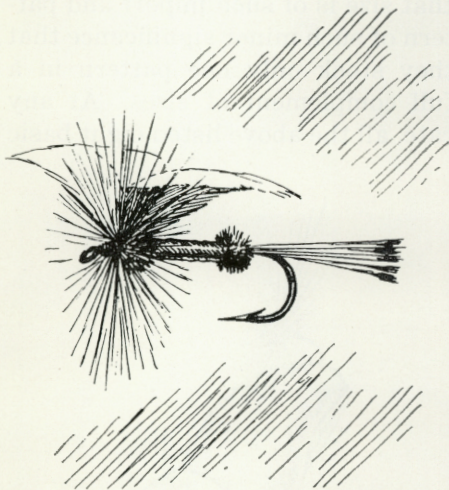
Leaders:

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 summer 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 used by a good many fishermen



Fan-wings may represent adult moths

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 disgorging, 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 and likes and then purchase those books for study.

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 flies generally recognized. In

. . . *Dry fly*

addition there are a number of specialty flies that imitate specific foods.

Upright wing flies:

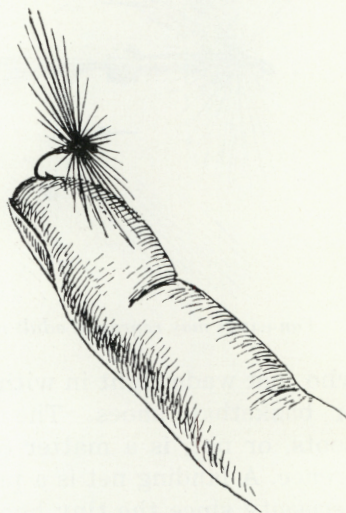
The upright wing flies are the conventional dry flies based on ancient origins and of classical use. By far the majority of trout flies fall into this category and hundreds and hundreds of color combinations and shapes, or patterns, have been tied. Most of these patterns were originally tied to represent 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 also 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 times 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 dur-

ing the emergence of certain mayflies the following four patterns may be added: light Hendrickson, Wallkill, Basherkill, and Paulinskill. 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 full complement of sizes. At any rate, all the above listed eight basic



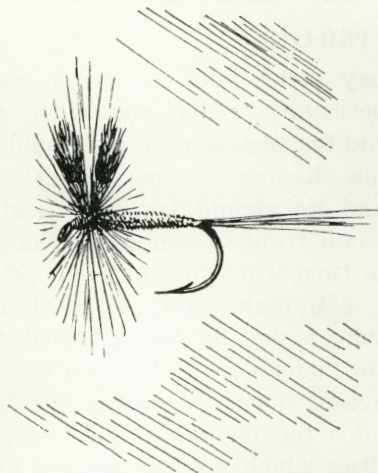
Spiders have long hackles sparsely tied

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 paramount 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 rod, reel, and line 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

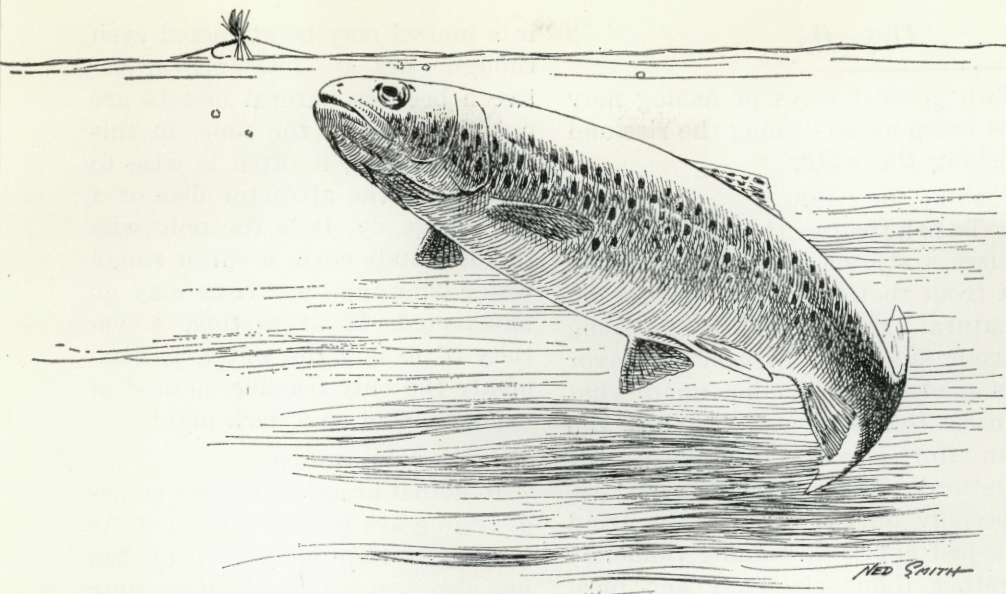
pay strict heed to avoid making betraying reflections with shiny rod ferrules or reel, he should keep his shadow off the fishing water, and he should try not to startle small trout or other fish that may in turn warn his intended prize.

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 floating line is used, it is usually helpful to dress the line before fishing.

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 in particular 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 frequently may be taken most regular with dry flies, and only dries. Thus, the complete, all-season angler must master dry fly fishing to consistently take trout.

