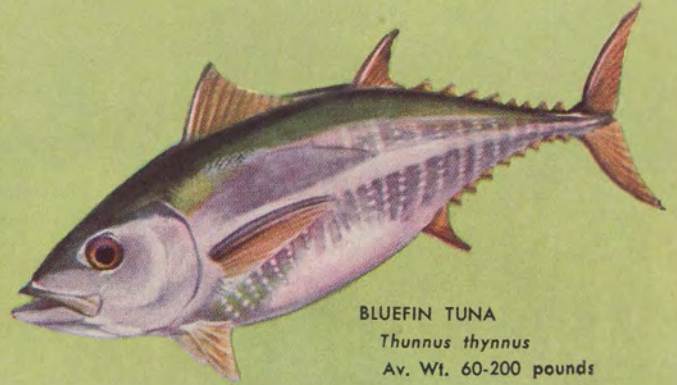


The New York State **Conservationist** February-March 1956



WHITE MARLIN
Makaira albida
Av. Wt. 60-70 pounds



BLUEFIN TUNA
Thunnus thynnus
Av. Wt. 60-200 pounds



SWORDFISH
Xiphias gladius
Av. Wt. 250-350 pounds



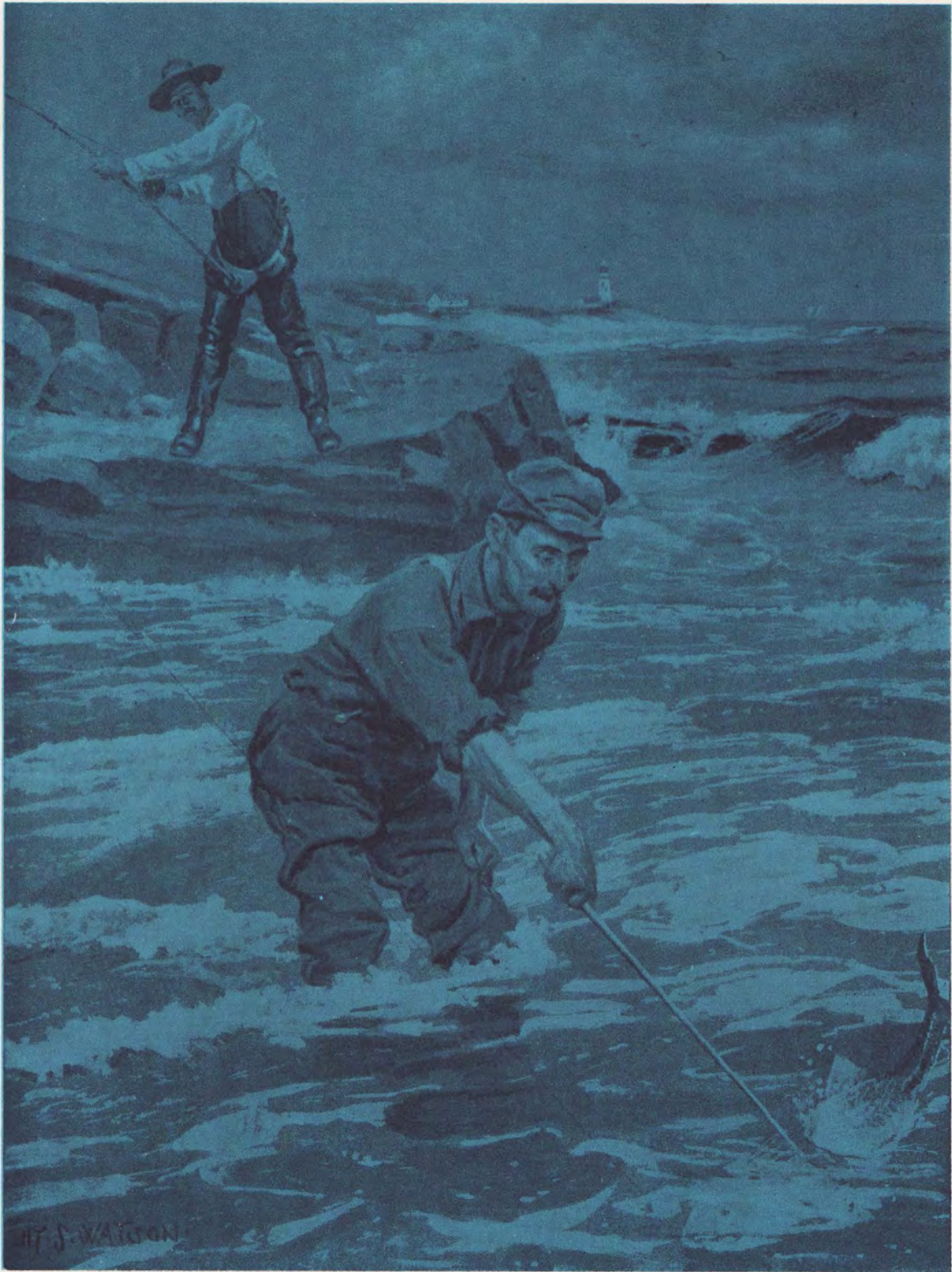
MAKO SHARK
Isurus oxyrinchus
Wt. up to 1000 pounds



STRIPED BASS
Roccus saxatilis
Av. Wt. 1-10 pounds

WTRIMM





SURF FISHING AT MONTAUK POINT—HOOKING A STRIPED BASS

By Hy S. Watson, in The Annual Report of The N. Y. Forest, Fish & Game Commission, 1904-1905-1906

The Morning Mail

Among the Letters to the Editor in this issue you will find a number on the subject of last Fall's deer season, with special reference to the one-day season on deer-of-either-sex held in 15 Southern Tier and Western counties. We publish these letters without comment except for such general remarks as we make here.

These letters seem to fall into three classes: (1) *The "Poison Pen" Letter*, reflecting mainly the ambition of the author to get into print with an acid blast at the Department. (2) *The Inquiring Letter*, reflecting a perfectly understandable misunderstanding of the Department's plans and objectives, and asking for more information. (3) *The Letter of Constructive Criticism*, in which the author passes along his observations and suggestions in the hope that he may be able to contribute to the solution of a problem which he realizes is even more perplexing to us than it is to him. (God bless him.)

We don't intend here to get into a discussion of deer seasons; such discussions in this magazine have been (and we trust will continue to be) presented by writers much better qualified than we to deal with the subject. Nor do we aim to make an issue of this particular batch of letters concerning deer seasons; we get the same treatment on a great variety of Department policies and programs, and the deer letters are merely a case in point. What we do want to do is to state a couple of principles to which we adhere in trying to make this magazine, as an official publication of the Conservation Department, valuable to the public as a forum for the free expression of ideas.

(1) We like mail. As we see it, the primary purpose of THE CONSERVATIONIST is to provide a connection between the Department and the public it serves, and obviously that connection shouldn't be a one-way street. The Department is an agency responsible to the public, and it wants to know what the public thinks.

(2) In discharging its obligations to the public, however, we believe that this Department—in common with all State and Federal agencies intended to operate in the public interest—has a basic responsibility inherent in its mandate. It should do what it thinks right, regardless of the probable popularity or unpopularity of its decisions and actions.

After all, government agencies such as this are largely staffed by men specially trained to do a particular job, and these men are hired to serve the public mainly because of this special training and the knowledge acquired from it. If we—or any government agency operating in a specialized field—were to disregard the technical knowledge of such men, then it is difficult to see why the public should go to the expense of setting up and maintaining, say, a Conservation Department.

That is not to suggest that there is no room for argument on the subject of deer seasons. There's plenty, and the professional conservationists employed by this Department would be the first to admit that they don't know all the answers, and that they need all the help they can get.

But it is help they need— not senseless abuse, nor the bullying from a safe distance which some people seem to feel is one of their native rights in dealing with public servants.—Editor.

Conservationist

FEBRUARY-MARCH, 1956



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For More Public Lands

AS reported in the October-November issue of this magazine, the Finch, Pruyn Company of Glens Falls recently gave to the State large parcels of land which total approximately 13,250 acres. These lands are within the Adirondack Park, and will accordingly become a part of the Forest Preserve. For a majority of these parcels, the deeds have already been recorded.

Such gifts of land by public spirited citizens and corporations are immensely important in the solution of what is probably the most difficult problem facing the Conservation Department today—the physical problem of providing out-of-doors *space* for our citizens. We in the Department do our best—through good fish and game management, through propagation of fish and game in our hatcheries and game farms, through development of recreational facilities wherever and whenever possible—we do our best to make the supply meet the demand with the limited funds available. But we simply are not in a position to solve the *basic* problem of providing more *space* for our sportsmen and other users of the out-of-doors.

This problem of *space* is apparent to the general public as well as to the Conservation Department. The demand for recreation of all types (and that includes hunting and fishing, camping, canoeing, and just plain being out-of-doors) is increasing enormously from year to year. But the lands and waters available to the public for these purposes have been *decreasing* as posting signs have gone up and as industrial expansion has taken over lands previously available for sporting and recreational purposes.

One of our basic needs, then, is a greater acreage in State ownership which will be permanently available to the public, and we hope that the generous action of the Finch, Pruyn Company will set a precedent.

The Department is empowered by law to accept such

gifts in the name of the people of the State of New York, and we are more than ready and willing to do so.

Within the Adirondack and Catskill Blue Lines (as in the case of the Finch, Pruyn holdings), such gifts serve not only to increase the total area of our Forest Preserve, but to round out and provide access to lands already owned by the State. We doubt that there will be any disagreement as to the desirability of that. And it should be pointed out, too, that when such lands are given to the State, the State continues to pay taxes on them—a very important consideration in the financing of many of our Adirondack and Catskill townships. Finally, it appears to us that the tax bill, though considerable, is a small annual price to pay for such properties.

Lands given to the State *outside* of the Adirondack and Catskill Park Blue Lines can be used for specific purposes, including forest, fish and game management. The need for such lands is perhaps even greater than for additional properties within the park Blue Lines, and here again the Conservation Department is more than anxious to consider all offers.

Obviously, it is not for us to advise landowners as to how they should dispose of their holdings; that would be presumptuous. All we are trying to do here is point out that a sizeable increase in the total acreage of publicly owned land would go far toward solving the primary problem of how to make our supply of recreational opportunity meet the constantly increasing demand.

The Department will do everything within its power, through personal contacts, through the elimination of red tape, and by co-operating to the fullest extent to assist any landowners who may be interested in transferring by gift or devise, at least a part of their properties to public ownership.

—LOUIS A. WEHLE, *Commissioner*



FOUR years ago a thought provoking editorial in *THE CONSERVATIONIST* touched off a public discussion of the Forest Preserve which, in turn, led to a Legislative study of the Preserve by our Joint Legislative Committee on Natural Resources.

A fine Advisory Committee appointed to assist in this survey, aided materially by the Committee's special consultant, Dean Joseph S. Illick, has now completed over three years of study in co-operation with the staff of the Conservation Department. A vast amount of information about the Preserve has been collected, sifted and studied, many meetings have been held, and numerous field trips have been taken. Most recently, a series of five public hearings have been held on the four recommendations of the Committee which have thus far emerged. Nearly 500 persons attended these hearings, and 157 individuals actively participated to give information.

The four proposals mentioned above are aimed at strengthening and improving the usefulness of the Preserve for our rapidly growing number of outdoor recreationists, and are in keeping with the State's traditional policy of preserving the wild forest character of these lands.

The first proposal would establish a long-range plan of land acquisition to consolidate the State's present holdings and to acquire other areas which have special recreational or conservation values. The Committee believes this is an essential part of any comprehensive plan to improve the Preserve.

The second proposal calls for the expansion, by nearly 100 per cent, of the recreational facilities now available to the public—including campsites, bathing beaches, picnic and other areas, in a manner which would not violate the "forever wild" spirit. It is generally agreed that the present over-crowded facilities are inadequate. These two proposals could be effectuated by joint administrative and legislative action, and would require

no amendments to the Constitution of the State.

The third and fourth proposals, which *would* require Constitutional amendments, would (1) permit the improvement of existing State highways which presently cannot meet either highway safety standards, or the demonstrable basic needs of local residents for adequate transportation; and (2) authorize the reclassification or disposition of small, detached parcels of land which are technically Forest Preserve lands, but which actually are outside the Adirondack and Catskill parks boundaries. The State would be authorized to use these parcels for reforestation or other State purposes, or—if of no use to the State—to sell them and apply the proceeds to the purchase of lands within the "Blue Lines."

AT the hearings, the preponderance of testimony taken showed that a majority of the people of the State seems to consider each and all of these proposals desirable. Representatives of the Administration of the Conservation Department endorsed them. Some suggestions were made for the refinement of the language used in the two constitutional amendments, and as a result the Committee is currently considering minor revisions.

For a great many years, conservationists have felt that they had to direct their primary efforts against the invasion of the "forever wild" concept of the Forest Preserve. The Advisory Committee (which has in its membership many of the conservation leaders of our State) and the members of the parent Legislative Committee feel that these proposals represent the first carefully thought out opportunity to take *positive, constructive* steps for the betterment of the Preserve. We are hopeful that the millions of our people who know and use and love the Forest Preserve will join us in supporting these proposals. Such a joint effort, we believe, would be a real milestone in the history of the Preserve.

—SENATOR WHEELER MILMOE, *Chairman*

The Growth of the Deer Antler (2)

by Drs. Edgar B. Taft, Thomas C. Hall and Joseph C. Aub

(From the Medical Laboratories of the Collis P. Huntington Memorial Hospital of Harvard University, at the Massachusetts General Hospital, Boston)

This article on "The Growth of the Deer Antler," by Drs. Taft, Hall and Aub, is the second to appear in THE CONSERVATIONIST. It is a very modest presentation and gives only a hint of the really basic and important findings which they and their distinguished associates have published in medical journals.

They are delving into the mysteries of cell growth, using antler bone cells as their experimental subjects. The rapid multiplication and growth of these cells into the symmetrical form and mass of the completed antlers, and their cyclic shedding and renewal each year make them extremely dramatic, yet convenient and useful subjects for experimentation. Their studies shed light on the intricate forces at work within the body which govern cell growth. By identifying these forces and the extent to which they depend upon or react to each other, even if the studies involve only one special type of bone cell, by so much the work of this team of scientists has contributed to the great search to discover the controls for other types of cells—those of cancer.

This Department is proud to have some small share in this work.

GROWTH is a fundamental biological process which is all too little understood—Nature holds her basic knowledge close. Why should animals grow to a certain size and then stop growing? Why should cuts heal to make a smooth skin surface, and then the repair stop? Why should male animals become larger than female?

"These are important problems which can well be studied in a specialized organ like the deer antler."

When Aub, Wislocki and Waldo wrote a report of their studies of antler growth which appeared in THE CONSERVATIONIST five years ago (December-January, 1949-50), they asked the questions which we have quoted above. It is doubtful that any of these basic questions have been answered by our subsequent studies of

the growth of deer antlers, but since then our understanding of the process has definitely increased.

In studies such as ours, first things must come first. One of our primary problems has been the physical handling of deer, and one of the most interesting outgrowths of our studies is that we have found a way to handle deer successfully even in the rutting season or during the period of antler growth. As might be surmised, this is not easily done since adult deer are surprisingly strong and their first reaction to any situation of stress is flight. Attempts to confine them in narrow chutes similar to those used for the handling of cattle—to permit examination of their antlers, removal of blood samples, and injection of drugs—often resulted in damage to the growing antlers and occasionally to the buck.

We have gone to the American Indian for help in solving this problem and now use a small dart tipped with *Flaxedil*, a drug similar to the curare used in blow guns by Indians of Central and South America. These darts can be blown 25 to 50 feet by a Crossman compressed carbon dioxide gun and will just penetrate into the muscle of the rump of a deer within these distances. After 20 minutes or thereabouts the deer painlessly falls paralyzed to the ground. The safety of this method of relaxing the deer is insured by the availability of a harmless antidote, *Tensilon*, for the curare-like drug. This method has enabled us to handle and to study more deer in shorter time with less danger to the subjects and to the investigators. We have also used it to permit the transport of numbers of animals.

Such discoveries have reduced many of the mechanical problems involved in our studies, and have thus made it easier for us to progress with our basic work. The latter includes a study of calcium metabolism in an attempt to answer certain questions about antler growth. Why does the antler grow to any particular size—and can something be done to make them larger? Where does the calcium in the antler come from? Is it from the diet, or is it drawn from the bones of the buck? We have approached this problem in various ways, but as yet the observations are not complete. Here, however, are some of our findings:

One animal, a mature buck of two years, was fed large quantities (2 grams per day) of calcium phosphate and vitamin D in the form of tablets. His antlers grew to surprising size—much larger than those of an older animal. Both deer were on what had been thought to be an adequate diet since the herd had remained healthy and fertile and the young had grown to good size. This tends to confirm some work done in Austria on a species of European deer—work which suggested that calcium in the diet might be the most important factor in determining the size of antlers.

Three bucks have been given small amounts of radioactive calcium in the hope of following its metabolism during the subsequent growth of the antlers. Preliminary data suggest that the radioactive calcium (given during the late

Winter and early Spring) is deposited in the skeleton. Then when the antlers begin to grow, the bone salts needed to make the antler framework are in part taken from skeletal stores in a fashion reminiscent of the hen who daily dissolves the calcium in her bones to deposit it elsewhere in the form of egg shell.

We have found that antler growth is depressed profoundly by intoxication of bucks with vitamin A. This confirms observations in other species that bone growth is interrupted under such circumstances. Such evidence suggests that chondroidal bone (an unusual sort of bone of which antler is an example) is susceptible to the same toxic action of vitamin A overdosage as are cortical and enchondral bone found in the rat, dog and chicken.



OUR present state of knowledge of the growth of deer antlers as influenced by organs of hormone secretion might be summarized by saying that in the intact buck, antler growth is probably initiated at maturity by the pituitary. Growth in turn is stopped by increased amounts of circulating testicular hormones as the testes begin to be active in the late Summer—perhaps as a result of suppression of pituitary secretions by these circulating hormones. When testicular activities cease, and the level of circulating testicular hormones becomes low, the antlers drop off. (One theory states that the lowered testicular hormone allows the pituitary growth hormone to rise in circulating level and the antler is pushed off by new growth.)

What stimulates the pituitary in the Spring? And what makes the testes inactive from mid-Winter to mid-Summer? Perhaps the lengthening of the days is responsible for the increased pituitary function—as in birds. It is said that deer taken from the United States to South America show a surprising change in the growth of antlers and rutting season, but after a period of adjustment both processes again conform to the seasons. This is further support for the hypothesis that light and length of day may be important factors in this cycle.

Obviously, our studies are still inconclusive. But we feel that we are making progress, and we wish to express our thanks to the New York State Conservation Department and to the Department's personnel at the Wildlife Research Laboratories at Delmar. These studies have been made possible only by the friendly co-operation and assistance we have always received.

It is now known that animals and men can live happily and well without their pituitary glands. We were able to remove the pituitary gland from an 8-month-old buck. This animal remained well, although during thirteen months of observation he did not grow further nor did his coat change with the seasons as did that of an intact (normal) buck of similar age. His antlers grew only very slightly even with massive doses of growth hormone prepared from extracts of beef pituitaries. From these observations it seems that the pituitary is essential for the growth of antlers—as was postulated in the original report.

We were disappointed that growth hormone and adrenocorticotrophic hormone (ACTH) had no more effect on the antlers than they did. This, of course, is just further evidence for the statement quoted above: "Nature holds her basic knowledge close."



Woodpeckers VS Scientists

by H. T. Pfitzenmeyer,
Pennsylvania State University

In New York State (so far as can be ascertained by talking to representatives of the local utilities companies) the pileated woodpecker does not constitute the same sort of nuisance on line poles that it does in the states farther south. Complaints reaching this Department are more likely to be with respect to attacks by these birds on pine trees. In such cases, however, the woodpeckers are scavengers rather than vandals, as explained by State Zoologist Ralph S. Palmer of the New York State Museum in a leaflet reprinted from *THE BULLETIN TO THE SCHOOLS*, Volume 37, No. 6, February, '51:

Speaking of the large, oblong cavities, Dr. Palmer says in part: "These are made mainly in Winter and often in what appears to be a healthy tree. Close inspection reveals, however, that these trees contain colonies of carpenter ants or other insects. After a thorough testing, the bird concentrates on one portion



of the tree and excavates a cavity into the ant colony. A tree is visited repeatedly until the insects are cleaned out."

Dr. Palmer reminds us further that the pileated woodpecker is protected in New York:

"It is unfortunate that this woodpecker, a conspicuous living target, is shot wantonly by some gunners. Insects, not the woodpecker, damage trees, the bird excavating after the real damage has been done."

A FAMILIAR topic among utility companies throughout the United States concerns the subject of woodpeckers and their damaging attacks upon wooden utility poles. Why the woodpeckers damage poles and how this damage can be prevented—that is still in the realm of conjecture and theory. The pileated woodpecker (*Dryocopus pileatus*), possessed with extreme cunning, agility, and determination, holds the secret to this perplexing problem in the Northeast. So proficient has this particular bird been in eluding all practical devices designed by the utility companies to keep them off these poles that scientists at the Pennsylvania State University have been called upon to test their ingenuity against that of the woodpecker.

In order to have a complete and unbiased view of the pileated woodpecker's role in today's problem, a look at earlier accounts of the bird reveals some interesting facts.

The pileated woodpecker naturally is at home when among mature forest trees and exhibits considerable reaction upon the slightest intrusion. Even before the White settlers arrived on this continent there was an apparent awareness among the North American Indians of the pile-

ated woodpecker. The Indians showed a great deal of respect for this bird; frequently its magnificent head was included in part of their ceremonial worship and its crest was often found decorating their peace pipes.

When the early pioneers began to exploit new territories and clear the virgin forests for farm land, they of course encountered some resistance from the woodpeckers. Peter Kalm in 1748, writing of his experiences in North America in obtaining new seed material for Sweden, tells of the pileated woodpecker being seen frequently in the forests of Pennsylvania and destroying much of the settlers' corn crop. But as civilization became more firmly established, the pileated woodpeckers gradually succumbed to its advance. It was not uncommon to see bunches of these birds on sale for food in the market places of the cities. Man with his musket, axe, and plow apparently had again won this battle for existence, and it seemed that the pileateds were about to join other non-conforming species in the ranks of the extinct. Furthermore, the extensive lumbering typical of our early history destroyed the original habitat of the bird, and that, along with other harassments of civilization, forced it to become

adapted to civilized conditions or become an extinct species.

