

NEW YORK STATE
Conservationist

February-March, 1949



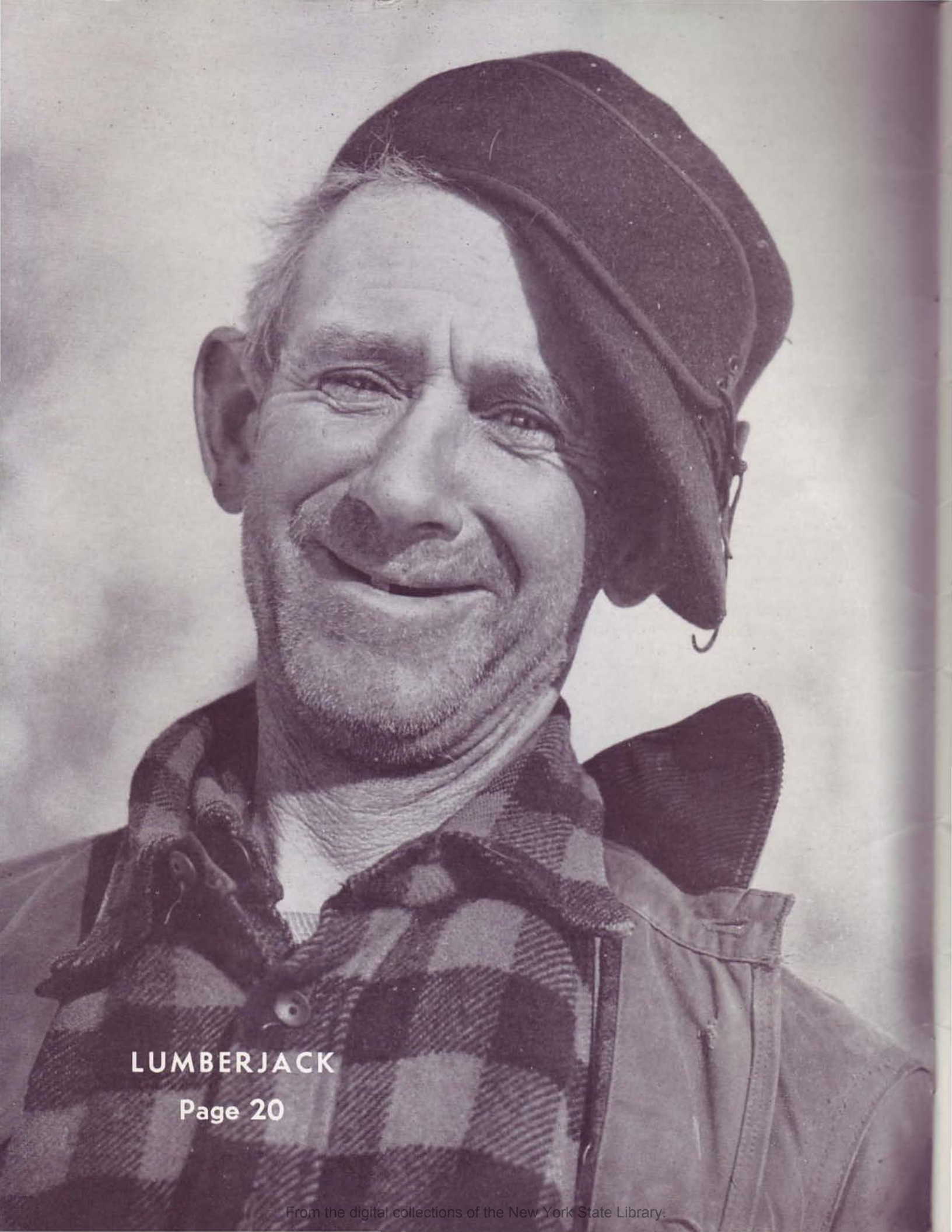
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AMERICAN WINTER SCENES
EVENING

STATE OF NEW YORK CONSERVATION DEPARTMENT





LUMBERJACK

Page 20

A BIGGER MAGAZINE—

WHY?

With this issue, an enlarged version of your magazine makes its first appearance. You have eight more pages to thumb through. The magazine still sells for a dollar a year, which most people seem to think was a good enough bargain even under the old system, but now, in defiance of current trends, you will get 20 per cent more for your money.

One reason we can do this is that the magazine seems to be taking ahold; a year ago our press run was 17,000 copies, now it's 49,000. We are happy but not complacent about this because if our circulation boom collapses, if you forget to renew your subscription, if you don't help us to sign up new subscribers, we'll be right back where we started in short order.

That would be too bad; we still have a long way to go—not just with the magazine but with the business of promoting conservation. After all, we're not in the publishing business just for the sake of providing interesting reading material to our subscribers, though we try to do that too. Our main purpose is to be useful. Our hope is that after reading about conservation, people will get out and do something about it, and generously sprinkled through our pages are suggestions of what might be done, and how.

There will be more of this sort of thing in the future. The eight extra pages, which a commercial magazine would add or subtract without thought and probably without consequence and certainly without comment, loom large to us, because we've added them mainly with the idea of being more useful. In the hope that more will get done.—
Editor

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NEW YORK STATE Conservationist

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STATE OF NEW YORK
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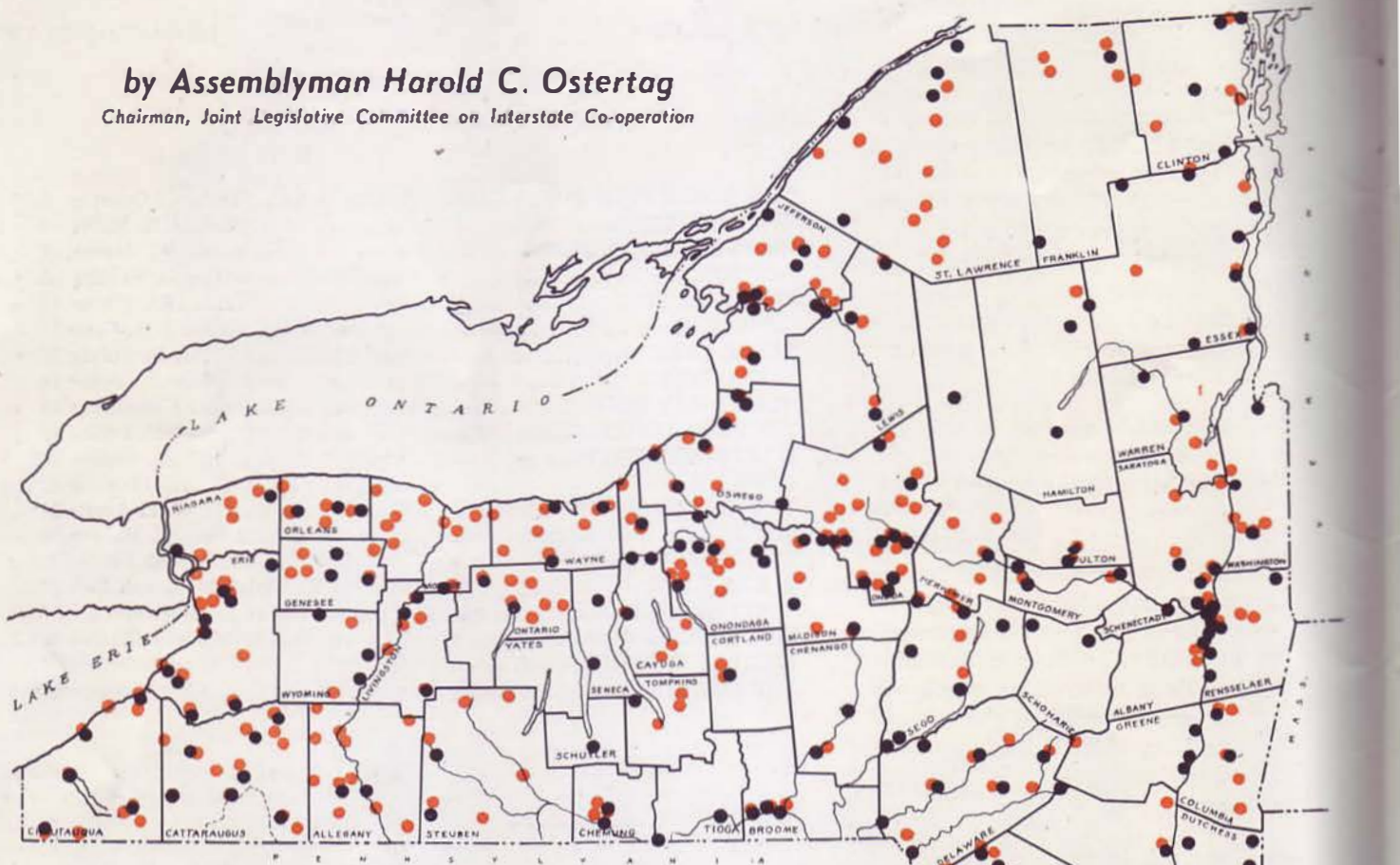
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This Business of POLLUTION

by Assemblyman Harold C. Ostertag
Chairman, Joint Legislative Committee on Interstate Co-operation



POLLUTION abatement, Deputy Commissioner Skiff observed in the last issue of *THE CONSERVATIONIST*, is the problem of the hour; and as this is written, it has become the problem of the moment. After two years of exhaustive (and I use the word advisedly) study, the Special Committee on Pollution Abatement of the Joint Legislative Committee on Interstate Co-operation has submitted to the Legislature a long-term program to rid the State's waters of a burden of wastes which has become truly staggering in proportions.

It is hardly necessary to tell conservationists that our waters are seriously contaminated. But our Committee's studies spell out the magnitude of the problem in unchallengeable statistical terms. They show that more than a

billion gallons of raw sewage and industrial wastes are going into the State's watercourses every 24 hours. They show that 115 municipalities containing almost one-third of the population of the Empire State are dumping raw sewage into rivers, lakes and coastal waters. They show that more than 400 smaller communities of 500 to 1,000 or more population are without sewers or treatment facilities, while thousands of industries add their millions of gallons of putrid or corrosive industrial wastes to the grand total. The miracle is, when you look at the picture thus quantitatively, that there is so much good water left in the State. The only reason for this is because social-minded individuals, civic officials and industrialists in all parts of the State have assumed the responsibilities and costs of waste treat-

BLACK DOTS
●
SEWAGE POLLUTION

ment over the years, even though it was unquestionably a heavy financial burden, and in the case of municipalities and industries, put them at a competitive disadvantage with those who operated without assuming these costs.

The size of this group is also impressive, our studies show. Thus 326 New York State communities have sewage treatment facilities (as against 530 which do not); 68 State institutions arrange for sewage treatment for their wastes (but 12 others do not); 6,655,000 urban residents of the State are served by sewage treatment plants (but 4,726,000 are not); and hundreds of industries are treating their wastes and in some cases converting them into saleable products (but thousands are dumping them untreated into waters which must then be used by their downstream neighbors).

Our Committee well realizes that no program to correct a condition of this magnitude and potential can be effectuated overnight, and that corrective machinery must be built within the framework of technical and fiscal possibilities. Our objective, therefore, has been to formulate a pollution control program which would put a halt at once to further degradation of State waters and make possible the correction of existing pollution on an achievable, systematic basis.

With these objectives, we have formulated legislation which calls for the creation of a water pollution control board within the Department of Health, with power to prohibit new pollution from entering the State's waters, and to provide for progressive abatement of existing pollution. The bill takes cognizance of the fact that the waters of the State must be used for many purposes, ranging from domestic water supplies and recreation to commercial and industrial uses. It does not contemplate

the conversion of waters in heavily urbanized areas into trout streams, but by the same token, it will insure that our trout streams do not become dumping grounds for industrial or domestic wastes.

Under the bill, all the waters of the State will be classified according to their best uses. Classifications will be set up by the pollution control board after public hearings and with due regard to the nature of the body of water, the character of the area, and the uses to which the water is to be put. Following the establishment of standards under this procedure, polluters will be required to eliminate contaminating discharges on a workable time schedule in accordance with the established standards.

SINCE it takes time to build treatment plants, and since, in the case of industrial wastes, successful means of treatment may have to be developed, the bill makes provision for time extensions to meet the standards set up under the classifications, but always on the basis of eventual elimination of the wastes. The bill provides civil and criminal liabilities for violations.

This approach, we are convinced, promises an effective and equitable solution to a highly complex and many-faceted problem. One of its major advantages is that it consolidates existing pollution abatement laws, now divided among the Health, Conservation and Public Works departments and creates an agency with authority to deal with the problem, whether the pollution in question affects human life or fish life.

A second important factor is that in the classification system, the bill provides machinery under which standards of purity can be set up and maintained within a given area. It should, therefore, prevent situations—all too familiar to sportsmen and conservationists—in which polluters may continue to dump contaminating materials into water-courses until the fish are killed, or serious threat to human life is created, before they are liable to legal action. Under the bill, the disposal of wastes into a body of water in contravention of the standards set up is itself cause for action by the pollution control board.

Perhaps the greatest advantage of the bill, however, is that it creates a program under which the degradation of the State's waters can be halted and a clean-up started on a systematic State-wide basis.

Pollution legislation is not new—nor is public interest in better pollution control. Legislative records show many

attempts to improve our laws, yet it has been a great many years since any State-wide advances have been made. "Died in Committee", "Killed in Committee", or "Defeated", are the usual obituaries.

Of some 45 investigations of stream pollution ordered over the years, this current legislative study is undoubtedly the most comprehensive. How it came into being; how it was assigned to our Committee; and how it has been conducted, was previously described in *THE CONSERVATIONIST* (Oct.-Nov., 1947). There is no need for repetition here, except to emphasize that our inquiry and our hearings and field inspections carried our Committee into every section of the State. Wisely, we believe, our Committee has had responsible representation from industry, municipalities and conservationists. Discussions have been long and exhausting—so much so that the group came to be dubbed the "Perspiration Committee". But generally speaking we have had the most earnest and sincere co-operation of all affected groups, plus a willingness to consider all aspects of the problem in the interests of a far-sighted, constructive and effective bill.

And finally, we have enjoyed the continuing encouragement and support of Governor Dewey. In his message to the Legislature of a few weeks ago he outlined the Committee's work and findings and said, "I cannot urge too strongly your favorable consideration of legislation that the committee will present this session. The problem merits prompt action".

WE sincerely believe our approach to this public problem has been sound and just. Our hearings gave our Committee first-hand evidence that our people need and want more effective pollution control. The legislation which we now recommend is the result of much study and careful thought. The Committee realizes that pollution control will require more than a new and progressive law—but it also knows that such a law is the first big step which must be taken.

There is every reason to believe that this legislation will be successful—but it must receive genuine public support. Those who for years have followed the fate of other State and Federal legislation in this field will know exactly what I mean.

The support of our Governor, our conservationists and our progressive leaders in our municipalities and industries will be of inestimable value in this effort to provide real pollution control—but—only the folks back home can make it sure.



RED DOTS

INDUSTRIAL WASTE POLLUTION

WOOD STOVES



Granddaddy of ranges, Swett, Quimby & Perry's 1875 Empire Heating Range was made in Troy. Showing the front with cooking plates, baking ovens and warming ovens. The rear projects back quite a ways, bricked up so that the front really set jomb-like into the room. Over, around and about it worked the women and lived the rest of the family; under and alongside it, the household pets congregated to eat, sleep, fight and settle things. Overhead hung clothes of all sorts. Beneath were boots and shoes for humans, bods and food for animals. On the top plate kettles boiled, stews stewed, flatirons, cough syrups warmed and food cooked. Meat roasted, feet toasted in oven.

THE experience eastern New Yorkers had with the year-end weather afforded a striking example of the value of a good wood stove. Freezing rain, sleet and wet snow broke off limbs, felled trees and toppled poles loaded with wires causing power failures that made mechanized heating plants useless. Elsewhere, floods cut off deliveries of coal and oil. Much suffering was alleviated where households had old stoves that could be set up during the emergency, and their stand-by worth for heating and cooking was priceless.

A good wood stove long has been invaluable to a great many people. It is still the simplest and most economical heating plant to install because it requires no system of transmission; by radiation and convection it diffuses heat directly to the air and to the objects in the room. It gave way to the hot-air furnace (as the latter did to the steam boiler) when buildings increased in size, and it took a back seat when gas and oil stoves became valuable as a means of heating isolated rooms in buildings or houses not otherwise connected with any heating plant. But the stove surrendered only on the factors of steady heat and infrequent attention which the furnace, boiler, and oil, gas and coal stoves could offer. Then too the use of wood as a natural fuel never was popularized to the extent coal, oil and gas have been.

The wood stove is now taking a new lease on life as these disadvantages are being overcome. Smart people are finding ways of modernizing the old stoves and are learning better methods of burning wood. Furthermore, the high price of coal and oil and the periodic shortages of these fuels are leading many people to take advantage of the woodlot and its hitherto wasted products. This is good conservation; New York has millions of cull hardwood trees that should be cut to make room for new growth, and, as explained on page 32, such trees make good stove wood.

Cast-iron stoves dominated the field from early Colonial days, with a few experimenting with sheet-metal. Their shape was usually like a box. An exception was the Franklin heater which simulated his fireplace-fireframe. Sides were called plates. The six-plate stove was the pioneer of the modern heater, became a ten-plate with insertion of an oven, and eventually grew into the cooking range-heater. Cylindrical or oval stoves were forerunners of the oval regulator stoves of today.

An oddity with a crank and turntable top is this one—a Stanley (Poultney, Vt.) Rotary Top Cook Stove. Two smaller raised turret-like parts on the turn table are actually of one piece that sits over the fire-pot. The story is that you started your meal on these two of the three raised parts, one with a regular lid, the other with a small griddle for a lid, then completed whatever else you had to cook by cranking the turntable so that the bigger turret swung into place over the fire-box as the other two swung out of the way but were kept hot in the rear. The lazy Susan-like top turned easily, its flat and raised surfaces radiated heat. Smoke was channeled through and out the rear. The fire-box was fed from the side; firelight escaped in front.



The pot-bellied stove put out by Van Wormer (Albany) bore the name Globe and is characteristic of those found in the old country stores, law offices or doctors' offices not so long ago.

In the Farmers' Museum store at Cooperstown the Van Wormer Globe is still used for heat and is a nostalgic touch that is completely in harmony with the rest of the wonderful-smelly articles found in this old merchandising mart, moved piece by piece from its original site to the Museum property. Note the drum on top for extra radiation of heat.



These Stanley Columned Heaters are illustrative of the iron casters' art at the height of its popularity.

Others like these have swan-necked columns with warming ovens above. The idea was to trap as much heat as possible and utilize it before it reached the chimney. Stanley also put out a chunk heater with decorations enough to satisfy the most discriminating person.

The Farmers' Museum is lucky enough to have an identical pair of Stanley chunk heaters, dated 1845, and dubbed by the staff as "The Twins".

Sometimes, (and one of the museum's Stanley columned stoves shows it), the cast-iron columns have gotten crocked, burned through or damaged so that ordinary stove pipe has been substituted for the columns. The urns on top and between the uprights of one held water to provide humidity.

Smoke pipes went out the rear of the tops. Some were fed by side doors; some doors opened in front to give a fireplace effect. They were as ornate as black cast-iron could be made. Many houses on big estates have one or more of these, usable if needed, but mostly for show-pieces. They are prized by antique dealers as well.



The invention of the oven sounded the death knell of the iron casting era. The industry went West with the emigrants; eastern foundries were forced to open western branches, and felt the effects of unionization of the iron workers and competition from prison labor. Now only a few factories in the Midwest and South make wood stoves. But ultra-modern ones are on the way.

—ROLAND B. MILLER

Makers of the Daniels Wood Chunk Furnace pictured on the next page also turn out ports for converting oil drums into stoves for ski lodges, camps, garages, etc. You've probably seen these oil drum stoves in picnic areas or backwoods cabins. The hermit, Noah

John Rondeau of Cedar River Flow in the Adirondacks, has one. If a larger barrel stove is required, a two or three-stove can be made with additional collars and brace.

This forms an efficient, economical, low-cost heating unit for burning oil, wood or rubbish to heat comfortably an average size camp or garage. Ports to convert include a door frame on head of barrel, bolts, legs, pipe collar, door. Adjust so stove

sets level. Of course you first have to find your barrel but that ought not to be too difficult.

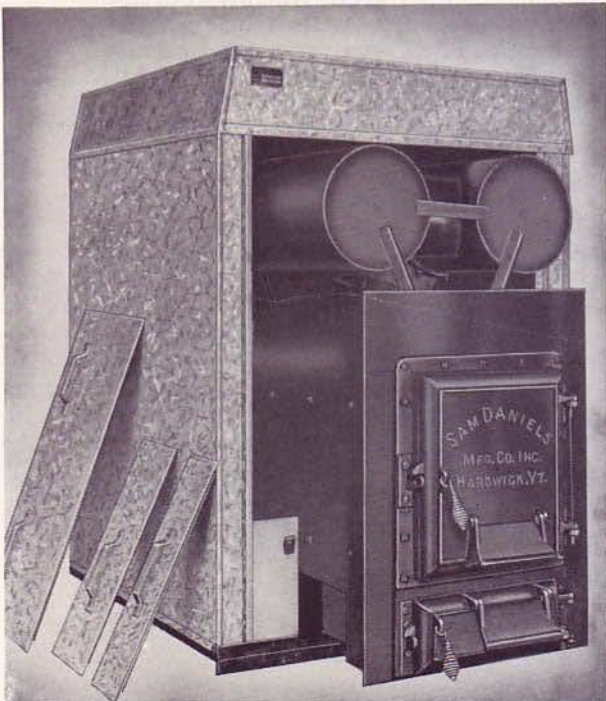


G. W. Eddy of Troy put out the Castle in 1853, almost a bric-a-brac-y heater that looks just like a castle with its turrets and spires, an outstanding specimen of delicate but serviceable casting. To have owned one of these was the height of extravagance in stoves. The Castle was fed at the side as were practically all chunk stoves. The tiny round swivel draft control on the apron hardly seems large enough for its purpose. Minus front doors or windows which many chunk heaters had, it had more surface to heat.

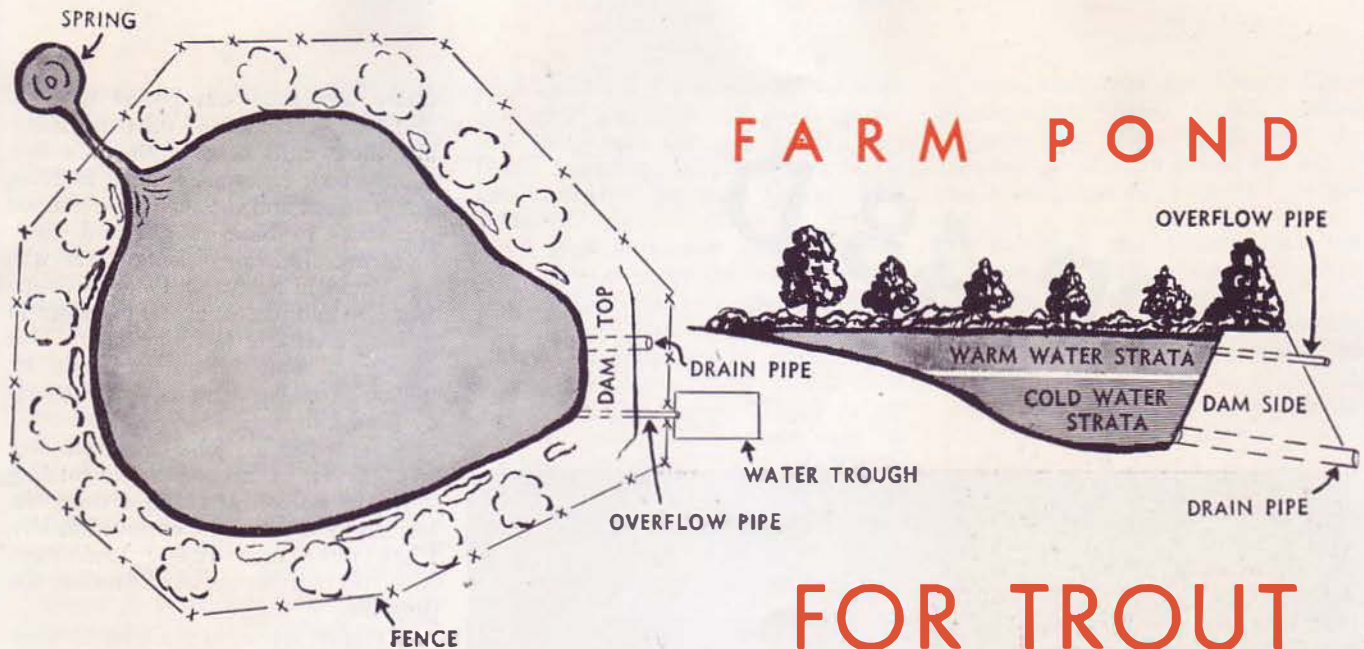


You'll find in the Shaker stove evidence that the Shakers did things simply and efficiently; their little cast-iron heater is typical. The Farmers' Museum collection, incidentally, includes besides two Shaker stoves in the Museum proper, another in the Shaker room in Fenimore House, across the main highway. (Both the Museum and Fenimore House are operated by the N. Y. S. Historical Association). Some Shaker stoves have heat drums on top for extra radiation. While this stove looks small, looks are deceiving; its fire-box is ample and it is heavy. Many camps in eastern New York boast a Shaker stove. Shaker stoves from old homes have found their way via auctions into the hands of collectors and dealers.