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

. . . Dry fly

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:

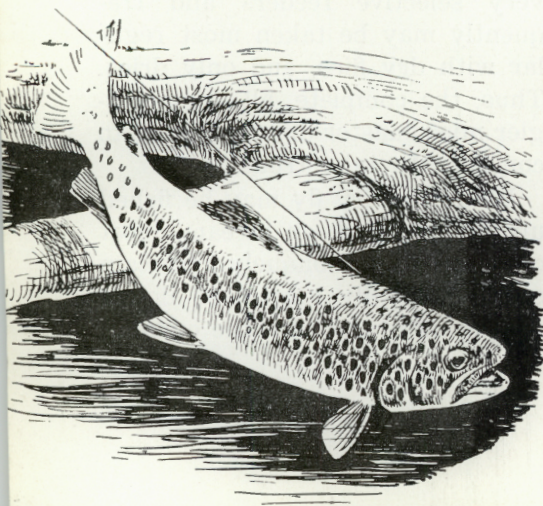
Working up a stream while casting the fly to float over each likely spot that may harbor a trout without necessarily seeing the trout rise is called fishing the water. In this manner any trout interested

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 to adequately 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 bivable, 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 commonly 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. #

. . . Conservation

Continued from Inside Front Cover

have definite and different ideas of what Conservation means.

Long before my employment with the State Conservation Department, I had strong convictions as to the proper means of correcting our conservation problems for the future. I knew that one-tenth of the solution of the problem consisted of management and protection, but that nine-tenths would have to be the education of those who use the resources and those who will. Hence, I chose the slow and arduous pathway toward educating the masses. It did not involve just the sportsmen, nature-lovers, or farmers, but everyone in our State, young and old—draftsman, banker, statesman, carpenter, doctor, lawyer, teacher, student, mother, father, and children to be.

It was the Fish and Game Division who fostered the first full-scale Conservation Education program in our State, and their records show the thousands of programs, exhibits, and so forth that were presented across the State. Every city and hamlet heard the word Conservation—how and why it must be practiced by everyone. But today, everybody is jumping on the bandwagon, for they are beginning to realize the place and importance of Conservation as the lasting antidote.

As sportsmen—at times you may have thought that you were

paying for it, but that you were being neglected. Too many programs for — 4-H'ers, Scouts, schools, P.T.A., service clubs, garden clubs, Church groups, camps, professional organizations, municipal groups, and so on. But I had to plow and cultivate all fields of human relationship before seeds could be planted. They were planted and nurtured for the benefit of all, and their fruit-bearing results are evidenced in our state today. I could relate stories by the hour as to when and where seeds were planted and are now flowering as ever-bearers.

A few examples—The beginning of some pollution abatement on the Passaic and Raritan Rivers was through some of the communities on their banks, who were indoctrinated with pride of stewardship. Many groups were instilled with the enthusiasm for the acquisition of lands and waters for public use. And most of all, the sincere philosophy of Conservation as related to the future living of the youth of those days, many of whom have followed the profession as a vocation, or are ardent conservationists planning today's programs. This instillment into their hearts was done with books, but, wherever possible, right out where the problems existed.

You know that there has to be a beginning for everything, and, at the beginning a conservationist was thought of as a "queer one with a butterfly net that he should have put over his own head."

For years we were told of our



Mr. Marron instills conservation in the outdoors where the problem exists

devastations—the last heath-hen, passenger-pigeon, polluted streams, lost forests, floods and erosion, destroyed wildlife habitat, and hundreds of other spoils committed by our forefathers (and present fathers, too). It would seem that the word Conservation has a far too broad and complex meaning to be defined in one or two sentences, or even in one of two paragraphs, so the average individuals pass it by as something that does not pertain to them.

Conservation and planning are synonymous. So let's change our word of Conservation to Planning. Isn't good planning, conservation? Had we *planned* our communities

years ago with green areas, we would not have had slums and the products of slums. Had we *planned* our industrial sites years ago, there could have been better working facilities for labor and management—and no POLLUTION. Had we *planned* our rural areas, we would have more recreational areas today. Had we *planned* our farming programs, we would have no surplus, but better produce, rested lands, and no wasted soil. Had we *planned* our fish and wild-life needs, we would not be striving to save our wetlands, habitat, and a place to hunt and fish.

Had we *planned* our forested areas for yearly crops and not ex-

. . . Conservation

ploitation, we could have avoided floods, water supply shortages. Had we *planned* the proper use of our precious water, we would have plenty for all, for generations.

You see, Conservation as I know it is **PLANNING**. For many years I have linked the two together. And

future. So let's reverse the procedure with rapidity—that ounce of prevention through planning. I may be an idealist, but may I assure you that I am a realistic idealist.

A successful Conservation Education program is not an idea of the moment. Rather, it is the result of cooperative effort over a long



Mr. Marron, center, discusses conservation with Governor Meyner on TV

all this could have been, without the taxpayer paying for it. We have found that the errors of yesterday had their culmination in such conditions as I have stated, and their correction, if that is possible, is overtaxing our already heavily burdened financial status. The situation should be reversed. Instead of paying for our fathers' follies, we should be paying for our

period of time, enlisting the cooperation of many groups. I knew that if New Jersey was to maintain its natural resources and provide for the wise use of them, there must be created an understanding and appreciation of these resources; not on the part of the persons engaged in the present task of fish and game or forestry management, but also on the part

of the boys and girls who will be using them in the future.

The early development of conservation attitudes and appreciation in the youngsters will determine to a great extent his or her treatment of the resources, knowing of their complete dependence upon them.

When the Good Lord blessed New Jersey with its rich agricultural lands, lakes, streams, the once vast expanses of forests, marshlands, and fringed us with an ocean of incalculable resources, He certainly never intended that these resources should be exploited for a few, or even only several generations of human beings.

In our program in New Jersey, we came down to earth in this broad and important field. As the basis for practical procedure, we tried to teach the whence, where, and whys. When they understood the whence, where, and why, we were on our way towards the goal. For a great deal of this function, we depended upon the schools, colleges, and universities of our State, and upon those who report, translate, and interpret the activities. Education builds the firm foundation needed for the structure of good citizenship, and good citizenship includes stewardship of all our resources.