The population of woodpeckers diminished throughout the Nineteenth Century to the extent that in sections of the country where they were once abundant they became absent. Outdoors authors and bird-lovers wrote of the pileated woodpecker but admitted they had never seen one. Naturalists and egg collectors invaded what seemed to be the last few remaining localities where the bird had taken refuge against civilization with the hopes of adding the rare specimens to their collections.

Although the extreme rarity of this species is shown by a study of ornithological notes of the early 1900's, it was evident by this time that the birds were at least holding their own in some localities. And some observers reported seeing them once again in areas where they hadn't been seen for many years. So, without any help from man, this beneficial bird chose to adapt its mode of living to civilization and accept the terms of the conqueror.

In the woodpecker's desperate attempt to become accustomed to the revised environment it acquired certain habits which proved disagreeable to man. In place of forest trees the wood-

peckers found other wooden structures and apparently the birds derived a great deal of satisfaction from drumming upon or damaging houses and barns. Another favorite subject of attack were high church spires.

The damage to wooden power poles commenced just after the turn of the Century when the rapidly expanding utility companies laid thousands of miles of electric and communication lines throughout the country. This rapid installation of tempting timbers was too much for the ever-curious woodpeckers to resist, especially over deforested areas.

The Southern States were the first to report damage to utility poles. Apparently the climatic conditions and swampy areas of the Deep South are the most suitable habitat for the pileated woodpecker, and it is here one finds the heaviest concentration. The late Dr. Hoyt of Cornell University reported that in open forested areas in Louisiana during the years 1938 to 1940 there was an average of a nesting pair of pileateds to the acre.

In 1906 the State of Louisiana reported that 41 per cent of the poles on one line had been damaged. On a line in Indiana, damage occurred on 59 per cent of the poles. Damage to the utility lines in our Northeastern States was not so serious at this time. This is attributed to the fact that practically all of the woodpeckers' natural habitat had been destroyed by large-scale lumbering operations. Consequently, drastic reduction of the woodpecker population took place to the extent of near extinction, especially in the case of the large pileated woodpecker. Time was needed for the second growth timber to become large enough to support a woodpecker population able to inflict serious damage.

It was a common expression of the line crews in Louisiana that the woodpeckers "got fat off of creosote." Early preventive methods taken on these lines were: Hanging the birds by placing a noose of horse hair around the entrance to their holes; filling their holes with pebbles, and shooting the birds off the poles. However, no practical method of eliminating the damage was found.

Pole damage in the Northeast is not just a recent problem but one that has been gradually increasing in direct proportion to the increasing woodpecker population. In the past, the utility companies were able to contend with the woodpeckers and withstand the cost of replacing an occasional pole, but when damage took place to the extent that a pole had to be replaced within six months after being installed the problem became of critical importance, especially when the average life expectancy of the treated

pole is considered to be 30 to 40 years. The areas where they frequently must be replaced are nearly always very inaccessible, and the cost of getting manpower and equipment into these remote areas amounts to more than twice the cost of the pole. Also, frequently the line which has serious damage is the only source of power for distant community. Therefore it is necessary to give maximum service and replace the poles—with uninterrupted electric power. So, besides amounting to many thousands of dollars per year, the woodpecker problem is also very perturbing to the utility companies.

Over a period of years these companies have tested various methods to make the poles as undesirable to the woodpeckers as possible. But these expedients did not appear to discourage the birds in the least, and some even seemed to concentrate their activity. A few methods attempted were: (1) leaving the ruined old pole in place beside the new one; (2) lashing sections of the old pole, which contains woodpecker holes, to the replacement; (3) attaching metal flashers that would revolve in the wind; (4) hanging strips of red cloth from the cross-arm and pole; (5) wrapping the pole in wire hardware cloth; (6) enclosing the pole with tarpaper; (7) placing sections of garden hose around the pole to represent snakes; and (8), filling the holes with a sticky tar-like substance.

In March, 1955, the Pennsylvania State University in co-operation with the Pennsylvania Power and Light Company, New Jersey Power and Light Company, Northern Pennsylvania Power Company, and West Penn Power Company began a study of woodpecker damage to wooden utility poles. The initial phase of this project has been a life history and behavior study of the pileated woodpecker in relation to utility line poles and, secondly, development of a practical method of preventing the woodpecker from causing damage to wooden poles.

Sections of four separate power lines have been designated as the study areas and periodic observations of these areas have been continued since the start of the study. The woodpecker damage to these poles is seasonal. The period of activity begins approximately the first of October and lasts throughout the Winter months until about March. This season of pole damage corresponds to the season of increased woodpecker activity among the forest trees. It is at this time of year the pileated must secure its principal food supply from the heart of the trees infested with carpenter ants and wood borers. Consequently it is during the Winter months one finds new

wood exposed and extensive tree excavation—an indication of a pileated woodpecker in the vicinity.

This would lead one to believe that the reason for damage to the poles was relatively simple; to secure food. However, when a pole which has been creosoted under pressure and erected on the line exactly three weeks, is then extensively damaged by woodpeckers, one becomes somewhat skeptical about the food theory.

There has been some proof that the pileated woodpeckers use the holes they make in the poles as shelter or roosting cavities. But this cannot reasonably account for numerous poles which have received damage four or five feet from the ground line, or the ones which have holes not in the slightest resembling the characteristics of a roosting or shelter cavity.

It was once thought that the vibrations or humming caused by the wind against the wires was responsible for misleading the woodpeckers into thinking that insects were moving within the pole. But: Whenever a new utility line is being constructed all the poles are first set in the ground; after this is completed the wires are then attached to the poles; and it so happened that on one line under study some of the poles had to be replaced because of woodpecker damage even before the wires were attached.

(Continued on next page)



Excavations in electric utility pole shown here were made by pileated woodpecker and are typical of the damage now under study as reported in this article

With these facts before them, members of the School of Forestry and the wild-life management experts at the Pennsylvania State University have undertaken this disturbing problem.

To test the pileated woodpeckers' reaction to colors, a color repellent experiment was established on a section of 24 poles which had the most recent damage. Four poles, or two adjacent structures were each painted with four ten-foot bands of red, white, green, and yellow paint. One adjoining structure (two poles) was then left unpainted to serve as controls for the sake of comparison. On the next two structures proceeding along the line, the colors were rotated; i.e., white, green, yellow, and red, as compared with the first color sequence. Again the next single structure was left as a control. This method was continued until each color had appeared on four possible positions on the pole. In this way, if the damage occurred only in one color or two or three colors, the assumption could be made that a color or colors would repel the woodpeckers.

Since the establishment of this experiment in March, 1955, approximately 42 per cent of the poles in the test area have received light damage in all four colors—as well as the unpainted control poles. Therefore, the colors used in the experiment do not appear to repel the pileated woodpecker, although they may prove discouraging enough so that the bird will leave before doing damage.

Experiments on several commercial repellents as well as other chemicals are now in progress, using a pileated woodpecker which has been in captivity since May, 1955. This bird has become surprisingly well adapted to the limited natural habitat within the confines of its aviary. Its behavior and capability of damaging poles or trees is nearly the same as a wild bird.

Repellents are placed on wooden sections in which there is known to be food—so the bird has every reason to attack them. Those which are being tested are believed to be most practical for use on an actual utility line; thus for observations under practical conditions, repellents found effective in connection with the captive woodpecker can be applied to poles of a section of line which is receiving damage.

An ideal solution to the problem would be a chemical repellent which would treat the wood against woodpeckers when mixed at the same time with a wood preservative necessary to prevent decay. Thereby, one operation would serve a dual purpose. However, the battle is but joined and the victor is not ready for crowning. Woodpecker or scientist, that is the question!



Problems
and
Plans

Adirondack Coyotes

THE coyote is almost as familiar a feature of children's books as cowboys and Indians. Like cowboys and Indians, they are generally thought of as standard "props" for stories of the Old West. During recent years, however, New Yorkers haven't needed to travel west to meet personally with these bushy-tailed predators. Instead the coyote came east, making its New York debut about 1912.

It seems most probable that this was accomplished as a natural extension of the coyote range eastward along the Canadian border and thence across the St. Lawrence River into Northern New York. The first coyote recorded in that area was shot about 1925 by a hunter in the Town of Belmont, Franklin Co., 12 to 14 miles south of the Canadian border. Then nothing more was heard of them until the mid-Thirties when another specimen was shot by a Game Protector. This too was in Franklin County, Town of Belmont. About this same time coyotes were also reliably reported in the Luther Preserve south of Saratoga and at Vischers Ferry on the Mohawk River.

At any rate our new citizens naturalized rapidly and went about extending their range through the Adirondacks (see map). In this effort they appear to have found willing allies among stray and "wild" dogs. Coyotes are known to hybridize with dogs, and such crossbreeding appears responsible for the ancestry of some members of the tribe—generally called coy-dogs. Game men point out, however, that for the most part the present day population of coyotes in New York runs true to type; they are typical coyotes, though generally larger than their western cousins. This had led, they add, to the mistaken belief that we

have some wolf blood involved—an error perpetuated by the use of "brush wolf" as a common name for the coyote.

No matter what the origin and precise ancestry may be, and by whatever name they're called, coyotes are now widely enough distributed throughout the Adirondacks, and are sufficiently abundant

The Coyote at home on typical Adirondack range





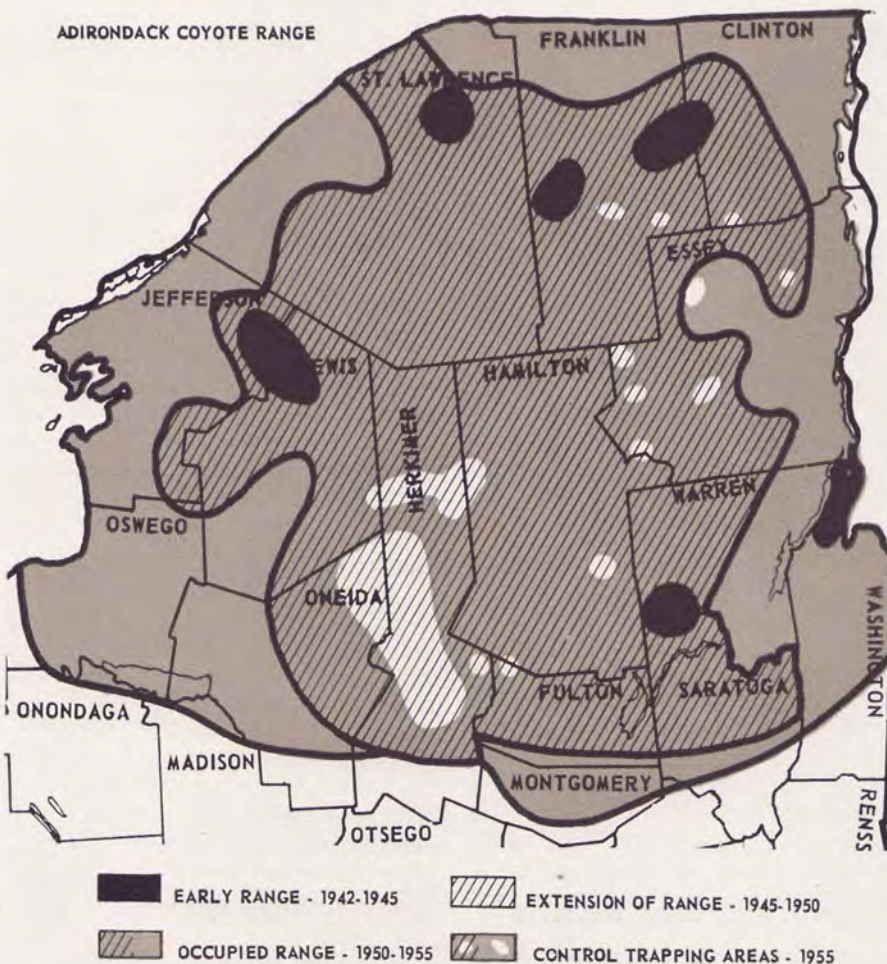
Coyote "young uns." Note individual variations in same litter

to be a source of some concern. In northern Hamilton County sportsmen are blaming coyotes for the decline in deer hunting success. Fawns, they say, are scarce while coyotes are sufficiently common to be seen and heard frequently. Similar reports are heard from the East Branch Sacandaga, Curtis Clearing,

Siamese Ponds areas of Warren County and from the Wilmington, Jay, and Lake Placid areas of Essex County.

Leading up to this point, Department Game Managers, technicians and predator trappers have for several years studied the rise of the coyote in the Adirondack area; have correlated it

with records of deer take and, more important, with the general upswing in the varying hare population. With respect to the deer, it is pointed out that since 1942 (when coyotes first got a good foothold in the area to begin their rapid spread) deer hunting has been progressively better. This is borne out by the reported buck take in central Adirondack counties—which rose from 4,600 in 1942 to an all time high of 8,000 in 1954. During the same period coyotes increased their range in the Adirondacks from approximately 700 square miles in 1942 to about 16,000 square miles in 1954.



Meantime the varying hare or snowshoe rabbit was also building in population. However, this has not been a uniform increase throughout the Adirondack area. In this connection it has been noted that coyotes apparently have gravitated to specific areas of high hare populations to take advantage of such relatively easy prey.

But while game men see an apparent cause and effect relation between varying hare and coyote increase and distribution, they do not deny that the coyotes under some circumstances take deer.

They point out, though, that limited Winter food and periodically severe winters remain the dominant factors in reducing the deer population in the more remote, interior areas of the Adirondacks. But it is from Adirondack fringe areas, where most of the deer hunting is done, that sportsmen have expressed concern over the possible effects of coyote predation on deer.

After reviewing the Adirondack coyote situation with Department field men, Commissioner Wehle announced that a stepped-up coyote control program would be undertaken—primarily in the Adirondack fringe areas. This will involve increased effort by State trappers, and trapping instruction to sportsmen's club members and other outdoorsmen interested in coyote trapping techniques.

—A. W. BROMLEY



Shifting Dunes

by Meade C. Dobson



TERRESTRIAL changes on the face of our spinning globe are constantly occurring due to internal fires, flood waters, the four winds and other forces of Nature. These changes are often sudden, widespread, violent and disastrous. But more frequently lesser surface variations occur as a result of action by tidal waters and the impelling power of steady winds.

In the latter category, Nature has been operating on a spectacular scale to change a section of the Montauk area of Long Island, and has provided a sight intriguing to Nature-lovers and photographers. Here, in the western border of Hither Hills State Park, a half-mile north of Montauk Highway and on the eastern shore of Napeague Harbor, is the visible movement of a vast flood of sand propelled by the powerful thrusts of persistent winds and accelerated by an occasional hurricane. Uncountable thousands of cubic yards of sand, originally part of an old landmark dune, have thus been moved during the past ten years.

This ancient dune, about 125 feet high and 2,000 feet long, facing southeast, has been on the move for at least that long. For the past decade boisterous nor'westers have been steeplechasing over this high obstruction, and the dune sands are now cascading into the wooded area on the lee side, with the results that trees forty feet tall are being submerged and whole thickets of smaller growth deeply covered.

For many decades this shaggily overgrown, lofty dune stood as a bulwark against northerly winds, protecting a struggling group of scrub oak, pine, and

pepperidge trees and much tangled underbrush on its southerly flank. But in the year of the 1944 hurricane it received heavy nor'wester attacks until notches were torn through the beach grass, beach plum and bayberry bushes on the dune's crest. These openings were first noticed by the writer in 1946, when they had widened sufficiently to attract attention from the Montauk Highway a half-mile to the south. The major opening is now 800 feet or more wide, through which the flooding sands are being poured.

Until 1951 the dune could be climbed up its southeast front, as the sand was well anchored by beach grass. Now, that is not easily done, since the wave of sand (thirty feet high) is loose, deep, and too precipitous. But to reach the present top of the dune bordering on Napeague Harbor, an easy detour can be made from the dead-end of the approach road, along Napeague's beach for a quarter-mile, where the northwest slope of wind-packed sand affords easy climbing.

Here is a desert expanse of many acres, where even the light winds steadily roll up wavelets of sand granules over the shrinking ridge of the dune to go flowing down upon the beleaguered trees on the other side. This mobile sand-wave had, by the Summer of 1954, surged 200 feet or more into the trees and shrubs that had been protected so many years by the bulwark of the dune.

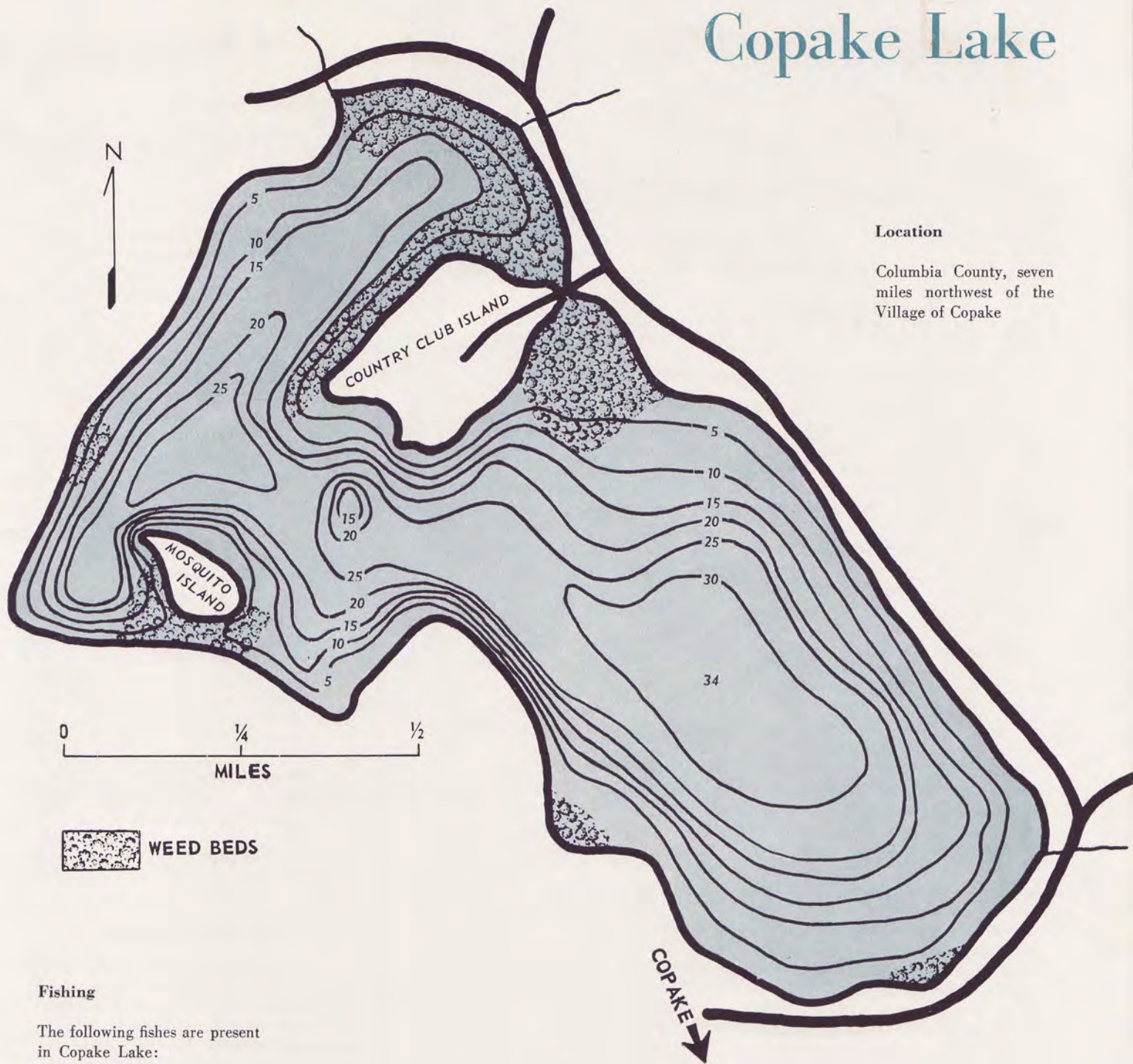
But when the violent and vicious blows of the sister hurricanes, Carol and Edna, struck Long Island in August and September, '54, the flowing dune sands were hurled faster and farther to the

southeastward. The whirling winds from the northwest scooped acres of sand from the new surface, built up slowly over the years, and sandblasted the tops of the trees exposed along the southeast face of the dune. These winds broadcast sand amidst the trees to a distance of one hundred and fifty feet, covering the ground six inches or more deep. The boughs of the trees were stripped of leaves and the twigs skinned and scarred. So, long before frost time, the trees stood bare and gaunt, and the many varieties of ground plants, mosses, lichens, deer-feed, tiny florets, goldenrod, sprouting beach plum and bayberry were smothered.

In the terrific blasts of wind on the northwest slope an acre or two of sand was blown away, exposing the butts of small pine trees that had been buried long ago. And three more channels for flowing sands have been torn through the northeasterly crest of the dune, with a nearby grove of small trees sandblasted to sticks.

THE ancient shaggy crest of the Napeague dune is now almost obliterated. Another windy year, and it will probably be gone. But the blowing sand that is sifting over into the southeasterly trees will be stabilized by them into a new crest. In any case, it will be interesting to watch this changing, tiny wrinkle on the surface of Long Island. Lovers of nature and the ubiquitous photographer can set to work making documentary notes and films of the upbuilding of a *new* Long Island dune, how it becomes stabilized and eventually a new landmark for other generations.

Copake Lake



Location

Columbia County, seven miles northwest of the Village of Copake

0 1/4 1/2
MILES

 WEED BEDS

Fishing

The following fishes are present in Copake Lake:

Chain pickerel
White perch
Yellow perch
Pike-perch
Smallmouth bass
Largemouth bass
Calico bass
Common sunfish
Rock bass
Barred killifish
Bluntnosed minnow
Common shiner
Golden shiner
Common bullhead
Common sucker

Physical Features

Area: 365 acres
Maximum depth: 34 feet
Shoreline: Wooded with cottages
Elevation: 715 feet

Chemical Characteristics

pH: Alkaline (7.3-8.7)
Oxygen: Good down to 20 feet
Water Color: Clear

Note

In the past this lake was best known for its pike-perch and largemouth bass fishing. The pike fishing declined during the war years and has not yet recovered. Bass fishing and angling for the pan fishes is still good

—JOHN S. GRIM,
Aquatic Biologist



Bath Hatchery

How it changes your Conservation Dollar into trout

The accompanying article tells how the sportsman's dollar is spent in raising legal-sized trout at our Bath Hatchery. Bath, because of the quantity and quality of its spring water supply, is the most efficient of New York State's 17 trout hatcheries. The average cost of producing legal trout is somewhat higher in the other hatcheries. Continuous efforts are being made, however, to reduce further the costs of raising trout in all hatcheries including Bath.