Poor Richard, lover of comfort and exponent of economy, put a frame on the fireplace, then made the fireframe portable by giving it a top, bottom, legs and andirons to keep the logs from rolling out on the floor. Smoke was piped to the abandoned fireplace. Eventually the famed Franklin heater evolved into the current model pictured here and is as highly prized as any wood heater.



There's even a furnace especially designed to make the burning of wood a simple procedure. It's made of steel with fire-pot and super-heat drums electric welded. The rectangular fire-pot varies from 30 to 60 inches and a big door permits burning of the biggest chunks. Large combustion chamber plus long fire travel and an upward trend produce maximum radiating surface (something the old time stove builders would have given a good right arm to have mastered). This furnace will hold fire all through the night and has proven its economical operating ability.



DEVELOPMENT of the potential values of small ponds in relation to general improvement of land use has recently received much attention. Directions for pond construction and management have been issued by various agencies and progress toward fuller development of pond values has been made. Even when built according to specifications, however, ponds vary greatly in suitability for various types of management. At this early stage in development of farm pond methods, present and prospective pond owners should be open minded toward choice of methods.

As far as fish are concerned, usual management recommendations for farm ponds are for largemouth bass and bluegills, according to a technique developed in the State of Alabama. There has not been time to test thoroughly this technique in New York and other northern states, but there is reason to suspect that results will be less than satisfactory in many instances.

Implementation of this type of management is complicated enough to require some expert advisory service in the average situation. It also requires a considerable amount of attention and care from the pond owner, in diagnosis of difficulties and application of necessary management methods. These difficulties in applying the techniques are regarded by many as the critical bottlenecks limiting success with the bass-bluegill combination. Granting this, the natural conclusion is that a simpler technique would, in itself, considerably increase the chances of success with a fish pond.

Ponds suitable for trout management will often allow this increased simplicity of method and will also offer other advantages. With trout as the only fish species present, which seems the

ideal condition, unfavorable competition between populations is not a problem. Trout usually need stocking for maintenance in ponds and this places control of the population completely in the hands of the owner or manager through the comparatively simple expedient of regulating the amount of stocking. Thus the balance between food supply and fish population is under direct control. If in favorable balance, trout stocked as fingerlings in the fall will provide fishing the following season. This avoids the necessity of carrying a large proportion of fish too small to catch—which is a usual limitation of warm-water fish management in northern latitudes.

A few other good features may be worth mention. Trout are conceded to be unsurpassed for both sport and food purposes. With the exception of brown trout in rare instances, trout are never harmful to connected waters. Finally, trout are easily available for stocking.

The catch—there always is one for the fisherman, of course—is that not all ponds are suitable for trout. It seems safe to say that without competition from other fish species, trout will thrive under physical and chemical conditions which would otherwise be unfavorable or even intolerable. Nevertheless, as a minimum, trout must have some permanently cool water to use as a refuge in hot summer weather, and this must carry enough dissolved oxygen to support them at all times. The cold area does not need to be large, but only extensive enough to tide the trout over bad times.

Farm ponds fed directly or indirectly from streams will often contain minnows, suckers and other stream fishes. These may not be fatal to the use of such ponds for trout; in fact

certain species of minnows may be desirable. How well trout fare in competition depends considerably upon the quality of physical and chemical conditions in the pond. A cold, well-aerated pond adequately fed by springs or spring seepage will favor trout over most non-trout species, whereas any competition in a borderline pond may be disastrous to the trout.

NEW YORK differs from most states where the farm pond program has been extensively carried on, in that trout waters are distributed over the entire State, even if somewhat unevenly. Supplies of spring water, extensive upland areas and northern geographical location all favor trout here. Pond locations favorable to trout may therefore be found in almost any part of the State, and in planning fish management for such ponds the advantages of trout should not be overlooked. Incidentally, cold ponds are comparatively unfavorable for bass, bluegills and others of the warm-water species.

While trout pond possibilities should not be neglected, it is not the intention of this article to overstress any one type of fish pond management. There are varied possibilities for developing the potentialities of small fish ponds of which many have hardly been tested at all: none has been completely evaluated.

At best intensive fish farming is not simple or certain under usual conditions; one thing or another is sure to prevent realization of maximum production. In our opinion the wise pond owner is the one from Missouri who calls his farm pond a farm fish pond only after the title has been thoroughly earned.

—C. W. GREENE,
Senior Aquatic Biologist

PR-48-D


ecessary legislation was passed in 1940 and today there are 35 districts. Basically these units of government within county boundaries are formed to bring group action and the services of trained specialists to bear on soil and water problems. Individual landowners who need help in analyzing their particular situation can receive expert guidance in putting each acre to its best use. This involves a complete study of soils, topography, and present land use on individual farms.

All this is a big job. There are over 150,000 farms in the State totaling some 18 million acres. But since the formation of the Soil Conservation Districts, more than 10,000 landowners have become co-operators under the program.

A further service is available to landowners throughout the State, particularly woodlot owners. The 1946 Legislature passed what is known as the Forest Practice Act. This act provides for the setting up of definite standards for the practice of forestry on the 10 million acres of privately owned woodlands in the State and for assistance by Conservation Department foresters in carrying out these practices. Much has already been written about the Forest Practice Act in this magazine.

The future looks bright for the continued use and expansion of both the Soil Conservation Districts and the Forest Practice Act. But the need for soil, forest and wildlife conservation is so great that more effort on the part of everyone is needed. That is why the Division of Fish and Game has undertaken a new State-wide program in cooperation with the Soil Conservation Districts and the District Foresters under the Forest Practice Act. Because in analyzing the whole problem we find that there is still a lag in getting certain conservation practices on the land. The need is there, the plan is developed and agreed to by the landowner, but the work is deferred. This applies particularly to measures that have a future value or are not vitally concerned with making a year to year living on the land. Such projects as tree planting, fencing of woodlots against grazing, establishment of shrub borders, and development of marshes for muskrats are cases in point.

The new development program—PR-48-D—was begun in April, 1948 and is operated by federal funds derived from the excise tax on sporting arms and ammunition and made available under the Pittsman-Robertson Act for Wildlife Restoration. Nine practices have been approved by the Fish and Wildlife Service for consideration in this program, since it is believed all of them



PR means the Pittman-Robertson Act for Wildlife Restoration; 48 is the Project Number; D is for Development. PR-48-D means *More Cover on the Land*

THIS is the story of a conservation program designed to put more cover on the land. It calls for the planting of more trees and shrubs, the building of fences to prevent grazing of woodlands and the construction of dikes to impound water areas—measures that make land more beautiful to look at, more valuable for timber, more productive of wildlife and safer from the effects of soil erosion.

America, in its short history presents a record of great achievement made at the expense of priceless soil, timber, and wildlife resources. Perhaps such misuse of a wonderful heritage is the natural consequence of a young pioneer nation where free men strive to

develop a new land. Viewing the landscape we see worn-out fields gullied and bare, hillsides stripped of their protective forest cover, streams brown and swollen with flood waters or boulder strewn and dry under the summer sun. It isn't a pretty picture. But fortunately, in this country we aren't content to stand by and see such misuse continue. We know that problems of land use can be overcome. Soil scientists, crop specialists, foresters, engineers and others have viewed the situation for years and gradually a program has taken shape designed to cope with land and water problems.

First came the establishment of Soil Conservation Districts throughout the country. For New York State the nec-

will directly or indirectly benefit wildlife. These measures are: (1) tree planting (reforestation), (2) establishment of woodland borders (shrub planting), (3) the planting of hedges, (4) stream bank planting (trees and shrubs), (5) wildlife area development (planting of odd corners of the farm to trees and shrubs or fencing them against grazing), (6) the planting of windbreaks to protect farmsteads or roadways (usually with conifers), (7) woodland protection (fencing) against grazing by livestock, (8) pond development (for fire protection, stock water, fish and wildlife by diking and planting and fencing where necessary), (9) marsh development (for muskrat and waterfowl by diking and planting and fencing where necessary).

Game is benefited as a secondary consideration by these practices. For example, conifers provide future timber supplies but they also supply needed winter shelter for several species of game. Shrubs, particularly multiflora rose, may have important uses in forming stock-proof fences but they furnish travel lanes and sources of food for wildlife. Fences that keep livestock out of woodlands and thereby increase the timber value result also in providing better food and shelter for wildlife. Marshes developed for muskrats (a cash crop to the farmer) are also utilized by waterfowl; the borders by pheasants, cottontails and certain fur-bearers, and even deer and grouse.

THE eight District Game Managers are responsible for carrying out the details of the plan, which works something like this: A memorandum of understanding is drawn up by the individual Soil Conservation Districts and the Division of Fish and Game. In this memorandum are indicated in a general way the responsibilities and contributions to be made by each party. The District Game Manager or his assistant meets with the directors of each Soil Conservation District to discuss the details of the plan. At the present time, to accelerate the establishment of measures known to be beneficial to wildlife, the following objectives are indicated:

(1) Conifers in blocks up to 10 acres in size will be planted for co-operating landowners with crews hired and directed by the District Game Manager at a cost of \$7.50 per thousand.

(2) Shrubs for use in woodland borders, wildlife areas, or hedges will be planted at the same rate as conifers.

(3) Fences to exclude livestock from grazing woodlands, tree plantations, wildlife areas or stream banks will be built at a charge of 25 cents per rod, provided the owner furnishes suitable

posts and wire. Or if desired, the available posts and wire will be furnished and the owner can put up his own fence, following the plan prepared for his farm by the Soil Conservation District.

(4) Muskrat marshes and farm ponds must be paid for by the landowner but services of technicians are available to prepare the plan and supervise the work. If the borders are planted and fenced, the arrangement is the same as previously indicated. The plan for muskrat marsh development may be modified in another year to further stimulate this type of development. It is expected that assistance will be provided to the owner in actual dike construction where needed.

Trees for reforestation are available from State nurseries at a minimum cost of between two and three dollars per thousand, although some landowners may qualify to receive them free under the terms of the Forest Practice Act or from Soil Conservation Service nurseries. Shrubs are available free of charge to Soil Conservation District co-operators under this program. For 1949 over a million and a half are available and each year thereafter enough will be provided to take care of anticipated needs.

The directors of the Soil Conservation District and the technical staff make an analysis of the needs of the co-operators for the services available under this new program. They often find that many landowners are in a position to do their own work. Others require only technical assistance in carrying out practices indicated for their farms. A certain proportion of owners, however, whether because of a lack of time or because of a shortage of trained labor, desire to have some of these practices done for them at the prices indicated. A list of these co-operators and the work they desire is prepared and submitted to the District Game Manager well in advance of the time when the work is to be done. With this information the Manager and his staff make plans for handling the assistance required. Labor crews and equipment are made ready and the program is swung into action.

In 1948 the program was new. Soil Conservation Districts had more or less completed their plans for the year. Nevertheless a good start was made. Assistance was given in the planting of 458,750 conifers and 28,750 shrubs on 112 farms in 12 counties. During the fall 45,000 shrubs were planted to form woods borders and wildlife hedges on 15 farms in 6 counties. More than 3,000 rods of fences were built to exclude livestock from grazing 700 acres

of woodland. On the Cicero Game Management Area 20,000 willow cuttings were made which were distributed to three districts for use in streambank control work and hedges.

FOR 1949 the picture looks encouraging. Plans are completed for giving co-operators in Soil Conservation Districts assistance in planting more than 2,000,000 conifers and over 1,000,000 shrubs. Fences to exclude livestock from grazing woodlands are planned in nearly every county and the total may well exceed 25,000 rods—which will benefit more than 10,000 acres of woodland. For marsh development the plans are somewhat less complete but it is fully expected that several hundred will be completed throughout the State during the year. Many of these marshes together with farm ponds will be fenced and planted to suitable shrubs. This also applies to planting of stream banks with suitable trees or shrubs and the establishment of wildlife areas on odd corners of many farms. During the year, or in any event, not later than 1950, the program will be extended to include co-operators under the Forest Practice Act. This is important since a number of counties still do not have Soil Conservation Districts.

That in essence sums up the new program to get more cover on the land. The program will benefit wildlife while providing for better land use. Taken together, the Soil Conservation Districts, the Forest Practice Act—and now PR-48-10—bring to the landowners of New York State a service program which will be of tremendous value. The results in terms of more wildlife won't show in one year or two, but the approach is basically sound from any angle.

Planting of trees and shrubs, building of fences, and other measures designed to aid in soil control, forestry and wildlife management, form an excellent activity for sportsmen's and civic clubs. A club may desire to acquire land for wildlife and forest development, or the group may wish to underwrite the development on one or more farms each year. Sponsoring youth groups in tree planting is a very worthwhile activity. This can be handled by hiring the boys or stimulating their efforts by offering suitable prizes. Any club or individual desiring to contribute to a greater conservation effort should contact the local District Forester, District Game Manager, or office of the Soil Conservation District.

—BEN O. BRADLEY,
Supervisor of Wildlife Restoration

TREE PLANTING

FIRST, know what part of your property is best suited to tree planting. This will depend mainly upon your objectives. Naturally, a farmer will not want to "plant up" his better pastures, while a non-resident owner may decide that trees are his best crop and will wish to reforest the better fields in addition to his steep hillsides and odd corners. Free advice on these matters, as well as on what species of trees to plant, is available from this Department or from technicians of the Soil Conservation Districts.

Getting Trees: Having decided what trees to plant and where to plant them, how do you go about getting them? You can (1) obtain free trees from the Conservation Department as a cooperator under the Forest Practice Act (send for Forestry Bulletin #21); (2) obtain trees through your Soil Conservation District; (3) purchase trees directly from the Conservation Department, at a nominal cost. For the spring planting season this year the third method is the only one still open to you—as long as the supply lasts.

Getting Trees Planted: An inexperienced two-man crew can plant about 500 trees per day. Possible sources of outside assistance (see preceding article) might be local 4-H Clubs or Boy Scout groups, which often plant trees at a reasonable cost for the benefit of their respective treasuries. Your Forester may give you some suggestions along this line. Or you can always invite your friends over for a good old fashioned planting bee. Of course, you'll have to serve the usual eats and refreshments—but after the trees are planted, please!

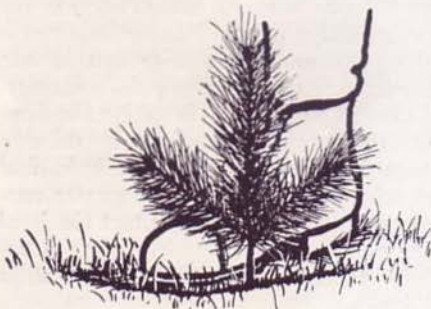
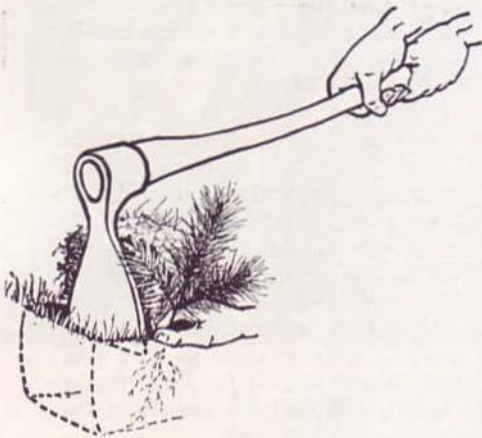
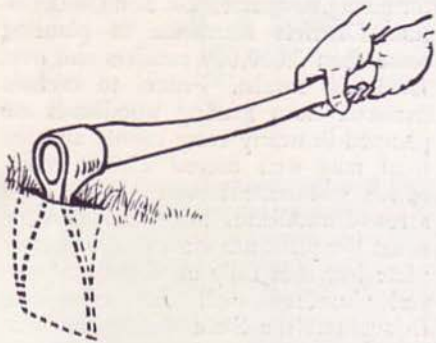
Come spring, the frost is all out of the ground and your shipment of trees arrives. Get them in the ground, as soon as possible! If you must delay a day or two place the trees, crate and all, in your potato cellar or some similar cool and shaded place. For any period longer than two days the trees should be "heeled-in", which means removing the trees from the crates, then placing them, still bundled, in a spade-wide trench deep enough to cover the roots, with several inches to spare. The loose earth should be packed around the roots and well watered. Trees may be kept in this condition for several weeks, but the sooner planted, the better.

Planting day is at hand, so you'd better check to see if you have the necessary tools available. First, for tree carrying, ten-quart galvanized buckets that will hold water, one for each member of your planting crew and several extras for getting the trees to them. Second, enough planting tools, preferably grub-hoes, or mattocks. Third, several eight-foot sighting poles with white flags if you are planting a large area. In the field, organize your crew permitting the best planter to lead-off toward the sighting pole at the far end of the field, the others following in echelon, planting their trees at a point opposite those of the leader and maintaining the spacing recommended. Generally this is 6' x 6' (1,200 per acre) for all species except red pine, Scotch pine and larch, which should be planted 8' x 8' (680 per acre).

Planting: The mechanics of actual tree planting by the slit method are best described by the accompanying sketches. The things to remember are (1) the roots should be placed about a half inch below their former ground level; (2) the roots should not be doubled up; (3) the soil should be solidly compacted about the roots by tamping with the heel. Take care of the roots and the rest of the tree will take care of itself.

Do's and Don'ts: 1. Don't plant closer than 30 feet from the woods, 6 feet from scattered brush. If you do, you will waste both trees and labor. Young evergreens will not stand too much shade or competition. 2. Don't get the idea that you have to fit the land by ploughing in order to plant trees. Occasionally it may help to plough single furrows and set the trees in them, but usually it's better to plant the trees right in the sod; you'll get less frost-heaving. 3. Don't attempt to plant up spots that are permanently wet. You must remember though that much of the land that looks wet in April will be dry by June. 4. Do protect the planted area from cattle. Trampling and browsing are sure death to young trees. 5. Do see that you keep your brush fires from getting into your plantations. A dozen ploughed furrows around the edges will be a big help. 6. Do send to the Conservation Department for Forestry Bulletin No. 2, "Forest Planting in New York", if you want more details.

—ED HUBER, Forester



by Prof. J. A. Cope

Extension Forester, State
College of Agriculture

WHEN March winds blow and days are warm but nights still cold, so that icicles hang from maple twigs, it is a sure sign sapping weather is at hand. In the big sugar woods roads are being broken out, tap holes bored and buckets hung. The sap house too is the center of lively activity.

Anyone who has access to a few sugar maple trees in the back yard or along the nearby highway can have the fun of making maple syrup, even though the quality will not be up to the commercial standards. As far as getting sap is concerned all one needs are brace and tapping bit, spiles and some kind of bucket that can be hung to catch the dripping sap.

Suppose you want to make five gallons of syrup. That will mean 25 tap holes and 25 buckets, in ordinary seasons, assuming of course you are going to be around to collect all the sap and not let the buckets run over. A dozen average sized maples, 15 to 20 inches through, will be enough to do the trick. Most producers only put one tap hole in a tree until it gets above 15 inches in diameter. Twenty-inch trees take two buckets and on trees above 20 inches three buckets are usually hung.

For tapping use a seven sixteenth-inch bit and bore in to a depth of about three inches, slanting the hole a little toward the ground so it will drain easily. The tapping spot will be a nice smooth area on the trunk at convenient height and not closer than three inches to an old tap hole, assuming the tree has been tapped before. The spile or sprout had best be of metal though you could, like the old timer, fashion one out of "elder" and hang the bucket on a nail. The tapered metal spile has a hook for bucket hanging and for that reason it preferred. Drive the spile in lightly so it will just hold the bucket full of sap. If it is driven in too hard the bark will be split and a leaky tap hole results. Your modest operation will scarcely justify the purchase of sap buckets such as the one shown above; gallon jugs can be used—but will the sap drip into the neck of the jug when the wind is blowing? Five gallon oil cans or even gallon cans with the tops cut out can be used. Remember the smaller the container the oftener gathering must be done.

Now for the boiling. The ratio of sap to syrup is on the average 40 to 1, so definitely the operation must be done outside. What would your kitchen look like after 39 gallons of water went up in steam to get one gallon of



sapping it

syrup? The pioneers used a big iron or copper kettle, which was suspended over the fire from a tripod or crane. As the sap boiled down more was added and the result after a day's boiling was sweet, but dark and strong.

Probably no such kettle is available. It will be necessary then to make your own real investment—a flat pan from the tinsmith. Tin is best, but galvanized metal will do. Have it made three feet by six, with a depth of at least eight inches. This pan is set up absolutely level on a supporting arch of loose bricks laid up to make a wall 12 inches high. At the leeward end a chimney effect with 10 feet of stove pipe is called for, and at the firing end have a piece of metal from the junk yard to act as a door to control draft.

A GOOD run will give 10 quarts to the tap hole if all 25 tap holes run the same, or enough to fill the pan within an inch or two of the top. Now start firing and stay with it. You will need plenty of split, dry wood to do the boiling, and this of course must be all ready and stacked even before tapping starts. Three-foot wood will be sufficient for the six-foot pan. The stove pipe will draw the heat the rest

of the way. A good fire will cause the sap to boil over the sides unless you have some fat to throw on the boiling mass. Some producers use a drop or two of cream, while others have a piece of pork fat attached to a string; when the boiling sap hits the pork, it quiets.

When is it done? Well, to find that out you will need one other piece of equipment, a syrup hydrometer. This comes from the hardware store, and be sure to get the cup that comes with it! When the sap begins to thicken toward syrup, scoop up some in the cup and float the hydrometer. For standard syrup the hydrometer should read 32° Baume and when you get such a reading move fast because the liquid is now down to well under four gallons and it can scorch.

You can see now why the pans need to be absolutely level. With holders to protect the hands, lift the pan and pour the precious syrup into a bucket, and before it has a chance to get cold strain it through several layers of cheesecloth. Your syrup is ready.

A lot of work—yes indeed. But when it's finished you know the satisfaction of the creative artist, and incidentally, perhaps you will no longer resent the prices that farmers charge for syrup.

BLACK LAKE

BLACK LAKE dislikes being talked about; she is a lady with a past. A sullen girl, and beautiful.

Kentucky, a century ago, was neither wilder nor more picturesque than the southern shores of Black Lake. (Right, foreground.) From a lair among these swamps and crags, outlaw bands made frequent raids on villages along the nearby St. Lawrence River. And they were as frequently pursued by an indignant citizenry and even by militia. But seldom caught, they remained as wild as the eagles that return there each spring to nest.

The mountaineer legend has been slow to die. Not many years ago a boy took a huge revolver to school, in defiance of a demand for daily lessons. Callow girls, on occasion, still enter breathlessly into juvenile wedlock. And when they begin the beguine at Pope's Mills on Saturday night, anything can happen. But an event that occurred back in 1908 probably wrote the climax to the lake's waning outlawry—a gruesome double murder that Black Lakers still talk about and the scene of which they still shun with superstitious dread.

Near that scene a hamlet named Rossie, weary of miners' jokes, has settled to a peaceful life of selling minnows and renting outboards. Here, where George Parish ruled a tiny mineral kingdom, the Indian River cascades in glad unharness past the old iron mill into a widening pool, pastoral promise of the lake nearby. Here the antique steamers "Paul Pry", "Rossie", and "Evening Star" whistled lustily out with freight and passengers.

A "country mile" downstream, the Indian, weary of life as a Jefferson County hobo, yawns and stretches. And she has earned a rest, having carved a 20-mile-long body of water from our State's most complex geological area. Paralleling the St. Lawrence River and only six miles to its south, this lake has been called Oswegatchie. O-tsi-kwa-kee (in Iroquois: "Where the ash-tree grows with large knobs for making clubs"), and finally Black Lake, honoring its peaty mosses. A recent move to call it Lake Roosevelt died a natural death. Most colorful handles of all have been improvised by certain fishermen, profane in sunburned defeat.