For the past fifteen years, a Conservation Course for teachers has been conducted at the Trenton State Teachers College during the summer months, and each year's graduation created more missionaries for resource management.

The State School of Conservation, jointly sponsored by the State Departments of Education and Conservation, has been in operation for almost as many years, serving both youth and adults. Thousands have passed through its portals of outdoor training.

We would not have as much today had we not started years ago with the "softening." When the land forces were ready for an invasion, the air and sea bombardment started first. We have bombarded. Maybe not hard enough, for some of our landing crafts have not been beached, or if they have, they were unable to hold the area.

In a way I am like the Russians — (a very small way). I don't talk about my "sputniks" until they are in orbit. Well, this conservation missile has been in orbit a long time, but it needs the same reaction that the science courses got in our schools and colleges after the Russians launched their first missile successfully, and before we did. What do we need to create the same all-out increased emphasis for Conservation courses?

Surely in New Jersey we can look backward first, for we have gone forward in Conservation Education on a sure-footed basic program, though long in process but short in the final lap. Teaching the teacher, who will teach the teacher, who will teach the child.

These many words I have spoken about the past have to do with the

. . . Conservation

future of Conservation in New Jersey. For if we are planning the resource needs for our exploding population and industrial growth, the past programs have eased the ways.

My faith in youth is boundless to do the major job in resource management that points towards a brighter horizon than could be seen not too many years ago. They have given us the key to the future of Conservation in our State. Watch them, as I have, in their many performances in Youth in Government days—listen to them, as I have, in their conferences, debates, and discussions.

The future of Conservation in New Jersey needs the man-in-the-street to be informed of the resource management programs of his State. Has not the fish or game biologist, the forester, or water resource specialist, found this to be true?

When we want to have a State bond issue to purchase the last vestiges of wilderness (and we must do it now) the general public will say, yes or no. When we want to set aside the remaining wetlands, forests, uncultivated fields, and waterways, in a master plan, the public will say, yes or no. When we further squeeze our wild-life into smaller quarters and they become obnoxious to the public, they will decide our fate.

You have heard within the past two years that the problem was sociological, not biological. When

our industry supports a community and it is supposed to straighten out its pollution problem—the community will decide, regardless of the law.

After these many years, we now hold the key to the future of Conservation. Let us not hold it until the lock is so rusted it will not open.

Yes—yesterday we found the key—today it is in the lock—tomorrow the key must be turned.

We should further remember that no greater shrine will be long to weather the sands of time than that freckle-nosed boy, grown to manhood, steeped and molded in concepts and appreciation of the natural beauty of God's out-of-doors about him; a natural beauty saved forever and a human life, endowed so richly and so very fit, to once again endow. No greater heritage can grace the brief allotted time of just another citizen concerned of his stewardship or a public servant who really loves his community, state and country.

I took a piece of plastic clay
And idly fashioned it one day
And as my fingers pressed it, still
It moved and yielded to my will.

I came again when days were past
That bit of clay was hard at last
The form I gave it still bore
And I could fashion it no more.

I took a piece of living clay
And gently pressed it day by day
And molded with my power and art
A young child's soft and yielding heart.

I came again when years had gone
It was a man I looked upon
He still that early impress bore
And I could fashion it no more.

Conservation Education

for teachers

JULES W. MARRON, SR.
Supervisor, Public Relations

Back in the 1930's the C.C.C., Civilian Conservation Corps, built the more than twenty-five buildings on both sides of the impoundment of Lake Wapalanne. Some were constructed of stone while others were built of wood. Being familiar with the C.C.C. Camp and the area, in the early 1940's I surveyed the tract as a potential Conservation Camp.

It was in 1949 that Dr. E. DeAlton Partridge, present president of Montclair State College, first inspected the area, and the State Department of Education and the State Department of Conservation and Economic Development jointly initiated the New Jersey School of Conservation. Both Mr. and Mrs. Partridge supervised the camp until 1954 when Dr. Partridge assumed his duties as president of Montclair State College. The school was then under the direction of Dr. Edward Ambray, and like his predecessor, Mr. and Mrs. Ambray pursued the same course of outdoor instruction with a constant growth of participants. Following Dr. Ambray, Mr. Benton Cummings directed the camp and he has since developed and is directing a private conservation camp known as the School of the Outdoors.

By 1957 the present director and his wife, Clifford and Virginia Emanuelson moved into camp with their family to start the year-round operation "Conservation Education."

I am proud that we, through the creation of the demand for this need of conservation education, contributed to the conception of the School of Conservation. Through its growing years we have finally seen the goal accomplished, with the lasting antidote for resource management, teaching the teacher who will teach the teacher who will teach the child the needed knowledge, attitude and respect toward our natural resources.

This same story can be told of the Conservation Workshop, conceived and conducted by Dr. Victor Crowell of the Trenton State College. The base camp is the college campus but the students travel many miles around the State, viewing first-hand our resource problems and corrections. This course has been in operation since 1945 and each year more conservation missionaries spread the gospel. Here, too, since its beginning we have had the pleasure of assisting with the program. #



THE NEW JERSEY

CONSERVATION EDUCATION WORKSHOP

PROFESSOR VICTOR L. CROWELL, *Director*

THE SUMMER of 1961 will again find a small but enthusiastic group of public school teachers participating in the New Jersey Conservation Education Workshop on the campus of the Trenton State College. For those readers who are not familiar with this workshop, a few words of explanation may be in order.