Coincidentally, on the day that final copy of this article was submitted, the Bath Hatchery building was destroyed by fire with a loss of 1,540,000 young brook, brown, and lake trout. Arrangements have been made to make up insofar as possible for this loss of fish, and plans are underway to restore Bath to full and efficient production.

—W. M. LAWRENCE,
Asst. Director, Div. Fish and Game

ON a cash-and-carry basis, 20,000 fishermen could yearly walk into the Conservation Department's fish hatchery at Bath, plunk down \$2.25 apiece (just the cost of a fishing license) and walk out with 22 seven-inch brook or brown trout. The hatchery would break even on the deal; in fact, the Department as a whole probably would make a little, as the expense for equipment and labor for stream stocking would be eliminated. But of course those 20,000 "fishermen" would lose the many hours of quiet contentment to which they are entitled in the process of taking their fish with rod and reel.

There are more watchdogs on your Conservation Dollar than there are at Fort Knox—any Fish Hatchery Foreman will swear to that. In fact, he'll probably swear at most anything. But let's take a close look at what happens to your money from the time it leaves your wallet at the Town Clerk's office until it shows up in the creel in the form of ten legal-sized trout. Specifically, let's follow a

dollar that goes to the Bath Hatchery for producing trout; just how is it used? You might say that 33 cents of it is actually eaten up, for that much is earmarked for the purchase of fish food. Now you can't serve filet mignon for that, but what your trout *do* get for that 33 cents is about 3 lbs. of well prepared, scientifically balanced diet: 1 part beef liver; 2 parts pork spleen; 3 parts mixture of wheat middlings, cottonseed meal, menhaden (salt water fish) meal, powdered milk, brewers' yeast and cod liver oil. This diet assures your fish of enough carbohydrates (fuel) to carry on their body functions and movements, and it also provides the vitamins and minerals and fats essential to trout life. The rest is protein used to build flesh.

Now trout aren't acquainted with the modern, self-service stores or cafeterias. They want their food served, and service they get. They refuse to stoop to menial tasks, so their living quarters must be cleaned for them. They will just up and die if they feel crowded, so "room clerks" are needed to keep that situation suitable. Travel? Sure—in big, easy riding trucks to their new stream or lake homes previously selected through careful surveys by the Department's fisheries biologists.

All these hatchery housekeeping chores require manpower, and that—including a portion for upkeep and improvement of the grounds, equipment and buildings—accounts for 54 cents more of your dollar.

Now there's 13 cents left. It will be used for the purchase of new equipment, and for repairs and materials needed to keep the hatchery in good shape.

So your Conservation Dollar has been transformed from a piece of paper into ten tasty trout just lying over there where the stream has undercut the bank waiting for your lure. You paid for them; they're yours; come Spring, go get them.

—JAMES J. LINDSEY,
Fish Hatchery Foreman

Onondaga Conservation

WHEN you mention *Conservation* to the average man, he is likely to think exclusively of fish and game, fish and game clubs, or fishermen and hunters. He seldom gives a thought to the broad application of conservation, which in fact includes the conserving of all of our natural resources: The land, the water and the forests, as well as their inhabitants.

With the thought that there is a great need for general education of the public if the efforts of conservationists are to be effective, the writer asked the Board of Supervisors of the County of Onondaga in the early Spring of 1954 to set aside a week—to be designated as *Onondaga County Conservation Week*. The Board of Supervisors promptly complied by unanimously adopting a resolution setting aside the third week in April. In their resolution they called upon all agencies of the county government and all other organizations interested in or having to do with conservation, in any of its branches, to participate in bringing to the people of Onondaga County during that week all possible information pertaining to conservation. The Common Council of the City of Syracuse endorsed the action taken by the County Board of Supervisors and called upon all interested branches of city government to co-operate.

Committee organized

With the co-operation of other interested conservation groups, we organized a Conservation Week Committee. On this committee we had widespread representation, including the Executive Secretary of the County Parks and Playgrounds, the District Game Manager of the State Conservation Department, the Chairman of the County Public Works Commission, and representatives of both Federal and County Soil Conservation Services. Also on the committee were representatives of the New York State College of Forestry, members of the Board of Supervisors who were Chairmen of committees having to do with any branch of conservation, officers of the County Federation of Sportsmen's Clubs, representatives of the Junior Chamber of Commerce and of the press, radio and television stations—and others we felt were necessary to make a well-rounded committee.

County Week

by Dr. Benjamin A. Sauer,

Chairman, Onondaga County
Conservation Week Committee

The committee functions

Response of those invited was surprisingly good; enthusiasm ran high and attendance at all committee meetings was excellent. The committee tried to arrange for the demonstration of every sort of conservation activity during Conservation Week. The press, the radio stations and the television stations gave us wonderful co-operation, and the people of Onondaga County learned a great deal about conservation during Conservation Week of 1954. When it was all over, we certainly felt that there was much still to be done. But we were satisfied that we had succeeded to a great degree in making the people of Onondaga County conservation-minded.

So the committee decided that Onondaga County Conservation Week should be an annual affair, and in January of 1955 the committee met and reorganized and started planning for a repeat performance. The same general officers who had carried on during the first year were re-elected, and the committee enlarged its membership as well as its efforts. The Board of Supervisors set aside the week of May 1st as Conservation Week for 1955, and again the Common Council of the City of Syracuse endorsed the action.

1955 program

The committee, with a year of experience behind it, in 1955 launched a much more ambitious program. The highlight of the week was undoubtedly the dedication ceremony conducted on Sunday, May 1st, at the Erie Canal Project. This project was carried out by the County Federation of Sportsmen's Clubs and it amounted to the restoration of a two and a half mile section of the old Erie Canal. It involved cleaning out the old canal bed, draining it, removing or killing off carp and other undesirable fish. Federation workers also cleared out wild brush along the shores, reflooded the section and planted desirable and appropriate fish. Conservation Department employees were on hand with the fish, which were planted in the waters immediately following the dedication. This whole project is intended to be for the benefit of boys and girls of this community.

Among other activities scheduled and carried out during the week were conservation caravans to Highland Forest, to Pratt's Falls County Park, to Carpenters Brook Rearing Station, and to the Baldwinsville Game Management Area. Various conservation clubs throughout the county held open house at specified times. There were archery exhibitions, hunter safety programs, pistol instruction, and other activities carried on throughout the week. All were well publicized through the local press, radio and television facilities.

Tully experiment

Exploring for possible future activities, the Conservation Week Committee carried out an experimental program in 1955 in the Village of Tully. In the Tully Central School there was a poster contest for students in the fourth through the eighth grades. These posters were displayed in the window of the local drugstore and the people of Tully voted for what they considered the best posters. Students in the ninth through the twelfth grades participated in an essay contest on conservation. After the teachers of these classes had selected the three best essays, these in turn were voted on by the people of Tully. And on Wednesday, May 4th, an assembly on conservation was held for the students of Tully Central School in the school auditorium. Appropriate movies were shown and the winners of the poster and essay contests were announced.

Meanwhile, the Tully Grange arranged a display on Route 11, in the heart of the town. On one side of a high mound of earth they planted sod and trees; on the other side there was the bare soil (to show the effect of soil erosion) in which they set out *burned* shrubs and trees. The background sign read "Help Nature Help You—Prevent Forest Fires." This display on the main highway was visible to all travellers passing through Tully. The Baptist Church of Tully conducted a Conservation Week calendar for the



week, and window displays were prevalent through the village.

Evaluation committee

Among the many sub-committees operating under the general Conservation Week Committee was one on Planning and Evaluation. This committee, under the chairmanship of Dr. Floyd Carlson of the State University College of Forestry, suggested the various committees that participated in 1955, and examined and evaluated the work carried on by each. After Conservation Week was over, the Evaluation Committee filed a report and submitted recommendations for future activities. High in their estimate of success were the activities carried on at Tully, and the recommendation was made that such activities be extended to other communities in future Conservation Weeks.

We are confident that in the future we will have the co-operation of the school authorities throughout the city and county, as the Board of Education of the City of Syracuse in 1955 co-operated by designating the week of May 1st as Conservation Week in the public schools. Also, the Boy Scouts accepted as one of their projects the distribution of 5,000 cleverly designed official conservation week posters. These were placed in store windows throughout the county. The posters and the committee stationery were donated by the Estabrook Printing Company of Syracuse. Other committee expenses were covered by donations made by conservation clubs in the county.

WE feel that we have now established the need for—and the benefits to be derived from—the observing of an annual Conservation Week. We feel also that inasmuch as Conservation Week has proven of great benefit to the cause of conservation in Onondaga County, an extension of the program on a state-wide basis would be desirable and of great benefit throughout the State.



The La Dolce Case

One Reason For Increased Posting



Game Protector Harry J. Maddren and the 5 deer (4 "button bucks" and one doe) jack-lighted and killed by LaDolce on three successive nights in Allegany County. This and the other photographs shown here were part of the evidence presented to the Grand Jury which indicted LaDolce.

DEAR EDITOR: The Olean Division office has advised me that we are to forward to you any unusual or outstanding cases that were prosecuted during the Fall hunting season. I wish to report the following:

On November 23rd, I, with the assistance of District Game Protector Cone and Assistant District Game Protector Hannon, apprehended one William J.

LaDolce for taking, with the aid of a 30-30 caliber Winchester rifle and an artificial light, 5 deer. The violations occurred on three successive nights. Two deer were taken the first night, 2 the second night and 1 the third. The deer were 4 button bucks and 1 doe—none of them legal deer under any circumstances in this county at that time.

After working four nights trying to catch up with this type of violator, and getting complaints from two individuals, I felt I had sufficient reason to search the outbuildings of a farm in Bolivar, Allegany County, where LaDolce and a party of ten friends were staying. It was in an abandoned chicken house directly behind the main building that we found the 5 deer hanging.

On questioning the so-called sportsmen, LaDolce claimed he shot all of the deer without the knowledge of his ten companions, and used a truck belonging to one of the party without his knowledge. The spotlight was attached to the roof of the truck.



Chicken house on the farm of George Fanton, South Bolivar, in which Protector Maddren found the deer hanging.

The case has been turned over to District Attorney Norman Fitzner of Allegany County. LaDolce was released on \$500 bail (which the rest of the party raised), pending action by the January Grand Jury.

You probably know that the posting around this area has increased by leaps and bounds. After this mess, it is going to be plenty difficult for any city hunter to enjoy a few hours' sport in Allegany County. Am enclosing a clipping from our local paper that will express in a lot fewer words what I am driving at.

—HARRY S. MADDREN,
State Game Protector

The Wellsville Daily Reporter,
Nov. 25, 1955

From Where We Sit

It Takes Only One City Hunter to Make Trouble For all Hunters Who Come Down from Rochester and Buffalo

By Rae Rowan

"How many times have you heard farmers declare: 'I don't like City Hunters!'"

"Most farmers will agree with us when we say that such a blanket indictment is not exactly fair. Many hunters who come from the cities are fine sportsmen and gentlemen. It is the few who make it tough for anyone who comes down from Buffalo or Rochester.

"This situation was driven home with a bang late Wednesday afternoon when a Rochester hunter was arraigned in Bolivar on a charge of killing five wild deer with the use of a jacklight and a 30-30 Winchester rifle.

"Certainly there could be no excuse for his act. To make his crime even more criminal was the fact that four of the deer were illegal button bucks and the fifth was a doe. LaDolce was a member of a party of 11 hunters from Rochester staying at a South Bolivar farm. He swore that his companions had no part in the crime, no knowledge of the crime, and that he alone killed the deer.

"District Game Protector Elmer E.



Truck, with spotlight mounted on top of cab, used in taking the 5 deer. LaDolce claimed he borrowed truck without owner's knowledge.

Cone, Jr., his assistant Dick Hannon and Allegany County Game Protector Harry Maddren spent most of the day on the case, with LaDolce finally being released on bail until the January Grand Jury can investigate the whole situation.

"This is the type of Conservation Law violation that boils the blood of every sportsman and every landowner. It is the type of thing that annually brings more hundreds of acres of farm land under posting."

Dear Sir: I have some further information on the case of William Joseph LaDolce.

LaDolce was indicted by the Grand Jury on nine counts, January 4, 1956. I will list below the 9 counts. (The violations occurred on 3 separate days—November 21 at 2 A. M., November 22 at 2 A. M. and November 23 at 4 A. M.).

3 counts of taking deer with aid of artificial light and 30-30 rifle; 3 counts of taking deer with horns less than 3 inches; 3 counts of taking deer with other than a shotgun of not less than 20 gauge.

Today (Friday the 13th, by the way) LaDolce came before Allegany County Judge Ward M. Hopkins for sentencing. LaDolce pleaded guilty on all counts and received the following sentence:

\$1,400 for the 3 counts of taking deer with the aid of light and rifle, and a total of \$225 for the other 6 counts. The grand total comes to \$1,625. He was also given a 1-year suspended jail sentence and placed on 3 years' probation, during which time, as ordered by Judge Hopkins, he is not to hunt or fish in the State of New York. I enclose another newspaper clipping concerning some remarks made by Judge Hopkins in passing sentence.

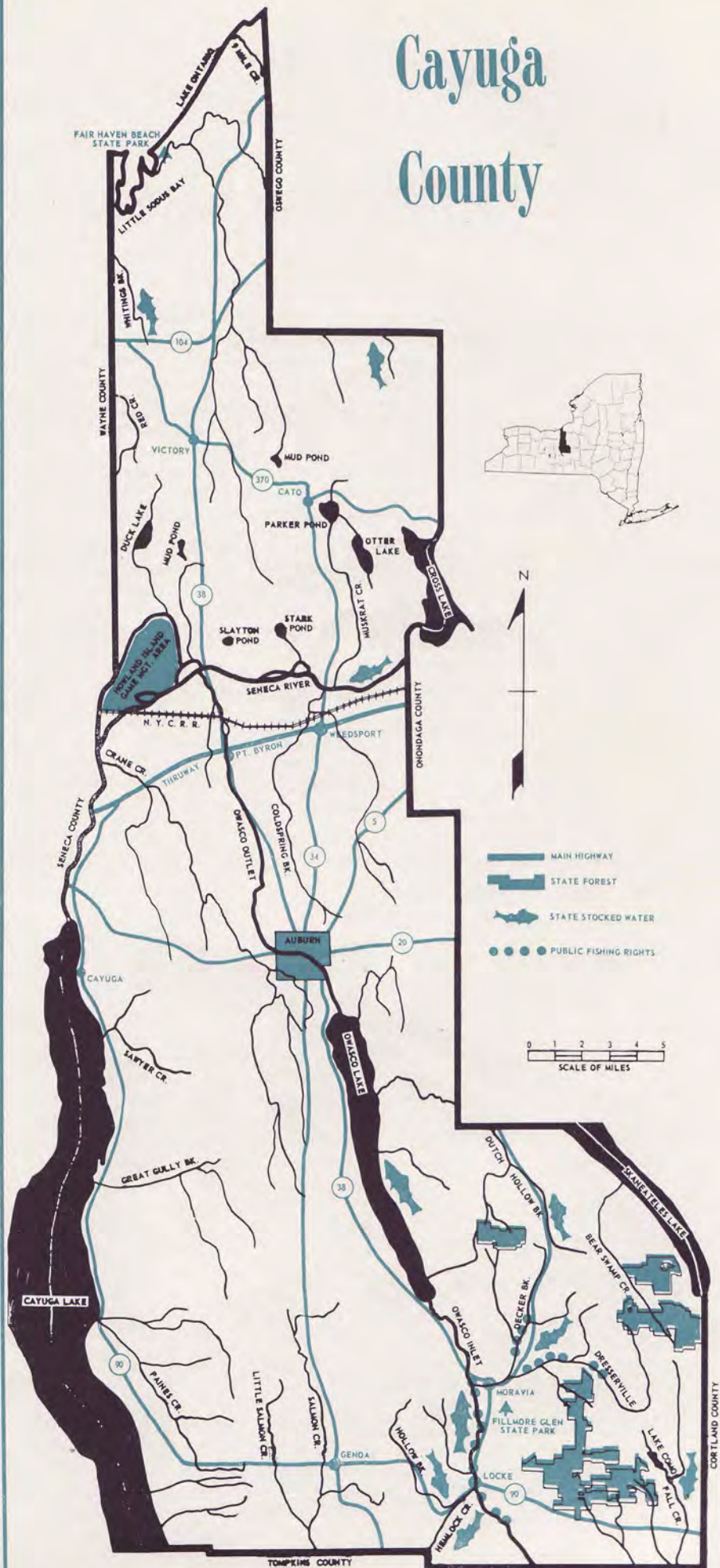
—HARRY J. MADDREN,
State Game Protector

"The Judge preceded his sentence with a severe lecture to LaDolce and his companions. He said that it was not possible to believe that the rest of the hunting party were without knowledge of the acts, but that nothing could be done due to lack of proof.

"Judge Hopkins described the Rochester man as the type of hunter who puts a blot on all city hunters who come into an agricultural county like Allegany to enjoy deer hunting."

Superintendent of Law Enforcement Andrew Vormald, has recommended to the Conservation Commissioner that LaDolce be denied the right to purchase hunting, fishing and trapping licenses for the next five years—the maximum period permitted by law.

Cayuga County





Lake Ontario Lake Trout

TWENTY years and more ago, fishing for lake trout in eastern Lake Ontario was both good sport and good business. Early each Spring, even before all the ice flows had disappeared from the lake, small boats headed out from such famous fishing resorts as Cape Vincent and Henderson Harbor to troll the rocky shorelines and shoals where the trout lay in shallow water. In those days, lake trout were plentiful enough so that some guides advertised "No fish, no pay." It was unusual to catch a trout much under five pounds, and 10-pounders were common. But as the season progressed and the shallows warmed up, the trout seemed to move westward, and by the time the bass season opened in mid-June most of them had disappeared into the deep, cold waters of the open lake.

If the trout were fun for the angler, they were money in the bank for the commercial net fisherman. Some enterprising individuals even combined busi-

ness with pleasure, reaping a good profit from the fish they took by hook and line.

Today the picture is vastly different: Angling for lake trout in Lake Ontario is gone, and the commercial catch is insignificant. This situation is a bitter pill to swallow for many sport fishermen who still remember the "good old days," and who urged their Conservation Department to take action.

It was apparent from the start that the problem was of an international nature. Available statistics pointed up the fact that New York fishing grounds were only an extension of the main lake trout production area, most of which was in Canadian waters. Commercial catches in the Canadian fishery over a long period of years were about eighteen times as great as in New York. So it was doubtful that an improvement of fishing in New York waters could be achieved independently.

Fortunately the Department of Lands and Forests of the Province of Ontario

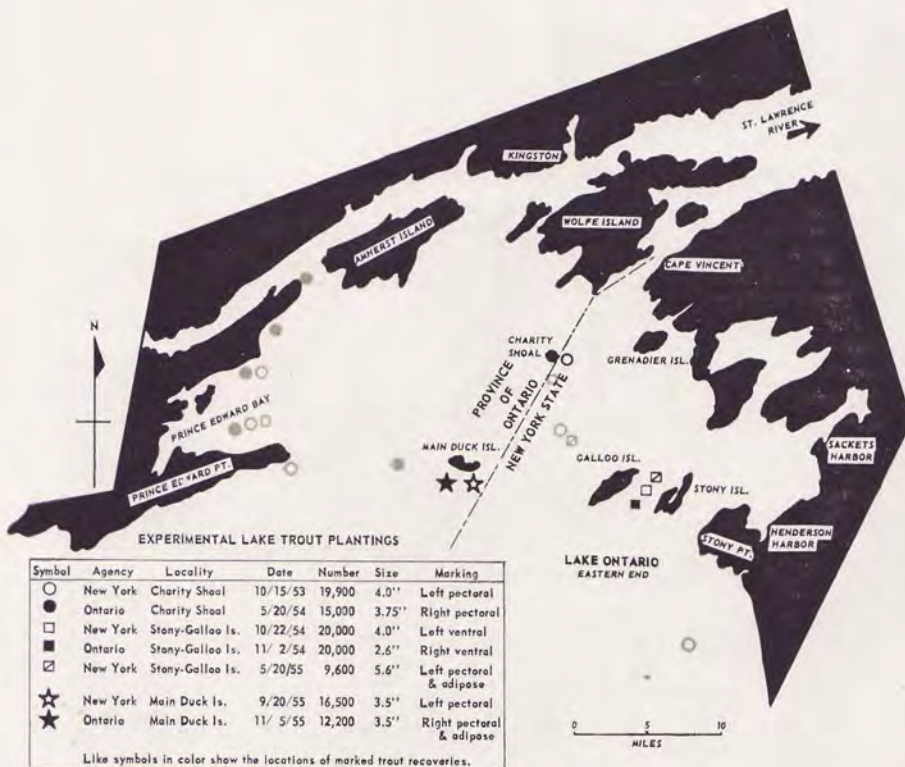
proved to be willing to co-operate with New York in building up the remnants of the once plentiful lake trout population. Annual conferences on Lake Ontario fisheries problems had been held between representatives of New York and Ontario for some years, and in 1953 an international lake trout program took shape.

A review of available information turned up some interesting facts. It seems that the eastern end of the lake is the only area which has ever produced large quantities of lake trout. Much of this area runs around 100 feet in depth, while the rest of the lake averages several hundred feet deep. (One spot north of Sodus Bay is 780 feet deep, the bottom actually being more than 500 feet below sea level.) Lake trout may work into this deep water to some extent, but the eastern shallower parts of the lake undoubtedly produce much more food and are therefore more attractive to them.