One history, more enthusiastic than truthful, calls the lake "clear and deep". It is neither. In "blow" most of the summer, its average depth of 15 feet

is frequently stirred to the sand-rock-muck bottom by prevailing westerlies. These quick-tempered winds can, on occasion, turn the lake's usual serenity into white-capped fury.

A dozen wooded islands dot the waterscape before the lake tapers compromisingly to the "narrows" at Edwardsville. Once an Indian village, this area saw battles between Iroquois and Algonquin.

Booth's Island, cork of Black Lake's bottleneck, has always provided here a natural crossing-place for travelers who used to make the trip on a cable scow which was levered along by hand. Later came a crude causeway with toll bridge, and finally the concrete span of today.

From this throat to her mouth, the lake is a lazy river whose reedy, shallow edges provide a nursery for fingerlings, a succulent diet for wildfowl. Down on the southern, peatbound shore, foreign interests once attempted to refine the bogs for marketable fuel, but the clanking dredge has long been silent. The northern shore is a wind-swept hill where the Davics family monument points to the sky. Nearby, a sagging dwelling awaits the return of some ill-fated duck hunter of another day. And up the macadam road—northeast past a few well-kept farms whose owners know potatoes better than pickerel—is a neat little settlement, once condemned to perdition for "hanging fire" on contributions toward a new church whose soliciting minister dubbed their group of farms a "Lost Village". The name stuck.

A SCANT mile away is the junction where the Oswegatchie siphons from the mouth of Black Lake additional strength for her six-mile journey northward to the St. Lawrence River at Ogdensburg. Simeon Fishbeck once operated an eel weir at this fork where Eel Weir State Park now is located.

Half a century has passed since the last of the steamers, whistling around this bend, sent mallards squawking skyward with her noisome paddles churning. But Black Lake has lost little of its rugged grandeur, and from Lost Village to tiny Rossie is still a picture of simple, home-spun beauty.

Although a great deal of this rustic charm lies in the lake's location away from the greater traffic arteries, it is really quite accessible by road and rail. U.S.G.S. quadrangle maps of Ogdensburg, Brier Hill, Hammond and Gou-



verneur will give you a transportation picture of the area.

Word-of-mouth news and improved highways have made Black Lake's extraordinary fishing a little more ordinary, but it remains one of our best fish producers. Best fishing months are May, June, September, October. Most widely sought-after is the walleye, who attracts big crowds during his annual April 'runs' at Pope's Mills and Rossie. You'll find him more elusive than his Oneida brother. Also plentiful are great northerners. Both may be taken through the ice. Bass, largemouth and smallmouth, provide good sport. And don't be too surprised if a musky comes up and grabs the fish you may be playing, like a shark after a tuna. It has happened, and no one is ever prepared, so the musky usually wins out against the light tackle used by most local sportsmen. Strictly in the culinary department, pan fish are numerous, and if you want to drop in



at a bay some night with cane pole and nightcrawlers, Black Lake bullheads are rated as top fare.

In lures, a dark plug on a dark day seems to work wonders when all else fails in shoreline casting. If you troll for walleyes, the usual June bug spinner and gob will do, but you'd better get one of the area's dozen licensed guides to show you where and what depth to fish. There is little need in outlining fishing spots here, because they'll be biting in a different place tomorrow.

IF you use bait, "Worms for Sale" is a common sign along the road. Minnows can be bought at prices ranging from three cents at "Abby" Peck's in Rossie to ten cents (each) at more gilded establishments.

On both shores are plenty of clean camps with housekeeping facilities and boats galore. If you prefer canvas overhead, tent-space can be boned from

a farmer, or you can park it (or your trailer) at Eel Weir Park as the guest of this Department. A Ranger is in attendance here from Memorial Day to September 15.

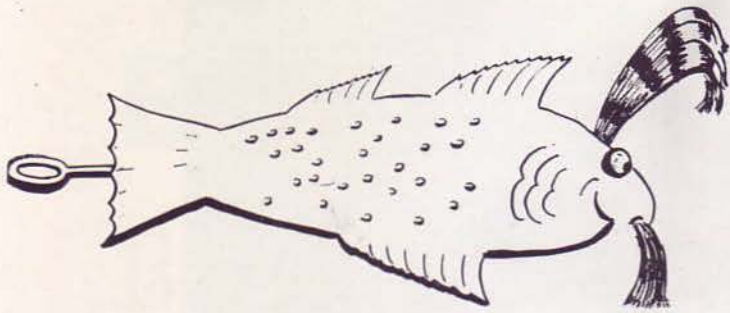
Maybe you hunted or fished Black Lake last year. If you were there during the fall, you had the best duck hunting in years, thanks to local co-operation in conservation measures. The fishing however, seems not to have been so hot. Fishermen blame this on several things, all based on the theory that the fish are disappearing from the lake. Naturally, with the increased fishing pressure of late years the fish have had to wise up or die down. Maybe they've done the former. At least the annual pike run last spring at Pope's Mills and Rossie showed a large and healthy walleye population, and there are still people that catch them. Confidentially, if you have tough luck there in the future, keep an eye out for a boat being sculled furtively along by a gaunt, clon-

gated man with a cane pole and homemade spinner. He will be a "Black Laker" and he'll probably have fish. He'll be a lot friendlier than the variety of 50 years ago; he might even tell you how to catch some. (See page 31). He knows how, for he's been catching them all the time they "haven't been biting".

It's quite a spell since Florence Earle Payne set Black Lake to music. Her "Down on Lonesome Bay" was inspired by one of the north's biggest attractions, a sunset across a Black Lake Bay. We like that tune and its gentle reminiscence of another day. And we'd like to be down on Lonesome Bay one of these mornings when smoke from the chimney goes straight up. We would like to be there with about five tip-ups and some of "Abby" Peck's shiners.

—J. D. BULGER

The Conservationist is very grateful to Ken Ovis, of the Gouverneur Tribune-Press, for help with this article.



The Which-Way-Is-You-Going-Boy Minnow

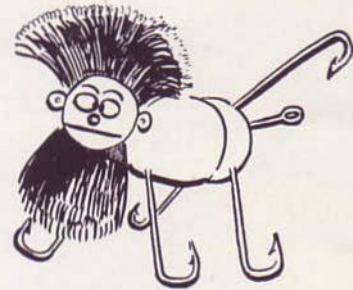
The lure with its head where its tail ought to be. Designed to confuse rather than catch. Is primarily for boss who make a swipe at it because they never want to see it again.

BASS LURES!

The average bass plug today looks like a prematurely born dinosaur. Many of them catch fish, which is presumed to be the basic aim in the first place, but in doing so they defy all that is holy in artistic construction. It is our studied opinion that most bass bite at the lures presented to them merely in a frenzy of despair.

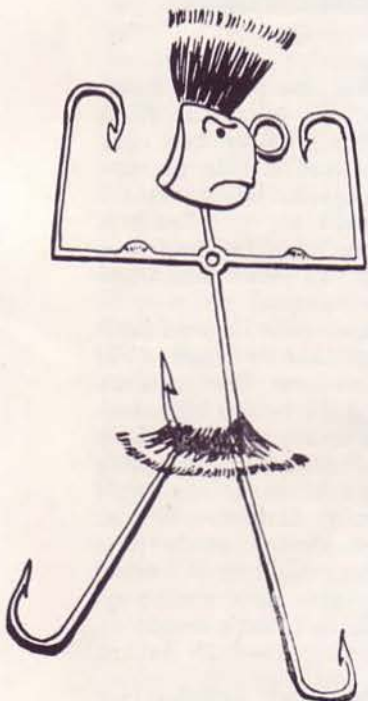
Trouble with the modern plug, mousie or bug, is that it was designed to suit the designer and not the consumer. In business that ain't good.

Considerable research has gone into the creations here presented, made only after the author spent several long sessions swimming under rocks with his favorite fish. It is our pleasure to offer these creations for your study, a gesture we qualify with the assertion that if they laughed at Joe when he first sat down to play the piano, they also howled at Fulton when he tied two mill paddle wheels to the side of a boat and made it go upstream. He who laughs last laughs best. (Bottom right).—Barnett Fowler



The Bolshevik Bullseye Mousie

Mostly for red herring, not bass. Also can be used for fish who travel in the wrong schools. The future looks bright to (not for) this number. So what?

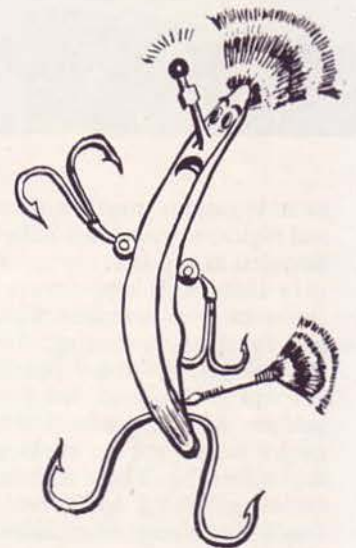


The Mussellounge

Bass loathe it. A sturdy, bar-bell trained plug to be used in dragging for sunken boats when muskies aren't biting.

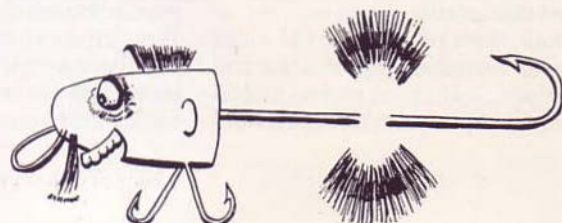
The Brushbroom Tail Flatfit

This does it folks, it really does. Throttles fish if swallowed sidewise. Will catch six or once if properly presented.



The Cheerful Bucktooth Wizard, Special

An underwater plug which always gets its fish in the end. Designed mainly for fish afflicted with sitophobia, which snap at hallucinations.



Oyster Bay Duck Club

ALTHOUGH duck shooting has been a popular sport in New York for many years, very few records are available of the number and species of ducks killed by an individual or club. And many of the records that are available do not include the time spent afield or the number of gunners participating in the sport, so that no accurate estimates can be made of success per hunter hour. Not that success per hunter hour is everything in duck shooting. But it is an index of the status of the sport, through the years.

Recently there became available to us the game record of the Oyster Bay Shooting Club. This was a wealthy sportsmen's club located on the south shore of Long Island, and the records, complete from 1920 through 1930, are especially valuable in that they include information as to the number of ducks shot by species, the number of guns, and the number of hours hunted on a daily basis. In addition, the records are typical of the times; all the duck shooting methods then in vogue were used, including live decoys, baiting, and permanent blinds. Crippled ducks were picked up with the aid of two well-trained retrievers.

The Oyster Bay Shooting Club owned and operated Eccles Pond (locally known as Guggenheim's Pond) as a shooting preserve between the years 1920 and 1930. One of the key figures in the club was Harry Guggenheim, but the records also include the signatures of many other prominent New Yorkers, including Dwight Morrow, Ambassador to Mexico. The club property was eventually taken over by the State, and

Eccles Pond became a part of the bird sanctuary of the Jones Beach State Park.

It should be noted that Eccles Pond is a fresh water pond. As a result the kill consisted mainly of dabblers, and only ducks of this type are shown in the table below. During the 11 years covered by the records, however, a total of 151 diving ducks and geese was taken. If this total were included in the final figures, the kill per gun hour would be somewhat higher. In any case, it is interesting to note that of the 4,125 geese and ducks of all species taken during the 11 year period, 87 per cent were black ducks.

Shooting success from 1920 to 1930 varied from 1.12 ducks killed per gun hour in 1926 to 5.79 ducks killed per gun hour in 1928. The average for the 11 years was 2.55 per gun hour. Although this does not show in the table below, it is of considerable interest that on opening day—usually considered by duck hunters to be the best in the season—success per gun hour was only one-tenth of a duck better than the average for the month of October. Approximately 27 per cent of all October hunting occurred on opening day; hunters put in a long day trying to complete the bag limit, thus reducing the bag per gun hour. But with the suspense and eagerness of opening day declining as the season wore on, fewer hours but relatively more productive ones were spent in the blinds. Actually the variation in success for three months of open season was very small—.26 duck per gun hour.

Shooting success in November was the poorest of the three months during

which the club operated. This was probably due to the migration passing across Long Island and continuing farther south. October (the season opened on the 16th) was the most productive month, possibly due to the presence of large numbers of local or unwary birds. Things picked up again in December with the influx of wintering birds, but most of the shooting was done during the first half of the month.

UNFORTUNATELY, we have uncovered no recent records which can compare in accuracy and detail with those kept by the Oyster Bay Shooting Club. We have, however, some figures for the 1948 split season supplied to us by Ross Federico of the Southampton Township Wildfowl Association. These figures were collected from the operators of 11 blinds in Shinnecock Bay, and they show that 496 ducks of all species were taken during a total of exactly 1,900 gun hours—an average of .26 duck per gun hour.

Compared to the 2.55 average recorded by the Oyster Bay Shooting Club some 20 years ago, this modern figure would seem to indicate that duck hunting on Long Island ain't what it used to be. Nobody claims it is. But in evaluating the records of the Oyster Bay Club it must be remembered that they were compiled at a time when the ducks were baited, live decoys used, and rest days ordered between shoots. In addition, the ducks were confronted with unplugged automatic shotguns in the hands of excellent shots.

—DON SCHIERBAUM,
Game Research Investigator

YEAR	Black	Mallard	Gadwall	Baldpate	Green Winged Teal	Blue Winged Teal	Shoveller	Pintail	Total	TOTAL GUN HOURS	DUCKS KILLED PER GUN HOUR
1920.....	406	9	2	18	2	3	6	12	518	257.5	2.01
1921.....	724	17		23	2	2		26	794	235.7	3.37
1922.....	310	3		23	4	2	2	7	351	142.6	2.46
1923.....	431	12		5	2	2	1	7	460	142.7	3.22
1924.....	272	12			1	2		10	297	183.7	1.62
1925.....	245	8		4	7			3	267	148.0	1.0
1926.....	99	7		2	1			2	111	99.3	1.12
1927.....	268	8		5	1	3		7	292	96.4	3.03
1928.....	444	11	3	24	1		1	5	489	84.5	5.79
1929.....	221	9		17				10	257	114.9	2.24
1930.....	103	9		1	4		1	15	138	56.0	2.46
TOTALS.	3,588	105	5	122	25	14	11	104	3,074	1,561.3	2.55

Catskill Hatchery at DeBruce

THE Division of Fish and Game has had its covetous eye on Toad Basin Spring in Sullivan County for a long time. In 1935, when the Biological Survey was snooping up every stream and tributary of the Delaware and Susquehanna Watersheds it examined this spring and noted it as a possible water supply for a fish hatchery. The stumbling block to purchase of the spring was the presence of the Willowemoc Creek Hatchery, owned and operated as a private hatchery by "Bob" Ward on Mongaup Creek into which Toad Basin Spring flows. One hatchery on a stream is usually sufficient and the Division decided to wait until such time as Ward would sell his hatchery. At that time the need for increased hatchery production was not as urgent as it was in 1946, when it seemed that every trout fisherman had become triplets overnight. Trout streams are fish hatcheries in their own right and when fishing pressure is light they can maintain good fishing year after year without any help. But, they couldn't stand up alone against this horde of worn dunkers and fly flippers. It was obvious that they would need more help from the fish hatcheries, and Toad Basin Spring became important.

World War II was just as hard on fish hatcheries as it was on everything else. Labor, materials and fish food were scarce and during the war years the Willowemoc Creek Hatchery was not in active operation. After the war it was offered for sale and was pur-

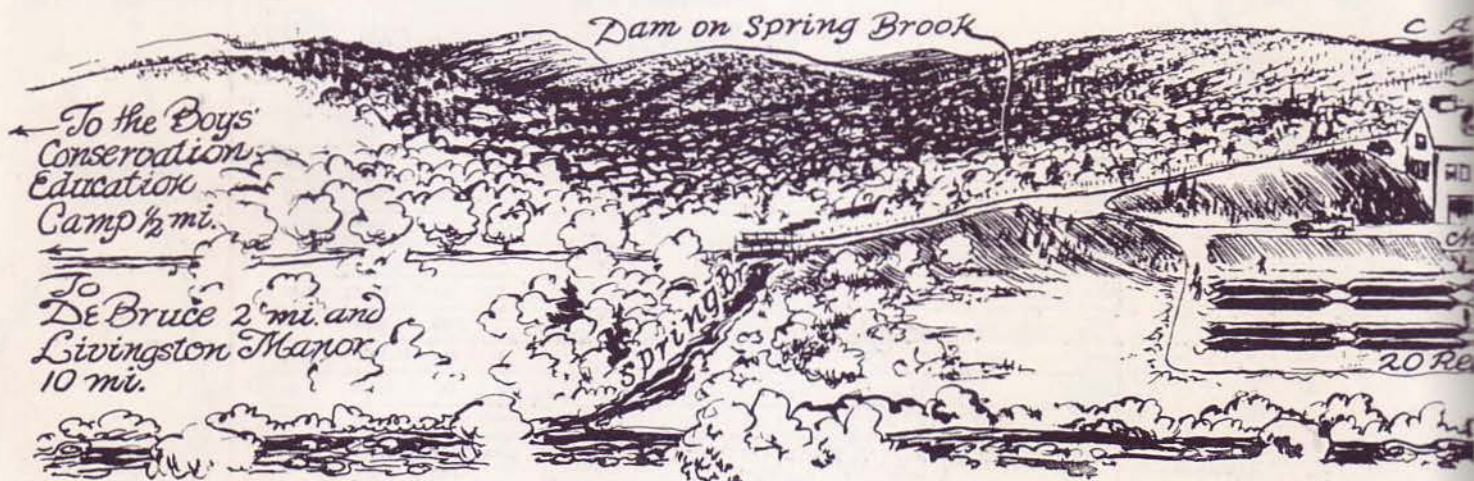
chased by the Conservation Department on August 30, 1946. Included in the purchase was the hatchery, Toad Basin Spring and 335 acres of land. The location is one and one half miles north of the village of DeBruce and eight miles from Livingston Manor in Sullivan County. Mongaup Creek, a tributary of the famed Willowemoc, flows the entire length of the purchase and is a good trout stream. Formerly posted, it is now open to public fishing and good catches of brown and brook trout are made by fishermen who drive a hundred miles or more and sleep in their cars along the stream for just that reason. Practically all of the 335 acres are forested and in deer season, like any other place, you generally have to share your runaway watch with six other hunters. So, in addition to material values received, we found some recreational values on which it is difficult to set a price.

The location of the DeBruce Hatchery is particularly advantageous. Formerly, when stocking the Catskill streams, it was necessary to haul the fish from 150 to 300 miles, one way. This not only left the fish slightly groggy but it was expensive and time consuming, requiring an overnight truck trip. Fish have been shipped into the Catskills from the Rome Hatchery which is 155 miles from the DeBruce Hatchery. They have also been shipped from the Randolph Hatchery which is 280 miles away. It is simple to reason that starting from the DeBruce Hatchery with a truckload of fish you have

saved 310 miles in the first case and 560 miles in the second before the truck has left the hatchery. And two truck driver days in either case. This saving means more fish planted in the same time, more time to plant the fish, fish in better condition for planting and a considerable saving in trucking expenses.

A second reason for the acquisition of another trout hatchery was the need for increased trout production. This need is especially acute in this region for within a radius of 30 miles you will find the Beaverkill, the Willowemoc, East Branch of the Delaware, Esopus and Neversink. These streams are known to trout fishermen all over the county and they are fished by thousands of anglers every year. When the DeBruce Hatchery is in operation it will mean more fish for these streams to meet the demands of the anglers. And by relieving other hatcheries of the necessity for stocking these streams it will mean more trout for hard fished streams in other parts of the State.

A THIRD reason (if this hatchery needs any further justification) is the necessity for increased output of trout eggs to supply the other New York State hatcheries. The principal egg producing hatchery at the present time is the Randolph Hatchery. Eggs are taken at some of the other hatcheries but Randolph is the biggest supplier. But, the demand is exceeding any supply that the Randolph Hatchery can put out and to alleviate



this shortage, breeders will be held at the DeBruce Hatchery and trout eggs above its own requirements will be shipped to other State hatcheries.

After the purchase of the Willowemoc Creek Hatchery plans were drawn up for the construction of an entirely new hatchery about a half mile north of the old one. This new hatchery will be modern in every respect and have about four times the producing capacity of the original plant. The meat grinding room, food storage room, garage, office, laboratory, workshop and hatching troughs will all be in one building, a compact and efficient unit. An oil furnace will provide heat, hatching troughs (60 of them) will be made of steel and lighted with fluorescent lights. Electrical refrigeration will keep meat used for fish food frozen until needed. The garage will handle four trucks and have overhead folding doors. On the outside will be 20 concrete rearing ponds 50 feet long, 15 feet wide and with tapered ends. These ponds will be arranged in four rows with five ponds in each row. Water for the ponds will come from four sources—a dam on Toad Basin Spring, a second dam which will catch the overflow from Toad Basin Spring further downstream where it will be warmer, the overflow from the hatching troughs and the overflow from the rearing troughs. There will be 84 rearing troughs a short distance from the head of the rearing pond series. These will be made of steel, and the whole battery of troughs will be roofed over to give protection to the hatchery workers and keep snow from the troughs. The water supply for the rearing troughs will be from Toad Basin Spring, from the second dam below this spring and from the hatching troughs overflow. In the case of both rearing troughs and rearing ponds the water supply will be so diversified as to permit controlling water temperature by regulating valves. Toad Basin Spring water is 44.5 degrees

F. in winter and never gets more than half a degree warmer than that in the summer. This is a good temperature for hatching trout eggs but too cold to permit good growth of trout in the summer. Therefore the second dam mentioned above will catch this water a half mile below its source—which will give it time to warm up to a more favorable temperature. Inversely, if the water from the second dam becomes too warm, colder water can be admitted from the Toad Basin Spring pipeline. The water supply for the hatching troughs in the hatchery building will come only from Toad Basin Spring. This because of its freedom from suspended material which would be injurious to the eggs and also because of its favorable temperature during the winter.

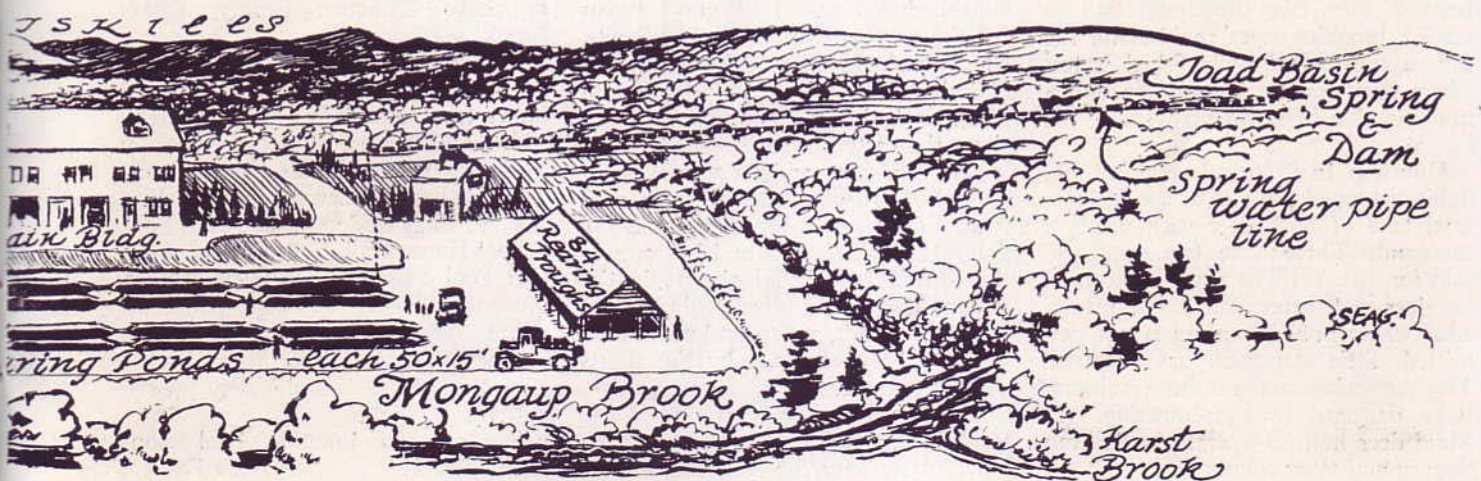
In the spring of 1947 three companies made bids for the job of constructing the DeBruce Hatchery. All of the bids were so high that they were rejected and it was decided to have Conservation Department engineers do the building, using local labor. This work was started in April 1948 and it was uphill work all the way. At the start the weather wouldn't cooperate and two months later, when it did, it was impossible to obtain cement and gravel. That was solved and pond construction was begun. Pipe for the supply line from Toad Basin Spring to the hatchery was ordered in April and some has now been received. Other pipe to be used as intakes and outlets in the rearing ponds themselves will not be delivered until later this year. However, the hardest work has been done. The ground is cleared for the hatchery building, the rearing troughs and the rearing ponds. A road has been made through the woods to Toad Basin Spring and it is along this road that the supply pipeline will run. The dam on the spring is finished and ready to operate. Excavation for the rearing

ponds was made and most of the footings for the pond walls are finished. Some of these ponds will be ready for rearing trout this coming summer.