The Conservation Education Workshop is actually a three weeks course in which are enrolled teachers from all sections of New Jersey. Since its inception in 1946, approximately 350 teachers from the 21 counties of the state have been enrolled in the course. The teachers devote their entire day to discussions, illustrated lectures by specialists from private, state, and federal agencies, and field trips to points of interest in New Jersey. The group travels about 800 miles in the three weeks to study conservation practices in state parks, forests, hunting and fishing grounds, game farms, and so forth. Opportunity is provided for the teachers to talk with twenty-five or more specialists and with the director of the workshop about problems related to the wise use of New Jersey's natural resources. The teachers learn about desirable conservation practices peculiar to our state. They are also encouraged to work out a program of conservation education appropriate for their own classroom situation.

Many of the consultants who meet with the teachers and who conduct the field trips are representatives of the Department of Conservation and Economic Development. From every division of this department the workshop has received whole hearted cooperation. Invariably the teachers express amazement at the dedication of the consultants to their work and the enthusiasm which they convey to the teachers.

Scholarships for teachers attending the workshop have been given annually by the Garden Club of New Jersey. Several scholarships have also been furnished by sportsmen's clubs.

It is gratifying to all who give so generously of their time and experience to the workshop to know that the interest of the participating teachers does not end when the workshop closes. The teachers develop attitudes and interest toward conservation which influences their teaching throughout the year. At every grade level more and more children are being made to realize that conservation is of direct concern to them and their families. The teaching of science and social studies, in particular, is enriched by the teacher's first hand experiences in the three weeks session. Many teachers use conservation as a theme for assemblies and parent-teacher meetings. Other teachers have given talks on conservation on local radio stations.

It is felt that the Conservation Education Workshop has played a small part along with other interested organizations in overcoming to some degree through education the ignorance and indifference of the public. This is the way progress should be made in a democracy. Laws alone are ineffectual unless the persons affected by them believe in the worth of the laws and wholeheartedly support them. #

Enrollments for the 1961 Conservation Education Workshop are now being accepted and information concerning the program and scholarships may be obtained by writing to Professor Victor L. Crowell, Director Conservation Education Workshop, Trenton State College, Trenton 5, New Jersey.

← *Professor Crowell and a group of teachers visit a state game farm*

Teacher Training for

OUTDOOR EDUCATION

By CLIFFORD and VIRGINIA EMANUELSON

N. J. State School of Conservation

Photographs by DONALD BETTEW

WHERE and when should teachers be trained for outdoor education experiences? Should a teacher be a science specialist or expert before embarking on learning experiences outside of the classroom? Is "conservation" a way of life which should be stressed in our education programs?

These questions and many more in the same vein have been the focus of attention in many discussions, conferences, and publications in the last decade. Outdoor education has taken root in our foundation of learning processes.

Area of Need

We must work from where we are. There is a need for teacher-training in this area on the undergraduate level. Our future teachers should be prepared to work with youngsters on all grade levels in taking advantage of their immediate school grounds, the community, county, state, and national facilities within their reach.

To achieve this goal the New Jersey Department of Education and the De-

partment of Conservation and Economic Development have jointly sponsored the N. J. State School of Conservation located in the Stokes State Forest, along the Kittatinny Mountain Range.

Dr. Robert H. Morrison, who was assistant commissioner of education at the time the school was founded, has stated that the prevention of the waste of human and natural resources is one of the purposes of the school. In the 1957 N. J. Outdoor Education Campshop Report, Dr. Earl Mosier, present assistant commissioner for higher education, added that "Outdoor Education has two goals . . . The first-hand study of the phenomenon of nature through the integrated disciplines of geology, botany, and zoology and the first-hand careful exploration and use of the land, rivers, lakes, and forests for economic and recreational values."

One Week Outdoors

The six State Colleges — Glassboro, Trenton, Newark, Paterson, Montclair,

Judith Weber, a science major at Paterson State College, learns how to identify leaves at the School of Conservation ➡



JUNE, 1961

. . . Outdoor Education

and Jersey City — have inaugurated a program of outdoor education. Within a few years, students of the colleges will be living one week of their teacher preparation at the School of Conservation in an outdoor environment.

Through the cooperation of the Conservation Department, state resource personnel have been made available for the program. They cover the various departments of geology, forestry, water, wildlife, soil, and recreational use of public lands. These persons appear on a daily basis to stress the use and values of soil, water, forest, and wildlife in



Students of the six State Colleges live one week in an outdoor environment

During the spring of 1959, 204 students representing all six colleges started the program on a voluntary basis. In the fall of 1959, 205 students participated. During the spring of 1960, 600 students have participated in this program. It is anticipated that in the coming school year 2,400 students in the State Colleges will have at least one week's experience of learning and living in this natural setting.

the balance of nature and the use of our natural resources.

Together with each group of students, faculty members from each college participate as core members to work with the permanent staff of the School of Conservation. The college staff members carry through with the program and integration of experiences within their general teaching preparation. #