Commercial catch statistics revealed that there have been periods of abundance and scarcity in the past. In 1879 a record catch of 569,700 pounds of lake trout in New York waters was reported. In 1925 a lesser peak of 70,000 pounds occurred. However, there have been other periods between these peaks and again in recent years when the catch has fallen to a very low level. The available information does not necessarily lead to the conclusion that overfishing is the sole factor in the decline of the lake trout. In a water as vast as Lake Ontario and as complex in the variety and nature of its aquatic life, there are many other factors which might have a decisive effect on a particular species of fish.

One such factor is the lamprey eel. This villain has been accused of decimating the lake trout population of some of the upper Great Lakes since its entry into these waters in recent years. Yet the lamprey is known to have been present in Lake Ontario for a great many years—years when the lake trout has been abundant as well as when it has been scarce. Just what its effect has been in the past is not well understood.

The smelt is another factor to be considered. A few years ago this species



was practically unknown in Lake Ontario. Now it is so numerous that thousands of fishermen flock each Spring to the mouths of lake tributary streams to dip these savory little fish by lantern light as they come in to spawn. In summertime these fish retire in great numbers to deep water where the lake trout might devour them for food. This is fine, but this little fellow also has an extraordinarily fine array of teeth, and who knows how many baby lake trout he himself might dispose of, or how much of the food supply of the young lake trout he might consume?

Many other species of fish might also

on the survival, rate of growth and movements of the lake trout. If these little lake trout survived and grew well, it would perhaps indicate that a bottleneck existed at the very beginning of the life cycle of the native trout in the lake. Then it might be possible to quickly narrow the search for limiting factors to a determination of those involved in the natural spawning, hatching and early survival of native lake trout. Also, it would show whether the lake trout population was one homogeneous mass or whether it was made up of separate, local groups which could be managed individually.



have a tendency to keep lake trout numbers in check. The common eel, to mention one, has been observed in considerable numbers on lake trout spawning grounds in the Fall, apparently engaged in feeding on the bottom where the newly-deposited lake trout eggs would be found.

One item of available information was particularly significant. This was the extreme scarcity of very young lake trout in Lake Ontario. Experimental netting by the Conservation Department in years past (as well as netting by commercial fishermen) had clearly shown this to be true. There were still enough adult breeders left to produce a crop of young trout, but for some reason these young never materialized.

Therefore, it was decided that experimental plantings of young lake trout obtained from fish hatcheries would be made in the lake. These fish would be marked by removing certain fins so that they could be recognized later. Recapture of some of these fish at a later date would provide badly needed information

The accompanying table summarizes the experimental plantings which have been made to date. Areas on both sides of the lake were chosen in the vicinities of what, in the past, were known to be important spawning grounds, and plantings of trout of varying ages and sizes were made by both New York and Ontario. At first, the trout were carried by boat to the planting grounds; but because of the hazards of unpredictable weather and rough seas, it was quickly decided to employ a more modern and efficient method of transportation. As a result, all of the plantings since the first have been made by dropping the trout from low-flying airplanes. On-the-spot observations in the drop zones have shown that the trout did not suffer injury as a result of this experience.

Plantings began in the Fall of 1953, and returns started coming in surprisingly soon. Although the trout were still sub-legal in size and so small that they would slip through the coarse mesh of nets set by commercial fishermen without being gilled, occasionally one would

get its teeth entangled in the fine thread of the net. The co-operation of the net fishermen was enlisted in reporting any small lake trout which might show up. During 1955, reports were received on 11 specimens from New York waters and 39 from Ontario waters. Nearly every one of these little trout was a marked fish of hatchery origin, again underlining the absence of small, wild trout produced by natural spawning in the lake.

Considering the small numbers of trout planted in relation to the great size of the lake and the great odds against any of them being accidentally entangled in nets, the number of recoveries is very encouraging and indicates good survival.

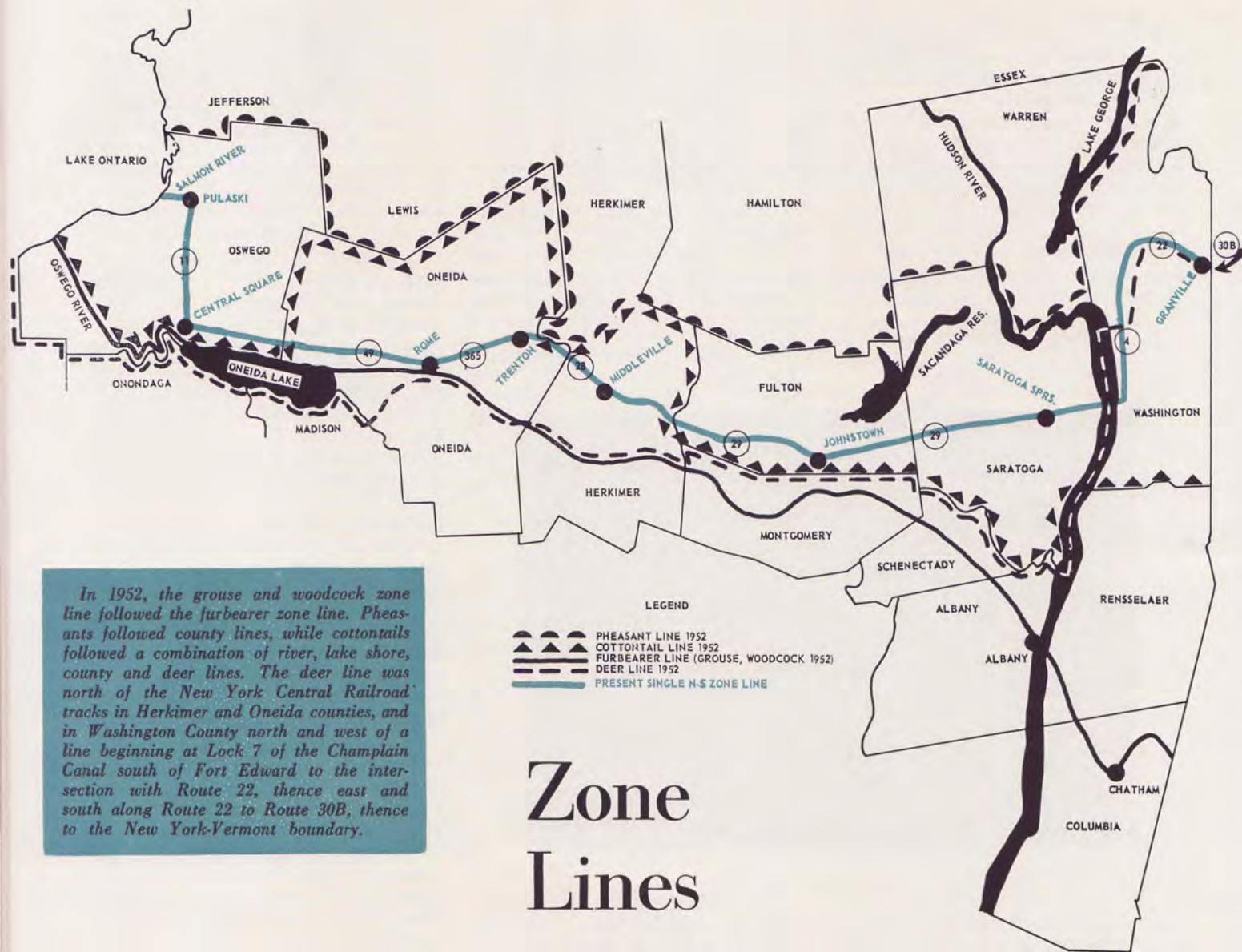
The growth rate of the trout has also been very good. Trout planted in the Fall of 1953, at a length of four inches, averaged over a foot long when taken in the Summer of 1955. It can be expected that they will continue to grow well, as an abundant food supply is available in the lake in the form of small fish. To people living near the lake, the windrows of dead alewives (locally known as "mooneyes") along the beaches early each Summer are a familiar sight; this small fish occurs in countless numbers in the lake and is a favorite food of the lake trout.

From the accompanying chart it is apparent that the young lake trout did not all stay where they were planted. The fact that they scattered widely in various directions indicates that it will be necessary to manage the lake trout fishery on a lake-wide, not a local, basis; except that, as pointed out above, it is likely that the fishery will be restricted to the eastern end of the lake.

It will take considerably more time and study to get all the information desired on the results of the experimental plantings. Apparently it requires about two years for the trout from each of the experimental plantings to reach the legal length of fifteen inches. There should be some trout big enough to keep in 1956, but whether or not there will be enough of them by then to provide any angling is uncertain. Possibly, as in the past, the trout won't show up in the anglers' catch before they reach a weight of four or five pounds.

The friendly spirit of co-operation between the conservation agencies of New York and Ontario and the results achieved to date are hopeful signs that progress is being made towards returning the lake trout to the important position it once held in Lake Ontario.

—DONALD G. PASKO,
District Fisheries Manager



In 1952, the grouse and woodcock zone line followed the furbearer zone line. Pheasants followed county lines, while cottontails followed a combination of river, lake shore, county and deer lines. The deer line was north of the New York Central Railroad tracks in Herkimer and Oneida counties, and in Washington County north and west of a line beginning at Lock 7 of the Champlain Canal south of Fort Edward to the intersection with Route 22, thence east and south along Route 22 to Route 30B, thence to the New York-Vermont boundary.

Zone Lines

In THE CONSERVATIONIST for October-November, 1953 we presented under the title "The Problem of Zoning" an argument favoring the consolidation in eastern New York of the various zone lines which up to that time, separated north-south hunting season opening dates for deer, pheasants, cottontail rabbits and furbearers. Reference to the map shown here will provide ample proof that a problem really did exist at that time.

So in 1953 the Conservation Department worked out what was hoped to be a solution to this problem and secured legislation establishing a single north-south zone line based upon (1) simplicity, (2) ease of identification, (3) applicability to all species and (4), logical separation of climatic and ecological zones.

But the problem still was not solved to everyone's satisfaction—particularly

not to the satisfaction of many who happened to live and hunt adjacent to the zone line. And it's quite likely that it will never be completely solved for, as Dr. E. L. Cheatum points out in the accompanying article, a solution satisfactory to everyone cannot be secured by any one zone line. To paraphrase a currently popular song, "Something's Gotta Give" in the interest of securing a workable compromise.

HEATED discussion of the north-south zone line persists. If there is a common denominator in all this discussion it is a misunderstanding of the original objectives in establishing a single zone line for seasons on all furbearer and game species except waterfowl. Not many hunters and trappers dispute the proposition that open seasons in northern New York should be earlier than those in

the southern part. Most also agree that a single zone line, applicable to all species, is desirable for the sake of simplification. But when it comes to drawing such a line—then the trouble starts.

The Department's objective was to establish such a line and 1955 was the second year of its existence. There was no such single line before, and when we hear suggestions that we "go back to the old zone line," we are moved to inquire—which one? Some refer to zones for grouse and woodcock, others to cottontails and pheasants, others to deer or furbearers. (Please note the map showing the north-south separations for hunting and trapping seasons in 1952.)

Now let us consider briefly the present location of the north-south zone line. It was set as far north as feasible in order to attain a major division of the State, throwing most of the farm game territory

into a single block (the southern zone) and providing a logical north-south division in deer and furbearer range. Cottontails and pheasants are the most popularly and heavily hunted species of small game in New York. If this zone line were shifted farther south—for example, the Mohawk River or the N. Y. Central tracks—and all game seasons were fixed on that basis, we would be inviting trouble from the hordes of pheasant and cottontail rabbit hunters who would find good hunting for these species in many places immediately adjacent to and north of the Mohawk River valley. As it is now, there is little attraction for them north of the existing line—and with experience they will find that out. It is true that there are certain good grouse and woodcock coverts extending south of the line in certain localities which logically belong to the northern zone. However, the number of hunters pursuing these particular species is comparatively small, and so far as hunting pressures are concerned relative to a zone line, they are less important.

If we are to abandon the objectives of a single line for all game and furbearer species, we can return to the old situation—or something similar to that which prevailed in 1952 when, as you will note, we had a separate boundary for pheasants, largely occurring on county lines, another line for cottontails, another for deer, and still another for grouse, woodcock and furbearers. These presented an extremely complex pattern which defied easy illustration on a hunting season map of the State, and required a "Philadelphia lawyer" to interpret.

But so long as we have a different season in northern and southern counties, some kind of zone line is required. And if there is a zone line, there is bound to be hunter shift. It is true the southward shift is of least significance because of the comparatively small resident population in the northern zone.

We explored with the Small Game Committee of the New York Conservation Council the possibilities of a simultaneous opening of all small game seasons throughout upstate New York, and could come to no agreement for such a date. It was generally agreed, however, that insofar as actual management of game populations is concerned the zone line has little significance. It is devised primarily out of recognition of the contrasting weather conditions which normally prevail in the northern and southern parts of the State as these conditions affect hunting opportunity and the abundance of small game. In other words, the zoning of the State was established out of consideration for hunters themselves and for the landowners who were interested for other reasons.

THE question of the zone line is most certainly still open for discussion; we realize we by no means have the perfect line. But we also realize that a single line—for all game and furbearer species and satisfactory to everybody—simply cannot be found.

—E. L. CHEATUM,
Chief, Bureau of Game

Subject: North-South Zone Line

Early in the work of our committee, it became apparent that the sportsmen of our State were most concerned over the line that had been set dividing New York into two hunting zones. The demands upon us to investigate and take a stand in this hot controversy became very strong, and as a major part of our work in 1955, a careful and quite complete investigation of the line and the conditions it caused was instituted, and a report was made in detail at the New York State Conservation Council annual convention in Poughkeepsie.

Testimony and eye witness accounts, as well as professional advice and opinions, were gathered and heard by our committee from all along the whole line, and two very definite conclusions were unmistakably brought out:

- #1. The line as it now stands is most unsatisfactory to many hunters and landowners on both sides of it.*
- #2. As expressed by a vote of 7 to 1 in our committee, there seems to be a need of a line, and there seems to be no place else where such a line could be established as well as it is at present. The more our committee studied this line and the thinking back of it, and the more testimony we gathered in our investigation, the more apparent it became that sound, logical reasoning was used in the developing of this line. No one came up with any solution or change that would seem to improve the conditions. It seems that moving any good sizeable sections of the line north or south from where it is laid out at the present would only cause more dissatisfaction and more harm to the hunters and landowners that would be involved.*

It seems that the line is necessary and very well laid out. And it is hoped by those of us who have been in the middle of this sincere controversy that time will be a great healer, and that through the years it will become accepted and respected.

—F. A. DEMEREE, Chairman,
Small Game Committee,
N. Y. S. Conservation Council

Howland's I. Deer Season

The first of the Conservation Department's two-day deer-of-either-sex season declared last year for the Howland's Island Game Management Area in Cayuga County has gone into the archers' record book with a kill of 71 deer.

Hunting was by permit only with a quota of 500 set for the one-day archery hunt on November 20. The full quota of permits was issued according to game men supervising the 3,200-acre State area and of these 450 archers checked in for the hunt. Of the 71 deer taken, 33 were deer of the year, 21 were adult does and 17 were antlered bucks.

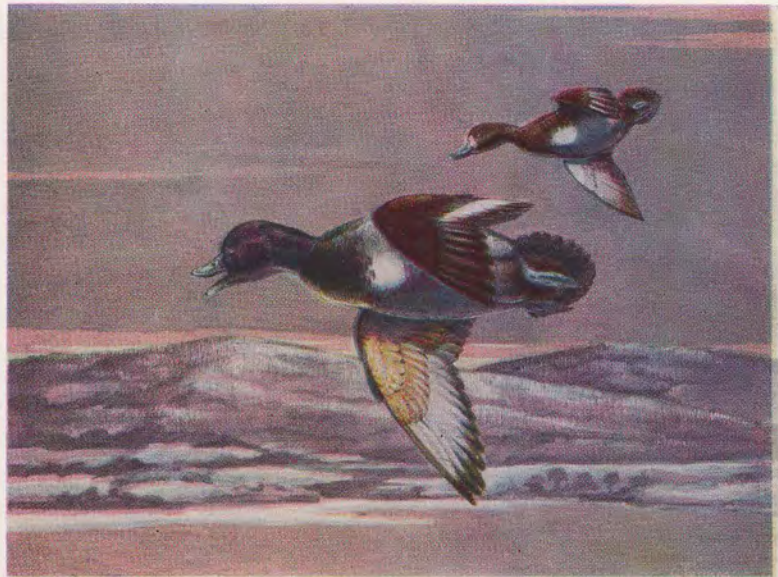
This is by far the most successful kill ratio recorded by archers thus far in New York, exceeding even the approximate 1 to 12 state-wide average kill ratio by gunners during regular buck seasons. It also bettered by a wide margin the 1952 Howland's Island tally when 1,017 archers hunted the Area during a 13-day season and took a total of 11 deer.

Then, on December 3, gunners had their chance and 222 showed up out of the quota of 250 permittees to take advantage of it. They, too, had a most successful day, taking a total of 147 deer. Of these, 23 were adult bucks, 52 were adult does and 75 were deer of the year—both bucks and does. The oldest buck deer taken by gunners was 3½ years old, while 10 of the does taken ranged from 4½ to 7½ years old.

This year's Howland's Island season provided another opportunity to shed light on the question of the effectiveness of the bow and arrow as a big game hunting weapon. A complete check of deer taken from the area by gunners on December 3 showed that only one had previously been wounded and lost by archers during their November 20th hunt. This was a big buck which charged a gunner as he sat on the ground changing his shoes. He grabbed up his gun and succeeded in dropping the deer with three slugs in the head and neck region. Upon examination it was found that this deer had previously been hit twice by arrows—once in the head and once in the neck. According to report, this buck had also charged the archer. It seems obvious that the intervening time had done nothing to cool this buck's anti-hunter grudge.

The special two-day, deer-of-either-sex season on the Department's Howland's Island Area was declared by Conservation Commissioner Wehle to reduce the top-heavy deer herd that has damaged grain and other field crops, interfering with the Department's experimental waterfowl work at this central New York Game Management Area.

Diving Duck Banding in New York



Scaup



Canvasbacks

SUMMARY OF DUCKS TRAPPED AT FOUR STATIONS
DURING JANUARY, FEBRUARY AND MARCH, 1955

Species Banded	DUNKIRK HARBOR	CANANDAIGUA LAKE	SENECA LAKE	CAYUGA LAKE	TOTAL Banded
	Jan. 21-Mar. 30	Feb. 24-Mar. 31	Jan. 9- Mar. 31	Mar. 7-Mar. 31	
Black	87	---	58	1	145
Mallard	2	---	---	---	2
Canvasback	523	225	477	144	1369
Redhead	102	451	333	21	907
Greater Scaup	200	90	20	85	395
Lesser Scaup	45	14	189	52	300
Ringneck	2	6	20	---	28
Goldeneye	4	1	---	4	9
Bufflehead	20	3	8	---	31
Coot	1	---	---	---	1
Total	986	790	1105	307	3188

AT the first touch of Fall the hunting instincts of the average nimrod are set a "tingling." One group of sportsmen, however, still remains dormant, for it takes the first cold blasts of Winter to get the diving duck hunter's blood stirred up, and the stronger and colder the wind, the happier he is. He must be a hardy fellow.

Some of that same hardiness is required for trapping and banding diving ducks during the late Fall and Winter months. The supreme test of course is working bare handed in zero temperatures to retrieve the ducks from the traps, hold the wet birds to examine for age and sex, then band the duck and record the data. And this isn't just one day in the Winter, it's every day and two or three times per day in the coldest and roughest weather. Last year, through the co-operative efforts of members of the Northern Chautauqua Conservation Club and Canandaigua Lake Duck Hunters, Incorporated, we have had the best season yet in banding diving ducks.

Over the years many thousands of dabbling ducks have been banded throughout North America, and many of our laws and management practices for waterfowl have been based in part on knowledge gained from band returns on these dabblers. But for the diving ducks there is a dearth of knowledge. For example, in New York we have very little idea where our canvasback, redhead and scaups are raised, or whether those

At a testimonial dinner at Dunkirk, January 11, "Outdoor Life's" 31st annual Conservation Award went to the Northern Chautauqua Conservation Club for its outstanding waterfowl banding project.

which are hunted here in late season are the same which winter in our waters. Furthermore, we have little idea of what part of the annual diving duck population is being harvested. Without such knowledge season lengths and bag limits are only calculated guesses. Much of the needed information can be supplied by band return records, but, obviously, hunters can't report shooting banded ducks until the ducks have been banded.

It was not until 1952 that a reasonably successful, self-operating, diving duck trap for use in New York waters was developed by Everett Talmage of Long Island working with Don Schierbaum of the Conservation Department. About 500 ducks were taken with this trap and banded during the Winter of 1952-53. It was not until the 1954 Winter, however, with four stations in operation, that an extensive diving duck trapping program was gotten underway, and a total of 3,038 banded. The station at Dunkirk Harbor on Lake Erie was sponsored by the Northern Chautauqua County Fish and Game Club and operated by Frank Kuhn and Robert Withington. These two gentlemen practically lived with the traps—and when they weren't busy banding ducks they were teaching duck identification and conservation to kids of the community. At Canandaigua Lake the trapping was carried on by the Canandaigua Lake Duck Hunters, Incorporated, who live only for diving ducks. Their efforts were ably sparkplugged by Robert Case, who kept the records and never missed a banding session. On Seneca Lake Dr. Richard Ryan of Hobart College in Geneva, and on Cayuga Lake Howard Amidon of Canoga turned in a splendid banding record.

A large share of the success of the program may well go to Frank Kuhn; he came up with a trapping technique which probably nearly doubled the number of ducks taken. Customarily duck traps are set with the entrance toward open water, but Frank noticed that his ducks were going out of the entrance almost as fast as they came in, and if they didn't find the exit immediately they were always working the wire toward the open water. Frank reasoned that if the entrance were toward shore, the ducks wouldn't get out as readily. He and Withington turned the trap around and they more than doubled their take the next day. Application of the same technique at the other stations produced equally good results. Each of the other trap operators also made innovations to adapt their traps to local conditions.