During the spring and fall of 1947 and 1948 the Willowemoc Creek Hatchery was used as a distributing point. Fingerling trout were received from other hatcheries and held for distribution in several counties of the Catskill region; 30,000 brook trout were held in one large pond over the winter of 1947-1948 and distributed in the spring of 1948 after doubling their weight. In August 1948 the Division of Conservation Education, after renovating the original buildings, operated a summer Conservation Education camp for boys who were instructed by Department experts in forestry, fire fighting, game management, fisheries biology, soil conservation, outdoors photography and less academic subjects like fly tying, casting, hunting dogs or the use of sporting arms. The summer camp plan will be continued and eventually will absorb all the buildings comprising the old hatchery. With the 335 acres of forested land and a trout stream through the middle of it, it is a natural for teaching conservation and the principles of good sportsmanship.

There have been many visitors to the DeBruce Hatchery this year and their favorite question was: "Is this going to be the largest hatchery in the world?" No, it won't. In fact there will be two or three of our own 22 State hatcheries that will produce more trout. But it will accomplish the three purposes for which it is being built. It will mean quicker and cheaper transportation of trout to the Catskill streams. It will mean more trout for all the trout streams in the State by increasing overall trout production. And by maintaining breeding trout it will mean more trout eggs for the other State hatcheries.

—JOHN W. FREESE, Hatchery Foreman



SULLIVAN

SULLIVAN COUNTY, named for the Revolution's Major General John Sullivan, is the State's 17th largest—986 square miles. Its rugged terrain, sprawling off the lower Catskills, was formerly the range of the Esopus Indians, members of the Wolf Tribe of the Lenni Lenape (Delaware Nation). Most of Sullivan's streams were named by them.

It is probable that Sullivan reaps the biggest recreation dollar of any county. Sparsely settled in winter, Sullivan's magnetism for comparatively nearby metropolitan New Yorkers hits full peak on the Fourth of July, wanes on Labor Day. Sullivan cashes in substantially but less importantly on three other seasonal recreations: spring and fishing; fall, hunting; winter, skiing.

Fishing: Sullivan's trout streams are world-famous and, obviously, are subjected to unusually heavy rod pressure. The county's Big Five in any fly fisherman's book are the Beaverkill, Willowemoc, Neversink, Delaware and of less importance, the Mongaup. More American trout lore has been written around those streams than perhaps any other waters on the continent, but they represent only part of Sullivan's water layout comprising more than 250 assorted streams, lakes and ponds. Most of these supply fish in respectable quantity despite the pressure. Of the game fish, brown trout, pickerel and largemouth and smallmouth bass are by far the most important. The Department stocks 44 streams with brown trout, 15 streams and two lakes with rainbows and 63 streams and three lakes with brook trout. The latter are stocked for the most part in the smaller tributaries. Because they take the fly or bait so readily, brookies never could stand the gaff in the more heavily fished waters where their smarter cousin, the brown trout, is able to stand up well.

Hunting: In 1946 and again last fall, Sullivan topped the rest of the State in total take of buck deer with nearly a thousand. There were two good reasons for this: (1) The range is excellent for deer and, except on a few private areas where public hunting is not permitted, little starvation has occurred. The range has not yet been substantially damaged by over-browsing. (2) More deer hunters operate in Sullivan than in any other county.

Ruffed grouse and woodcock provide the main bag of game birds although there is some hunting for black and wood ducks. The cottontail rabbits and grey squirrels are main small game fare. A few snowshoe hares fill in the menu. Sullivan is definitely not good pheasant range. About a quarter of the county is posted, mostly in the southern end where much of the area below a line drawn from Cochecton on the west through Monticello to Wurtsboro on the east is closed to the public by large estates, utilities, youth organizations and more than a score of deer hunting clubs. However, there still remain many pockets of open land and water in the southern area. Virtually the entire northern end is open. Only a comparatively small mileage of the big trout streams is posted and the State has been acquiring public fishing rights to much of the water. The State land appears on the northern edge and comprises 9,524 acres. In the same general area are located the new Catskill Mountain Fish Hatchery (see page 16) and the State Conservation Education Camp for boys. A popular State public campsite is at Lew Beach on the Beaverkill. Camping, swimming and fishing are available. And a popular canoe route is the trip down the Delaware to Port Jervis.

Sullivan is heavily wooded throughout, mostly second growth hardwood with scattered pine and hemlock. Originally, the region boasted exceptional white pine towering 200 feet. These were rafted down the Delaware and many a gallant sailing vessel was rigged from a Sullivan spar. The original hemlock stands were taken for tan bark.

Many acid wood industries once flourished but now only ghost towns dot the northern second growth lands. The vanished village of Acidalia is typical. A little known industry is fern picking. And the Shawangunk range along the eastern edge is noted for its huckleberry crop—and its annual forest fires. But, as was said, the main crop is what's known to the industry as the Summer Boarder. Route 17 is one of the heavily trafficked highways in the nation. It gets that way mainly because Sullivan's woods, waters and piazzas are ready to be taken over by the shorts and halter trade.

More in our line, however, is the trout fishing department, and as a parting shot we offer the following:

Best stretches for the dry fly: Beaverkill from Roscoe to Covered Bridge at Rockland; Beaverkill from Junction Pool at Roscoe to East Branch; Beaverkill at Lew Beach Campsite; Willowemoc from Livingston Manor to Roscoe (State-owned and marked); Willowemoc—open water between Livingston Manor and DeBruce (some State-owned and marked); Roundout above Lackawack Dam to posted water below Sundown; Neversink River from Hewitt's line to Woodbourne.

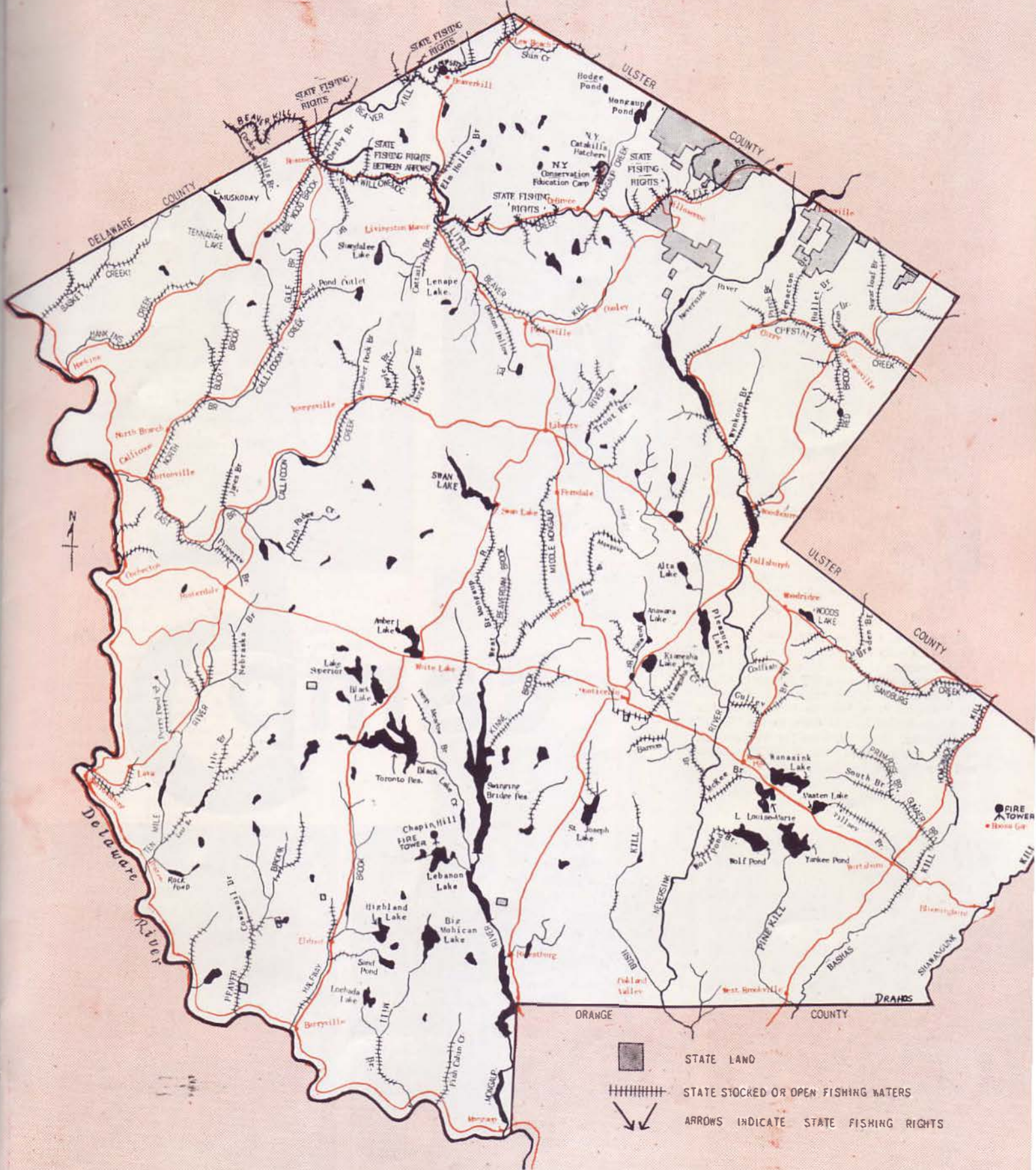
Good small streams yielding occasional big trout: Beaver Brook at Jordan Meadows 3 miles north of Yulan; Upper Willowemoc from Conklin Hill covered bridge to Willowemoc village; Sandburg Creek from Spring Glen to Ellenville; Bashas Kill one mile north from route 17 at Wurtsboro (posted by Mamakating Club); Lower Mongaup from route 97 to Rio Dam on open waters; Mongaup River above Mongaup Valley.

Good fly brooks for 7 to 10 inch fish: Little Beaverkill from Parksville to Livingston Manor; Fir Brook above Willowemoc Village; Benton Hollow stream below Parksville where it flows into Little Beaverkill; Ten Mile River; East Mongaup from Luzon to Harris; West Mongaup from Swan Lake to Mongaup Valley; Mongaup stream from fish hatchery to DeBruce; Halfway Brook from Eldred to Barryville (much posted); Wyncoop Brook one mile from Neversink at Hasbrouck; Shinglekill from Sparrowbush to Rio (some posted); Trout Brook from Peakville on Beaverkill to Lake Muskoday; North Branch of Callicoon Stream from Hortonville to above Callicoon Center; Basket Brook.

Good bets for the season's heaviest brown trout, especially if fished at night: Mongaup-Delaware Junction Pool at Mongaup, above Hawk's Nest on route 97; Mill Brook-Delaware Junction Pool at Pond Eddy Bridge; Cook's Falls Pool, School House Pool, Cairin's Pool, Barnhart Pool on Beaverkill below Roscoe; Neversink River, all large pools between Neversink Dam and Woodbourne; Neversink River below Bridgeville and above Oakland Valley (mostly posted).

See you on Junction Pool along about June 1. —NICK DRAMOS

COUNTY





The Foreman

Comp 5 is a 50-man, 20-horse, 1-woman Adirondack pulp camp operated by the Finch, Pruyn Company of Glens Falls. It is high on a mountainside overlooking the Boreas Ponds, in Essex County. Working out of Comp 5, men cut the pulp from May to November; when snow comes they haul it down to the "dump" on the pond. In spring, when the ice goes out, so does the pulp--88 miles down the Boreas and the Hudson to the mill at Glens Falls.

camp 5





The Clerk keeps the books, runs the store, and pays the men according to a piece-work scale set by the Foreman—so much per cord, more for a tough job than an easy one. A good man makes 15 dollars a day, pays back to the Company 65 cents for each meal in camp. Beds are free. A very high percentage of the money earned is spent in bars as soon as the men hit town. The Foreman's biggest problem (next to weather) is "floaters"—lumberjacks who drift from job to job.



There are two groups in the camp, the older Finns (now dying out) and the younger French Canadians. Each group has a separate bunk-room, but everybody is up by 5:30 (earlier in summer), in bed at 8.





The Cook, a good one, is the only woman in camp; she serves meat three times a day. A sign in the mess hall says: "Ne parlez pas a la table"—"Do not talk at the table". Nobody talks so the men waste little time at the table. Breakfast at 6; dinner at 11:30; supper at 5:30.



Camp 5 is one of five camps operating this winter on Finch, Pruyn's 173,000 acres of Adirondack land. It will produce 5,400 cords of spruce and balsam. Then, this spring, it will be abandoned and when the land it services (about 1,500 acres) is ready for another cutting in about 30 years, a new camp will be built. Price of pulp depends on quality, market, and species. Price of mixed rough pulp delivered to the mill is now \$22 a cord. Due mainly to high land taxes and the Company's policy of sustained yield management, it costs more than this to produce, cut and deliver pulp from Camp 5.





the house on Venison Mountain

A MAN in the town said to me last fall that if somebody would just tear down this house, or burn it up some winter night, then the community would be a lot better off. But as long as the house stood there, he said, somebody would come along and try to live in it, and ever since the Caskells had frozen up in the winter of '34 it had always been the wrong sort of people that came along.

The man who said all this happened to be the local Tax Assessor, and it may be that he was prejudiced because he'd had a tough time trying to keep the Caskell property straight on his books. Title seemed to change about every year, usually in the spring and specially after a tough winter. Local people were not interested in buying the property so that most of the time he was dealing with parties from Glens Falls or Schenectady or even New York, parties he almost never saw except on Tax Grievance Day or when he was out at the place trying to perform his function as Assessor. These parties just bought the place to get whatever it was they wanted out of it: they put nothing back in.

If you had heard the Assessor make these remarks you might suppose that the Caskell place was haunted, or at least queer. Not at all. What it amounts to is a small run-of-the-mill frame house, not well built but not badly either, set in a clearing of about three acres on the bottom slopes of Venison Mountain. There are lots of other places in the Adirondacks just like it. What makes it a problem nowadays is that it's six miles from town and the six miles is measure over a dirt road that was layed out for horses, not cars.

My first memory of the place is of a time when the Caskells were still living there, about 25 years ago. They were both very old then, in their seventys, and how they managed to survive the Adirondack winters as long as they did nobody seemed to know; most likely they just holed up. But in the summers they were out and around, very cheerful, and hunters and fishermen on their way out over the road used to stop in and give them whatever they had left

over in the way of provisions. As they drove away the Caskells would stand side by side on the porch, waving slowly until the car had disappeared down the mountain.

But the winter of '34 was too much for the Caskells. Along in February the man who keeps the general store in town happened to think that he hadn't seen them for over a month, so one Sunday he harnessed up his horse and drove the six miles. He found Mr. Caskell on the floor of the woodshed, frozen stiff and still gripping a battered splitting axe. Mrs. Caskell was dead too, sitting in a rocking chair pulled up as close as she could get to the stove.

After that the house on Venison Mountain was vacant for a couple of years. In later years it has often looked vacant even when people were living in it, but on our way out from hunting in the fall we can always tell whether or not somebody is going to winter in there by the way the place is fixed; a rough plank cribbing around the foundation, stuffed with straw or even dirt, means that somebody is going to winter through. Otherwise not. For a couple of years after the Caskells, nobody wintered through.

THEN came a character named Nicoletti. How he got title to the place and what he did in it nobody seemed to know, except that he used to show up every once in a while with some other men, all in business suits, and stay four or five days. Sometimes the lamps would burn all night while they were in there. They came even in winter and must have brought everything they needed with them because they never stopped in town or hired anybody to do anything for them. As far as I know they never went outside except to stand on the porch and shoot revolvers at tin cans and bottles, which got to litter up the place quite considerably. In July they used to shoot the heads off Mrs. Caskell's peonies.

There may have been another fellow in between, but the next one I remember was a man named Hoffman who tried to take yellow birch and maple

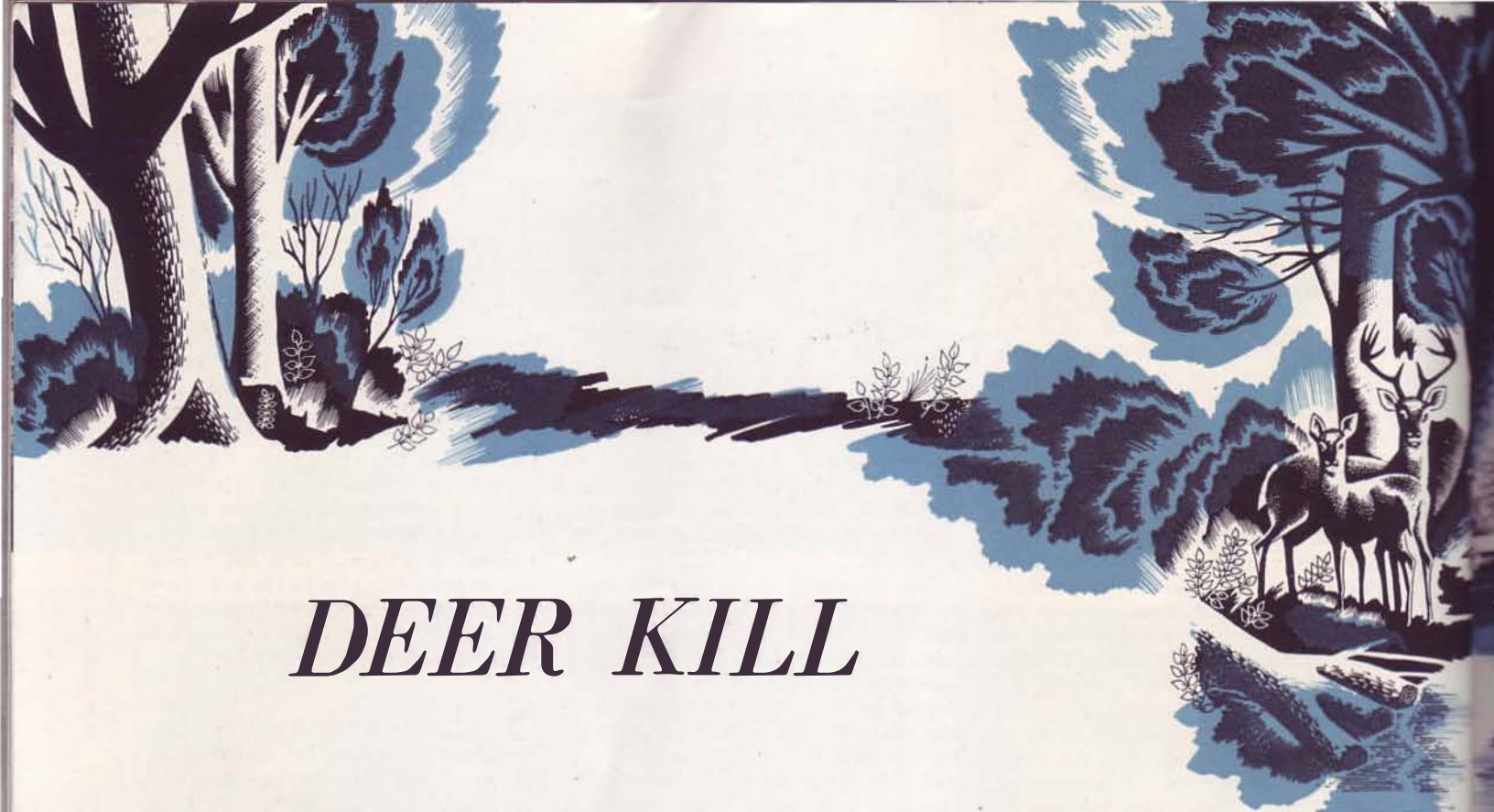
off Venison Mountain. (About 85 acres go with the Caskell house). He looked tired and unhappy all the time and he certainly worked hard, but he never seemed to get going in a big enough way to make things pay. He lived alone in the house. He borrowed money and did a lot of cutting, but in a couple of years he folded up and moved on.

SOMETIME during the war came Willie Price. The story of what happened to Willie is a matter of official record and so is more complete than the others. One day last July (after he had been on the Caskell place for almost four years) Willie went up into one of the clearings that Hoffman had made on Venison Mountain and there shot a large doe. He dressed it out and cut it in half and then carried it in two trips down to the road below the house, where he stuffed it into a culvert. As he was starting home a Game Protector and a Special rose up out of the brush.

That was the end of Willie and apparently the end of Willie's business in the community, because a couple of weeks later he left for parts unknown. Incidentally, the Game Protector told me later he'd made a mistake in this arrest; he should have waited to see who was coming to pick up Willie's doe, and then we would all have known more about how Willie supported himself those four years.

Roughly, this brings the house on Venison Mountain up to July, 1948, which was the approximate time when the Assessor said he wished somebody would burn it down. But since then maybe the Assessor has changed his mind. Coming out after hunting last fall I noticed a bunch of fellows putting up that winter cribbing and straw, and I stopped to talk with them. They come from Utica. It seems they'd gotten together and bought the place, partly just to have a good time, and partly to have a good time working on the place. They seemed to be humorous fellows but serious minded, such as the Assessor might welcome into the community. They were even pruning Mrs. Caskell's lilacs.

—P. W. FOSBURGH



DEER KILL

THIS past fall, 375,000 licensed deer hunters took the field in New York State. The stubs they sent in, now completely tabulated, indicated an all-time record take of 37,683 whitetailed deer.

The Adirondack Region, consisting of 14 counties, reported a take of 4,650 bucks as compared to 6,094 in 1947. The 15 counties in the Catskill Region produced 4,846 bucks as compared to 4,787 last year. Of the 25 counties in the Southern Tier and Western Region, the 15 in which only bucks could be taken reported a kill of 2,331, as compared to 2,428 in 1947. In the 10 counties in this region in which there was an open season on deer of either sex, 11,242 bucks and 14,614 does were taken, as compared to a kill of 4,034 bucks in the same counties the previous year. (Complete table on page 33).

These are the figures. What may be deduced from an analysis of them?

Deer hunting in the Adirondacks, due principally to unfavorable weather, was disappointing this year. Other factors contributing to the 1,444 decrease in take from last year were: (1) depredations of dogs in the outer counties such as Oneida, Oswego, Fulton and Warren; (2) the toll taken by violators; (3) the severe cold and deep snows of last winter, which effected a reduction particularly in the young bucks which were born in 1947; (4) reduced hunting pressure, partly because of poor hunting conditions and partly because of the promise of better opportunities in the western and Southern Tier counties.

The kill in the Catskill Region as a whole remained constant this year as compared with last, and the general situation there may be considered a healthy one as far as the herd is concerned. Putnam County, however, showed the effects of the damage done by dogs last winter in the drop of 32 per cent in the take. Neighboring Dutchess County showed a rise of 34 per cent, apparently largely because of increased hunting pressure. And up on the Mohawk River, Schenectady County showed a sharp decline in the take with a slump of almost 50 per cent—the result of a third open season in a small, well-populated county where the reserve built up by previous close seasons had been depleted.

In the 15 Southern Tier and western counties in which there was a season on bucks only, the slight drop in take over last year undoubtedly reflects a shift in hunting pressure to the counties farther west, where deer of either sex could be taken, and it was in these 10 buck-or-doe counties that the most significant developments occurred; 21,822 more animals were taken in these counties this year than last. The combined factors of large deer concentrations and heavy hunting pressure accounted for the large kill, 75 per cent of which occurred in Chautauqua, Cattaraugus, Allegany and Steuben counties. These counties offer excellent deer range. Furthermore, extensive reforestation by this Department's Division of Lands and Forests has made the habitat more attractive.