Reprinted in part from N.J.E.A. Review



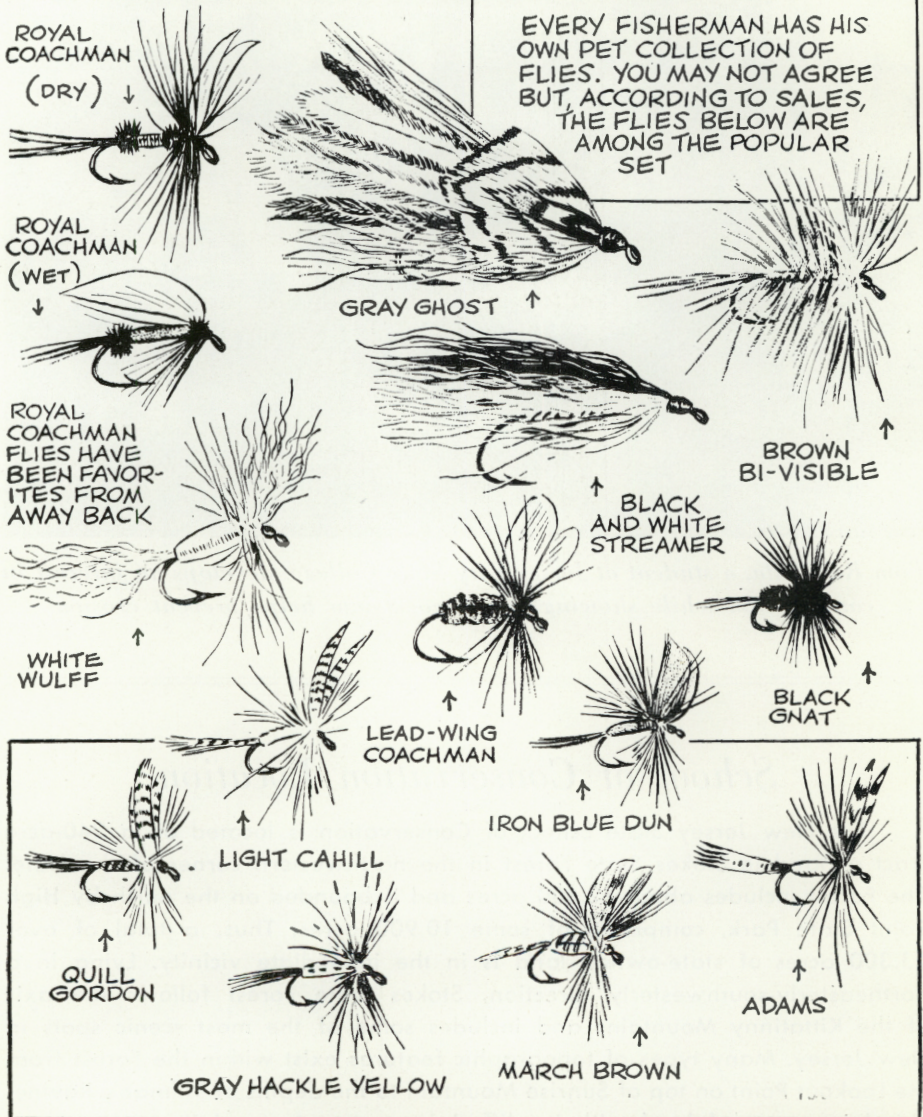
Tom Ricadella, a student at Jersey City State College, develops an interest in conservation while showing how a rock dam helps prevent erosion

School of Conservation Location

The New Jersey State School of Conservation is located on a 240-acre tract of land in Stokes State Forest in the northwestern corner of the state. The Forest includes about 12,400 acres and is bounded on the north by High Point State Park, comprised of some 10,900 acres. Thus, a total of over 23,300 acres of state-owned land is in the immediate vicinity. Lying in a northeasterly-southwesterly direction, Stokes State Forest follows the axis of the Kittatinny Mountains and includes some of the most scenic spots in New Jersey. Many types of topographic features exist within the Forest from the Lookout Point on top of Sunrise Mountain to the depths of Tillman's Ravine. This large tract of land with its differing topography and its acres of unspoiled natural beauty is a most desirable area for carrying on a program in outdoor education. The School, which borders Lake Wapalanne, is about nine miles northwest of Branchville, off Route 206, in Sussex County. It is accessible by hard-surfaced roads. #

Fur, Fin ^{and} Campfire

By JACK SORDS



Check the Compendium of Fish Laws for fly-fishing regulations which are currently in effect in certain designated waters

COUNCIL HIGHLIGHTS

JUNE 1961

The open session of the regular monthly meeting of the Fish and Game Council was held in Trenton on April 11. In addition to the Council, Director, and Staff the following attended: William Backus, Henry Schaefer, Lillian Godown, Edmond Shuler, and Roy Williams.

Pollution Control

Commissioner Bontempo and Commissioner Kandle and Robert Shaw of the State Health Department met with the Council to discuss coordinated effort for pollution cleanup in the state.

Discussions concerned problems encountered in attempts to clean up pollution. Often plants locate in areas and commence operations without the knowledge of the State Health Department. Also, as plants increase in size, their facilities for waste disposal become inadequate. In such cases it should be made a prerequisite that treatment facilities be expanded before the plants themselves are allowed to expand.

Commissioner Kandle stated that since the inception of the Governor's interdepartmental committee much progress is being made. There are 15 more ways of handling sewage now than were available before. The main difficulty is in coordinating with municipal planning.

Mr. Shaw explained that the cleanup of the Hackensack River is very much alive; however, it will take a great deal of time to make the Hackensack a clear stream again. Tremendous progress has been and is still being made. However, it is a problem that will always be present. He explained the Department's method of handling pollution cleanup and the necessity for a cleanup upstream and gradual descent to the lower reaches.

Mr. Shaw stated that his Department has a case against an offending chemical company in court. Possibly this case and the Fish and Game Division's suit could be joined, thereby making the case even stronger.

Mr. Shaw urged that irregularities concerned with waste disposal in Bergen County should be immediately reported to the Bergen County Sewerage Authority. He promised that prompt investigation would be made by them on all such complaints made in the interest of being constructive and cooperative.

Commissioner Bontempo urged continuation of conferences and exchange of information. He stated that relationships between the two Departments have never been as good as they are today.

Director Underhill explained that the Department of Health Pollution bill has been modified to the extent that industries located in a non-potable watershed, when their effluent will go through a municipal treatment plant which has already been accepted by the

. . . Council Highlights

Department of Health, will not have to submit specific plans to the Department of Health. This will save a great deal of paper work.