—DIRCK BENSON,
Game Research Investigator

Lake Cayuta

LOCATION

Southeastern Schuyler County about 3 miles northeast of Odessa

PHYSICAL FEATURES

Area: 518 acres
Elevation: 1,317 feet
Maximum depth: 26 feet
Length: 7,400 feet
Width: 2,800 feet

FISH PRESENT

Pike-perch
Chain pickerel
Largemouth bass
Yellow perch
Bluegill sunfish
Common sunfish
Rock bass
Bullhead
Golden shiner
Chub sucker
Common sucker
Carp

SPECIAL REGULATIONS

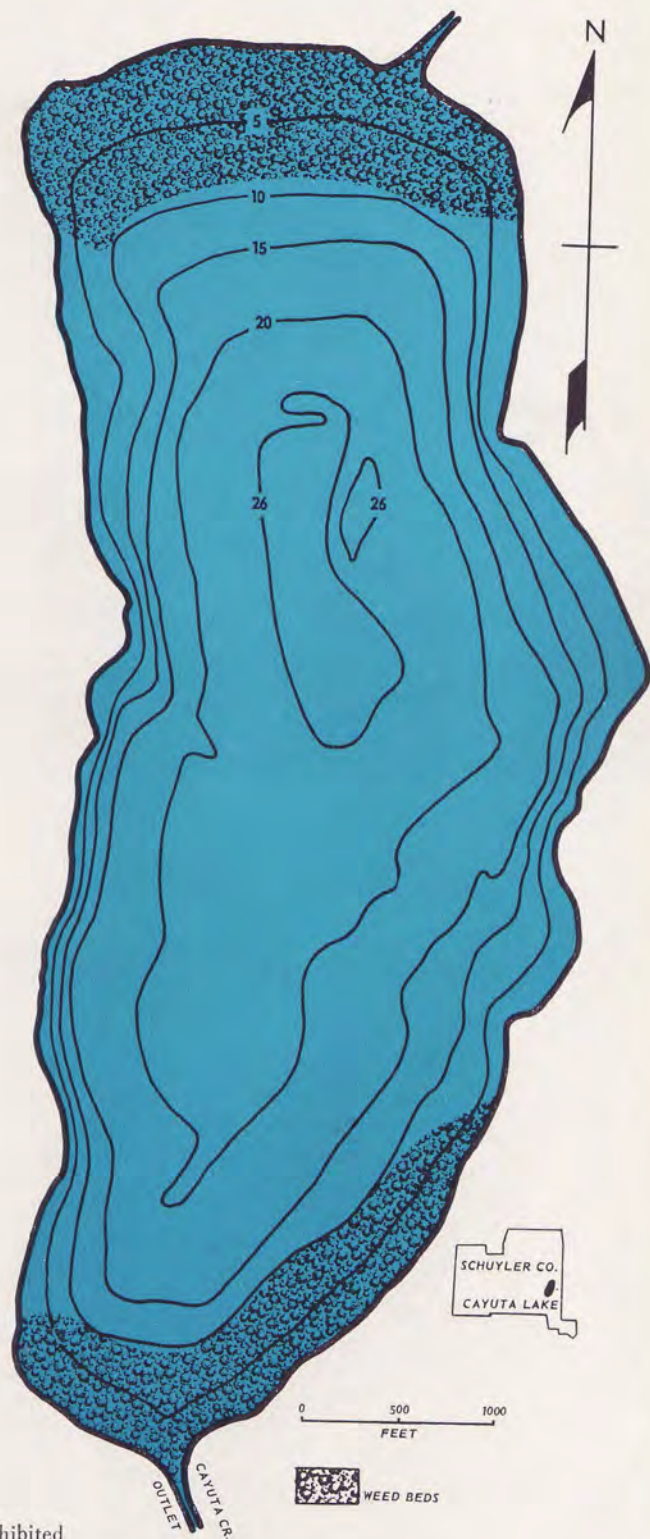
Tip-up fishing through the ice prohibited under provisions of Conservation Law

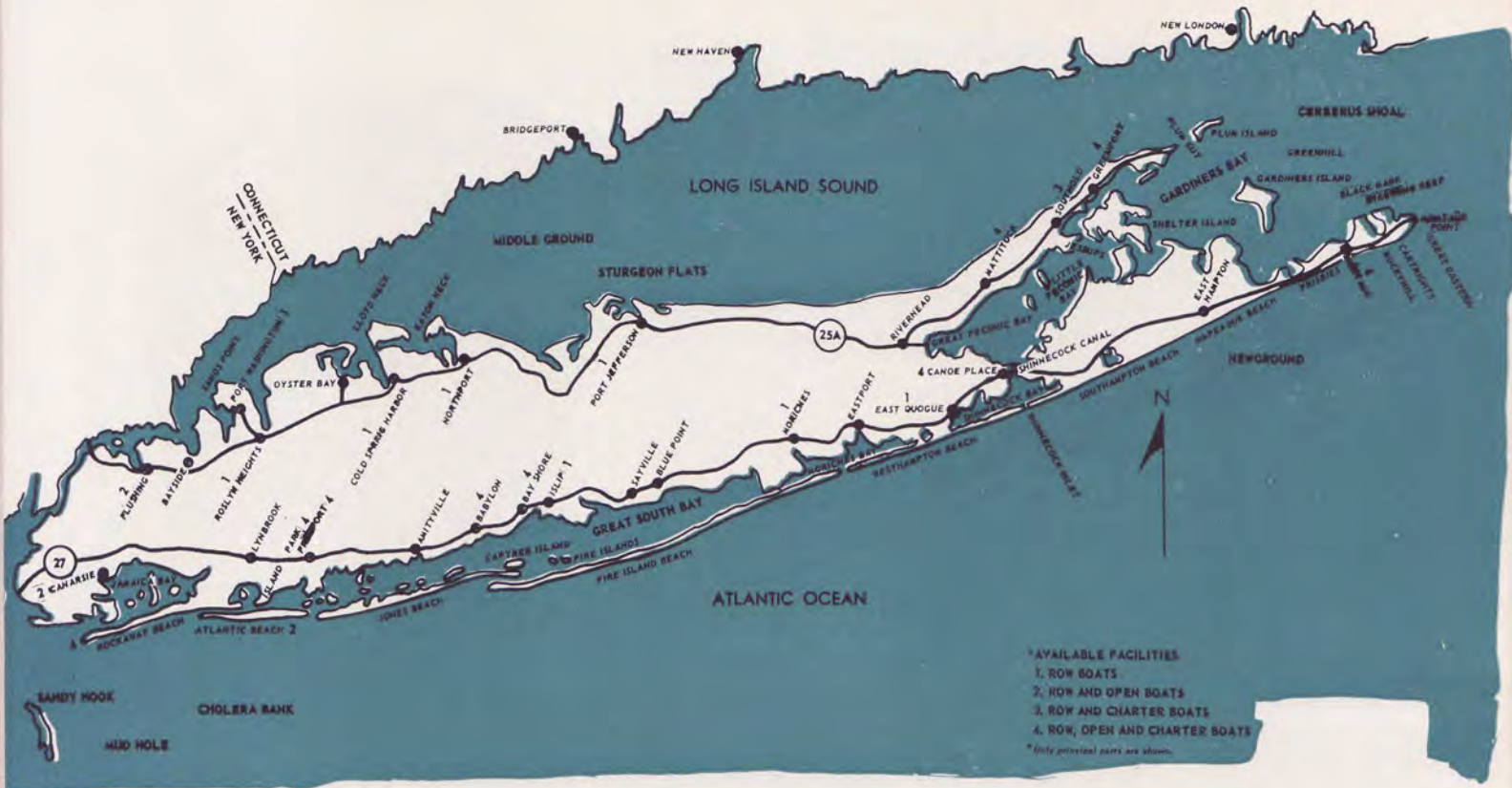
GENERAL

Cayuta Lake has a well balanced fish population with many individuals of the desirable species attaining good catchable size. Bass fishing during the early part of the season is usually excellent. Although netting checks show pike-perch to be fairly common and attaining weights up to 7 pounds, few are reported caught by fishermen. Heavy growths

of submerged aquatic plants especially in the shallow water near the south end of the lake present a problem for the Summer angler. Boat liveries are present on the lake (Map of lake is based on hydrographic map prepared by Cornell students at Summer survey camp.)

—A. C. PETTY,
District Fisheries Manager





Down to the sea—for fish!

YOU may have been fishing for fluke, the toothsome flatfish which provides our *fillet of sole* during Summer months, off the new Captree State Park fishing pier at Fire Island Inlet. Or perhaps you had just come back to shore in your rented outboard skiff after a weakfish and porgy trip out of New Suffolk on Peconic Bay. Or maybe the open boat which carried you offshore to the bluefish grounds off the New York-New Jersey shores had just docked at Sheepshead Bay. At any rate you were fishing somewhere along the 600-mile coastline of New York's Marine District—when a stranger, dressed like any other fisherman—approached you and asked, "How did you make out today?"

Even before you could reply he would have explained that he was collecting sport fishing data for the State Conservation Department, and would you be kind enough to answer a few questions? Then the interviewer took down your answers to his inquiries on a printed tally card and perhaps punched out certain notches along its edge (see cut). In its final form, this interview card and thousands of others like it were turned

in to our Marine Fisheries Research Unit at Freeport.

What was it all about? Well, back in the early months of 1953, the Department decided that our marine fisheries were undergoing very heavy pressure by the hook and line fishermen—had been all along, but decidedly so since the end of World War II. We had a survey back in 1938 but that seemed obsolete; we wanted to know how many people were fishing in the Marine District *now*. What did they catch? What species did they prefer and how did the angler go about catching them? And of course we needed answers to a host of other questions. It was imperative to know how the fisheries were holding up from year to year and if they weren't, could we do something about it.

Our first objective was to find where the bulk of the fishing took place, how it varied seasonally, and what facilities were available for the sportsmen. In other words we needed an inventory. Dividing the Marine District into eight broad areas (with a ninth to include the Lower Hudson River), we went through each of them with a fine-toothed comb locating rowboat stations, open boats

and their dockage, charter boat fleets, fishing piers, rock jetties, canals, backyard boat basins, beaches, inlets, seawalls and channel banks. Even then we missed some out of the way places here and there but later found them during our aerial surveys.

This area inventory has given us a sound idea of the fishing potential and of a grand total of our salt water facilities, even though there is some variation from year to year. Boats come into and leave the fishery, stations change hands, new areas are created or become more easily accessible to the public; but the overall picture is reasonably constant and reliable.

At any rate, for 1954 we recorded some 6,975 rowboats and skiffs (plus a few inboard u-drives) for hire at 234 fishing station liveries stretching from Princess Bay, Staten Island to Orient and Montauk Points at the eastern tip of Long Island. Within the confines of this same "fishy" area we located 168 open boats ranging up to 110 feet long with a passenger capacity of 100 or more, and 307 charter boats mostly in the 40-foot class and limited to six or eight fishermen for offshore cruises. We

couldn't begin to estimate the total number of privately-owned boats in use, although our aerial surveys showed us how many were out fishing on any particular day.

With the boat inventory information and a list of the more fixed facilities such as piers and jetties in the hopper, and with up-to-date familiarity with the centers of activity, we put into action our plans to learn how many people were fishing and what they caught. To accomplish this we hired some field-help, "salts" who knew a blackfish from a white marlin, to interview anglers throughout the length and breadth of the District. Moving from port to port on a scheduled basis, these interviewers gave us daily samples of what transpired in New York's salt water sport fisherman's world. To supplement this sampling method we had dockmasters, at certain busy key ports, who recorded the activities of entire fleets of boats under their charge. Similarly, some row-boat station operators kept log books of their station's activities—boats rented, passengers, catch, hours fished, etc.

To cap it off and correlate the observations and records of the ground forces, we organized an aerial survey. Using the Department's pontoon-equipped Stinson aeroplane, six times monthly (weather permitting) we flew over the entire Marine District and a good portion of the bordering ocean and Long Island Sound. In fact we flew wherever New York boats and fishermen were fishing and kept accurate tabs on what we saw below. We counted, by areas, the number of charter and open boats, the private boats from great yachts to outboard skiffs that had lines oversides, and recognized by their colors and numbered bows the rented smallcraft. We didn't neglect the surfcasters, the jetty "jockies," the bank fishermen and pier-bound "sinker bouncers." All went into the flight log.

Does all this sound impossible or unlikely? Well it isn't, really, especially with fair weather and an experienced pilot like John Schempp—expert at low-

level flying. If one can identify and count ducks from the air (Schempp can and does), certainly boats and fishermen aren't too much of a challenge.

The accumulation of statistics by all the methods described above—personal interviews, dockmasters' reports, row-boat station logs, aeroplane survey, facilities inventory—has continued full blast for two years. Most of our data covers the periods from April through November to correlate with reasonable flying weather and maximum fishing activity. Additionally, we have some earlier and later data including the mid-Winter fishery, when hardy souls fish for codfish and whiting over the offshore banks.

With all this pulse-taking of our salt water recreational fisheries, we now know a great deal more about them than we did, even though the thousands of records are not yet entirely analyzed. For instance, we have found that there are more than 30 species of finfish quite regularly taken by anglers in the Marine District. Actually, however, only about a half dozen of these make up the real volume of the catch. These most important species include the widespread porgy, the fluke or Summer flounder, the sea bass, the bluefish, the flounder and the blackfish. These are the mainstays for the "everyday angler."

Other species are taken in numbers and occasionally contribute a considerable part of the catch in selected areas. Weakfish in Peconic Bays in the Spring, striped bass at Montauk in the Fall, school tuna offshore during the Summer, cod, whiting and ling during the cold months. Some anglers fish for all these species and more. Others tend to specialize. The big game trollers fish for species not often caught but eagerly sought after; broadbill swordfish, white marlin, giant tuna, mako shark—but often settle for lesser lights in the form of bonito, school tuna, false albacore, dolphin, mackerel, bluefish or striped bass.

But our marine fisheries are hardest pressed during the hot Summer vacation months (nearly everyone "wets a line") and the fish caught then

provide the largest part of the yearly bag. In this regard, we have already mentioned the porgy, fluke, sea bass, and bluefish, and we mustn't forget the bags of baby bluefish or "snappers," and the bushels of blue-claw crabs. These last hardly can be classed as game fish, but certainly they are fished for—or better, *crabbed* for by many in the Marine District.

Cold statistics by themselves make dull reading. But to complete the picture, let's look now at a few figures that indicate the size and importance of our salt water recreational fisheries. More than 415,000 boat trips were taken from April through October, 1954 to catch some species of fish somewhere in the Marine District. Another 71,000 fishing-days were spent by bank, beach, pier and jetty fishermen during this same period. In all, about 1,700,000 angler-days were spent in pursuit of marine species by our sport fishermen.

Our observations showed that 34 per cent of all anglers fished from hired rowboats and skiffs (mostly outboard equipped) while open and charter boats, between them, carried another 35 per cent of the fishermen to the most productive waters. Fishing from private craft accounted for 27 per cent of the angler-days while all land-bound fishermen (surfcasters, pier fishermen, etc.) constituted only 4 per cent of the total. To be fair, it should be noted that we were unable to check and calculate the total of night fishermen and both the last two categories—private boat fishing and surf and bank casting—have numerous adherents who do a lot of their fishing between dusk and dawn.

Now, while you are still in the mood for numbers, let's toss in a few catch statistics of interest. For example, it was estimated that the catch of open and charter boats during the 1954 season was over 5,300,000 fish of all species. This huge figure is on the very conservative side, so you can see that the seas must maintain a very productive replacement of individuals to keep up with the catch of this fishery alone. One of the most popular species in 1954 (and during 1955 as well) was the bluefish. The schools of blues were in good supply in all their regular haunts and the fish were large, ranging generally from 5 to 12 pounds. Both their number and their size made the bluefish very desirable to catch and it follows that they were heavily fished. One open boat that made 64 trips to the bluefish grounds in the New York-New Jersey Bight carried a little more than 3,000 fishermen who accounted for 10,746 bluefish—an average of 168 big fish per trip.

(Continued on page 26)

NEW YORK'S MARINE SPORT FISHERY SUMMARY FOR 1954

Facility	Trips	Anglers	Man-Hours	Percentage
Rowboats	222,180	570,405	3,422,430	34%
Open Boats	22,931	451,606	2,483,833	26%
Charter Boats	17,225	146,596	879,576	9%
Private Boats	153,424	460,272	2,761,632	27%
Bank Fishing		38,886	272,202	2%
Surf Fishing		32,709	261,672	2%
Totals		1,700,474	10,081,345	

Marine Game



WEAKFISH
Cynoscion regalis
Av. Wt. 3-6 pounds



SEA BASS
Centropristes striatus
Av. Wt. 1-2 pounds



KINGFISH (WHITING)
Menticirrhus saxatilis
Av. Wt. 2-6 pounds



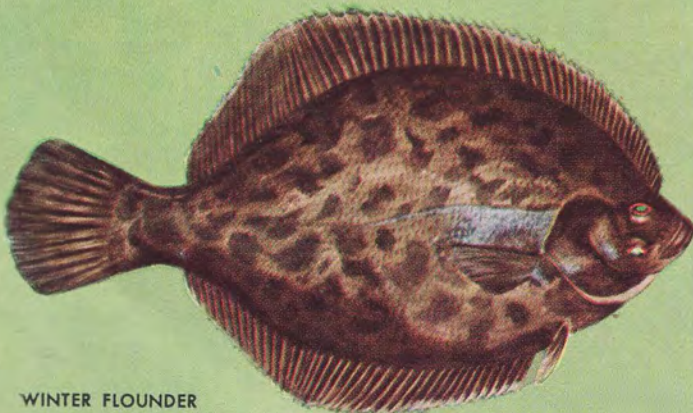
PORGY (SCUP)
Senotomus chrysops
Av. Wt. 1/2-4 pounds



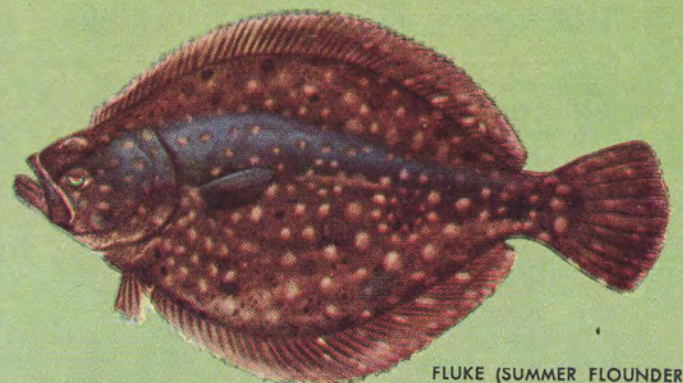
BLACKFISH (TAUTOG)
Tautoga onitis
Av. Wt. 2-10 pounds



CUNNER
Tautoglabrus adspersus
Av. Wt. less than 1 pound



WINTER FLOUNDER
Pseudopleuronectes americanus
Av. Wt. 1 pound

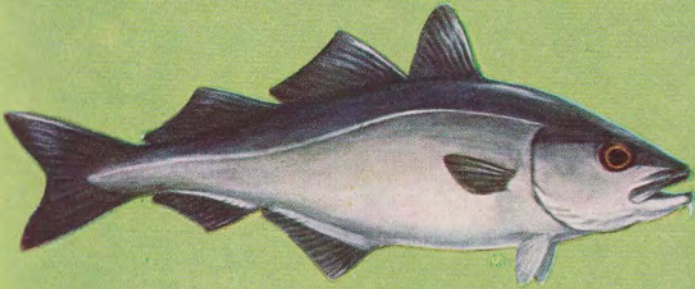


FLUKE (SUMMER FLOUNDER)
Paralichthys dentatus
Av. Wt. 1-2 pounds

Fish



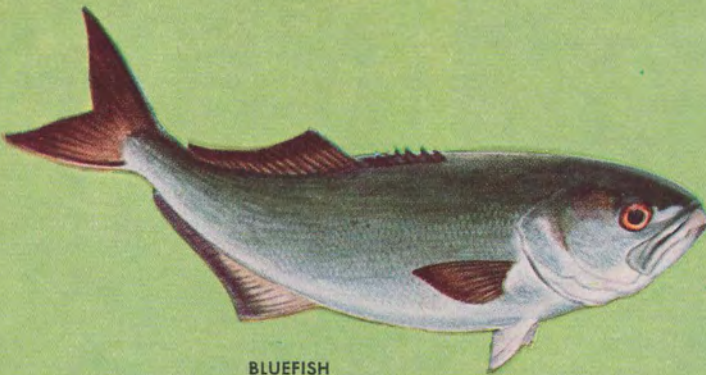
OCEANIC BONITO
Katsuwonus pelamis
Av. Wt. 4-5 pounds



POLLOCK
Pollachius virens
Av. Wt. 4-12 pounds



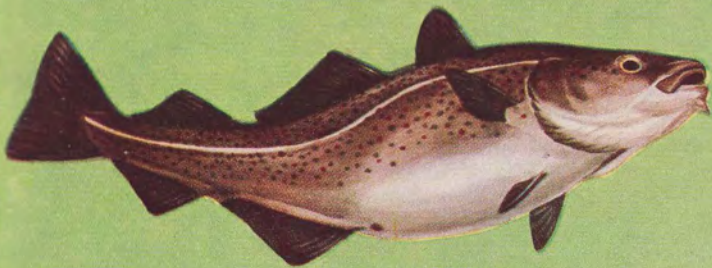
COMMON BONITO
Sarda sarda
Av. Wt. 1-6 pounds



BLUEFISH
Pomatomus saltatrix
Av. Wt. 3-6 pounds



ALBACORE
Thunnus gerno
Av. Wt. 15-50 pounds



COD
Gadus callarias
Av. Wt. 10-12 pounds



ATLANTIC MACKEREL
Scomber scombrus
Av. Wt. 1 pound



BLOWFISH (SEA SQUAB)
Tetraodon maculatus
Av. Wt. under 1 pound



Party boats take off from a south shore port

(Continued from page 23)

And a fleet of charter boats sailing from a south shore Long Island port made 632 trips to the blue-fishing areas during the season and caught more than 24,000 bluefish and several thousand bonito—or about 40 big blues per trip. When you consider that it was not unusual to see 200 or 300 boats of every description on the bluefish grounds most any day during July, August or September, you have some idea of the number of fish taken.

Another species that excites the salt water angler is the striped bass; they come big and they are not easy to take. At the eastern end of Long Island, charter boats accounted for 2,900 stripers (averaging 12.5 pounds) during the 1954 season, but increased sailings during 1955 brought the total bass catch for these craft up to 4,100 fish at an average weight of 18 pounds. Surf fishermen also seek the big striped bass but their gear limits them to the fish they can reach from shore. During 1954 about 23,000 surfcasters caught only a little more than 7,700 stripers. In the warm water months charter boats trolled offshore for tuna (the smaller fish usually referred to as school tuna) and other pelagic or open-sea species. They returned from 1,963 trips with 10,823 tunafish ranging from 15 to 80 pounds and a number of other species including 70 spectacular white marlin. The tuna

catch was equal to about 5.5 fish per trip and one fish per fisherman.