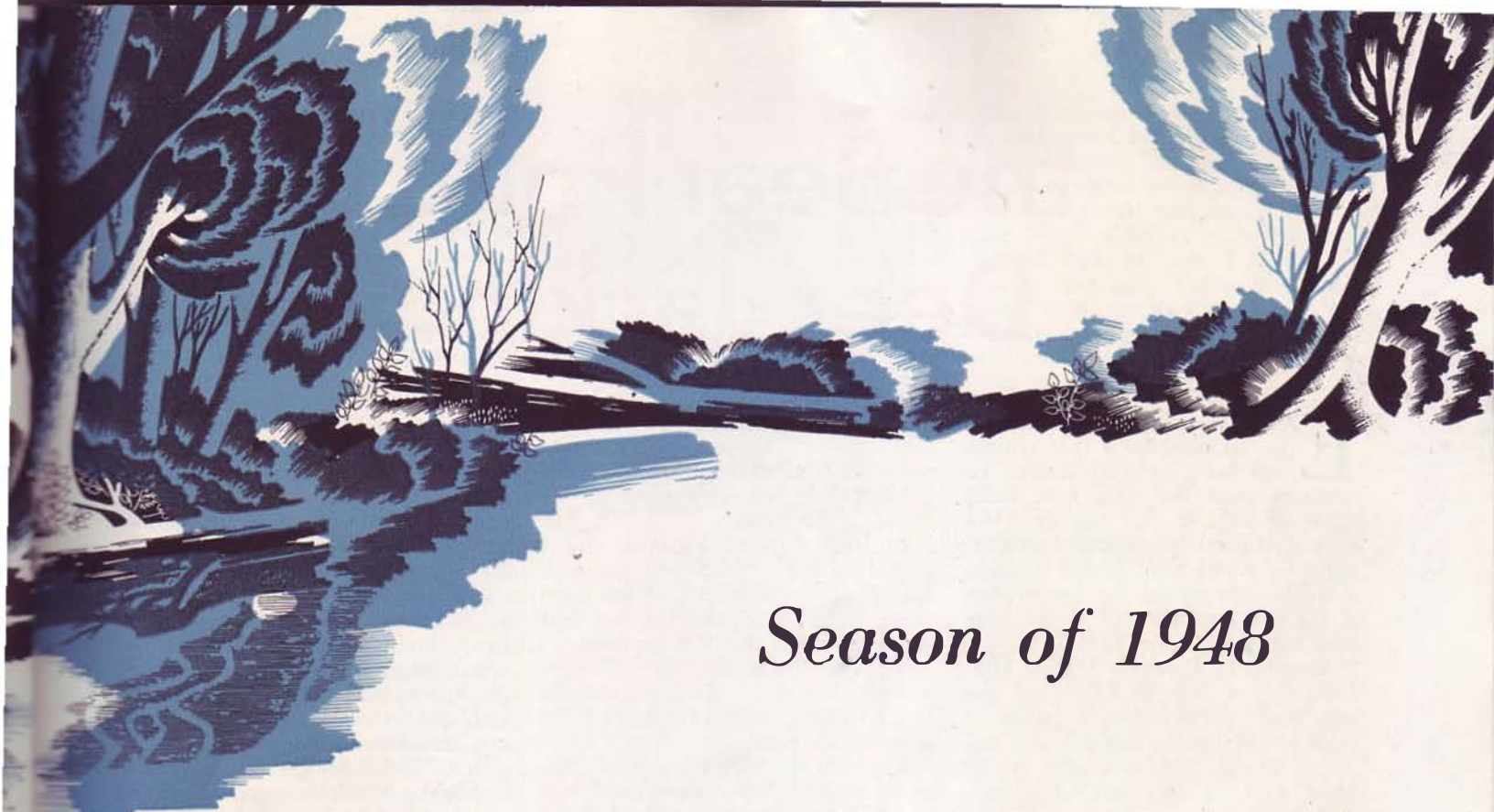
As has been explained in previous is-

sues of this magazine, the season on deer of either sex in western New York was the result of a recommendation worked out by a joint wildlife control committee composed of representatives of the Farm Bureau Federation and the New York State Conservation Council. The object of the recommendation was (1) to protect agricultural interests and (2) to prevent the herd from over-browsing its own range. It is believed that in these ten counties these objectives were assured by last fall's substantial kill.

THE belief was that such a season would be needed only at intervals, so it is unlikely, based upon experience in this and other states, that a season of this kind will be necessary for another two or three years. However, the committee continues to function, and is planning to meet and go over the results of the season in detail and to recommend any change in the law or in its application which seems called for.

There were a few people who felt that the herd in this area was unduly depleted, but this is not borne out by observations made during the closing days of the season and subsequently. These observations definitely indicate an adequate residual stock.

The important point to remember is that deer in this area multiply very rapidly—having a reproductive capacity which is 100 per cent greater than it is in the Adirondacks. If the range is permitted to be over-browsed, however, (and this has been proved many times



Season of 1948

in many parts of the country), it takes a great many years for it to recover. Here in New York the Legislature, by a careful revision of the State's deer law from time to time, has done a good job in avoiding these pitfalls.

At the same time, the Legislature should be complimented upon the new deer jacking law which was enacted at the last session and was in operation during the past year for the first time. By making deer jacking an indictable misdemeanor and greatly increasing fines and penalties, deer jacking already has been reduced about 50 per cent.

Another problem in successfully managing deer is represented by the losses occurring from marauding, unlicensed, and in some cases semi-wild and wild dogs. This is a problem which involves not only the Conservation Department but also the Department of Agriculture and Markets (through its Dog License and Control Bureau) and a great many local officials who administer the Dog Law throughout the State. A committee composed of representatives of all groups and agencies affected has tackled this problem with a view to cutting down the number of such dogs.

WITH these factors in mind, it is reasonable to ask what are the prospects for the hunting season next fall. While it is too early to make an accurate prediction, this much is clear:

In the Adirondacks, the take during the hunting season depends a good deal on the nature of the preceding winter. A series of mild winters without deep

snows results in a good survival of the fawn crop with the possibility of a resultant higher take the following years. Under the Federal Aid in Wildlife Restoration Program (Pittman-Robertson), an allocation has been earmarked to cope with emergency conditions which might lead to starvation. This program is fully described on page 34.

In the Catskills the take has been reasonably high and increasing over a period of years. However, District Game Manager Albert Hall feels that there is need for developing mutual good will between landowners and sportsmen in certain sections where high hunting pressure, coupled with some cases of property damage, will result in posting for protection. A high illegal kill of does on the part of irresponsible hunters is tending to keep the Catskill herd below a potentially higher level.

In the Southern Tier and western counties, where the special season was held, there are undoubtedly enough deer left to provide reasonably good hunting in the areas which are really adapted to deer. In one heavily hunted section, 31 parties of hunters with 33 deer taken on the last day reported that they had seen 149 other deer during the day. In addition, direct observations by Department employees in the better parts of the Southern Tier deer range indicated that there were hundreds of square miles of the less accessible deer range which were only lightly hunted. Thus, it is expected that hunting will not be as good in the more open fanned areas as it will be back in the hill country.

One of the most vexing problems in connection with deer hunting, which it has not yet been possible to solve, stems from the fact that the seasons in the various regions of the State do not run concurrently. The Adirondack season currently closes November 20; the Catskill season runs from the 15th to the 30th of November, and the western and Southern Tier season is held the last six weekdays of November. It is felt in some sections that this situation results in a number of disappointed Adirondack hunters switching to the other areas after the Adirondack season closes. Where this occurs there is strong sentiment for a realignment of seasons so that all close on the same date. This has been difficult to achieve, however, because climatic conditions differ so widely between the northern Adirondack counties and the Southern Tier counties. A bill before the Legislature would split the difference on a compromise basis by having the Adirondack season close five days later, or on the 25th of November. This subject will undoubtedly come up for discussion at the annual hearing on conservation legislation.

But perhaps the best assurance of at least reasonably good hunting next fall is the amazing adaptability of the white tailed deer himself. Granted proper protection and good management, he has demonstrated his ability not only to withstand, but to recover from, both hard winters and hard hunting.

—ARTHUR W. HOLWEG,
Supervisor of Game Management

the Bear Pond Deer Jacking Case

EARLY in July, 1948, we received several complaints that venison was being peddled around Ticonderoga and that deer were being taken at night in that vicinity. We knew if an arrest and successful prosecution of the case were carried through, it would demonstrate the effectiveness of the new deer law and at the same time satisfy the complaints.

Accordingly, Protector Francis Murdock, also of Schroon Lake, and myself, made a comprehensive study of maps of the heavily forested area and visited several spots accessible by car where we knew deer jackers had operated in the past. The results were negative. We decided to try the marshes and ponds. On July 24, Murdock and I headed for Bear Pond, a small body of water in Essex County, Town of Ticonderoga, about three miles from the highway. It is a pond with shallow bays supporting a good growth of lily pads. During the fly season we frequently had seen deer feeding there.

Every precaution was made for this man-hunt. We knew we were up against individuals who were using extreme caution against detection. We concealed our car at a point on Eagle Lake and, carrying packs with provisions for the night, struck out through the woods by compass over Otter Pond Mt. and thus came to the north shore of the pond by about 9 o'clock, while there was still light. We spread our bags on the edge of the woods and waited until dark. We then moved our position to a rock ledge directly on the shore. It was dark and warm and still and there were the usual night noises of the woods, but nothing to indicate the presence of other factors.

I wondered about the time and Murdock crawled head-first into his sleeping bag to examine his watch with a flashlight. He whispered it was 10:45 p. m. Just a few moments after this we were alerted by the sudden, brilliant appearance of a powerful beam of light emanating from a promontory about 125 yards across a bay from us, and directed at a spot on the south shore of the pond. The light revealed a deer standing knee deep in lily pads and looking directly into its source. Immediately

the silence was shattered by two rapid rifle reports. We saw the deer lunge out of the mud and water and disappear.

Meanwhile the light remained directed at the scene.

In total darkness Murdock and I groped our way to the point from which the rifle shots had been fired, but upon arrival there found that the big light had been turned off. We then saw two small lights across the bay where we had seen the deer. Then we saw the lights bobbing toward us around the shore of the pond.

Our plan of action was simple. We went back onto the Bear Pond trail about 50 feet from the pond. I stayed at that point where I could still see the lights and sent Murdock downtrail about 25 yards, it being our plan to allow the first person approaching to pass my position in case he was a lookout. In that event, Murdock would apprehend him and I would make contact with the second party.

But it did not work out this way.

When the lights reached my position, I saw two men together, one Silas W. Nadeau in front with a two-cell flashlight in his right hand, a deer heart dripping blood in his left, and slung over his shoulder was a battery and a spotlight.

The other person was Howard Schryer, Sr., who was carrying the headless carcass of a deer across his shoulders. Nadeau stopped when he was within six feet of me. Schryer stepped alongside and I heard one of them ask: "Well, what will we do next?"

The next move obviously was up to me, so I grabbed hold of Nadeau with my left hand and Schryer with my right. I told them I was a Game Protector and they were under arrest and at the same time I called to Murdock.

[In the preceding issue of this magazine we carried a brief report of the case described on these pages; our deadline made more complete coverage impossible at that time. Because of the importance of this case, however, and because it so clearly demonstrated the combined effectiveness of law, law enforcement, and support of the law in the courts, we now publish a more detailed account. First we have Protector Kerst's report of the actual arrest, then a brief summary of the court proceedings which resulted in conviction and sentence.—Editor]

There was a lot of twisting and pulling; the deer was knocked off Schryer's shoulders and Nadeau dropped the deer's heart. I felt clothing rip under my grasp, but as soon as my partner arrived and took a hand there was no further resistance.

Since neither Nadeau or Schryer was carrying a rifle, and because we had seen two lights approaching, Murdock surmised the presence of a third person. He back-tracked about 30 feet and his flashlight revealed Schryer's 15-year-old son, crouched at the side of the trail with a 250-300 Savage rifle and a small flashlight. Murdock examined the rifle and found it to be loaded with three cartridges, one in the chamber and two in the magazine. Murdock unloaded the weapon. It was now past midnight.

WE started back, using the regular pond trail to the Tweedle Armstrong place where Nadeau had parked his small truck. Murdock and I took turns dragging the deer and carrying the seized equipment, keeping the prisoners between us. On reaching the first brook which crossed the trail we allowed Schryer and Nadeau to wash the blood from their hands and arms, which were red to the elbows. The greater part of the trail was a washed-out, rock-filled dry stream bed and our exertions were lightened only by the appearance of the moon and the fact that we had a downhill course.

When we reached Nadeau's car, he refused to allow its use, and it was necessary to send Murdock an additional three miles to a residence from which place he could telephone the State Police sub-station at Port Henry. Corporal George Hanby, who was subsequently contacted by radio, met Murdock and both came back and picked us all up. We arrived at the office of Justice of the Peace William Barry, Ticonderoga, at about 3 a.m., Sunday. The prisoners were arraigned on a charge of taking a wild deer with the aid of an artificial light after refusing an offer to settle by civil compromise. Schryer, Sr. and Nadeau waived examination and were held for grand jury action. The former's son was held for appearance in Children's Court.

Immediately after the arraignment, Murdock and I returned to Bear Pond, arriving there shortly before daylight and picked up our packs. As soon as we could see without a light we went to the promontory and found the spot from which the group had watched, it being indicated by flattened grass and broken brush and a candy wrapper. We also found two bright, empty cartridge cases of a calibre the same as Schryer's rifle. We then visited the spot where the deer had been standing. There we saw deer tracks in the mud and a trail of blood leading into the woods. At the trail's end, we saw the insides of a deer, still slightly warm and minus the heart, and we also found the severed head of a deer without horns. Continuing our search for additional evidence, we found two large pack-baskets concealed off the trail a short distance from the point where Murdock had found the boy. They contained an assortment of camping equipment, consisting of food, cooking and eating dishes, blankets, axe, large hunting knife, ropes and cigarettes. I recognized one basket as belonging to Schryer because it had a complete covering of brown hand-sewn canvas. A year previous almost to the day, I had checked Schryer and others on the Bear Pond trail and saw the same pack-basket and rifle, a take-down model.

Taking the head back to Ticonderoga where we had placed the carcass in storage, we determined that it had been cut from that body by the neat way the two fitted together.

ON Oct. 12, Schryer, Sr., and Nadeau were indicted by the Essex County grand jury on three counts. These were: Taking a deer with the aid of an artificial light, taking deer with horns less than three inches in length, and unlawful possession and transportation of a wild deer.

The Savage rifle and spotlight were confiscated by the Department and I have recommended revocation of the license privileges of both men for the maximum period of five years.

Howard Schryer, Sr., is 52 years old, 5' 10" in height, weighs 185 pounds and is a carpenter by trade. He resides at 18 Battery St., Ticonderoga. He was apprehended once by me for spearing lake trout on the spawning beds in Lake George and settled by civil compromise. He was once apprehended by Protector Harlow Wheeler for jacking deer in the Town of Burke, Franklin County.

Silas Nadeau is 45 years old. 5' 11" tall and weighs 200 pounds. He is a part time painter, farmer, and butcher and lives outside Ticonderoga on the



Dwinal G. Kerst
Ass't District Game Protector
Saranac Lake Division



Francis Murdock
Game Protector
Saranac Lake Division

Buck Mt. Road and has not previously been convicted of a violation of the Conservation law.

I should like to suggest that due recognition be given to District Attorney Daniel T. Manning of Essex County who was so instrumental in bringing this case to a successful conclusion. His co-operation was complete and unprecedented. Mr. Manning lives in Ausable Forks, a hotbed of Conservation law violators, and his sharp prosecution of this case together with the respect these people already had for his ability as an attorney has changed the atmosphere in that locality considerably.

—DWINAL G. KERST,
Ass't Dist. Game Protector

THE trial of Nadeau and Schryer, Sr., Nov. 17-18 in the old courthouse in Elizabethtown resulted in their

convictions on all three counts. There is no question but that the legal astuteness of District Attorney Manning did much to obtain these convictions.

It was a trial without precedent in the North Country, with the people of the State of New York lined up against two men who were symbolic, more than ever in this instance, of a situation incompatible not only with law and decent sportsmanship, but also with proper maintenance of the Adirondack deer herd. And this was the first successful prosecution of the new deer law which makes deer jacking an indictable misdemeanor.

The courtroom was well filled: discussions during recesses were lively, topical and certainly varied, for just a day or two previously Elizabethtown had undergone another sensation—the bludgeon-murder of an elderly sheriff's office attache by two hoodlums. Eight State Police road blocks were passed by this writer in covering the trial.

Adirondack and city flavor were in the courtroom. Residents drove from miles around in cars old and new, in checkered shirts and white ones. New haircuts and freshly shaved faces were in evidence. So were beards. County Judge Sheldon F. Wickes was lenient with his restless audience, far more accustomed to the open than the hours-long confinement and decorum of courtroom etiquette. Jury panel members, closely questioned before their eventual choice by District Attorney Manning and defense counsel, represented a true all-walks-of-life picture.

Fred Chambers, Department photographer who made aerial views of the Bear Pond section, Protectors Murdock and Kerst, the writer, who snapped ground shots, and several others were among those giving testimony. Questions and answers gradually built such a solid foundation for conviction that long before the end of the trial there was little doubt among the audience as to what the outcome would be.

When the due process of law was concluded, the defendants felt the heavy impact of the teeth in the new deer law, passed by last year's Legislature. On December 6, each was sentenced to one year in jail, suspended on payment of \$250 for the first count, and a fine of \$100 on each of the other two counts. Schryer, Jr. was placed on probation.

Each man, therefore, paid not only his share for legal defense counsel, but in addition \$450—a total of \$900 for a deer which they had no opportunity to enjoy, since the carcass was turned over to charity in accordance with this Department's custom.

—BARNETT FOWLER

the Cedars— white and red



White

Flora

THE several trees to which we give the name "cedar" in New York are not true cedars at all. Only one tree in the world has a genuine right to bear that name: the famous "Cedar of Lebanon" from Syria and other parts of the Near East. Our American trees are, technically speaking, cypresses, but for practical purposes we will keep right on calling them "cedars".

To complicate things further, our native white cedar is often called "arborvitae". This is just the Latinized version of a designation given to it in France when the tree was first brought back to Europe from North America, but it has now (believe it or not!) become adopted in horticulture as the English name.

The aroma of the cedars is one of the most unforgettable scents in the whole out-of-doors and is quite distinct from the fragrance of the pines or the firs. Wood, leaves and twigs are all permeated with a volatile oil which protects the tissues from attack by insects and decay, and when extracted, the oil from white cedar is known to industry as "cedar-leaf oil" and is used mainly as a perfume in soaps. In Northern New York, you will often run across home-made distilleries for extracting cedar-oil. A ton of cedar boughs will make from 10 to 20 pounds of cedar-oil.

To the forester, white cedar means poles, fence posts, canoes, and shingles. To the nurseryman and landscape-designer it means hedges and also those dwarfed and pyramidal forms into which the tree can be trained. To the Game Manager it means deer food, in fact white cedar is the most favored winter browse for deer.

Wherever you find white cedar, with its sturdy buttressed trunk, growing in any abundance, you can be sure there is limestone or lime-bearing rock of some kind below ground, and this holds just as true up on the shores of Hudson Bay or Lake Winnipeg as it does in Onondaga County, New York. White cedar, though it grows prolifically in swamps, is also found on the uplands (even in the Adirondack High Peaks region) up to 4,000 feet.

Don't confuse the white cedar with the red cedar, which is more properly called "redcedar juniper". While this tree has many characteristics like those of the white cedar, including the stringy bark and the fragrant, durable wood, there are specific differences which are easy to recognize. In white cedar the tiny leaves are jointed together like chainmail in medieval armor; red cedar has some of these jointed leaves, but also another leaf like the needles of the common juniper,—that low



Red

shrub that infests pasture-lands. (See photographs). The two kinds are often present on the same tree. Being a juniper, red cedar has the familiar bluish "berries" while the white cedar bears cones with woody scales. The heartwood of red cedar, from which its name is derived, is a deep purple-red. Both trees may occur in the same locality, but red cedar never grows in swamps and is usually found in dry, open pastures. Those legions of trim, upright evergreens that you see marching across the landscape in the Hudson Valley south of Albany, and on Long Island, are red cedars. It is from this tree, which grows to a much greater size farther south, that we get our cedar chests, lead pencils and floor polish.

But white or red, our New York cedars have their place in landscaping and the woods-industries; and whether properly called cedar, cypress, arborvitae or juniper, they all have the same pleasant and lasting aroma.

—ED LITTLEFIELD,
Superintendent of Forest Investigations



Fauna

FEW animals are as descriptively named as the varying hare (*Lepus americanus*), also commonly known as the snowshoe hare, white rabbit, or snowshoe rabbit. The species derives its various names from its interesting adaptations to the seasonal changes affecting its habitat.

The color changes are effected by means of a molt, and are timed (although the hares have no voluntary control over them) to coincide with the changing appearances of the background. The periods of transition, from white to brown in the spring, and from brown to white in the fall, each require more than two months from start to completion, during which time the hares are a mottled brown and white.

In addition to the changes in color, in the fall the soles of the feet develop a very heavy growth of hair which functions as snowshoes.

In New York State, hares are most abundant in and around the Adirondack and Catskill Mountains. Thriving populations, with less extensive ranges, are found in Allegany, Cattaraugus, Rensselaer and Chenango counties. Smaller colonies of limited range are found in scattered "islands".

Primarily a woodland species, varying hares occupy a variety of cover associations, but show a preference for coniferous swamps, particularly in the Adirondacks. In the Catskills, where the slopes are forested principally with hardwoods, most of the hares are to be found on the mountain tops where also are found the spruces. In the southern Catskills the rhododendron "jungles" support a substantial population.

In contrast to some of the other small game species in this State, within their natural range hares have been relatively abundant and hare hunting good in the past few years, except for portions of the Catskills. Even there, definite gains were noted last year. One notable extension in range bears further com-

snowshoe rabbits



The only photograph known to exist of new-born hares in their birth site, where they remain only a day or two. Taken May 7, 1948, near outlet of Raquette Lake

ment on the basis of outlook in regard to future hare hunting. On January 14, 1948, the season for taking varying hares was reopened in Chenango County. It had been closed since 1935. Due principally to the extensive plantations set out in 1927-28 an extensive tract of excellent hare habitat has been re-created. At the time of reforestation, hares were scarce and limited to a few of the larger swamps around Beaver Meadow. They are now common or abundant over about one-quarter of the county and are still spreading. The implication is obvious.

Food requirements do not seem to be a limiting factor in hare abundance; almost every plant that occurs in hare habitat has been recorded in their diet. Chief among their predators are the bobcat, great horned owl, red fox, weasels, and, near settlements, cats.

The breeding season of varying hares in New York State begins about the last week in February and latest litters are born in late September or early October. The gestation period is normally 37 days. Litter averages are three or four young, but litter sizes from one to six are common. Since hares are capable of breeding the same day of parturition, they have a potential capacity for producing five litters a year, but it is very improbable that this maximum is attained in the wild. Indications are that three litters a season is usual.

Leverets (young hares) are born fully furred, alert, open-eyed, and able to walk and hop. No nest is constructed, although the female flattens a depression in the vegetation or forest litter, into which the young are born.

—JOSEPH DELL,
Game Research Investigator

Scatter Shots

Notes of General Interest

AVIATION'S HERE TO STAY, ETC.—From Protector Paul Campbell of Parishville comes an aerodynamic revelation. It seems that Art McRobbie, local resident, adopted last spring an orphaned mallard duckling and proceeded to buy it a Pekin playmate. Both ducks summered in a little pond near the house and before fall the wild hen began trying her wings. Soon attaining flight, she tried to get the white barnyard fowl to do the same by continually flying in small circles above the Pekin's head.

Before winter set in, says astonished Campbell, both ducks were banking around the eaves of the house, the white one still needing a little dual on landings which he executes like a pumpkin thrown into the pond from an upstairs window. Neither duck offered to head south, and both have free access to the barn. We wonder what the result will be of tender spring quackings in the granary.

DUCK BANDING, 1948—During the past fall 10 duck banding stations were operated at scattered points throughout the State. These were (1) The Perch Lake station on Perch Lake, north of Watertown; (2) the Oak Orchard station on the Oak Orchard Game Management area west of Rochester; (3) the Oneida Lake station on Oneida Lake west of Constantia; (4) the Tomhannock station on Tomhannock Reservoir northeast of Troy; (5) the Lake Alice station on the Miner Preserve north of Chazy; (6) the Stamford station on a small pond near Stamford; (7) the Bronx Zoo station; (8) the Quogue station in the sanctuary north of Quogue, Long Island; (9) the Montezuma station on the Montezuma Refuge at the north end of Cayuga Lake; and (10) the Grand Island station in the Niagara River. The last two stations represent an addition to the eight which were operated during the season of 1947-48.