Discussions ended on a note of optimism and a feeling that a great deal can be accomplished by a mutually planned program of action combined with a workable system of reporting. In this connection, the Director stated that the State Federation of Sportsmen's Clubs is at present working on a system of pollution reporting which should prove most helpful. Commissioner Kandle assured the Council that all reports received are processed thoroughly—investigation is made and any possible action taken.

After Commissioners Kandle and Bontempo and Mr. Shaw left, a motion was made by Councilman Lunsford, seconded by Councilman Sheppard that a note of thanks be sent to these gentlemen for taking the time to discuss these matters with the Council. All approved and the motion carried.

Gravel Operations

Director Underhill reported on a cooperative effort with the Health Department, through the use of the public health law rather than the Fish and Game law to reduce or eliminate silting of stream beds by construction companies taking gravel. (The Division cannot prove a fish kill or permanent destruction of habitat under our law). Also, it is hoped that something can be worked out to block the type of pollution caused by the Highway Department in their gravel taking operations. To date we have been unable to do this. While they have agreed to create a series of pools and riffles which will eventually improve the stream, silting is still going on downstream and it takes two or three years for a stream to recover.

Round Valley and Spruce Run

The Director reported that contracts have been let for reservoir construction at Round Valley and Spruce Run and major construction will commence this spring and summer. Director Shanklin reports that both areas must be closed to hunting this fall. Director Underhill, however, is trying to work out arrangements whereby the area in the vicinity of construction will be closed but the remainder of the area can be left open.

Green Acres Bills

Director Underhill stated that the numbers of the Green Acres bills were A-540 and A-541. Copies of these bills will be sent to the Council members as soon as available.

He stated that the proposed legislation incorporates just about

everything that should be in such an acquisition program, and he is quite optimistic that these bills will receive the support needed to pass them. Certain details have yet to be smoothed out with the N. J. Taxpayers' Association, and the New Jersey League of Women Voters. He feels that basically these groups favor the legislation but merely oppose the method of financing.

Pequest Construction

Concerning construction at Pequest, the Director reported that the Division is definitely proceeding with the engineering. Presently the Division is exploring the feasibility and possible savings by the use of prefabricated-type construction for the ponds.

Game Management Report

Chief MacNamara stated that deer survey work is being conducted in South Jersey at the present time. Definite information will not be available until the information has been worked over and put on a statistical basis. There are indications that there has been a drop in deer in South Jersey, which is quite reasonable to expect after the severe winter. Also, there are the problems of dogs killing deer and shifts in population, but the overall picture looks very good.

The Manahawkin project is nearing completion. Excellent co-operation has been received from the State Mosquito Control Commission.

Fisheries Management Report

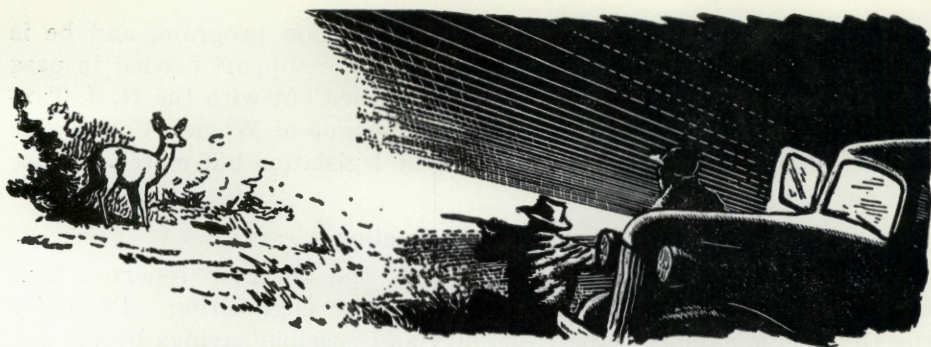
Chief Hayford stated that it appears that the season trout distribution total will be 525,000, plus 62,000 federal fish. Mr. Hayford will have report for the Council on the success of the federal fish stocking program at the next Council meeting.

Conservation Officers Report

Chief Coffin stated that reports indicate that fishing pressure for the opening was not as heavy as usual, although a little heavier on some of the major streams. Work on the Conservation Officer Manual has been delayed by press of other business, however, this will be resumed shortly.

Stream Easements

Concerning stream easement rights, Director Underhill stated that it is planned to have four or five Conservation Officers in certain key areas sound out landowners in those areas to ascertain what their attitude might be to selling the Division fishing rights to portions of streams. The Director feels that if the Division can acquire parking areas and access, and have the right of public fishing written into the deeds for five or ten feet on each side of the stream, a great saving over the cost of acquiring outright ownership would be achieved. #