Not to lose sight of the rowboat and general small boat fishing in the bays and more sheltered areas, we have recorded that one boat station that operates about 130 skiffs accounted for 26,000 weakfish and 109,000 porgies during the 1954 season. Another livery with only 30 boats available recorded more than 15,000 fluke caught. Remember, then, that our facilities inventory (mentioned earlier) recorded over 6,900 small boats for hire throughout our Marine District. That adds up to a lot of fish caught!

We used the figures quoted above as examples to show you that fish—many of them, and frequently of large size—are caught by rod and reel during every season in the waters of the Marine District. Add to this the annual commercial catch of some 132 million pounds (about \$3½ million worth) of finny fish from our marine waters and you'll have some idea of the tremendous economic and recreational value of our marine fisheries resource.

We have already learned a great deal about its size, its variability, and its potential. Continued analysis of our widely collected data will reveal other facts of great importance to biologists working with our salt water resources and to those who fish these waters.

—IRWIN M. ALPERIN,
Aquatic Biologist, Marine

Sword Fish

Ranging the oceans of the world, these big billfish appear most commonly off Long Island during July. When located lazily on the surface they may be teased to strike a rigged bait trolled past their "snoots"—and when they occasionally respond, the angler is in for some backbreaking action.

White Marlin

Ranging from 60 or 70 pounds up to a bit over 100 pounds in our waters, this is one of the most spectacular big game fish taken. Normally arrives in our waters, 20 to 30 miles from shore, in early Summer. They are taken on the surface by trolling such rigged baits as mackerel. Once hooked they put on a power show of jumping and tail walking that the lucky fisherman will remember the rest of his life. Charter boat skippers know where, when and how to look for these fish.

Striped Bass (Rockfish)

Big, tough, streamlined and aggressive, stripers are the glamour fish of Middle Atlantic shorewaters. Tackle smashing 40- to 50-pounders are not infrequently taken by surf casting jigs, plugs, rigged eels; sometimes with such baits as shedder crabs and skimmer clams. Even more effective is trolling over rocky shore reefs and around barnacled spiles. Moving from the south into our waters in early Spring, stripers furnish fair fishing through the Summer months but really put on the heat from September into November when they swarm into our waters enroute South.

Bluefish

Moving into Long Island waters from the south in late Spring and early Summer, bluefish, in the last several years, have furnished food and sport for hundreds of thousands of fishermen. Blues, ranging up to 20 pounds in weight, are taken offshore, and often in bays and in the Sound by trolling feather jigs, spoons and plugs and with cut bait (bunkers of butterfish), using ground bunker chum. Surf casters too get their share. They are a hard-hitting, long-fighting, tough-to-lick fish with a permanent grudge against everything alive in the ocean—and they are good to eat too.

Weakfish

It's hard to say whether the "weaks" made the Peconic Bays famous or vice versa. At any rate, these waters and Great South Bay are headquarters for the species and quanti-

Most of the fish painted in this issue from specimens fresh out of New York's marine waters. This took time and a lot of help, for which we are principally indebted to Perry B. Duryea, Jr. and Captain Frank Moss of Montauk; George Thilberg, Jamesport; Andrew Zimmer, Staten Island; and Francesca LaMonte, Associate Curator of Fishes, American Museum of Natural History.

FISH OF NEW YORK

ties are taken during their late Spring spawning run by charter, open and rowboat fishermen. Chumming with live shrimp is productive but good catches are also made trolling feathered jigs. One- to three-pound fish is the rule—with a scattering of eight- to ten-pound "tide runners" mixed in.

Sea Bass

Often associated with porgies over reefs, wrecks and shellfish beds, sea bass share honors with porgies as one of the most abundant of the ground fishes. The bigger hump-backed ones, weighing three pounds or more are taken offshore in quantities by open boat fishermen from Spring until late Fall. Smaller sea bass invade the Sound and bays of Long Island and furnish good fishing for the rowboat fleet. Preferred baits are cut squid, skimmer clams, shedder crabs and worms.

Mackerel

This junior member of the tuna family may be taken by trolling, drifting or sometimes by bottom fishing in Long Island waters from early Spring to early Summer and then again from Fall into the Winter months. Often travel in huge schools and will take a variety of live baits and artificial lures. Good results are often obtained by chumming with ground mossbunkers. Mackerel range from two to five pounds and are good to eat—if you like a rich, rather oily fish.

Pollack

This is the fish you get in the restaurant when you order "Boston Bluefish" and pollack help the sham by fighting hard on light tackle. Often taken while bottom fishing for cod, pollack switch their feeding habits during Spring months and come to the surface, particularly during flood tide, to chase bunkers, squid and similar bait. Can be taken with light tackle at such times—trolling plugs, feather lures, jigs, spoons and the like. Not particularly good to eat but a good—and long underrated—scrapper. The waters off Montauk are a favorite Long Island fishing area for pollack.

Blackfish (Tautog)

A colorful, strong-jawed fish, moving into the shallow waters along Long Island's shores during the Spring months. They are caught bottom fishing with shedder crabs, clams or mussel bait, by rowboat and surf fishermen, usually around wrecks, over shellfish grounds or in rocky shallows. Although blackfish average only about three pounds in weight, they are wreckers of light tackle.

Cod

Cod, along with pollack, keep the salt water angler happy through the Winter months. A favorite for party boat fishermen, cod weighing from eight to 20 pounds and over are regularly taken bottom fishing off reefs and wrecks from late Fall to mid-Spring months in waters running to 150 feet deep. Skimmer clams are the preferred bait.

Boats and Bait: *Rowboat rate does not include cost of bait; open boat rate normally includes cost of bait; charter boat rate may or may not include cost of bait, with cost of "chum" usually extra; rowboat and open boat fishermen furnish own tackle or rent it; charter boats usually can furnish tackle.*

Accommodations: *Motels, overnight cabins, tourist houses, hotels, near all major Long Island fishing ports. Hither Hills State Park, Montauk, offers camp and trailer site facilities.*

Bottom Fishing: *Porgy, flounder, fluke, sea bass, blackfish, blowfish, cod, pollack, kingfish.*

Trolling or Chumming: *Bluefish, weakfish, striped bass, mackerel, school tuna, bonita, albacore, pollack, white marlin, giant tuna, swordfish.*

Surf Fishing: *Blackfish, bluefish, striped bass, weakfish, fluke, kingfish.*

Seasons: *Late Winter and Spring fishing for flounder, pollack, cod; early Summer to late Fall fishing for porgy, sea bass, blackfish, fluke, bluefish, weakfish, striped bass, school tuna, bonita, albacore, mackerel, blowfish, white marlin, giant tuna, swordfish, shark, dolphin.*

Mako Shark

Moving up from the South, these monster sharks (ranging from six to twelve feet in length and weighing in the thousand pound bracket) are to be found in waters off Long Island through the Summer and Fall months. Solitary in habit, they strike hard on surface-trolled baits; fight harder—given to spectacular aerial gymnastics. An increasingly popular member of the giant game fish group.

Bonito and Albacore

A charter boat, offshore specialty during Summer months in our waters, the bonito and their first cousins, albacore, have about the same design as a jet plane and approximately the same speed. Averaging from three to ten pounds of dark, muscular flesh, these fellows are not noted for their food value but they make up the difference in angling thrills. They're usually taken on spoons or feathered jigs trolled fast in the wake of the boat.

Bluefin Tuna

Working north along the Atlantic Coast, tuna normally arrive in our Marine waters in July, remaining into early Fall. Big, beautiful and streamlined, these open-sea racehorses are perhaps the major big game fish attraction of the Marine District; a prime target for the blue-water fishermen aboard private cruisers and charter boats.

Porgy (Scup)

The porgy is to salt water fishing what the cottontail rabbit is to hunting—meat on the table—and pretty good meat too. One of the principal bottom fish species of our waters, porgies are taken around wrecks, over reefs and about shellfish beds using skimmer clams, shedder crab or cut squid bait. Porgies are a favorite for open boat and rowboat fishermen. They range in weight from about one half up to 3 pounds and are taken in bays as well as offshore.

Kingfish (Whiting)

A light tackle fish of sandy bays and shores. Taken bottom fishing and occasionally surf casting. An excellent food fish.

Fluke (Summer Flounder)

The senior member of the flat fish family in Long Island waters. A 20-pounder, the rod and reel record, was taken off Oak Beach, L. I. in 1948. Average weight runs two to five pounds. When they get over five pounds, fishermen call them "doormats." Fluke move into New York waters early in the Summer and are eagerly sought by charter, party and rowboat fishermen. Good baits are killies and strips of squid, drifted slowly over sandy or mud bottom.

Winter Flounder

These little flat fish, averaging about one pound in weight, are one of the best eating fish of our marine waters. Moving into the shallows of Long Island's bays and Sound, sometimes as early as mid-February, the "flatties" are one of the season's earliest targets for rowboat fishermen. Flounders prefer sandy or muddy bottom and readily take such baits as blood and sand worms, chopped clams and mussels.

Blowfish (Sea Squab)

Often taken while bottom fishing for other species. This little bluffer (he pumps himself full of air to look real fearsome) used to be cursed as trash and a nuisance. Now recognized as a delicacy. Easy to clean (slit skin all around back of head and turn inside out like a glove); roll in bread crumbs, fry in butter. Good!

Cunner

A small colorful fish abundant over rocky bottoms and around docks and piers. Hardly anyone fishes for them; nearly everyone catches them. Take 'em or leave 'em.

A. W. BROMLEY

Two of Our Exotics

The House Sparrow and the Starling

STARLING
(*Sturnus vulgaris* Linnaeus)
Natural Range

Western and central Europe. Winters south to Africa. Accidental in Greenland. Many allied races in Europe and Asia.



THE word *exotic* means something imported from a foreign country. Considering that somewhere along the line we've all, as citizens of this country, had exotic ancestors we should have warm regard for the word. And in general we do. But not all imports are good. Avoiding further reference to humans (safer that way), this can easily be proved by considering just a few plant and animal introductions of questionable value.

Among exotics from the plant world are such things as the nightshade or European bittersweet, a pest at times but a fine Winter food for the pheasant; the wild carrot or Queen Anne's lace, a nuisance in hayfields but in its improved form a welcome addition to the dinner table; or the hawkweeds and thistles which certainly beautify the landscape when in flower but are otherwise undesirable members of pasture lot society. And then, of course, practically nobody has a good word for the water chestnut.

Among our exotic animals some are quite generally condemned, including the Japanese beetle, cockroach, house mouse and the Norway rat. Others in the animal world, as with the plants, receive mingled blessing and curses. For example, the carp is welcomed by some as a culinary delicacy but widely condemned by hosts of sport fishermen. Likewise, the ring-necked pheasant is sought after by many a gunner, yet cursed by gardeners.

The European house sparrow (the English sparrow to most of us—but improperly so) and the starling fall into the in-between category. There are some who sing their praises but far more who sincerely wish neither species were here.

The house sparrow was first introduced to America in 1850 to help control the cankerworm. Eight pairs were released

in Brooklyn in that year, and more were released there in 1852. In later years others were liberated in various New England communities. This species took hold rapidly and by 1900 had spread from the Atlantic to the Pacific. Many factors favored the almost lightning-like spread of this weaver-bird. As a non-migratory group the birds are here in the early Spring to start nesting, allowing time for up to three broods each season. An aggressive bird, they take and keep the best nesting sites and feeding territories, assuring a relatively high rate of nesting and rearing success. As a race that tolerates no weaklings, competition for mates is vigorous, with few delicate social refinements. When the parents are ready to start a new brood, the fledglings are left to shift for themselves. This feature contributes greatly to their spread, for the young form into flocks which keep pushing on into new territories. The house sparrow is fairly tolerant of crowding and if food is abundant will be content with a small territory and practically colonial nesting.

Man and his stage of civilization and mechanical progress aided this species in its spread. The house sparrow made good use of the horse and buggy era, thrived best in the cities and villages but also followed the post road to new communities. Undigested grain and spilled oats were their main fare, but were amply supplemented with crumbs from workers' lunch pails, uncontrolled garbage dumps, grain about the chicken yards and even some weed seeds and insects.

Times have changed now. There is little food for the sparrow in exhaust fumes or on the macadam around a gas pump. Their populations in the cities have declined and their diet changed but

year around they are still our most abundant avian urban dweller. Large flocks, however, now are most frequently seen in the country around the barns and chicken yards or in the grain fields about harvest time. The house sparrow is a most adaptable soul, feeding cheerily on weed seeds or switching to a nearly pure diet of grasshoppers, cutworms or cankerworms when these reach peaks of abundance.

Though commonly called a sparrow, this bird really belongs to the weaver-bird or Old World sparrow family. They differ in part from the New World sparrows and finches in their adeptness at weaving quite complicated nests. Furthermore, there are few that can compete in song with our native sparrows. The house sparrow is no exception, though there is something cheery in their happy but unmusical chatter. True to their family background, the house sparrow is still capable of weaving a fancy, bulky, wind resistant nest, but as many an immigrant before, most of our American residents have put aside the customs of their native land and made the best of available resources. Open gutter pipes, fancy cornices, holes under the eaves or hollows in trees are frequently used as nesting sites. Any site offering shelter and a firm base will do but, true to their heritage, almost invariably the nests will be lined with feathers.

Considering their dietary habits, one can neither completely condone nor condemn the house sparrow. Assuredly their feeding on grasshoppers, cutworms and cankerworms is commendable and one can rejoice at the quantity of weedseeds they eat. The cherry grower, on the contrary, is justifiably rankled at the damage to his fruit. In the field the house sparrow is quite adept at harvesting

wheat and has no compunctions about cleaning up a freshly seeded lawn, pulling seedlings, or stealing chicken feed.

Other activities of the house sparrow also tend to put them on the black list. In their aggressiveness they steal the nest sites and drive away some of our more welcome native species such as the bluebird. In their gregariousness, especially in Winter flocks, they become noisy, smelly and a minor hazard to pedestrians. Naturally they are not on the protected list but there is little chance of that having much effect on their numbers.

THE introduction and establishment of the starling in North America parallels that of the house sparrow in many ways. In 1890 some 60 birds were set free in Central Park in New York and an additional release of 40 birds was made the following year. For the first ten years the starling did not get beyond New York City but in the next ten years radiated out for 200 miles. Within fifty years the starling had spread north to the Gulf of St. Lawrence, south to Florida, and west to the edge of the Great Plains, and by 1950 a few individuals had been seen in the Pacific Coast states.

Some claim the releases were made to control the house sparrow, others for insect control. Perhaps it was a little of both and perhaps there was an element of yearning for a species from the homeland. In any case the starling, like the house sparrow, seems to be here to stay.

The starling is an early nester, often starting the first week of April, and may

produce three broods by August. The nest may be built in holes in trees or in houses, barns or churches where they can find a sheltered entry. Frequently the starling will dispossess the flicker or other hole nesting species. The starling, again like the house sparrow, seems to prefer solitary nesting sites but will readily adapt to tenement conditions when nesting sites are at a premium.

The song of the starling is not very accomplished nor harmonious but they make up for this with their versatility in imitating other birds. They are particularly adept in mimicking the bobwhite, the chickadee and the peewee, do well in copying the woodthrush, white-throat, crow and clucking chickens, and get out moderate imitations of other species.

The starling is a strong flier and quite gregarious outside of the mating season. As soon as the young are on the wing they form into flocks which range the agricultural areas in search of both grain and insects. As the season advances late hatching broods and adults that have completed their domestic duties join the flocks so that by wheat harvest time groups of over 1,000 birds are not unusual. In these flocks the more numerous young of the year stand out with their much lighter and browner plumage. In late Summer and through the Fall the starlings usually seek out conifer plantation for night roosts and often mingle with redwings, grackles, cowbirds and even crows so that the common roost may have many thousands of birds.

The starling is not a highly migratory

species but as Winter draws nigh many thousands push south into less rigorous climes. Like other tourists they find Washington, D.C. a very pleasant stopping point. Many more thousands hold no brief with long trips and have a simpler solution. They just move into the nearest city, roosting for the night in church towers and old buildings which offer shelter from the wind, or next to factory chimneys and advertising signs where they can cuddle up to a convenient heat supply. During the day some will range the city and trash dumps for food but others will fly ten or more miles to the country to feed. Being a size larger than the house sparrow the starling does things in just a little bit bigger way—the sparrow is noisy but the starling is noisier, in Winter roosts the sparrow is smelly but the starling is smellier. And if the sparrow makes walking under a roost somewhat of a gamble, the starling makes it a real hazard.

Most ground feeding songbirds hop but the starling walks, leaving practically no stone unturned in his search for insects and worms. The insect diet of the starling, including cutworm, wire, inch and tomato worms and the click, May, potato, bean and Japanese beetles, puts these birds in a beneficial class. On the other hand, their penchant for cultivated fruits and grains tends to put them on the other side of the ledger. On the whole it seems as if the starling is more beneficial than harmful but since their Winter flocks often become quite obnoxious, no one would mind if this species were a little less numerous.

Various methods have been tried to disperse large Winter roosts—shooting, scarecrows, intermittent noises, and even the playing back of the call of a scared starling—but so far none has proved very successful. Similarly, attempts have been made to control both starling and sparrow populations by trapping and nest destruction. In a local area this may be temporarily effective but it isn't long before other members of the species move into the void.

Another aspect of the economic importance of both the sparrow and starling is their part in the transmission of disease. Both species have been demonstrated to be potential agents in the transmission of diseases which may be important in domestic poultry and game birds, though at the present time there is no indication that they create a serious problem in this respect.

At any rate, for better or for worse, both the starling and the house sparrow are with us to stay. And since they appear perfectly willing to overlook our "seamier" characteristics, it seems only fair to extend them the same courtesy.

—DIRCK BENSON

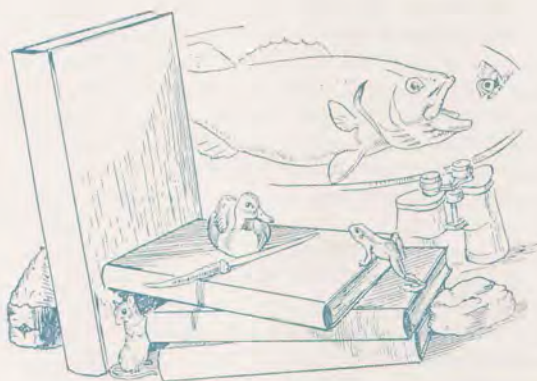


HOUSE SPARROW (*Passer domesticus* Linnaeus) Natural range throughout Europe and the British Isles except Italy, east of Siberia. Allied races occur in northern Africa, Asia Minor, and southern Asia.

Conservation Library

IN the Conservation Department, there are specialists in various fields who know a great deal about what they are doing. They would be the first to admit, however, that they have no option on total knowledge; that they are still learning; that they don't know it all.

Unfortunately, however, there are thousands of New Yorkers—teachers, school children, sportsmen, nature lovers and the much put upon “man in the street” who think we should have all the answers and who annually write to us about as follows: “In a maple tree in our yard there is a bird nesting in an old tobacco can. This bird has blue eyes, a pinkish streak down the middle of its back and orange tail feathers. What kind of a bird is it?” Or, “My little girl found a shell on the beach. This shell is sort of whitish-purplish-pink with a left hand spiral. What kind is it?” Or, “Last week while walking in the woods I heard a low moan followed by three and one-half sharp whistles and two barks, re-



READING GUIDE: Charts of separate animal groups show recommending authorities across tops; the books they recommend down left margins. Asterisks show specific recommendations of individual authorities. Accompanying digests on page 33 show source and briefly outline the contents of each book listed.

BIRDS

	*Sibley	*Palmer	*Reilly	*Meng	*O'Brien
A FIELD GUIDE TO THE BIRDS <i>Roger T. Peterson Revised (1947)</i>	★	★	★	★	★
AUDUBON BIRD GUIDE <i>Richard P. Pough</i>	★	★			★
MIGRATION OF BIRDS <i>Frederick C. Lincoln</i>		★			
BIRDS OF EASTERN NORTH AMERICA <i>Frank Chapman</i>					★
BIRDS OF NEW YORK (1910-1914 2 Vol.) <i>E. H. Eaton</i>	★	★	★		
BIRDS OF MASSACHUSETTS AND OTHER NEW ENGLAND STATES (3 Vol.) <i>E. H. Forbush</i>		★			★
NATURAL HISTORY OF THE BIRDS OF EASTERN AND CENTRAL NO. AMERICA <i>E. H. Forbush and J. B. May</i>				★	
BIRDS OF WESTERN PENNSYLVANIA <i>W. E. Clyde Todd</i>		★			
BIRDS OF AMERICA <i>I. A. Pearson</i>				★	
PENNSYLVANIA BIRD LIFE <i>H. H. Harrison</i>				★	
THE DUCKS, GEESE AND SWANS OF NORTH AMERICA <i>F. H. Kortright</i>	★	★			
HUNTER'S ENCYCLOPEDIA <i>Edited by Roy Camp</i>		★			
HOW TO KNOW THE BIRDS <i>Roger T. Peterson</i>		★	★	★	★
CRUICKSHANK'S POCKET GUIDE TO THE BIRDS <i>Allen B. Cruickshank</i>		★			★
LIFE HISTORIES OF NORTH AMERICAN BIRDS OF PREY (Parts I & II) <i>Arthur C. Bent</i>				★	
A GUIDE TO THE MOST FAMILIAR AMERICAN BIRDS <i>M. S. Zim and I. N. Gabrielson</i>		★			

DR. CHARLES G. SIBLEY, Associate Professor of Ornithology, Cornell University; DR. RALPH S. PALMER, State Zoologist, N. Y. S. Museum, Albany; DR. E. M. REILLY, JR., Senior Curator of Zoology N. Y. S. Museum, Albany; HEINZ MENG, State Teachers College, New Paltz; CHARLES E. O'BRIEN, Assistant Curator of Birds, American Museum of Natural History.