Due to an unusually mild fall, the trapping period, which began in early September, was extended until December 15 when freeze-up occurred throughout most of the upstate region. The banding stations at Quogue and the Bronx Zoo are still operating at this writing. Banding success on the latter area increases as the surround-

ing water areas freeze up.

A total of 5,394 ducks were banded and released during the current fall as of December 31, 1948. The following species were trapped: black duck, 3,516; wood duck, 1,040; mallard, 795; blue-winged teal, 24; and pintail, 19. These ducks were trapped at the various stations as follows: Perch Lake, 1,273; Niagara River, 107; Oak Orchard, 321; Montezuma Refuge, 1,029; Oneida Lake, 374; Stamford, 6; Tomhannock, 708; Lake Alice, 153; Bronx Zoo, 38; and Quogue, 1,385 ducks. The number of ducks banded at each station increased over last year with the exception of Bronx Zoo and Stamford. These stations may exceed their last year totals before the trapping season closes in April.

The number of ducks banded this season was more than double the num-

ber banded during the previous one. This was primarily due to an extended trapping season, the addition of two new banding stations and increased efficiency of the trappers rather than a marked increase in the number of ducks present.

ADDENDA—Our "Out of the Past" column in the October-November issue, which had to do with the evolution of New York's deer laws, brought forth the following from Ralph Smith, Department Game Research Investigator: 1705 ch. 151 Laws of New York (in effect Jan. 1, 1706): provided the closed season on deer Jan. 1-Aug. 1 in Suffolk, Queens, Kings, Richmond, West Chester and the fine of 20 shillings or 20 days in gaol. Also provided that dogs chasing deer in those counties were to be

OUT OF THE PAST



THIS old photograph, and also another of the same subject and period which we will publish in our next issue, were sent to us by John Knox, of Lake Pleasant. This is a contemporary record of how deer jacking was done when that sort of thing was legal. The lantern, placed well forward in the bow of the boat so that it would not reveal the hunters, was beamed toward the shore after the hunters had located a deer by the sound of splashing in the water. The light picked up the eyes of the deer. While the animal remained spellbound by the light the man in the stern paddled noiselessly until within easy range. Then the man in the bow lined up his sights in the light of the lantern, and fired.

shot and killed or otherwise destroyed.

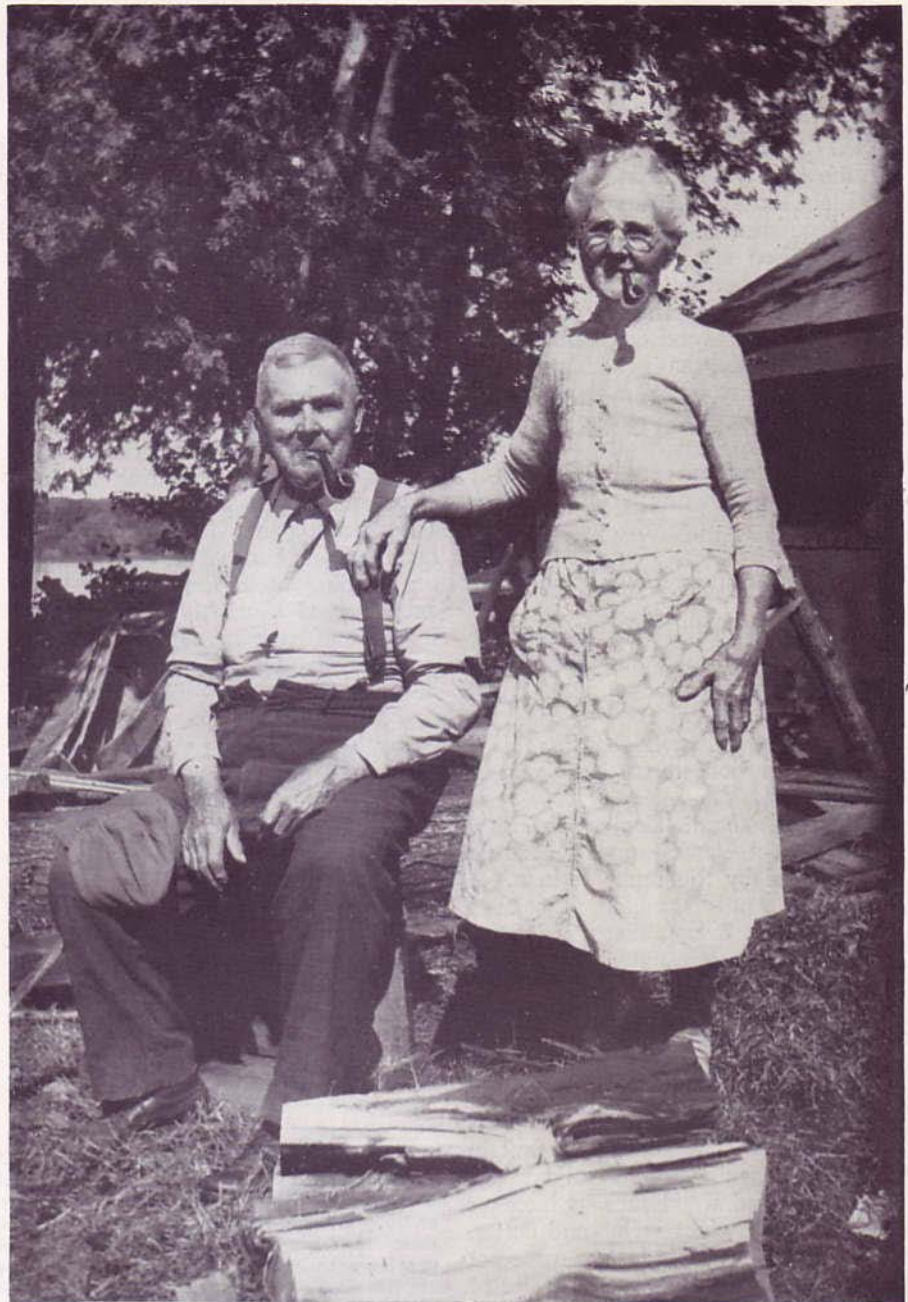
1768 ch. 1339 Laws of New York: a fine of 2 pounds or 1 month in gaol for any person found outside his enclosed lands in Albany, Ulster and Orange counties with a blood-hound or a beagle (to prevent their use in killing deer); modified by ch. 1396 to permit use of these dogs to hunt wolves and other vermin in Ulster and Orange counties.

1717 ch. 345 Laws of New York: laid a fox bounty in Suffolk, Queens and Kings counties; 5 shillings for an adult fox, 2 shillings 3 pence for a young fox.

1723 ch. 443 Laws of New York: bounties on foxes removed because too many fox skins were being imported simply for the sake of collecting the bounty—(no mention as to whether reds, grays or both were meant).

SICK 'COONS—The raccoons in this State have been climbing to a high population peak in many localities. Coincident with their increasing abundance, there has appeared among them a disease which shows every evidence of being highly contagious and is affecting them in epidemic proportions. Since the fall of 1946 sick raccoons have been reported from Dutchess County north up the Hudson to Albany and west to Colden in Erie County. Some have shown symptoms and autopsy findings suggesting a distemper-like ailment. The majority, however, have exhibited a swollen discolored liver with icterus (yellow staining) and frequent inflammation of the intestinal lining resulting in diarrhea.

The disease has invaded captive raccoons at Delmar, and just recently I received a dead 'coon from Game Protector Theo. W. Strang at Colden. Mr. Strang informs me that this 'coon was one of 28 which died while being held captive by the Erie County 'Coon Club. This raccoon was found to have perished from what appears to be the same malady affecting wild 'coons and those here at Delmar. Although rabies has been diagnosed by the State Public Health Department in several 'coons during 1948, those dying from the malady discussed here have so far been negative for rabies. The causative organism remains undetermined. It is highly fatal to raccoons and we do not yet know whether other wild carnivore or dogs are susceptible. It will probably take a fairly large toll of 'coons in localities where they have become abundant, but so far as is known, it is not infectious to humans.—E. L. CHEATUM



"Bub" and "Min" Mandigo pause for a puff of good old "Warnecke & Brown" between turns at a crosscut saw.

NATIVE Black Lakers, the Mandigos had never, since their marriage in 1894, bought a stick of firewood until last fall when they were physically unable to put by a supply for winter.

Bub, 83, states that the largest fish he ever caught in Black Lake was a 155-lb. sturgeon. He once caught 99 pike in one day between his home and Heuvelton. The Mandigos, who operate a boat and camp livery on Black

Lake (see story on page 12) knew Black Lake 'when', and can recite many interesting stories of the good old days. A virtual cripple, Bub, who guided for more than 40 years on Black Lake, can tell you from his armchair, more about where to catch fish than many can by more traditional methods.

The couple lives a short distance from Pope's Mills toward Gouverneur.—KEN ORVIS, Gouverneur Trib. Press

Stove-wood

STOVE-WOOD is what they use on the farm for heat and in the city for fun. But if our farmers keep on buying oil-burners, the time may soon be here when wood will no longer be used for fuel except in the suburban fireplace. As foresters, we would like to see more fuelwood consumption on the farm, because that's the best way to "clean up the woodlot" and get rid of inferior and defective trees. On the other hand, we can hardly blame the farmer (or the farmer's wife), if he (or she) likes the thermostat better than the kindling pile; or if the sound of the furnace-blower is sweeter music than the thud of chunks dropping into the wood-box.

Seriously, it will be too bad if we give up burning wood altogether, for it is a home-grown product and, when properly handled, an efficient fuel. At the present time, more than a million cords of fuelwood are cut every year in New York.

What is a cord? Some people say it's the most elastic unit of measure ever devised by the mind of man. A "standard" cord is a pile of stacked wood 4 x 4 x 8 feet; that's 128 cubic feet. But wait a minute: How much of this is wood? That depends on what kind of wood, the size and straightness of the sticks, and who does the piling. Small, crooked sticks cut from hardwood limbs and piled by one of those cordwood artists who knows how to make air-spaces, may contain less than 30 cubic feet of solid wood. Smooth, round wood such as birch or spruce, in sizes eight inches and better, will average 100 cubic feet or more per cord. (That's with the bark on. Peeled wood will make 10 to 12 per cent more cubic volume in the same sized stack).

Besides the standard cord, there are various other "cords," such as the "French" cord, the "50-inch" cord, the "five-foot" cord, and so on, used in different parts of this country and Canada. Then there is the "face" or "stove" cord, which may be 12, 16, or 24 inches wide. There's a trick to that, too: the shorter the sticks, the closer they pile. So a standard cord bucked into stove lengths and piled again will "shrink" about 20 per cent. A cord "shrinks" with age, too. If you cut your wood in the spring and pile it just 48 inches high, the pile will be three or four inches lower by winter; but there's just as much wood there, and better wood, because it's seasoned.

The heating value of wood varies

enormously with the kind of tree. Black locust, white oak, hickory, black birch and ironwood are the best. A cord of any of these woods, when seasoned, is worth approximately a ton of coal. Beech, yellow birch, sugar maple, ash and red oak are next. White birch, cherry, soft maple, sycamore and elm are comparatively poor fuel woods, with basswood, butternut, popple and the softwoods at the bottom of the scale.

The times when wood fuel is most keenly appreciated are during oil shortages, coal strikes and power shut-offs. (Brethren of the Capital District, remember New Year's Eve?) So let's keep on building those fire-places and let's keep a good wood stove handy. And let's always have at least half a cord of good dry hardwood on hand—just in case.

—ED LITTLEFIELD.

NOT A TALL TALE—Trout playing baseball? Bait picking in an orchard? Fish touring a roadway? A fish pond in the basement? New livestock in the barnyard? The year-end floods that sent streams over their banks in eastern New York created some odd situations.

Columbia County sportsmen, in surveying the situation, found 18-inch trout flopping among the cattle; picked up enough bait fish in an apple orchard to last a year at Glenco where Taghkanic Creek went on a rampage. Water

Street in that hamlet lived up to its name as fish wallowed in the mud and water on the right-of-way, and dobsons, torn loose from the stream bed, were left high and dry on the road.

In Stottville where Claverack Creek flooded the ball field, the diamond was covered with hundreds of trout running the bases. Nearby houses in that community had fish in their cellars.

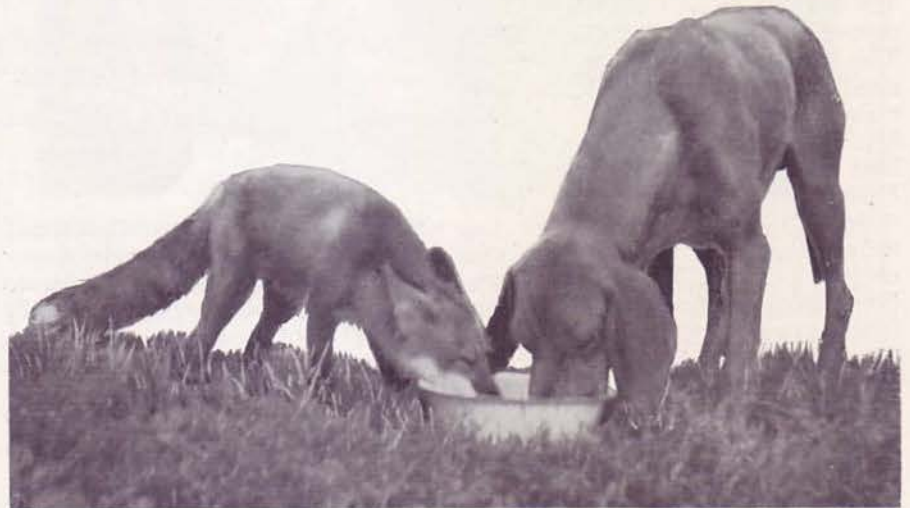
As many fish as could be found alive were returned to their normal habitat. The incidents, no doubt, are similar to others that occurred throughout the flooded area.

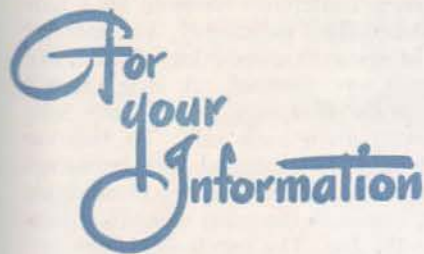
SHE GOT THE LICENSE—Game Protector M. R. Nichols of Massena recently investigated a request for a license. The results were interesting.

In reporting to J. M. Corbinc, the District Game Protector for the Watertown District, Nichols said that the applicant in question (a lady) had trapped a raccoon a year ago which she believed to be a male. There seemed to have been a mix-up, however, as the animal gave birth to a baby 'coon early in the spring. The lady now has both 'coons and wants to trade one of the animals with a legal pet dealer and keep on raising 'coons until she has enough pelts to make a fur coat.

Inasmuch as the said lady would wear a size 44 coat, says Protector Nichols, and "due to the amount of 'coons to be raised, I would suggest that a breeder's license be issued". The Bureau of Inland Fisheries (which handles such permits) has issued it.

Oscar, a fox, and Sol, a big redbone that puts his paws on your shoulders and looks you right in the eye, were both raised from pups by Charlie Roland, Dekalb Junction foxhunter and sportsman, who discovered the fox puppy, eyes not yet open, sitting near the mouth of its den. Fox and dog grew up together, ate together, and when they finished eating begged at the table for more. And when Sol and his mate, Red, went fox hunting, Oscar tagged right along behind, yapping occasionally as the dogs bayed his country cousins. He hasn't joined the chase lately though. One day he hitchhiked a ride to Watertown by standing at the roadside until someone came along and picked him up. Fed and returned, he apparently tried it again. Mr. and Mrs. Roland are still anxiously awaiting news of his well-being. They say the redbones miss him.





DEER TAKE, 1947-1948

Counties Opened For Antlered Deer Only

Adirondacks Region (Oct. 20-Nov. 30)

	1948	1947		1948	1947
Clinton.....	104	96	Oswego.....	89	134
Essex.....	802	709	St. Lawrence..	436	1,112
Franklin.....	823	856	Saratoga.....	108	171
Fulton.....	54	100	Warren.....	250	338
Hamilton.....	741	1,128	Washington...	143	211
Herkimer.....	383	617	County		
Jefferson.....	48	40	Unspecified..	1
Lewis.....	264	418	Totals.....	4,650	6,094
Orleans.....	104	153			

Catskills Region (Nov. 15-Nov. 30)

	1948	1947		1948	1947
Albany.....	137	95	Hackland.....	89	110
Columbia.....	302	285	Schenectady..	25	47
Delaware.....	664	661	Schoharie.....	348	320
Dutchess.....	301	224	Sullivan.....	973	978
Greens.....	431	357	Ulster.....	513	571
Franklin.....	387	373	Westchester..	6	7
Putnam.....	375	394	Totals.....	4,466	4,787
Rensselaer...	150	210			
	145	122			

No. Tier—Western N. Y. (Nov. 24-Nov. 30)

	1948	1947		1948	1947
Bronx.....	240	245	Schuyler.....	180	109
Cayuga.....	94	81	Seneca.....	40	57
Chautauq.....	309	204	Tioga.....	325	290
Chenango.....	340	194	Tompkins.....	192	201
Columbia.....	159	224	Wayne.....	54	63
Madison.....	165	162	Yates.....	101	198
Montgomery..	79	123	Totals.....	2,331	2,428
Orangetown...	50	89			
Orleans.....	56	98			

Counties Opened For Deer of Either Sex

No. Tier—Western N. Y. (Nov. 24-Nov. 30)

County	Male	Female	1948 Total	1947 (Antlered Deer Only)
Allegany.....	2,544	3,752	6,296	816
Cattaraugus..	17,211	2,072	19,283	738
Chautauq.....	1,280	1,495	2,775	336
Erie.....	612	613	1,225	310
Genesee.....	298	350	648	130
Livingston...	834	970	1,804	403
Niagara.....	84	92	180	62
Ontario.....	584	616	1,500	323
Steuben.....	2,891	3,678	6,569	763
Wyoming.....	578	655	1,233	312
County Unspecified.	6	11	17
Totals.....	11,242	14,614	25,856	4,034

1947 Grand Total, 17,343. 1948 Grand Total, 37,683

HUNTING ACCIDENTS—When a man bites a dog, it's news. When one hunter shoots another, it's equally a matter of public interest. The net result of either is a surge of public debate in which the unique character of the incident is inflated to the point that other facts are lost from view.

So—to bring into correct focus the entire 1948 hunting accident picture in New York, the following facts on it are reported:

Fatal accidents, 20 (8 self-inflicted) in the following types of hunting: deer,

12; woodchuck, 3; 'coon, 1; quail, 1; other, 3.

Non-fatal, 93 (24 self-inflicted) as follows: deer, 23; rabbit, 21; woodchuck, 12; squirrel, 6; partridge, 4; fox, 3; 'coon, 2; crow, 2; pheasant, 1; quail, 1; woodcock, 1; duck, 1; other types or unreported, 17.

Causes: in line of fire, 32; mistaken for game, 14; careless handling of firearms, 16; tripping and falling, 12; ricocheting bullet, 7; careless unloading, 6; dropping guns, 4; crossing fences carelessly, 3; hunting without safety on, 3; didn't know gun was loaded, 2; holding gun by muzzle, 2; loaded gun in car or camp, 2; insecurely resting gun, 2; snow or mud in barrel, 2; clubbing brush with loaded gun, 1.

Weapons causing accidents: shot-guns, 64; rifles, 47; pistol, 1; stray bullet, 1.

Accident rate, 1.28 per 10,000 hunters. Second lowest rate in 12-year period, only bettered by 1947 when it was 1.26. Highest rate in period, 3.93 in 1941.

Accident rate for licensed highway vehicles in 1948; 5.55 deaths and 340 injuries for every 10,000 licensed vehicles.

CANOES APLENTY—Approximately \$100,000-worth of canoes passed over the carry between Forked Lake and Long Lake during June, July, and August, 1948. This Department maintains a campsite caretaker at Forked Lake outlet (a popular camping place for people who enjoy nature in the raw) and he keeps a record of all canoe parties. Last season he registered 580 canoes containing 1,167 people with camp duffe. He estimates that if these 580 canoes had come along in one day, bow to stern, they would have extended for two miles. This number is an average of six canoes a day for three months.

The peak comes in August, and this past August the route was really crowded. Possibly a fourth of all canoes using this Adirondack water trail pass through Forked Lake. Many canoeists start at Old Forge, but do not paddle beyond Raquette Lake; many others start at Long Lake and go through to Tupper or the Saranacs.

Probably no connected waterways anywhere carry so many canoe campers as the 86-mile long Old Forge-Tupper-Lake-Saranac route in our own Adirondacks. Canoeing is big business in the Forest Preserve.

DO YOU KNOW YOUR LAWS?

MANY sportsmen have hesitated to "do something about it" when a violation of the Conservation Law has been committed or attempted in their presence simply because they weren't sure of their "rights" as private citizens. Perhaps if more sportsmen fully understood what they could do in such circumstances, more offenders would wind up before a magistrate or be turned over to a peace officer for prosecution.

May a private citizen arrest a violator of the Conservation Law, without a warrant, and is he under an affirmative duty to do so? Broadly speaking, and within limitations, the answer is yes. All criminal offenses under the Conservation Law are misdemeanors. Hence, the following principles—as established by the laws of the State of New York or by decisions of its courts—are applicable, defining as they do the powers and duties of private persons in connection with the making of arrests:

- (1.) An arrest without warrant may be made by a private person where the crime is committed or attempted in the presence of the person making the arrest.
- (2.) When so arrested, the prisoner must not be subjected to any more restraint than is necessary.
- (3.) Every private person must aid an officer in the execution of a warrant, if the officer requires his aid, and be present and acting in its execution.
- (4.) An arrest by a private person is just as binding as is one made by a police officer.
- (5.) The power of a private person to make an arrest for a misdemeanor committed in his presence is equal to that of a peace officer.

So the sportsman can "do something about it", if he wants to; he has the right and the duty to do so. Just be sure that a crime has been committed or is being attempted; don't guess—know! Be sure also the accused is informed of the cause and is asked to submit to arrest, unless the offender is caught in the actual commission of the crime or immediately after it has been committed.

Feeding The Hungry Whitetail

PERIODICALLY, winter weather conditions in certain areas of New York state leave the whitetailed deer hard pressed to secure enough food to avert starvation or maintain a normal healthy condition. This is especially true of the Adirondack Region, where snow of great depths and prolonged periods makes it necessary for the deer to concentrate in "yards". Many of these "yards" have been used for long periods of time and the animals have seriously depleted the browse that is normally within their reach. It is these yards that account for serious losses from starvation and malnutrition during especially severe winters.

Many systems of artificial feeding have been tried over the years, varying from "baled hay" to scientifically prepared, highly concentrated "deer cakes". The methods have been of little or no avail in reaching the large numbers of animals affected during the critical periods. It has long since been decided that a plentiful supply of natural foods, in and adjacent to the "yards", is the only logical solution.

The Conservation Department now has a program, tried and tested during the past winter, which will not only provide food during any current emergency but will serve to augment the natural food supplies for years to come. The program is carried out with the aid of Pittman-Robertson, Federal Aid Funds and provides for a continuous check of all the "yarding" areas and a plan for the rehabilitation of each.

When a critical season is anticipated,

crews of men will be assigned to specific yards under the supervision of regular Department field personnel. The crews will operate within and adjacent to the "yards", cutting brush and sapling size hardwoods of the more palatable and nutritious species. Such a procedure will not only provide immediate food supplies in the form of branches and tops that were previously out of reach but will also provide for a large amount of uneven aged sprout renewal, in a scattered pattern, in and around the fringe of the "yard". This type of operation, carried on periodically, will provide an ever increasing food supply on a rotation basis in the places where it is needed most acutely.

An opinion of the Attorney-General (see page 24) makes it possible to do this work on State lands in the Forest Preserve. The program will have direct supervision of the local District Game Manager. The Manager will be assisted by Forest Rangers, Game Protectors and Game Research men in carrying out the program, and in some areas local sportsmen's groups will lend their assistance, as they have in the past, in phases of the program as a part of their game restoration activities.

If we concentrate on carving out such a long range plan of habitat improvement we should, in years to come, have not only a healthy herd, unharassed by starvation and malnutrition, but an area capable of maintaining a much larger population. This, in turn, can only enhance the sport of deer hunting now enjoyed by so many.