VOLATORS ROUNDUP

FEBRUARY 1961

Defendant

Thomas Lesperence, 29 Poplar St., Penns Grove
 Thomas Lesperence, 29 Poplar St., Penns Grove
 Thomas Lesperence, 29 Poplar St., Penns Grove
 Allan Cooper, R.D. 1, Mays Landing
 Allan Cooper, R.D. 1, Mays Landing
 Allan Cooper, R.D. 1, Mays Landing
 Wm. Foster, Jr., R.F.D. 172, Columbia Rd., Egg Harbor
 Wm. Foster, Jr., R.F.D. 172, Columbia Rd., Egg Harbor
 Daniel Ezzi, 150 Wootton St., Boonton
 James R. Wild, Third St., Elwood
 James R. Wild, Third St., Elwood
 Frank A. Perona, Jr., Prince Albert St., Elwood
 Frank A. Perona, Jr., Prince Albert St., Elwood
 Victor Kaczor, Main St., Imlaystown
 Victor Kaczor, Main St., Imlaystown
 Victor Kaczor, Main St., Imlaystown
 Earl Obert, Glenwild Ave., Bloomingdale
 Alfred Crute, 263 N. Walnut St., East Orange
 Melvin Sliker, 5 Union Place, Newton
 Donald E. Gray, 265 8th St., Hoboken
 Robt. Kelly, Van Nostrand Ave., Jersey City
 Walter J. Crawley, 721 Palisade Ave., Union City
 Harold Sliker, 26 Union Place, Newton
 Carlo Francovilla, R.D. 2, Newton
 James Aten, 86-88 Front St., Paterson
 Harold Wright, 27 New Hampshire, Newton
 Michael Poczynok, 82 Canal St., Jersey City
 Joseph Stoop, 151 Browning Ave., Trenton
 Joseph Stoop, 151 Browning Ave., Trenton
 Joseph Stoop, 151 Browning Ave., Trenton
 Harry Dampf, 208 Buffalo Ave., Egg Harbor City
 Wm. J. Kelly, 33 Concord St., Jersey City
 Wm. Wright, 151 Lincoln Park Rd., Pequannock
 Wm. Wright, 151 Lincoln Park Rd., Pequannock
 Allan R. Heinke, Jr., Hillcrest Ave., Towaco
 Zenko Diaczuk, Main Rd., Towaco
 Thomas Gordon, 125 Empire Ave., Hilltop
 Edward B. Ross, Glade Rd., Delmont

Offense

Illegal firearm
 Hunt closed season
 Hunt aid of lights
 Hunt deer closed season
 Hunt no license
 Uncased gun
 Hunt deer closed season
 Uncased gun
 Tag not displayed
 Hunt deer closed season
 Uncased gun
 Hunt deer closed season
 Uncased gun
 Illegal missile
 Illegal firearm
 Hunt no license
 Uncased gun
 Illegal missile
 Gang hook in fly stretch
 Hunt no license
 Hunt no license
 Hunt no license
 Gang hook in fly stretch
 Gang hook in fly stretch
 False information
 Loaded gun in auto
 Gang hook in fly stretch
 Illegal firearm
 Hunt no license
 Hunt with rifle
 Hunt deer at night
 Illegal poss. deer
 Hunt no license
 Illegal firearm
 Hunt no license
 Loaded gun in auto
 Loaded gun in auto
 Loaded gun in auto
 Illegal missile

Penalty

Jail
 Jail
 Jail
 Jail
 Jail
 Jail
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 Jail
 Jail
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Defendant

Robt. Grafe, Black Horse Pike, Williamstown
 Frank Kulesza, R.D. 1, Box 269A, Flemington
 Carl J. Stolinski, 1031 Morton St., Camden
 Joseph Kravac, 82 Briarheath La., Clark
 Leroy Goodwin, Jr., 237 Wilson Rd., Neptune
 Wm. Eppes, Madison Ave., Mt. Holly
 Wm. Eppes, Madison Ave., Mt. Holly
 Charles Cooper, Prince St., Chatsworth
 James Leek, Jones Mill Rd., Chatsworth
 Ronald Ingram, 7278 Cedar Ave., Pennsauken
 Wm. Klnmer, 225 5th Ave., Maple Shade
 Frank Radey, Jr., 312 Kings Hwy., Haddonfield
 George Wenzel, Frankfurt Ave., Egg Harbor
 George Wenzel, Frankfurt Ave., Egg Harbor
 George Wenzel, Frankfurt Ave., Egg Harbor
 George Wenzel, Frankfurt Ave., Egg Harbor
 Robt. Wood, 130 Liverpool Ave., Egg Harbor
 Robt. Wood, 130 Liverpool Ave., Egg Harbor
 Robt. Wood, 130 Liverpool Ave., Egg Harbor
 Robt. Wood, 130 Liverpool Ave., Egg Harbor
 John Linasczuki, 377 Indiana Ave., Long Branch
 Atl. & Pacific Tea Co., Delsea Dr., Glassboro
 Robt. Smoke, 535 Sterling Ave., Lakewood

Horace Cowdrick, 1927 Central Ave., West Belmar

James Clark, 56 Willow St., Glassboro
 Stanley Platt, Five Cross Rd., Clementon
 John K. Parks, R.D. 3, Worrel Rd., Vincentown
 James Phillips, Jobstown-Jacksonville Rd., Mt. Holly
 Llowell Welnak, 128B Haddon Hills, Westmont
 James Vicari, 69 Wales Ave., Jersey City
 Willard Woehrl, 13-21 River Rd., Fairlawn
 James Dixon Lyons, 49 Lakeside Ave., Haskell
 Lee Roy Shipp, R.D., Blairstown
 Luster Schwinge, 315 Rochelle Ave., Rochelle Park
 John Hartman, 103 Carnation St., Bergenfield
 Edward Miller, 4513 Broadway, Union City
 John E. Siple, R.D., Blairstown
 Joseph Conover, Jr., R.D. 2, Deer St., Absecon
 Carl Eichmyer, 2232 White Horse Pk., Pomona
 Elmer Stonecipher, Hillcrest Blvd., Warren Twp.
 Wm. Stonecipher, Old Stirling Rd., Warren Twp.
 LeRoy Revis, 51 Passaic Ave., Nutley
 LeRoy Revis, 51 Passaic Ave., Nutley
 Wm. A. Newland, Brookside Dr., Martinsville
 Thomas T. Lee, Peterson La., Heislerville
 Thomas T. Lee, Peterson La., Heislerville
 Thomas T. Lee, Peterson La., Heislerville
 Thomas T. Lee, Peterson La., Heislerville
 James Williams, 20 Atl. Terr., Bridgeton
 James Williams, 20 Atl. Terr., Bridgeton
 James Williams, 20 Atl. Terr., Bridgeton
 Stanley Springsteadak, 421 Smith St., Millville
 Stanley Springsteadak, 421 Smith St., Millville
 Stanley Springsteadak, 421 Smith St., Millville
 Joseph Hisko, Box 56, Readington