FRESH WATER FISHES

	*LaMonte	*Lagler	*Raney	*Dence	*Greeley
FISHES OF THE GREAT LAKES REGION <i>Carl L. Hubbs and K. F. Lagler</i>	★	★	★	★	★
FIELD BOOK OF FRESH WATER FISHES OF NORTH AMERICA NORTH OF MEXICO <i>Roy Schrenk Keiser</i>	★				
THE FRESH WATER FISHES OF QUEBEC <i>Vianney Legendre</i>			★		★
FISHES OF NEW YORK <i>T. H. Bean</i>				★	★
NORTH AMERICAN GAME FISHES <i>Francesca LaMonte</i>	★		★		★
AMERICAN FOOD & GAME FISHES <i>Jordan and Evermann</i>			★		★
ECOLOGY & ECONOMICS OF ONEIDA LAKES FISHES <i>C. C. Adams and T. L. Hankinson</i>				★	
FISHERMAN'S ENCYCLOPEDIA <i>I. N. Gabrielson and Francesca LaMonte</i>	★				
FRESH WATER FISHES OF EASTERN CANADA <i>W. B. Scott</i>		★	★		★
N. Y. S. BIOLOGICAL SURVEY REPORTS (1927-1940)			★		
MANUAL OF THE VERTEBRATE ANIMALS OF THE NORTHEASTERN UNITED STATES <i>D. S. Jordan and B. W. Evermann</i>					★
THE WISE FISHERMEN'S ENCYCLOPEDIA <i>Edited by A. J. McClane</i>			★		

*FRANCESCA LAMONTE, Associate Curator, Department of Fishes and Aquatic Biology, American Museum of Natural History; DR. K. F. LAGLER, Professor and Chairman, Department of Fisheries, University of Michigan; EDWARD C. RANEY, Professor of Zoology, Department of Conservation, Cornell University; WILFORD A. DENCE, Associate Professor, Department Forest Zoology, N. Y. S. College of Forestry, Syracuse; JOHN R. GREELEY, Senior Aquatic Biologist, N. Y. S. Conservation Department.

SHELLFISHES-MARINE

	*Clench	*Abbott	*Rehder
AMERICAN SEA SHELLS <i>R. T. Abbott</i>	★	★	★
A FIELD GUIDE TO THE SHELLS OF OUR ATLANTIC COAST <i>P. A. Morris</i>	★		★
MONOGRAPHS OF THE MARINE MOLLUSKS OF THE WESTERN ATLANTIC <i>Edited by W. J. Clench</i>	★		
ANIMALS OF THE SEASHORE <i>Horace G. Richards</i>			★
SEASHORES <i>H. S. Zim and Lester Ingle</i>			★
FIELD BOOK OF SEASHORE LIFE <i>Roy Waldo Miner</i>			★

*DR. W. J. CLENCH, Curator of Mollusks, Museum of Comparative Zoology, Harvard College; DR. R. TUCKER ABBOTT, Department of Mollusks, Academy of Natural Science of Phila.; DR. HAROLD A. REHDER, Division of Mollusks, U.S. National Museum, Washington, D. C.

REPTILES AND AMPHIBIANS

	*Hamilton	*Reilly	*Zweifel
FIELD BOOK OF SNAKES OF THE UNITED STATES AND CANADA <i>Karl P. Schmidt and D. Dwight Davis</i>	★	★	★
HANDBOOK OF LIZARDS <i>Hobart Smith</i>		★	★
HANDBOOK OF TURTLES <i>Archie Carr</i>		★	★
SALAMANDERS OF NEW YORK <i>Sherman Bishop</i>		★	
HANDBOOK OF SALAMANDERS <i>Sherman Bishop</i>		★	★
HANDBOOK OF FROGS AND TOADS <i>Wright and Wright</i>		★	★

*DR. W. J. HAMILTON, JR., Professor of Zoology, Cornell University; DR. E. M. REILLY, JR., Senior Curator of Zoology, N.Y.S. Museum; DR. R. G. ZWEIFEL, Assistant Curator of Herpetology, American Museum of Natural History.

FRESHWATER SHELLFISHES

	*Clench	*Abbott	*Rehder
HOW TO COLLECT SHELLS <i>(Symposium)</i>	★	★	
THE MOLLUSCA OF THE NIAGARA FRONTIER REGION <i>I. C. S. Robertson & C. L. Blakeslee</i>	★	★	★
LAND MOLLUSCA OF NORTH AMERICA <i>H. A. Pilsbry</i>	★	★	
WHAT SHELL IS THAT? A GUIDE TO SHELL BEARING MOLLUSKS OF EASTERN NORTH AMERICA <i>Percy A. Morris</i>			★
FIELD BOOK OF ILLINOIS LAND SNAILS <i>Frank C. Baker</i>			★

*DR. W. J. CLENCH, Curator of Mollusks, Museum of Comparative Zoology, Harvard College; DR. R. TUCKER ABBOTT, Department of Mollusks, Academy of Natural Science of Philadelphia; DR. HAROLD A. REHDER, Division of Mollusks, U. S. National Museum, Washington, D. C.

MARINE FISHES

	*La Monte	*Raney	*Greeley
FIELD BOOK OF MARINE FISHES OF THE ATLANTIC COAST <i>C. M. Breder, Jr.</i>	★	★	★
MARINE GAME FISHES OF THE WORLD <i>Francesca LaMonte</i>	★		
FISHES OF THE GULF OF MAINE <i>H. B. Bigelow and W. C. Schroeder</i>		★	
FISHES OF THE WESTERN NORTH ATLANTIC <i>H. B. Bigelow and Co-authors</i>	★	★	★
GIANT FISHES, WHALES AND DOLPHINS <i>D. R. Norman and F. C. Fraser</i>		★	★
MANUAL OF THE VERTEBRATE ANIMALS OF THE NORTHEASTERN UNITED STATES <i>D. S. Jordan and W. W. Evermann</i>			★

*FRANCESCA LAMONTE, Associate Curator, Department of Fishes & Aquatic Biology, American Museum of Natural History; EDWARD C. RANEY, Professor of Zoology, Department of Conservation, Cornell University; JOHN R. GREELEY, Senior Aquatic Biologist, N. Y. S. Conservation Department, Albany.

INSECTS

	*Collins	*Krall
INSECTS, THE YEARBOOK OF AGRICULTURE 1952 <i>U. S. Dept. of Agriculture</i>	★	★
FIELD BOOK OF INSECTS <i>Frank E. Lutz</i>	★	★
THE INSECT GUIDE <i>Ralph B. Swain</i>	★	★
HOW TO KNOW THE BEETLES <i>H. E. Jagues</i>	★	
THE MOTH BOOK <i>W. J. Holland</i>	★	
THE BUTTERFLY BOOK <i>W. J. Holland</i>	★	
FIELD GUIDE TO THE BUTTERFLIES <i>Alex B. Klars</i>	★	
AN INTRODUCTION TO THE STUDY OF INSECTS <i>D. J. Borror and D. W. DeLong</i>	★	★
AN INTRODUCTION TO ENTOMOLOGY <i>J. H. Comstock</i>	★	★

*DR. DONALD L. COLLINS, State Entomologist, N. Y. S. Museum; DR. JACK L. KRALL, Department of Forest Entomology, N. Y. S. Forestry College, Syracuse.

peated every thirty-five seconds. Upon investigation I found that these noises came out of a hole in the ground. What was down the hole?" We don't know the answers. Maybe there aren't any.

But most of the thousands of people who write to the Department have sensible questions and we try our best to answer them. Very often, though, we miss the mark and seldom can we provide as complete an answer as the question may merit. For all these people—and for ourselves—we have hit upon a scheme; a sort of "do it yourself" plan to help answer questions about the living creatures, the plants and forests, the soils, and the waters around us. Our scheme begins in this issue with a chart setting forth by title and publisher 65 reference books on identification, habits, habitats, range, etc. of living creatures in our part of the world—at least those big enough to see with the naked eye. These references are the choice of recognized authorities in their respective fields. We are indebted to them for their help in making these reference selections and for providing digests of each reference book.

In continuance of our scheme, there will appear in future issues of THE CONSERVATIONIST comparable charts and reference digests concerning plants, minerals, soils and other natural resource subjects.

(Book Digests on page 33)

MAMMALS

	*Hamilton	*Reilly	*Cheatum	*Cook
THE MAMMALS OF EASTERN UNITED STATES <i>W. J. Hamilton, Jr.</i>	★		★	★
A FIELD GUIDE TO THE MAMMALS <i>W. H. Burt and R. P. Grossenheider</i>	★	★	★	
THE MAMMAL GUIDE <i>Ralph S. Palmer</i>	★	★		
FIELD BOOK OF GIANT FISHES, WHALES AND DOLPHINS <i>Norman and Fraser</i>		★		
FIELD BOOK OF NORTH AMERICAN MAMMALS <i>H. E. Anthony</i>				★
AMERICAN MAMMALS <i>W. J. Hamilton, Jr.</i>				★

*DR. W. J. HAMILTON, JR., Professor of Zoology, Cornell University; DR. E. M. REILLY, JR., Senior Curator of Zoology, N.Y.S. Museum; DR. E. L. CHEATUM, Chief, Bureau of Game, N.Y.S. Conservation Department; DR. ARTHUR COOK, Game Research Investigator, N. Y. S. Conservation Department.



Antlered does

During recent years in New York State the annual hunting harvest of buck deer has varied between 20,000 and 33,000. Mixed in with this buck kill there are, every year, from eight to twelve "jokers in the pack"—doe deer with antlers.

These "mixed-up ladies" are certainly freaks but the occurrence is sufficiently frequent to annually attract a lot of attention and questions of "how come?"

To find the answer, C. W. Severinghaus who is in charge of the Department's deer research work has, since 1941, followed up as many antlered doe reports as possible and has succeeded in personally examining or securing accurate anatomical information as published by other workers on a total of 21 such animals to date. Of these, 10 had velvet-covered antlers while 11 had true or buck-like antlers.*

Examination of the reproductive tracts of these antlered does has shown that those with velvet-covered antlers were predominantly female in their anatomy; were fertile and most had produced fawns. The does with polished buck-like antlers (no velvet), on the contrary, were predominantly male; had underdeveloped male testes and were infertile.

Severinghaus points out that in buck deer, antler development is controlled by hormones derived from the testes and from a part of the growth-controlling pituitary gland. The latter appears responsible for initiating antler growth while testosterone is involved in the hardening of the antlers and the shedding of velvet.

It follows, therefore, that "does" sport-

*In addition to antlered does reported on here, more than 20 doe heads with velvet-covered racks have been sent in to the Wildlife Research Center at Delmar. While it might be assumed that physiologically these animals were comparable to the velvet-antlered does reported on above, there is no proof since the internal organs were not available for examination.

the back of the book

ing antlers with no velvet (and apparently shedding their antlers as a buck does) should be—and are—more male than female physiologically. The velvet-antlered "does," on the contrary, retain their antlers, though they may freeze back during Winter months or otherwise be damaged thus accounting for abnormal or irregular antler growths in older deer in this class.

So, thanks to sportsmen who have brought these animals to the attention of Department field men, considerable light has already been shed on the phenomena of antlered does and more is certain to be forthcoming when next season ten to twelve hunters in New York will again draw successful beads on as many "bucks" only to find they have bagged antlered does. The game research men hope that these hunters will save not only the heads but also the reproductive tracts so that biologists, perhaps at the nearest deer check station, can make complete examinations.

Fishing in the future

Twenty years ago the New York Conservation Department secured an initial appropriation of \$100,000 to acquire permanent easements on first class trout streams flowing through privately-owned lands. This past Fall the score stood at 832 miles acquired—premium trout waters that will forever be open to public fishing. And during the past year the Department has broadened the program to include purchase of shoreline frontage and parking areas on heavily fished lakes.

The foresight of those who launched this program becomes more apparent each year, for no better conceived program for the perpetuation of public fishing opportunity has ever been undertaken in the State. That we are not alone in this evaluation is evident from the following statement taken from the Fish and Wildlife Service's 1955 Federal

Aid in Fish and Wildlife Restoration report:

"Few activities carried on by the states have such built-in guarantees of producing 'fish-in-the-creel' benefits in future years as the purchase and improvement of public fishing areas. By investing in real estate on the shores of lakes and streams, the states can perpetuate the public's right to use the recreational potential of the out-of-doors. A few years ago there was but little concern over the ability of the public to get to fishing areas. Our human population was substantially smaller and there was no great premium on natural fishing locations. Indeed, in many areas the public was permitted to trespass over private land to reach a favored trout pool or a little-frequented bass cove. This picture has changed over most of the country. Modern highways, fast automobiles, more leisure time, and a burgeoning human population have combined to place a premium on even second-rate areas. In the densely populated east, several states have been unable to engage actively in access purchase program because the costs of acquisition would be so great as to hinder other operations."

A shocker

Ed. Komrosky, a farmer of Valley City, North Dakota came up last Fall with a most effective solution to the problem of public hunting on his land. According to the Associated Press, Komrosky met the hunters halfway with the following proposition: Any hunter could shoot on his property all season if the hunter would first put up twenty shocks of corn. Komrosky added that he had plenty of ducks, and about twenty acres of corn to be shocked.

The Wildlife Management Institute, reporting this offer, says they haven't heard who was more shocked, the corn or the hunters.

(Continued from page 31)

Books on Birds

A Field Guide to the Birds: Roger Tory Peterson, 1947 edition; Houghton Mifflin, Boston. Field identification and species range; 60 illustrations, mostly in color. Handy pocket guide for those with some knowledge of ornithology.

Audubon Bird Guide: Richard H. Pough, 1953; Doubleday, Garden City, N. Y. Combines Audubon's *Waterbird Guide and Eastern Land Birds*. 96 colored plates. Covers field identification, range, reproduction, behavior habits and conservation.

Migration of Birds: F. C. Lincoln, 1950; U. S. Fish & Wildlife Service, Circular 16, Supt. of Documents, Washington, D. C. A black and white illustrated introduction to this baffling study.

Birds of Eastern North America: Frank M. Chapman, 1932; D. Appleton & Co., N. Y. C. & London. Excellent, though bulky, reference with good descriptions and illustrations; many in color by Louis A. Fuertes. Good bibliography. Out of print, but often available in second hand bookstores, or see in libraries.

Birds of New York: E. H. Eaton; 2 vols., N.Y.S. Museum, Memoir 12, Pt. I (1909), Pt. II (1914). Out of print; good library reference, well illustrated, including 106 colored plates by Fuertes. Features migration charts, descriptions, distribution habits.

Birds of Massachusetts and Other New England States: E. H. Forbush; Mass. Dept. of Agr., Boston. 3 Vols., (1925, 1927, 1929) out of print. Standard library reference. One of the best regional (Northeast) references. Detailed descriptions, reproduction, foods, habits, economic status and full discussion of species. 93 colored plates, mostly by Fuertes. Vol. I—Water, Marsh & Shore Birds; Vols. II & III—Landbirds.

Natural History of the Birds of Eastern and Central North America: 1939, E. H. Forbush & J. B. May; Houghton, Mifflin Co., Boston. Abridged, revised edition in one vol. of *Birds of Mass. & Other New England States*. 97 colored plates by Fuertes, Brooks and Peterson. Not as good for reference as orig. 3 vol. work by Forbush.

Birds of Western Pennsylvania, 1940, W. E. Clyde Todd; University of Pittsburgh Press. Detailed reference for advanced students to Birds of Pennsylvania and applies to New York. 22 color plates by Geo. M. Sutton plus many pen and ink drawings.

Birds of America: (1936) T. G. Pearson; Garden City Publishing Co., Garden City, N. Y. Generalized account of the birds including descriptions, life histories and a re-run of Fuertes colored plates appearing originally in Eaton's *Birds of New York*.

Pennsylvania Birdlife: (1952) 3rd. revised edition, H. H. Harrison; Pennsylvania Game Commission, Harrisburg, Pa. Good supplemental reference with many species shown in color; especially flying birds of prey. Handy, small book.

The Ducks, Geese and Swans of North America: (1943) F. H. Kortright and T. M. Shortt; American Wildlife Institute, Washington, D. C. Descriptions, habits, range, life histories of waterfowl. Includes 36 color plates plus many pen and ink drawings. The waterfowler's "Bible." A must for anyone interested in this group of birds.

Hunter's Encyclopedia: (1948) Edited by Ray Camp; Stackpole Press, Harrisburg, Pa. Identification of game species, including other than birds; history, distribution, color plates. Slanted for sportsmen but of interest to all outdoorsmen.

How to Know the Birds: (1949), Roger T. Peterson; Houghton Mifflin, Boston, Hard cover or *mentor* books, New York City (paper cover). An excellent introductory book on bird identification. Many black & white drawings plus a few color plates. A better beginners' reference than Peterson's better known *A Field Guide to the Birds*.

Cruickshank's Pocket Guide to the Birds: (1953) Allen P. Cruickshank; Dodd, Mead & Co., N. Y. City (hard cover). Pocket Books, Inc., N. Y. C. (paper bound). A handy and easy to understand reference for beginners, with many black and white illustrations, line drawings and kodachromes. Considerable information on individual species.

Life Histories of North American Birds of Prey: Parts I & II U. S. National Museum Bulletins 167 & 170. U. S. Govt. Printing Office, Washington, D. C. Contains extensive life history information on our birds of prey. Features habits, nesting, plumage, field identification, range, etc. Excellent photographs; good bibliography.

A Guide to the Most Familiar American Birds: (1949) H. S. Zim & I. N. Gabrielson; A Golden Nature Guide, Simon & Schuster. Common species shown in color, with brief descriptive notes plus small scale range maps. Handy guide for the beginner.

Books on Fresh-Water Fishes

Fishes of the Great Lakes Region: (1949) Carl L. Hubbs and Karl F. Lagler; Cranbrook Institute of Science, Bloomfield Hills, Michigan. One of the best on fresh-water fishes. Keys to families and species. Covers range, characteristics, methods of collecting and preserving. Well illustrated and good bibliography.

Field Book of Fresh Water Fishes of North America North of Mexico: (1938) Ray Schrenkeisen; Putnam Company, New York. Good reference for anglers. Carries descriptions and line cuts.

The Freshwater Fishes. Key to Game and Commercial Fishes of the Province of Quebec: (French and English Editions) (1954) Vianney Legendre, University of Montreal, Canada. Keys and excellent figures plus some black and white illustrations.

Fishes of New York: (1903) T. H. Bean; N.Y.S. Museum Bulletin 60, Albany, New York. Out of print but good library reference to descriptions, records, habits, habitats of both fresh and marine species.

North American Game Fishes: (1946) Francesca LaMonte; Doubleday & Co., Garden City, N. Y. Excellent for identification of both fresh and marine game fishes. Well illustrated. Text includes identification, characteristics, distribution, feeding habits, size.

American Food and Game Fishes: (1902) David Starr Jordan and Barton Warren Evermann; Doubleday, Page & Co., New York. An old, standard reference. Out of print but available in libraries. Popular account of nearly all species No. of Equator with keys, life histories, methods of capture. Illustrated with colored plates, drawings, photographs.

Ecology and Economics of Oneida Lake Fish: (1928) C. C. Adams and T. L. Hankinson. Roosevelt Wildlife Station, N.Y.S. College of Forestry, Syracuse, N. Y. Breeding habits, life histories, habitat, food, distribution, enemies, diseases, economic relationships and identification key for 59 species of Oneida Lake fish. Many illustrations, good bibliography.

Fishermen's Encyclopedia: (1950) Edited by Ira Gabrielson and Francesca LaMonte; Stackpole Company, Harrisburg, Pa. Covers fish management, culture, angling methods, tackle, fishing craft and photography of both fresh and salt water species. Slanted for the angler. Popular and informative.

Freshwater Fishes of Eastern Canada: (1954) W. B. Scott; University of Toronto Press, Toronto, Ontario, Canada. Photos, names, characteristics, economic importance, life histories, habits, foods of 142 common species.

N. Y. State Biological Survey Reports: (1927-1940) N.Y.S. Conservation Department, Albany, N. Y. Earlier survey reports out of print; more recent ones still available and all can be found in good libraries. Each deals with specific watershed of the State. Contains maps, photographs and excellent color paintings of many species. Valuable ref. to New York's fishes and fishing waters.

Manual of the Vertebrate Animals of Northeastern United States (1929) David Starr Jordan and Barton Warren Evermann; World Book Company, Yonkers, New York. Out of print. See in libraries. Remains one of the best for identification of all vertebrate animals.

The Wise Fishermen's Encyclopedia: Edited by A. J. McClane; William H. Wise & Co., New York. Comprehensive work on fresh-water and marine species. 700 drawings plus 32 pages in color. Of particular interest to sport fishermen.

Books on Shellfishes—Marine

American Seashells: (1954) R. Tucker Abbott; D. Van Nostrand Co., New York. Descriptions and illustrations, some in color, of more than 1,500 marine mollusks found on both Atlantic and Pacific Coast. Includes 158 species occurring in Marine waters of New York. Good introduction and bibliography.

A Field Guide to the Shells of Atlantic and Gulf Coasts: (1951) (Revised and Enlarged Edition). Percy A. Morris; Houghton, Mifflin Co., Boston. Recommended as a general handbook. Many mollusks occurring along N. Y. Coast included. Descriptions and illustrations, including some color photographs.

Monograph of the Marine Mollusks of the Western Atlantic: (1941) Ed. by W. J. Clench, Dept. of Mollusks, Museum of Comparative Zoology, Harvard University, Cambridge, Mass. Marine mollusks of the Atlantic Coast of the Americas from Greenland to Patagonia. Descriptions, range, records and general remarks re each species.

Animals of the Seashore: (1938) Horace G. Richards; Bruce Humphries, Inc., Boston. Treats seashore animals, including descriptions and illustrations of most common mollusks from Cape Cod to Cape Hatteras.

Seashores: (1955) H. S. Zim and Lester Ingle; Simon and Schuster, New York. A "Golden Nature Guide" dealing with plant and animal life of Atlantic and Pacific Coasts. Excellent book for the amateur. Shellfish illustrated in color.

Fieldbook of Seashore Life: (1950) Roy Waldo Miner; G. P. Putnam's Sons, New York. Handy, well illustrated book, including section on shellfish. Popularly written.

Books on Reptiles and Amphibians

Field Book of Snakes of the United States & Canada: (1941) K. P. Schmidt and D. P. Davis; G. P. Putnam's Sons, New York. Good reference for identification. Illustrated with figures, photographs & color plates. Features folklore, habits, collecting methods. With keys and descriptions. Excellent bibliography with references for each State.