FOREST PRACTICE NOTES—District Forester R. M. Hick (District 1) recently marked about 30 M feet of standing hemlock and pine on the Onontota City Forest. Hick and C. E. Boone, Forester, completed a management plan for this tract, and for the past several years the property has been under the jurisdiction of the District Forester (who is a member of the City Public Service Commission).

On one piece of woodland owned by a farmer who became a FPA co-operator a vast amount of damage due to grazing was evident; also evident was the fact the owner, his father and grandfather had considered grazing the woodland a proper procedure. The conclusion drawn by Forester C. B. Kresge was that our educational activities still haven't reached a lot of people.

What can be done on the farm with logs from the woodlot is illustrated in

the case of Carlisle Graves of Arcade, in District 5. He needed 600 feet of flooring to complete remodeling a tenant house on the farm. Market value for the flooring is \$180; Mr. Graves selected top quality maple from his lot, cut, skid, hauled them to a sawmill, a planing and matching mill, at a cost of \$68. This figure includes stumpage cost and a return for labor. Thus he saved \$112 and at the same time provided himself with one of the best looking floors in Wyoming County.

Union Academy of Belleville has signed up its woodlands in District 6 for a dual purpose: to produce a self-sustaining forest for the future and to co-ordinate work done in the woodlands with the studies of the agricultural classes at the school.

Foresters in the northern districts met at Long Lake in District 9 for a

training conference followed by a tour of Adirondack woodlands. The method of bringing hardwood logs down Lake Placid was observed. A long catwalk of spruce float logs has a heavy wire running along each side. To this are fastened the hardwood logs by means of a short chain with a loop in one end, and a spike in the other which is driven into the log. The spruce float logs provide sufficient flotation to keep the hardwood logs from sinking. The logs are lifted out of the water and loaded directly on trucks by means of a crane loader. With this method, about 60 logs can be hauled at a time by a power launch.

Perhaps the most interesting area planted in District 10 recently was an island in the middle of the Sacandaga River. About 9 acres were put to white and red pine. This plantation will certainly be well protected from fire, as it is surrounded by water, and in future years it also will be difficult for anyone to steal Christmas trees.

Two brothers in Duaneburg, Schenectady County, in District 12, own a stand of hemlock some of which are overmature and have a considerable amount of center rot. These trees are being cut and the sound wood is sawed into posts which are treated with creosote, at an approximate total cost of 9 cents each. This is a good example of improving the stand and also obtaining a worthwhile product.

OUR LOSS—One of the last of the real oldtimers, a Paul Bunyan of the Adirondacks stationed in one of the most remote and isolated spots in the State, was out January 10 repairing the State Forest Fire Control Bureau's telephone lines along the Cedar River Road when he suffered a heart attack and died.

So ended the career of Ernest Ovitt, of Indian Lake, one of the most colorful and valuable Forest Rangers in the Conservation Department. Born in December, 1889, he was appointed Forest Ranger June 4, 1928 and for 20 years was stationed at the Rangers' headquarters at West Canada Lake, midway on the trail between Northville and Lake Placid. He was well-known and respected by the more hardy fishermen, hunters, trappers and hikers who traveled to West Canada, and his fellow workers used to claim that he and a horse were the equal of any 10 men. It will be hard to find a man to replace Ernie Ovitt.

Spotted Rabbit Livers

Tularemia and Tapeworms

OF ALL the parasites of the rabbit, dog tapeworm larvae give the greatest concern to the rabbit hunter; hundreds of rabbits are needlessly discarded because of "white spots" on the liver. This is because the dread disease, tularemia, has been described as producing white spots on the liver and spleen, and no one in his right mind wants to

agents. Most warm blooded animals are probably susceptible to infection by the tularemia organism, and the course of the disease in rabbits is rapid and frequently fatal.

Dog tapeworm infestations, unlike tularemia, represent a generally harmless association between parasite and host. The rabbit is merely a way-station for the tapeworm larvae which, after migrating through the liver, come to a comfortable resting place in the body cavity and await further development. Since they do not invade the meat, the rabbit is safe for consumption after the entrails are removed. These larvae are non-infective to humans, but when eaten by a dog or fox they grow to adult tapeworms in their intestines. The rabbit becomes infected by swallowing the tapeworm eggs which are passed in the droppings of the infected dog or fox.

The question faced by the hunter is how to distinguish between harmless tapeworm infestations which often show as spots on the liver, and the discolorations typically associated with tularemia infections. I have drawn two pictures which may help to illustrate the difference. You will first note that the white glistening spots of tapeworm larvae (upper drawing) are relatively few in number and may vary greatly in size. With a small pen knife you can extract each of these spots from the liver tissue and discover that it is a tough little capsule embedded in the liver mass, and possessing an individuality all its own. You would find the head of a young tapeworm inside the capsule.

Now examine the liver affected by tularemia. Its surface is thickly studded with tiny, whitish discolorations. Each of these small spots is in reality a miniature abscess composed of dead liver cells and white blood cells. There is no membrane surrounding them as is the case with the tapeworm larvae, for they are derived from the liver tissue, and are a part of it (though a dead part). You will note also that the liver is somewhat swollen. If you were to examine the spleen you will find it also swollen and bearing similar discolorations. (I have never seen tapeworm larvae affecting the spleen).

The chances are very slight that you will encounter one of our native rabbits infected with tularemia. But remember that at least 80 per cent are infested with dog tapeworm larvae.

Learn to distinguish these. Then, if you encounter something different, suggesting tularemia as described here, send it to the Laboratory at Delmar and let me take the risk of determining whether it is a bona fide case of tularemia, for laboratory procedures must be used for a positive diagnosis. If, however, such an animal should be suspected of being involved in a case of human illness, the specimen should be referred to the local health authorities.

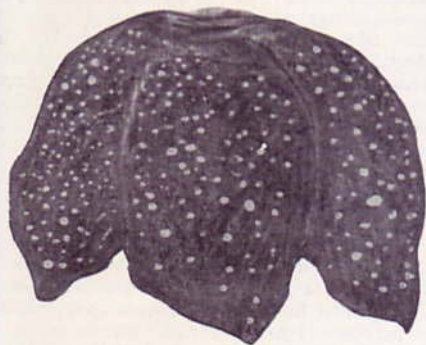
—E. L. CHEATUM,
Senior Game Pathologist

FORESTRY MEETING—The New York Section, Society of American Foresters, held its winter meeting at Albany on January 20-21. The two-day session was devoted to consideration of the many and varied activities of the Section itself and of its numerous committees. A dozen committee reports covered the field of forestry, from Cutting Practices to the Preservation of Natural Forest Areas and from Protection from Insects to Public Relations. The report on Mechanized Logging was supplemented by two reels of 8 mm movies, one of logging in the North Country and the other the College of Forestry's new movie made at the Loggers' Equipment Show last summer, an event sponsored jointly by the Section and the Forest Service.

The banquet on the evening of the 20th was climaxed by an inspiring speech by the Hon. Harold C. Ostertag, Chairman of the Joint Legislative Committee on Interstate Co-operation, on "Forestry's Future in New York State", in which he sketched the present situation and future requirements for our land management and timber production. After the address, Mr. Ostertag was presented with a scroll by Dean Illick of the College of Forestry, acting on behalf of the New York Section, for his leadership and constructive efforts in forest legislation.

SEEDLINGS—If the number of trees distributed to co-operators under the Forest Practice Act should increase in the future at the rate established between 1948 and 1949, it looks like we'll have the whole State reforested in no time. To prove the point, the Department supplied 480,000 trees for both the spring and fall planting seasons of 1948, while the request for trees for the spring of 1949 has reached the astronomical figure of 2,360,000.

Due to an enlargement of our nursery program in anticipation of this increased demand, it now looks as though we will be able to fill these requests with only minor substitutions in one or two species.



Top: liver infected by tapeworm
Bottom: infected by tularemia

risk tularemia. But, since dog tapeworm larvae are of such common occurrence in cottontails and snowshoe hares (about 80 per cent of over 2,000 examined at the Wildlife Research Laboratory, Delmar, were found infested), and since in the course of their migration through the liver they are often seen as white spots or whitish streaks on its surface, there is need for some clarification on the nature of these two confusion and often confused ailments.

Tularemia is a bacterial disease transmitted in nature from one animal to another by the bite of blood sucking insects or ticks. Ticks are probably the most important natural transmission

LETTERS . . . to the editor

RESTRICTED WATERS?

Dear Editor: Anyone who saw the number of anglers using spinning tackle on the Beaverkill last year quickly realized that even on this magnificent stream there just wasn't enough water to support the number of rods. Even the most ardent spinning addict must agree that the use of this particular type of tackle can cover and does cover four to five times the water generally covered by a fly fisherman. . . . With the gradual curtailment of the available trout waters, it would seem that the Conservation Department should give consideration to the possibility of establishing certain open waters as "fly" areas.

Another point which this angler believes should be considered by the Conservation Department is the prohibition of the use of gang-hooks on any lures which are used on any of the streams designated as trout streams by the Conservation Department. . . .

A. F. Bisgood, New York City

Dear Editor: Little by little our available open stream fishing is being reduced by dam building and other causes, yet the number who angle is increasing by leaps and bounds. The public stream fishing problem is literally becoming a traffic problem, and whether we like it or not some sort of traffic regulations must be imposed if all such fishing is not to be completely spoiled for everyone.

Would any of us not make some sacrifice to improve or even preserve the grand old sport of trout fishing? I believe that by putting our heads together we can work out some mutually advantageous and practical method of doing so.

Dana S. Lamb, New York City

• The problems mentioned by Messrs. Bisgood and Lamb, as well as by many others writing to this office, will be the subject of a feature article in the April-May *Conservationist*.—Editor

BUYING LAND

Dear Editor: Being a subscriber to *The Conservationist* I have noted with deep interest the need of rehabilitating vacant farms.

With this in mind I wondered if you are in possession of information regarding the location, size, and cost of such lands, owned either by the State, county, town or private. I am interested particularly in Dutchess or Putnam counties.

O. C. Birnbrauer, New York City

Dear Editor: In last month's issue of your magazine you had a piece about a person who wanted to sell his farm to the State. The article went on to state that such land must be at least 500 acres in area and for sale for \$4 per acre or the State would not be interested. I have been trying for some time to buy a small piece of land in Allegany County. Where could I get a list of land for sale in this district that does not come up to State specifications, as to area or price. I am especially interested in land near the town of Birdsall. Will you please send me any information you may have on this sort of thing.

Charles J. Miller, Rochester

• Unfortunately we can't be of much help here, since this Department is not in the real estate brokerage business and does not have listings of available properties. But you might be able to obtain a list of tax delinquent properties from the Allegany County Clerk, or possibly the Town Clerk of Birdsall might be able to pro-

vide you with some useful information. Otherwise, we could only suggest that you contact a local real estate agent, or make a personal investigation.—Editor

SALT WATER LAMENT

Dear Editor: In the 1920's I used to do a lot of fishing in a chartered boat on Great South Bay out of Babylon, L. I., and whether it was for fluke, flounders, blackfish, or what not, we always got plenty of fish and of good size.

After a lapse of the intervening years, I started going out there again last year, but on no occasion did my party get many fish. The final goal of futility was reached last Saturday, the 16th, when we got not one fish of any kind, and what is more, of the many boats that were fishing apparently the maximum fish caught per boat was just one fish.

The above has stirred my memory, which has recalled to me that at the end of the '20's or in early 1930 or '31, the State was busy filling in the inlet between Oak Island and what is now the stretch east of Jones and Gilgo Beaches; I believe that inlet was called Jones Inlet, so that the causeway from Jones Beach now runs all the way to Oak Island without needing a single bridge. Also I recall that I had heard from fishermen at that time that this filling in was ruining the fishing.

Could you enlighten me on this subject, and is it a fact that the fishing is now poor because of the closing of that inlet? And is the fishing in L. I. Sound, say around Huntington, better?

Frank Ledermann, New York City

• We have no direct evidence that closure of this inlet affected fishing in Great South Bay. Assuming that fishing has deteriorated, it would obviously be difficult to prove that such closure is the reason.

The 1938 hurricane opened an inlet through the barrier beach outside Shinnecock Bay and since then fishing is reported to have improved greatly in Shinnecock and the Peconics (which are connected to Shinnecock by canal). Considering this in connection with the Great South Bay situation, perhaps it is evidence that these inlets are important to the bay fishing.—Editor

DOGS RUNNING DEER

Dear Editor: Enclosed is a clipping from a column in the *New York World-Telegram*, issue of March 5, 1948 concerning the slaughter of deer by dogs during the winter months. Cannot your Department institute some penalizing legislation (and work for its passage next year) directed against owners of dogs detected attacking deer? In any event, cannot you work for amendment of Section 195 of the Conservation Law to give police officers of the State the power to kill dogs pursuing deer—whether in State parks or otherwise—the year around?

William B. Duggan, Poughkeepsie

Dear Editor: Recently one of the men here on my farm saw a police dog chasing a deer until the deer jumped into Mongaup Creek, and, beating the thin ice, struggled in the water with the police dog about on top of him. Both drowned. Such sights seem unnecessary, and if these huge dogs as well as airdales and other large dogs were properly tagged with names of the owners and the dogs shot on sight when caught in such an act (and the owners of such dogs fined) soon there would be an end to such

WRITE SOON

As the magazine has grown, so has our mail. We're just as glad to get it as we ever were, and because so much of it makes good reading we're expanding our letters section from two to four pages.

But we're getting a lot of letters that really ought to be addressed to other bureaus in this Department; we usually refer such letters to those bureaus anyhow, but you would probably get more prompt and maybe even more accurate answers if you wrote them direct. About seedling trees, for example, write the Bureau of Nurseries in this office.

Nevertheless, we'll take our mail as it comes—and print it that way. The shorter the letters, the more we can print. So, as we said in the first place, write soon.—Editor

tragedies. I happen to love dogs, and my two dogs—a collie and a Welsh shepherd—remain near this house. If my dogs committed such an offense as that above I would not allow them any more consideration than any other dogs.

Esther Karst, Livingston Manor

• Dog legislation will definitely be in the mill during the 1949 legislative session. Just what form it will take is not definitely known but it will very likely include an extension of the period during which the officers you mention may take dogs running deer, and perhaps a short State-wide quarantine period in the spring which would not only facilitate the rounding up of unlicensed dogs but pave the way for the cleaning up of wild and semi-wild dogs which are harbored by no one. Watch the legislative mill, which we think will produce something you can support.—Editor

BOBCAT RANNEY

Dear Editor: In your issue of August-September I read with a great deal of interest an article about Bobcat Ranney. And I made up my mind to pay the old hermit a visit. We set out for Bakers Mills, seventy-five miles from Broadalbin, N. Y. and to say that we were well paid for our journey would be putting it rather mildly.

We found a man with a fine personality, jovial, keen wit, and great sense of humor. His life as a hermit was not from choice; he left a fine twelve-thousand-dollar home at Binghamton when doctors told him he had only a limited time to live. So he took to the woods and Mother Nature—and Bakers Mills.

He left school when he was in the second grade, but his knowledge of English and world affairs would make a college man blush with shame. He was a type setter for many years, working on various newspapers. He has composed a number of poems, and recited for our party for forty-five minutes without a pause. He plays the banjo, has three Kodaks, has lived in every state in the Union, can hike nine miles a day with ease. He stands five feet four, weighs 170, and his muscles are as hard as rocks. He said the snow was eleven feet deep in front of his cabin last winter, and it was 50 below zero. Once he got a quill from a hedgehog in his mouth, and pulled it out himself with a pair of pliers. He loves flowers and hundreds of herbs he knows by name. He has just passed his 78th birthday.

W. Jas. Shaw, Hudson

RECORD WEIGHTS

Dear Editor: I am a subscriber of your State conservation magazine and would like some information on many questions what I have come up against in regards to hunting discussions. I would like to know the following: 1. What is the weight of the heaviest deer killed in New York State, either by gun or automobile, on record. 2. What is the weight of the heaviest bear killed in New York State, either by gun or automobile, on record. 3. What is the heaviest weight that a raccoon will grow to. 4. What is the weight of the heaviest jack rabbit killed in New York State, either by gun or automobile, on record.

L. H. Stone, Thornwood

• Heaviest deer, 388 pounds live weight, killed in Warren County in 1890; heaviest bear, 535 pounds, killed in Essex County in 1939. Game farm raccoons sometimes exceed 30 pounds, but a big 'coon in the wild weighs 15. No jack rabbits in New York, except in captivity.—Editor

CROSS-BOW

Dear Editor: Please advise me as to the legality and restrictions of the use and ownership of a cross-bow in New York State.

Harold Rosenberg, Brooklyn

• Not legal for hunting; otherwise OK.—Editor

TARGET SHOOTING

Dear Editor: In the last year I have become interested in target shooting. I have a high powered Savage 22 and I go down in an abandoned sand pit and set up a target and bang away at it. Do I need a hunting license? I do not have one. I have been told several times by "hunters" that I don't need one but I would like to be sure.

Edward J. Costich, Rochester

• No license required for target shooting.—Editor

BIRD FEEDING STATION

Dear Editor: In the August-September issue of *The Conservationist*, under "Letters to the Editor" Mr. Guy E. Lawrence, Schenectady, N. Y. asked for information on a bird feeding station. For your information (or his) the *Organic Gardening* magazine for November had a very interesting and informative article on bird feeding stations which I will gladly send to you or to Mr. Lawrence if you will give me his full address.

Thos. M. Walker, Rome

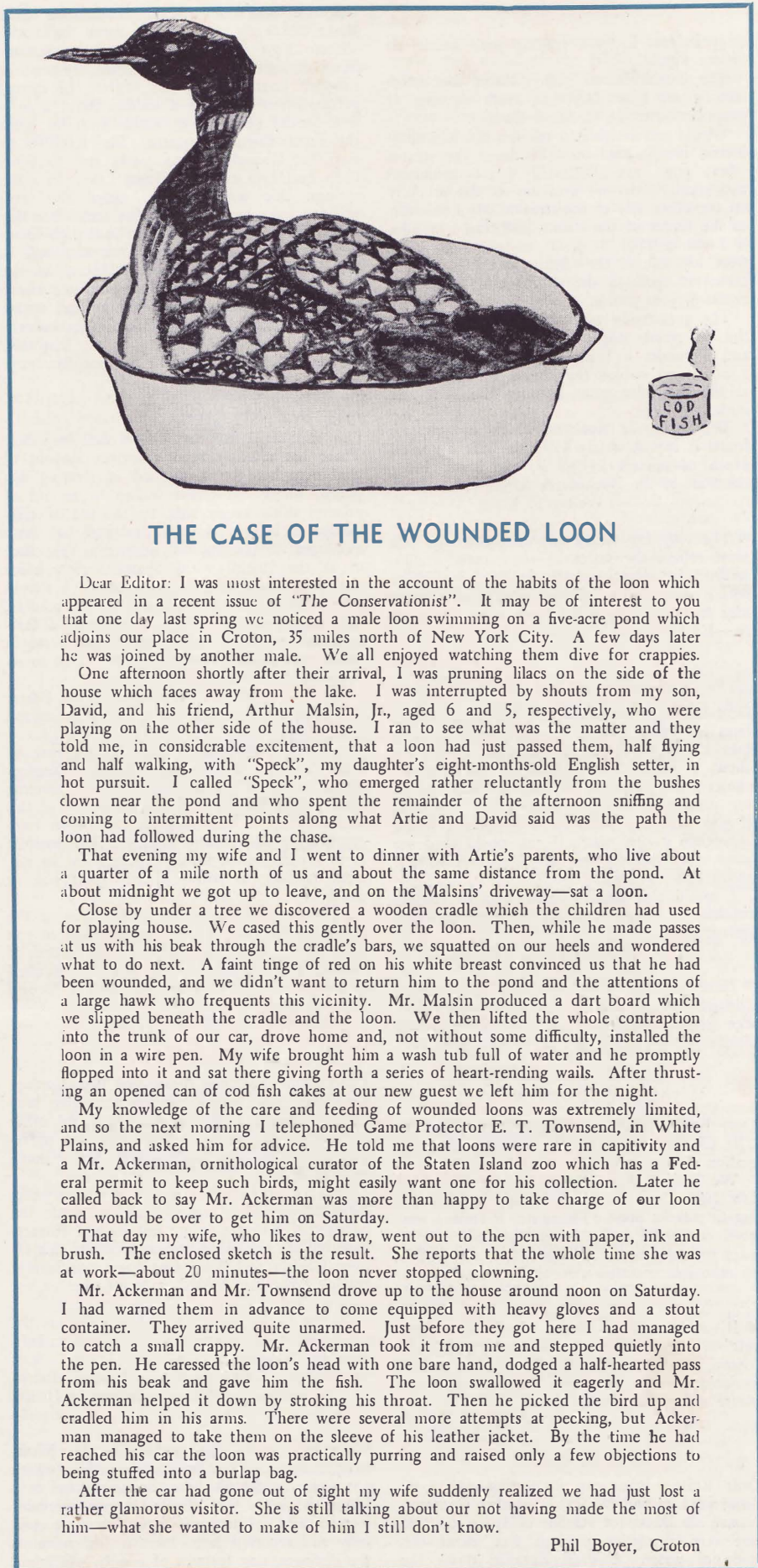
• We sent Mr. Lawrence's address to Mr. Walker. Mr. Walker sent Mr. Lawrence a copy of the magazine in question, and another copy to us. Who could ask for a more co-operative subscriber?—Editor

THIS DOES IT

Dear Editor: Reading your article on Adirondack Lie reminded me of being in a Tug Hill lumber camp and a fellow by the name of Billie Word Coster (the bear hunter) telling about the 'coon tree he saw in the woods on a bear hunting trip. He said a 'coon would go up the tree into a hole, but there were so many 'coons in the tree he'd push one out of the bottom, and they would make the rounds. There was a seam the full length of the tree, and the tree was so full of 'coons that every time they breathed the seam would open and close.

Elwyn C. Recor, Osceola

• You win.—Editor



THE CASE OF THE WOUNDED LOON

Dear Editor: I was most interested in the account of the habits of the loon which appeared in a recent issue of *"The Conservationist"*. It may be of interest to you that one day last spring we noticed a male loon swimming on a five-acre pond which adjoins our place in Croton, 35 miles north of New York City. A few days later he was joined by another male. We all enjoyed watching them dive for crappies.

One afternoon shortly after their arrival, I was pruning lilacs on the side of the house which faces away from the lake. I was interrupted by shouts from my son, David, and his friend, Arthur Malsin, Jr., aged 6 and 5, respectively, who were playing on the other side of the house. I ran to see what was the matter and they told me, in considerable excitement, that a loon had just passed them, half flying and half walking, with "Speck", my daughter's eight-months-old English setter, in hot pursuit. I called "Speck", who emerged rather reluctantly from the bushes down near the pond and who spent the remainder of the afternoon sniffing and coming to intermittent points along what Artie and David said was the path the loon had followed during the chase.

That evening my wife and I went to dinner with Artie's parents, who live about a quarter of a mile north of us and about the same distance from the pond. At about midnight we got up to leave, and on the Malsins' driveway—sat a loon.

Close by under a tree we discovered a wooden cradle which the children had used for playing house. We cased this gently over the loon. Then, while he made passes at us with his beak through the cradle's bars, we squatted on our heels and wondered what to do next. A faint tinge of red on his white breast convinced us that he had been wounded, and we didn't want to return him to the pond and the attentions of a large hawk who frequents this vicinity. Mr. Malsin produced a dart board which we slipped beneath the cradle and the loon. We then lifted the whole contraption into the trunk of our car, drove home and, not without some difficulty, installed the loon in a wire pen. My wife brought him a wash tub full of water and he promptly flopped into it and sat there giving forth a series of heart-rending wails. After thrusting an opened can of cod fish cakes at our new guest we left him for the night.

My knowledge of the care and feeding of wounded loons was extremely limited, and so the next morning I telephoned Game Protector E. T. Townsend, in White Plains, and asked him for advice. He told me that loons were rare in captivity and a Mr. Ackerman, ornithological curator of the Staten Island zoo which has a Federal permit to keep such birds, might easily want one for his collection. Later he called back to say Mr. Ackerman was more than happy to take charge of our loon and would be over to get him on Saturday.

That day my wife, who likes to draw, went out to the pen with paper, ink and brush. The enclosed sketch is the result. She reports that the whole time she was at work—about 20 minutes—the loon never stopped clowning.