Offense

Tag not displayed
 Illegal missile
 Hunt closed season
 Illegal poss. bird
 Illegal missile
 Loaded gun in auto
 Hunt no license
 Loaded gun in auto
 Hunt from auto
 Hunt from auto
 Illegal poss. bird
 Fail to exhibit license
 Hunt deer closed season
 Uncased weapon
 Poss. deer closed season
 Hunt deer with rifle
 Hunt deer closed season
 Uncased weapon
 Hunt deer with rifle
 Poss. deer closed season
 Loaded gun in auto
 Illegal poss. three striped bass
 Uncased firearm
 Uncased firearm
 Loaded gun in auto
 Loaded gun in auto
 Uncased firearm
 Uncased firearm
 Procure license wrongfully
 Hunt no license
 Illegal missile
 Poss. untagged deer
 Negligent use of gun
 Hunt deer before hours
 Hunt deer before hours
 Hunt deer before hours
 Hunt no license
 Illegal poss. deer
 Illegal poss. deer
 Fail to tag deer
 Loan license
 Loaded gun in auto
 Hunt aid of lights
 Fail to tag deer
 Hunt no license
 Loaded gun in auto
 Hunt aid of lights
 Uncased firearm
 Hunt deer closed season
 Hunt deer at night
 Loaded gun in auto
 Hunt deer closed season
 Hunt deer at night
 Loaded gun in auto
 Tag not displayed

Penalty

5
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 Jail
 Jail
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. . . Violators Roundup

Defendant

Reginald Marlowe, 32 E. 12th St., Bayonne
 Walter Schmidt, 807 Broadway, Bayonne
 Kenneth Williams, 165 N. Laurel St., Bridgeton
 Joseph Nutret, 7 Wilson Ave., Yardville
 Wm. Mayer, 336 Hickory Ave., Garwood
 Wm. Mayer, 336 Hickory Ave., Garwood
 Joseph Nutret, 7 Wilson Ave., Yardville
 Joseph Nutret, 7 Wilson Ave., Yardville
 Wayne Day, McAfee Rd., Hamburg
 Jos. R. Lipari, 120 W. 16th St., Bayonne
 Jos. R. Lipari, 120 W. 16th St., Bayonne
 Frank A. Torello, 120 W. 16th St., Bayonne
 Frank A. Torello, 120 W. 16th St., Bayonne
 Frank A. Torello, 120 W. 16th St., Bayonne
 Jos. J. Torello, Jr., 151 W. 20th St., Bayonne
 Jos. J. Torello, Jr., 151 W. 20th St., Bayonne
 Sas Mihaly, Ringwood Ave., Ringwood
 Everitt Mason, Jr., Leesburg Rd., Belleplain
 Everitt Mason, Jr., Leesburg Rd., Belleplain
 Otto Bochow, Frankfurt Ave., Egg Harbor
 John Bensel, 1535 E. North Ave., Baltimore, Md.
 Angelo Rodriques, Box 172, Egg Harbor
 Anthony Guida, 551 6th Ave., Lyndhurst
 John W. Smith, 167 Catherine St., Red Bank
 Anthony Palmeiri, 171 Navesink River Rd., Red Bank
 James Hanaway, Holmdel Rd., Holmdel
 Charles Bell, 689 Tinton Ave., Eatontown
 Terry B. Stroud, 8 Beaver Ave., Pennsville
 Carl Szmanski, 1911 Camplain Rd., Manville
 Donald English, Vorhiss Rd., Kinnelon
 John P. Gamble, 411 Delaware Ave., Riverside
 John Lynch, 17 Price St., Parlen
 Pasquale Capobianco, 90 Winans Ave., Cranford
 Frank Bonito, 307 Old Bergen Rd., Jersey City
 Frank Bonito, 307 Old Bergen Rd., Jersey City
 Leonard Francavilla, Box 132 Swartswood
 Joseph Karson, Jr., 194 Walnut St., Livingston
 Wm. Favretto, Jr., Lincoln and Magnla, Vineland
 Robt. Feierabend, 1792 Prospect St., Trenton

Offense

Illegal poss. firearm 20
 Hunt no license 20
 Illegal poss. Buckshot 100
 Loaded gun in auto 20
 Hunt deer closed season 100
 Hunt aid of lights 20
 Hunt deer from auto 20
 Refuse to show license 20
 Hunt on Sunday 20
 Illegal poss. doe 100
 Illegal poss. doe 100
 Illegal poss. doe 100
 Illegal poss. doe 100
 Illegal poss. doe 100
 Illegal poss. doe 100
 Illegal poss. doe 100
 Procure license wrongfully Jail
 Poss. goose closed season 20
 Illegal poss. deer closed season 100
 Illegal poss. 2 deer 200
 Procure license wrongfully 100
 Loaded gun in auto 20
 Illegal firearm 20
 Shoot deer closed season 100
 Shoot deer closed season 100
 Shoot deer closed season 100
 Hunt aid of lights 20
 Kill pheasant before season 20
 Illegal poss. pheasant 20
 Illegal poss. deer 100
 Poss. duck closed season 20
 Loaded gun in auto 20
 Hunt no license 20
 Discharge firearm upon road 20
 Kill 2 pheasants closed season 40
 False information 20
 Fish no license 20
 Uncased firearm 100
 Shoot geese over baited area 50

Penalty

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