Mr. Ackerman and Mr. Townsend drove up to the house around noon on Saturday. I had warned them in advance to come equipped with heavy gloves and a stout container. They arrived quite unarmed. Just before they got here I had managed to catch a small crappy. Mr. Ackerman took it from me and stepped quietly into the pen. He caressed the loon's head with one bare hand, dodged a half-hearted pass from his beak and gave him the fish. The loon swallowed it eagerly and Mr. Ackerman helped it down by stroking his throat. Then he picked the bird up and cradled him in his arms. There were several more attempts at pecking, but Ackerman managed to take them on the sleeve of his leather jacket. By the time he had reached his car the loon was practically purring and raised only a few objections to being stuffed into a burlap bag.

After the car had gone out of sight my wife suddenly realized we had just lost a rather glamorous visitor. She is still talking about our not having made the most of him—what she wanted to make of him I still don't know.

Phil Boyer, Croton

FARM POND

Dear Editor: Enjoyed reading your article on "Farm Ponds".

The illustration on both sides of the center column on Page 11 is an exact drawing of property I own in Rockland County.

Would you be able to tell me the following: I own all the land on the side of the stream where you have illustrated the embankment and pond. I do not own any of the property on the other side of the stream. My deed runs to the center of the stream and thus I wonder if I am entitled to divert some of the water from my side of the stream to the pond if I return it again to the stream exactly as illustrated in your article.

The quantity of water in the stream between the two points might fall only an inch or two and I wonder if I am allowed to create such a pond and reduce the stream by that much at the particular point between the inlet and outlet.

The stream or brook on which my property fronts is approximately 35' wide with a normal depth of around 2 1/2 to 3', the brook being the start of the Hackensack River.

Walter S. Kraus, Woodside

• The only law which applies states that you must return the water to the stream undiminished in quantity and quality. So you're within your rights. But it might be a good idea to let your neighbor know what you're up to.—Editor

FARM POND FOR TROUT

Dear Editor: I am building a fish pond on my farm for trout. This is all spring water feeding into creek which comes through woods for about a mile. I have tried to get the soil conservation people at Warsaw to help me on my plans but so far I haven't had any luck. If you have any plans for a spillway I would appreciate it very much if you would send me some. My spillway will be about five or five and a half feet high.

I would also like to know who to contact for 2,000 red pine seedlings to be planted next spring.

Howard P. Conklin, Castile

• Have patience with your Soil Conservation District officials; they're busy with back orders. For your seedlings, write this Department's Bureau of Nurseries here in Albany.—Editor

FARM POND FOR WHAT?

Dear Editor: Saw your add or recommend in *The Conservationist* and would like your suggestion on the property.

We have 14 acres but only about 3 acres of low land that could be flooded by bulldozing to make a pond. This water is from a very good stream of spring water. I would like to have your suggestion on this subject of whether to raise rats or make a trout stream of it.

Charles S. Glidden, North Chili

• If, after reading "Farm Marsh for Muskrats" (December-January *Conservationist*) and "Farm Pond for Trout" (page 7), you're still undecided as to the right thing to do—then please write us again.—Editor

LONG LAKE

Dear Editor: The very interesting article on Long Lake in the October-November *Conservationist*, doubtless for reasons of space, omitted one very interesting physical fact about this body of water. A short distance down the

Raquette River from Long Lake, the Cold River makes its entry. Cold River drains the western high peaks, the basin of the Seward-Sawtooth-Saotanoni Ranges, where tremendous snowfall occurs during the winter. In spring, particularly if there is a sudden thaw, a massive torrent pours down Cold River to meet the slower-flowing Raquette. The result is to stop the Raquette in its tracks and to force it to flow backward into Long Lake. In some springs, this water-jam has raised the level of Long Lake by as much as 14 feet. For this reason, boathouses generally are built high above the summer water level. A nuisance, but, as Donaldson points out in his "History of the Adirondacks," Long Lake is the only one where the beaches get a genuine flushing and spring cleaning. Except in Spring, Cold River behaves itself as a respectful tributary of the Raquette.

Hal Burton, King Features Syndicate

SHOCKING

Dear Editor: I wonder if you can help me? There has recently been a certain amount of chat over here on a method of clearing fish ponds, where the owner wishes to be rid of pike or other coarse fish, by the use of electricity. I believe that the method has been employed in America, but neither in this office or at the British Field Sports Society office can we get any reliable information; I should rather like to publish something on the scheme, if in fact it works (or even if it doesn't I dare say!) and I write in case you could put me in touch with anyone who might care to do something on the subject.

Anthony Clarkson, Editor
The Country Sportsman, London, England

• We are forwarding a copy of a paper by Haskell and Zilliox entitled "Further Developments of the Electrical Method of Collecting Fish". You will note, as one limitation of this method, that it was designed for use in comparatively small, shallow streams. The method as so far developed would certainly not be efficient for use in ponds of any great size or depth.

Very likely copies of the transactions of the American Fisheries Society are available to you in London. If so, you will find the papers of Haskell and Zilliox on this subject published in Volumes 69 and 70 for the years 1939 and 1940.—Editor

WOLF, WOLF!

Dear Editor: Enclosed please find two clippings from our paper which concern the same incident. One says the animal was a wolf, the other an unidentified animal. This is typical of reports that have been coming in from our north country all Fall.

Perhaps you have had reports of wolves being taken from various sources and can settle the question if they are or are not wolves. Hunters here tell us wolves do not come down this far from Canada and those who have seen various animals taken are divided as to whether or not they are wolves.

If the Commission has information on the subject we would appreciate a statement to help clear up the matter.

Walter F. Line, Managing Editor
Leader Republican and Morning Herald
Gloversville

• George Lesser, the taxidermist in Johnstown, reports that the animal in question (which was generally described by the newspapers as a 104-pound wolf) was mainly German shepherd—gone wild, of course. He examined it carefully and reported to us that it had none of the distinguishing features of a wolf.—Editor

THE UPPER HUDSON (1)

Dear Sir: Having spent many enjoyable pre-war week-ends along the upper Hudson, below Blue Ledge, I couldn't help making that trip again after reading "Days Off" (June-July issue). You know how one's enthusiasm builds up in anticipation of a trip of this sort to a favorite spot—Well, after hiking way up there, on Sept. 26, what a let down I got!

For your information and to relieve a gripe of mine I would like you to know of the pollution that I noticed. The water which was somewhat low, was not the clear sparkling river that I have always known and the fish that always were so plentiful at this spot, just weren't there. Conditions must have been much worse farther up the river before the Indian, Cedar and Goodnow rivers flow in to dilute the pollutedness.

That river belongs to me and every other taxpayer. How come some wise guys can bang right up through our State Park with a railroad, then poison from the very source, the largest river in the State?

It's bad enough, the way our streams get polluted flowing through populated areas without having it right at the source. What can we do about it?

Harry Guyon, Schenectady

• The railroad was built during the war to bring down titanium from the mines at Tahawas. The titanium was, and still is, essential to national security. Measures have already been taken to control the pollution caused by the mines.—Editor

THE UPPER HUDSON (2)

Dear Editor: I do most of my fishing for trout and bass in Essex County or the Boreas River and Hudson River near Kittle Mountain and the Big Bend under Pine Mountain. I have had some very fine catches in both places—that is bass and trout.

Could you tell me if there are any other species of fish in these waters other than I have named? I have caught both brookies and browns in the trout family and often a dandy smallmouth bass. I have been fishing this water ever since the war and have not been skunked when I went there fishing.

I would like to know if there are any other fish in these waters other than those mentioned.

I also have had some very good deer seasons in the same country so sit back and I will write some more later.

Grant P. Becker, Voorheesville

• Also northern pike and rainbow trout.—Editor

STICKER TROUBLE

Dear Editor: As far as I am concerned, your reply to the letter of Thomas W. Letson, Jr. regarding stickers "don't completely hold H₂O nohow". My last *Conservationist* arrived with a sticker very well placed, but folded. However, I can't argue whether or not it "expedites mailing".

Nevertheless, it is a hell of a good magazine and I'm not too worried whether or not it is wrapped, just as long as I get it and can read it.

Garett Droppers, Geneva

• We had a good deal of trouble with stickers in the mailing of the December-January issue, apparently due to glue of poor quality. We hope this situation has now been corrected, but readers who fail to receive their magazines should communicate either with us or directly with Williams Press in Albany. Our mailing is done by the Press.—Editor

TENT IN THE WOODS

Dear Editor: I have just finished dreaming over what I consider one of the nicest looking hunting camps I have ever seen. I suppose you know by now, your "Tent in the Woods" section of the October-November Conservationist is responsible for my feelings. My only question is where is it located, and would it be possible for the average guy with canoe and camping equipment to put in a few days at a spot like this? It also looks as though there might be a northern, or at least, a pickerel hiding under those lily pads in the foreground.

I could go on like this for an hour about the story that picture might tell, but will (hopefully) settle for its location.

Leo M. Bernard, Albany
P.S. My wife and I spent our honeymoon camping in the north woods during deer season, but were not lucky enough to find a spot like this.

• The pictures were taken in Essex County. One of the nice things about this State is that there are still plenty of spots like this—maybe not "for the average guy", but for the guy who gets out and discovers them. Would we be doing a service to the public if we told everybody how to get there?—Editor

OUR MISTAKES

Dear Editor: In the Dec.-Jan. issue of *The Conservationist*, in replying to Kenneth Y. Dalley's letter entitled "Panther Dam", I beg to correct your answer to one of his three questions. Question No. 3: "Is Falls Pond, West Canada. Lakes quadrangle, privately owned or State land?"

Sorry, but Falls Pond is on Lat. 51, Twp. 4, Moose River Tract, and is owned by the Gould Paper Company, Lyons Falls, N. Y.

Moses Leonard, Forest Ranger,
Raquette Lake

Dear Editor: In the last issue of *The Conservationist*, under "Letters to the Editor", you published one from Edward K. Friedl of Kenmore, in answer to a question in regard to a Winchester Model 12 12-gauge shotgun, instructing him that the capacity of the magazine had to be reduced to not more than six shells in the magazine and chamber combined.

You are apparently in error in so advising him, because the model 12 Winchester is a repeating and not an autoloading shotgun. There is no limit under the law to the capacity of a repeating shotgun or rifle used to take game other than migratory birds. The restriction applies only to autoloading or automatic shotguns and rifles.

A. J. Vormwald, Dist. Game Protector
Buffalo Division

• We were wrong both times. The Falls Pond we had in mind is the one reachable by canoe from Piseco, and that one is State land. As to our statement about the model 12 Winchester, we have nothing but apologies.—Editor

WATER SHREW

Dear Editor: While watching a few mink traps during the past season I discovered that the bait was missing at one of them. While looking the set over with my flashlight a strange looking little animal ran out of an opening in the rocks and disappeared almost as soon as he came. My curiosity aroused, I went to work with a small box trap. The third night I caught the little animal and identified it from Walter J. Schoonmaker's article in the August-September 1947 issue of *The Conservationist* as a

short-tailed water shrew. I am also quite positive that there are more of these little animals in or near the same spot.

Leland E. Cleland, Lewis

• Thanks for the interesting information. We're glad Mr. Schoonmaker's article was helpful.—Editor

ON BIG RACKS

Dear Editor: And now I have a question: (this is not a complaint, for I got my buck, a sleek 150-pounder in Greene County) but what happened to all the deer with the big racks of horns? This seemed to be a common complaint among the hunters and I didn't even see one large rack taken from the Windham section.

Willard E. Oremus, Hastings-on-Hudson

• Hunting pressure being what it is in Greene County, bucks are apt to get harvested before they can grow a rack.—Editor

KEEPING VENISON

Dear Editor: Our daily paper states venison may be kept only sixty days. The syllabus makes it until July 1, 1949. Will you please clarify this for us.

Mrs. Richard A. Kelsey, Jamestown

• The paper is wrong, the syllabus right. For legal venison, legally tagged, that is.—Editor

BACK ISSUES

Dear Editor: Please let me know whether I may purchase a copy of the April-May 1948 issue of *The Conservationist*. If it is available, please indicate the price, postage included.

George W. Howe, Sampson
Asst. Professor of Biology

• Only a few copies left. Single copies now sell for 25 cents.—Editor

HAS BACK ISSUES

Dear Editor: Will you please print in your magazine that I have all 14 issues and would like to hear from anyone interested in buying same.

Luther G. Goodman, R. 1, Camillus

MORE INDIANS

Dear Editor: Congratulations on finding a man like George Grayhorse—page 26, the October-November issue.

Can't you find a way to give more conservation work to Indians? Who could do any of the jobs better?

Rev. F. B. Grim, Speculator

• Our trouble is finding Indians like George.—Editor

FOR RESIDENTS ONLY?

Dear Editor: I would like to hear what you would say about having a deer season in Westchester County only for resident hunters. Do you think we will ever have one?

Anthony LoGuidico, Mt. Kisko

• Deer seasons throughout the State, as you probably know, are fixed by the Legislature and not by this Department. It seems unlikely, in view of the precedents that would be established, that legislation such as you suggest would receive serious consideration at the present time.—Editor

LAND SURVEYS

Dear Editor: I own 459 acres of land, recorded under the name of the L&M Lumber Company, in Corinth, N. Y. I would like to acquire a map and have a survey made of my land. Please inform me as to the procedure I must follow in order to secure data.

Samuel Levine, Kew Gardens

• Mr. Lester Coulter, Masonic Building, Glens Falls, is a licensed land surveyor practicing in the vicinity of Corinth. At this writing his is the only name we have on file of licensed surveyors in that area, but others might be found by consulting the roster of licensed professional engineers and land surveyors. These rosters are on file at most public libraries.—Editor

PHOTO CREDITS

Second cover, Schenectady Gazette; pages 4, 5, 6, Doug Finch-N. Y. S. Historical Asso.; 8, Ben O. Bradley; 11, Prof. J. A. Cope; 12, 13, Fred Chambers; 20, 21, 22, Clat Seagars; P. W. Fosburgh, Finch; 27, Barnett Fowler; 28, Earl McGuirk; 29, C. W. Severinghaus; 30, John Knox; 31, Ken Orvis, Gouverneur Tribune Press; 32, Charles Rowland; 35, E. L. Cheatum; fourth cover, Ellen Edmonson. (Pilot for aerial, Robert Mason).

STATEMENT OF THE OWNERSHIP, MANAGEMENT, CIRCULATION, ETC., REQUIRED BY THE ACTS OF CONGRESS OF AUGUST 24, 1912, AND MARCH 3, 1933.

Of the NEW YORK STATE CONSERVATIONIST published bi-monthly at Albany, N. Y. for February 1, 1949.
State of New York } ss
County of Albany }

Before me, a Notary Public in and for the State and county aforesaid, personally appeared Pieter W. Fosburgh who, having been duly sworn according to law, deposes and says that he is the Editor of the New York State Conservationist and that the following is, to the best of his knowledge and belief, a true statement of the ownership, management (and if a daily paper the circulation) etc., of the aforesaid publication for the date shown in the above caption, required by the Act of August 24, 1912, as amended by the Act of March 3, 1933, embodied in section 537, Postal Laws and Regulations, printed on the reverse of this form, to wit:

1. That the names and addresses of the publisher, editor, managing editor, and business managers are: Publisher, New York State Conservation Department, Albany, N. Y.; Editor, Pieter W. Fosburgh, Albany, N. Y.

2. That the owner is: the New York State Conservation Department, Albany, N. Y.

3. That the known bondholders, mortgagees, and other security holders owning or holding 1 per cent or more of total amount of bonds, mortgages, or other securities are (If there are none, so state) None.

4. That the two paragraphs next above, giving the names of the owners, stockholders, and security holders, if any, contain not only the list of stockholders and security holders as they appear upon the books of the company but also, in cases where the stockholder or security holder appears upon the books of the company as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting, is given; also that the said two paragraphs contain statements embracing affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than that of a bona fide owner; and this affiant has no reason to believe that any other person, association, or corporation has any interest direct or indirect in the said stock, bonds, or other securities than as so stated by him.

PIETER W. FOSBURGH, Editor
Sworn to and subscribed before me this 31st day of January, 1949.

DUNCAN G. RANKIN
[Seal] Notary Public in and for the State of New York, appointed in Albany County, official number, 275.
My commission expires March 30, 1949

TRAGI-COMIC NOTES, MOSTLY ABOUT BEARS

THE old lady gave off an unmusical moan, stepped archly over the bears and staggered into the car ahead.

The entrance was plainly marked as the Little Girls' Comfort Station. But when the door opened, a man came out leading a deer!

The house cat is a very independent operator. Kipling said this cat walks by himself waving his wild tail and all places are alike to him. But the house cat is not so independent as the black bear or the otter. This pair is so independent as to be disarmingly charming in a very dirty way. It is at least disconcerting when they become so disarmingly charming as to be entrusted with, say, the human hand. The hand is strictly an example since all places are alike to them, too.

It so happens that we've had much personal experience with black bears. You might call it first-hand experience. True, they are appealing—as natural clowns are appealing, not as dogs are appealing. For never once have we seen a bear give off the slightest visible affection. And by the Great Shiny Horn Spoon they should have! For our place once went through hail and high water trying to keep three orphaned cubs happy from the day they got their eyes open until they were four feet tall on their hind feet. They bit when the spirit moved them and they constantly were full of spirit.

In March when the cubs were about a month old we took them to the Philadelphia Sportsmen's Show in a small valise. The train was crowded. But we finally found a seat next an elderly character who looked like a cross between the Witch of Endor and Cassius' mother. We stowed the bear-laden valise between our feet.

One cub began to squall before Gotham was gone ten minutes. Now a small bear makes a noise exactly like a baby. We attempted nonchalance.

She said, "You got babies there?"

We said, "Righto, I got babies."

"In that little satchel?"

"Yup, they're small babies."

"Twins?" she asked.

"No, triplets."

"In that satchel—triplets?"

"Two girl babies and a papa baby. Just cutting teeth."

We thought of pointing out that

they were mostly cutting them on our arm. Long pause. Finally she said, "No air."

"Plenty air. It's my old one. Gotta hole in it."

She thought it over. Then she said with increasing irritation, "Well, if I were the father, I'd do something young man."

That last was extremely flattering, and we thought some of putting her wise to the deal. But we hadn't had so much fun since our old gas stove blew up. So we said, "I'm not the father."

We could see her giving that angle the once-over.

Then she blurted, "They're cold, probably wet. Wearing wool?"

"No," we said, "They're just,—well bear." Then we added, overdoing it, "One was kinda blue last time we looked." It was, too—only blue-phase black bear on Eastern record.

Well, that really floored the old gal. By then all three cubs were whooping it up like mad. People began to look around.

"What,—what are their names?" she said.

"Don't have any. The Philadelphia school kids gonna name 'em, I hope."

Boy, that really produced results. She called to the conductor, who had just gone by. More people craned. He came back.

"Conductor," she said "there's something strange going on here. You hear those babies crying? Triplets—in that satchel! No clothes. He won't do anything. He won't even look at them."

With elaborate gesture we slowly opened the bag. She and the conductor peered in.

"Bears," we explained.

At this point we refer you to the opening paragraph.

One day years ago we tore out of the city to cover the story of a little girl just killed by the captive black bear she had raised from a cub. We saw the bear at once. Some neighbors stood over it. It was dead. Near the bear the grass was stained. So was a ragged little doll, dirty with much handling, probably much loving. The father had found the tiny cub in the February woods under a stump. His daughter was delighted and took over the endless chore of bottle-feeding until it was weaned.

They used to romp together. By autumn the cub weighed about 70 pounds, as much as the child. This day the bear knocked her down—as it did frequently. But this time it began chewing at the base of her skull. The mother stabbed the beast with a bread knife. Not in time.

In 1947 the Department acquired a pair of adult tame otter, born in captivity. The breeder had said, "My daughter carries these otter around in her arms." He neglected to state that she must have worn a double coat of mail. One day their keeper walked as usual into their pen to hose it out. The big male otter apparently dozed in a corner. The man walked over to him. Suddenly the otter leaped, slashed and curled up again. It required many stitches to close the whole side of the poor guy's cheek.

About that time, Ed Maunton (See "Trapline," December-January issue) brought us a yearling female otter which had run afoul of a mink trap. Whether from shock or what, she was in a coma with little sign of life. All that night we gave her shots and massaged her long back and chest. In a day she was as good as new. For two days after that we could do anything with that wild otter, big as a dachshund and five times as wonderful. She'd climb in our lap while her chin got scratched. But suddenly she seemed to say "Time! What'm I doing?" Then bang she bit clean through a hard-leather boot. After that you couldn't touch her with a 10-foot pole.

Scene: main floor of same Grand Central Palace some years before the war. Vic Skiff is riding herd on the Department's exhibit of wildlife which included a young doe. One day the doe decided to go places. Vic used to tearing down the rocky, tumbling Ausable with a big brown on the end of some 3x leader, did all right in pursuit. Finally the frantic deer, being a doe and because a nearby door was opening and shutting with the frequent regularity that attends the movement of such doors when crowds are big, sought safety through its portals into—you guessed it—the Ladies Room.

Screams therein overcame Vic's natural hesitance for invasion. Pulling his hat over his eyes he marched in, colored the doe now intimately mixed up in the plumbing, gave off a blithe "cheerio" to all hands and turned on his heel.

The second opening paragraph, of course, fits here.

—CLAYTON SEAGERS.

WOODS EPISODE

Reason for this kind of picture is mainly to illustrate by detailed episode the two animals featured on the opposite page. Both were drawn from captive animals. The cub, born in mid-February, was three months old. The otter was mature, weighed 25 pounds, was nearly five feet long.

Otters often have some favorite rock on a stream or in a pond to which they bring food to be eaten. In this case, the cub has wandered upon such an "otter table." The rock bears a peck of crushed crayfish shells, remnants of many an otter meal.

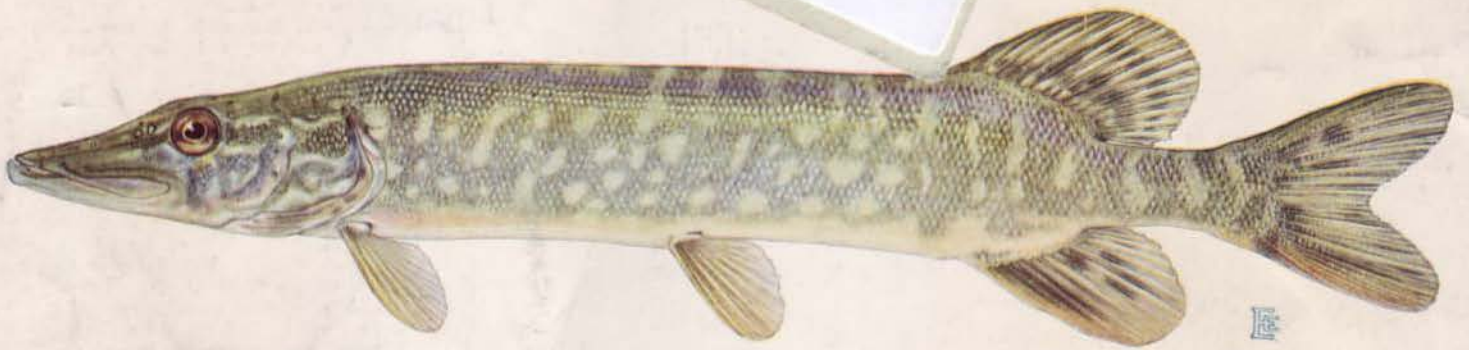
The cub, busy with the scraps of crayfish carapace and claw, doesn't notice the otter until it suddenly appears to scare off the trespasser. The cub's reaction is typical. He rears erect, shoulders hunched, little pig eyes rolling, fingers (tipped with needle-sharp claws) widespread and lips curled.

The otter's eyes are very small—black beads in a broad seal-brown face. His teeth are short and blunt, for tearing. The hack ones are built for crushing bones completely—even the smallest fish bones—before swallowing. His lower jaw is underslung, like a shark's. His tiny ears barely show beyond the short seal-like fur. The stout legs also are short, the tail muttony and tapered.

His mouth is open, not to bite the cub but to scream at him a mewling scream, like a baby. The bear's squall also is like a baby's (see story opposite).

In a moment Ma Bear, hearing the commotion, will grunt and the cub will scramble up the bank toward her. The otter probably will slide back into the water and keep on turning over rocks, looking for more crayfish.





NORTHERN PIKE

Esox lucius (Linnaeus)
From immature male 12 inches long



CHAIN PICKEREL

Esox niger (Le Sueur)
From adult male 11 $\frac{3}{4}$ inches long