Handbook of Lizards of the United States and Canada: (1946) H. M. Smith; Comstock Publishing Co., Ithaca, N. Y. Each species figured and described in detail. Inc. notes on habits, distribution, life history. Identification keys and information on collecting and preserving. Good bibliography.

Handbook of Turtles. The Turtles of the United States, Canada and Baja, California: (1952) Archie F. Carr, Jr.; Comstock Publishing Company, Ithaca, N. Y. Good keys, range maps & photographs of turtles of this region. Excellent accounts of habits.

Salamanders of New York: (1941) Sherman Bishop; N.Y.S. Museum Bulletin 324. Contains keys to eggs, larvae and adults. Also life histories, habits, distribution of native species. Well illustrated in bl. & wh. Technical terms explained.

Handbook of Salamanders: (1943) Sherman C. Bishop; Comstock Publishing Company, Ithaca, N. Y. Keys and descriptions to adults and larvae of all salamanders of middle North America. Each species pictured, with notes on habits. Good bibliography.

Handbook of Frogs and Toads: (1949) A. A. & A. H. Wright; Comstock Publishing Company, Ithaca, N. Y. Illustrations and descriptions of species, inc. adults, larvae and eggs. Keys for identification of adults. The most complete reference to the tailless amphibians of the U. S.

Books on Shellfishes—Freshwater and Land

How to Collect Shells: (1955) Various authors. American Malacological Union, Buffalo Museum of Science, Humboldt Parkway, Buffalo, New York. Series of papers dealing with land, fresh-water and marine shells and how to collect.

The Mollusca of the Niagara Frontier Region: (1948) I.C.S. Robertson and C. L. Blakeslee, Buffalo Society of Natural Sciences Bulletin 19, No. 3. Descriptions, records and figures of all known land and fresh-water mollusks of Western New York and Prov. of Ontario. Inc. notes on collecting, history with map, and 14 plates.

Land Mollusca of North America: (1939-1948) Henry A. Pilsbry, Academy of Nat. Science, Monograph No. 3, Phila. 3, Pa. Most complete work available on land mollusks of North America. Published in 4 parts with 1,165 text figures. Useful reference for professionals and amateurs.

What Shell is That? A Guide to the Shell-bearing Mollusks of Eastern North America: (1939) Percy A. Morris; D. Appleton—Century Company, New York. An elementary handbook of 76 land and fresh-water shells, (49 found in New York State), pictured and described.

Fieldbook of Illinois Land Snails: (1939) Frank C. Baker, Illinois Nat. Hist. Survey Div., Manual 2, Urbana, Illinois. 90 species illus. and described, 55 of them occurring in New York. Covers biology, ecology, methods of collecting, etc.

Books on Marine Fishes

Field Book of Marine Fishes of the Atlantic Coast: (1929) C. M. Breder, Jr. Covers distribution, characteristics and information on feeding and breeding habits of all coastal species from Labrador to Texas. Technical keys to identification. Line drawings and some color illustrations.

Marine Game Fishes of the World: (1952) Francesca LaMonte; Doubleday and Company, Garden City, New York. Covers characteristics, feeding habits, size, angling methods, market value of the major marine game fishes. Well illustrated in black and white and color.

(Continued on page 34)



Fur auction

There is, we think, virtually no limit to the activities which sportsmen's groups can undertake in the interest of good conservation in their localities. Several such club projects, including lake and stream improvement, small marsh construction, food and cover planting have been featured in THE CONSERVATIONIST.

Recently, though, the Middleburg Rod and Gun Club came up with a brand new one—sponsorship of a fur auction. Their first auction was held in Middleburg, December 10, 1955 and despite bad driving conditions, was well attended by local trappers and fur buyers, some from as far away as N. Y. City.

There were 27 lots of fur, primarily raccoon, consigned to the auction. Raccoon pelts sold at from \$1 to \$3.40; averaging close to \$3. One lot of small to average mink sold for \$18.50 a pelt; indicating that large mink would have commanded a much better price. Total revenue to trappers consigning fur to the auction was \$740.45.

Middleburg Club members, pointing out that only early season furs were featured in their December 10th auction, were confident that later auctions this season would be considerably larger. These are scheduled for March 3 and March 24 and will feature furs of muskrat, beaver and otter.

(Book Digests, continued from page 33)

Fishes of the Gulf of Maine: (1953) Revised edition. Henry B. Bigelow and Wm. C. Schroeder; Fishery Bulletin, Vol. 53, U. S. Fish and Wildlife Service, Washington, D. C. Up to date reference to marine and tidal fishes of North Atlantic. Includes keys, descriptions of individual species, size, habits, range, etc. More than 275 line drawings. Of value to students and fishermen.

Fishes of the Western North Atlantic: Part I, 1948; Part II, 1953. Henry B. Bigelow and co-authors. Sears Foundation of Marine Research, Yale University, New Haven, Conn. Part I—Lancelets, Cyclostomes and Sharks. Part II—Sawfishes, Guitar Fishes, Skates, Rays and Chimaeroids. Keys for species, distinctive characteristics, color, size, habits, abundance, economic value, etc. References. Beautifully prepared and illustrated with black and white drawings.

Giant Fishes, Whales & Dolphins: (1938) Norman & Fraser; W. W. Norton & Company, New York (recent reprint by G. P. Putnam's Sons, New York). Good reference for the larger marine fish. Illus. in black and white, few in color.

Manual of the Vertebrate Animals of Northeastern United States: (1929) David Starr Jordan & Barton Warren Evermann; World Book Company, Yonkers, N. Y. Out of print. See in libraries. Remains one of the best for identification of all vertebrate animals.

Books on Insects

Insects, The Yearbook of Agriculture: (1952) U. S. Dept. of Agriculture, U. S. Govt. Printing Office, Washington, D. C. Various specialists in Entomology

contribute sections which, combined, make excellent introduction to study of Entomology. Illustrations include text figures and 52 colored plates. Covers insect damage.

Field Book of Insects: 3rd. Revised Edition, 1935. Frank E. Lutz; G. P. Putnam's Sons, New York. Handy and good reference for beginners. 800 illustrations with descriptive text. Includes information on collecting and preserving.

The Insect Guide: (1948) Ralph B. Swain; Doubleday & Co., Garden City, N. Y. Good reference for beginner, with 175 illustrations, most in color. Interestingly written. Good bibliography.

How to Know the Beetles: (1951) H. E. Jaques; Wm. C. Brown & Co., Dubuque, Iowa. Primarily a key to identification. Carries 865 line drawings. A good reference to a specialized group of insects.

The Moth Book: (1903, 1917, 1934) W. J. Holland; Doubleday, Page & Co. Recommended as the best manual for identification of moths of North America (No. of Mexico). More than 300 illustrations, 48 in color. Out of print but available in libraries.

The Butterfly Book: (1931-1949) W. J. Holland; Doubleday, Doran & Co., Garden City, N. Y. Good reference for both beginner and professional. Carries 77 plates showing 1795 butterflies, caterpillars and chrysalids in color. Also half-tones and line drawings. Text easy to understand. Restricted to species native to No. America north of Mexico.

Field Guide to the Butterflies: (1951) Alexander B. Klots; Houghton, Mifflin Co., Boston, Mass. Brief but accurate descriptions; well illustrated. Excellent book for the field collector.

An Introduction to the Study of Insects: (1954) D. J. Borror and D. W. DeLong; Rinehart & Co., New York. Excellent keys, photographs and drawings. Discusses habits, activities, collecting and preserving. Good reference for the student—though technical.

An Introduction to Entomology: (1940) J. H. Comstock; Comstock Publishing Co., Ithaca, N. Y. The standard text for beginners. Keys to orders and families with discussion of habits. Slightly out of date but still good reference.

Books on Mammals

The Mammals of Eastern United States: (1943) W. J. Hamilton, Jr.; Comstock Publishing Co., Ithaca, N. Y. Covers range habits, food, reproduction and economic status. Well illustrated by E. L. Poole. Carries photographs and distribution maps of 253 species and subspecies. Good reference for advanced study.

A Field Guide to the Mammals: (1952) W. H. Burt & R. P. Grossenheider; Houghton Mifflin Co., Boston. Identification characteristics and range maps of 373 species of mammals occurring north of Mexico. Illustrated, many color plates. Handy size for field use; good reference for beginners.

The Mammal Guide: (1954) Ralph S. Palmer; Doubleday & Company, Garden City, N. Y. Color plates and line drawings by the author. Range maps and excellent short accounts of habits and distribution. Includes seals and whales of North America. Fairly advanced.

Field Book of Giant Fishes, Whales and Dolphins: (1938) J. R. Norman & F. C. Fraser; W. W. Norton & Co., New York. (Also reprinted by G. P. Putnam's Sons, New York.) Features larger fishes but good reference for large marine mammals. Good illustrations, some in color.

Field Book of North American Mammals: (1928) H. E. Anthony; G. P. Putnam's Sons, New York City. A one-time classic in the field; now somewhat dated but with much useful information concerning known mammals north of Rio Grande. Semi-technical.

American Mammals: (1939) W. J. Hamilton, Jr.; McGraw-Hill, New York. Features ancestry, classification, adaptations, food, reproduction, homes, hibernation, migration, behavior, etc. Discusses life history and economic relations. Written in easy to understand manner.

Aerial beaver survey

In the December-January, 1954-55 CONSERVATIONIST the Conservation Department's Ed. Maunton, described in detail the system used in New York to aerially survey beaver and certain other furbearers and game populations. Maunton's article, "Checking Up On the Beaver," pointed out how low-level flying by an experienced pilot and observer on predetermined mapped courses provided, in a matter of hours, information sufficiently accurate to correctly gauge beaver population trends in remote wilderness areas.

Because clear ground visibility is essential to determine whether beaver colonies are active or "dead," flying must be done after the foliage is gone but before snows blot out the signs of beaver.

Last Fall the Adirondack beaver survey got under way on October 27th and was halted by snow on November 24th. During this period a total of 42 hours were flown and all but a part of two survey lines was completed. This provided an approximately 17 per cent sample of the 13,838-square mile Adirondack area.

The survey disclosed an increase—along the sample lines flown—of 43

beaver colonies over last year. This increase is particularly significant following, as it does, recent year's trapping seasons during which the Department has provided lengthy open seasons within interior Adirondack areas, with no limit to the number of beaver that could be taken. It seems apparent that the inaccessibility of such range coupled with generally low prices on beaver com-

bined to discourage trapping effort. The flying biologists also noted a trend toward smaller colonies; many of them sandwiched in between older abandoned colony sites. This, they see as evidence of diminishing food supplies. It is unlikely, they feel, that over most of the Adirondacks there will be any improvement in beaver food supplies since, on most abandoned sites, ever-

greens take over after removal of aspen—the preferred food. On the basis of this 1955 survey it is probable that the Department will again this year declare a liberal season in the Adirondacks. Like deer, beaver can eat themselves out of house and home and be lost as a valuable natural resource if not adequately harvested.
—A. W. BROMLEY

Beaver survey chart



Vertical lines represent courses flown by Department survey plane, while round dots scattered along courses of flight represent actual locations of active beaver colonies. Flight lines are spaced approximately 13 miles apart. U.S.G.S. topographical maps are used in original mapping of colony locations. Both pilot and observer watch for beaver sign during low-level flight along survey lines. The effective zone of observation extends approximately one mile either side of the flight line.

The "Deer Ked" or "Deer Tick"

The close of the deer season has brought several reports and inquiries from hunters, even from out-of-state, about "ticks" found on their deer. Fortunately, specimens accompanied some of these inquiries and identification of the so-called "tick" was possible. This "tick" proved to be a wingless louse fly, *Lipoptena cervi*, known as the "deer ked." These have been reported to be a common species on European deer and have become naturalized in northeastern United States on our white-tailed deer.

The louse fly is wingless when established on deer, but has well-developed wings when it emerges from the pupa stage which is passed almost entirely within the abdomen of the parent. This blood-sucking parasitic fly has a peculiar feeding habit. They sometimes form chains of three or four attached to each other, in which the first fly draws blood from the host, the second thrusts its proboscis into the abdomen of the first, drawing blood from it, and succeeding flies drawing blood from the fly ahead of it in the same manner.

If a deer has a few louse flies the parasites probably do not materially affect the animal, but it is possible that a badly infested deer might show emaciation and general unthriftiness. These parasites may also play the role of vectors in the spread of disease in deer, but this has yet to be investigated. However, a louse fly of another species has been indicated to be a vector of quail malaria.

The louse fly of deer had previously been reported in 1941 and there are no records of it in the intervening years, although there have been several reports indicating ticks to be of rather common occurrence on Adirondack deer. Since the current reports of "ticks;" i.e., deer louse flies, are from the Adirondack region, it is possible that the reported "ticks" are a case of mistaken identity and the "ticks" in question are "deer keds."

To help us determine which species of parasite (tick or louse fly) is concerned, the co-operation of any of our readers who have encountered these parasites on deer, is requested. It is pos-



Louse fly (left) and deer tick

sible to differentiate true ticks from louse flies by their shape (see photographs) and the fact that they have eight legs while louse flies have only six. If possible, please send a postcard, reporting your findings to the Game Pathologist, Wildlife Research Laboratory, Delmar. This card should give information as to species found, the date, county and township where deer was taken and if possible attach the parasite found to the card with scotch tape. Many thanks for your co-operation.

—JAMES R. REILLY,
Game Pathologist

Hungarian hang-over

The first count of Hungarian partridge on the 16-square mile census area in Jefferson County indicates that the 'Hun' wintering population is suffering a hang-over. The census in 1954 indicated a wintering population of 43 coveys. In 1953 there were 23 coveys wintering on this unit and the first complete census this year showed a total of eight coveys. Past years' data indicates, however, that the total number of birds on the unit can only be ascertained following the third census. The present figure of eight coveys will probably be doubled following later checks.

It is interesting to note that the southern Ontario "Hun" population has followed a similar pattern. The Canadian data shows that a much reduced number of juveniles are being found in the Fall coveys. This points to a reduced number of young being successfully hatched and reared to maturity. Several instances of "clay-balling" were brought to our attention this year which can be a factor in juvenile "Hun" mortality. The heavy clay soils, upon which these birds appear most successful, often become very gummy after heavy rains. If this occurs at the time the young are very small the soil often balls to their feet, causing large masses to form which dries and may cripple the birds severely, or cause immobility; hence, heavy brood mortality. We can only speculate as to the importance of these phenomena this year, but evidence indicates it did occur in some areas within the "Hun" range.

Habitat, weather, hunting and predation all are factors of various importance in the scheme of things as it concerns Hungarian partridge. This little exotic from Europe, however, has a high breeding potential and given an aspirin, with a good nesting season as the main ingredient, he will soon shake off his hang-over.

—JOHN WILSON,
District Game Manager

The barefooted ice fisherman

Recent observations of an ice fisherman's tracks at Goose Bay on the St. Lawrence River has led to no end of speculation. Now, conventional ice fishermen are as common as ice on Goose Bay from mid-December until the ice leaves in the Spring. The odd note about these tracks was that the fisherman had four toes on each foot and was conspicuously unshod.

This character turned out to be just a "hanger-on" bald eagle that walked around the ice doing all his fishing topside. Minnows and small perch discarded by ice fishermen around the ice holes provided his fish—effort free. The bald eagle is a common Summer resident of this area but probably never has it so good as in the Winter.



A trap—but for what?

In THE CONSERVATIONIST for August-September and October-November, 1951, Nick Drahos pictured and described a great variety of steel traps. Here is another one; a coil spring, double-jawed affair that was owned by my grandfather in Warren County, Pa. I can remember his telling me it was a muzzle trap for bears, but since it lacks teeth it hardly seems practical for such use.

Actually we aren't sure for what it was used. Perhaps it was designed to take woodchucks, the hides of which were used extensively years ago for shoe tops. The double jaws corresponding to the diameter of a woodchuck burrow when set, plus the center post triggering device, would lend support to the idea. The photo shows the jaws at one end set. The contraption was made by the Sabo Manufacturing Co., Cleveland, Ohio.

Ever see a trap like it? If so, we would be glad to know more about it.
—WAYNE TRIMM

Road Block at Lake George

THIS last Fall at Lake George 10 Game Protectors, five men from the Warren County Sheriff's office and Lake George police set up a road block at Lake George to determine how many hunters were abiding by the rules. On two week-end days all hunters were stopped and their cars were examined for evidence of law violations. The work started at 4 p. m. and ended after midnight. In all, over 3,000 cars were inspected—between 4 and 8:10 p. m. between 211 and 396 cars per hour. Between 4 and 6:15 o'clock no car was delayed more than four minutes. Between 6:15 and 6:30 o'clock the traffic was heaviest and a few hunters were delayed for as much as 10 minutes, but at 6:50 the delay was down to five minutes and by 7:05 the delay was less than a minute.

In addition to the more than 3,000 cars examined in the two checks there were about 2,500 to 3,000 other cars that did not contain hunters sorted out of the traffic and passed down the road.

The safety precautions used were extensive. Red and yellow flares, signs and flashing red lights indicated the necessity for slow speed. An area of several hundred feet along Route 9 was illuminated by using a portable generator and flood lights furnished by the Sheriff's office. A side street was similarly lighted by using a generator and flood lights supplied by the game research men. The flood lights on the Lake George school illuminated the parking lot at the school.

The inspection job was handled simply, quickly and efficiently. The men from the Sheriff's office and the Lake George police handled the traffic. Hunters turned to the right on a street that goes around the Lake George school. Obvious non-hunters were passed straight down the road. The Sheriff's men watched for evidence of bundles being thrown out of cars, for drivers who turned off the road to avoid the road block, and they chased and brought back the few cars that went through the road block. The Game Protectors were stationed along the side street at car length intervals. Three lanes of cars, 10 to a lane, could be parked in the side street. This arrangement of the Game Protectors permitted rapid inspection of each car because they just looked through the car in front of them, then turned to the car in back of them. They really worked fast, for between 6 and 7:15 o'clock they inspected 495 cars—or 40 cars per hour per man.

All of the law men were quiet, courteous and pleasant. The hunters were pleased with the entire operation. The

vast majority commented that such law enforcing should be done more often and in more places. The vast majority of hunters got out of their cars, opened the car's back deck, opened their packs and duffle, and presented their unloaded guns for inspection without any instructions from the Game Protectors. This co-operation increased the speed and efficiency of each inspection.

The average car held three hunters. The second day of checking 1,515 cars (or about 4,545 hunters) were checked. The game technicians checked 97 legal bucks and 5 black bear from New York and 3 deer from Canada, or one big game animal for each 14 to 15 cars or 42 to 45 hunters. Fifty-four per cent of the deer and bear had been killed the week-end they were checked. The success of the individual hunter may appear low but many of these men hunt two, three or four week-ends.

The Sheriff's men, in addition to directing traffic, advised many car drivers to replace a burned out headlamp and specifically told several car owners to get their brakes adjusted. As the evening passed they suggested that a few drivers either find a place to sleep or let someone else do the driving. One driver, when stopped, was so nervous that it was evident something was wrong. He was driving a "borrowed car" and his operator's license had been suspended. One driver, after stopping his car, attempted to walk a straight line. He spent the night in Lake George.

The Game Protectors found 15 violations of the Conservation Law. The penalties totalled \$842.50. The lesser penalties included a box of whitefish that had been speared, a pileated woodpecker killed by a high powered rifle, a snowshoe rabbit killed out of season, and legal bucks being transported but not tagged. The heavy penalties were for does. Only two hunters did not have money enough with them to pay their penalties, and their wives brought the money to Lake George before morning.

For the Sheriffs, Policemen and Game Protectors each night was long and cold. Each of them had been in the field all day—the road check was strictly overtime. These men cannot check all of the hunters in the field, but 15 violators at Lake George learned a costly lesson. Most of them admitted that they "just knew I wouldn't get away with it." They didn't.

—C. W. SEVERINGHAUS,
Game Research Investigator



Every hunting season can be counted on to produce a few freak animals. With deer, it may be antlered does, bucks with off-beat racks, and once in a while a "white" deer. Here's one—a six-point piebald buck shot during the 1955 season in the Town of Hillsdale, Columbia County by Albert Farrere, Hillsdale.

Room and board

Reporting on the housing situation in western New York, Bill Blew, Foreman of the Department's White Game Farm at Basom, sends us the following note:

"While clearing some dead trees from around our duck pond we came to a hollow basswood, a known bee tree. Inside the tree we found four large raccoons comfortably spending the Winter next to the bees and honey. When these 'coon were taken to the shop and left by the heat a short time we discovered we had living bee hives. So it seems that while the 'coon were eating the honey and sleeping, the bees took advantage of the opportunity to move into nice warm quarters in the 'coon fur."

Dove doings

With temperature readings as low as -40°F in some northern New York communities, migratory birds and some people had moved on to sunny southern climes. Not so, a flock of 35 mourning doves, observed at the Conservation Department's Perch Lake Game Management Area, 7 miles northeast of Watertown on December 28th. The doves normally spend the Winter south of the Massachusetts-Iowa latitude. During the last two Winters, however, a few doves have stayed in the area near food patches developed for waterfowl which provide the necessary Winter grain. The flock, to our knowledge, is the largest wintering in the locality.



Holiday greetings from the Howards

The Howard's farm is located in Wayne County, Town of Arcadia. In 1953 they co-operated with the Conservation Department, under the 48-D small marsh program, to construct a 10-acre wildlife marsh on their property.

That they are pleased with the multiple purpose benefits seems obvious. Their 1955 Christmas card pictured a part of their wildlife marsh and described it as follows:

*"Enchanting view,
With bass and bluegills
Not a few.*

*"A haven here
For ducks and birds, and
Timid deer.*

*"Limpid jewel,
In Summer's reign, a
Swimming pool.*

*"A mirrored freize
Reflecting sunsets,
Stars and trees."*

Crazy As a Loon or Who's Crazy Now?

One frigid day early last December, William Frayne of Lake Placid was walking along a road near that central Adirondack village when he spotted a grounded loon—a red-throated loon, as it turned out. Now loons are water birds and this stranded specimen was obviously off its beat. Moreover, it *was* "beat"—from exposure and lack of food. So Frayne, with a good turn in mind, gathered up the loon, tucked it under his arm and delivered the bird to Greenleaf Chase, the Conservation Department's District Game Manager at nearby Ray Brook.

"Greenie," contemplating the loon and murmuring "water—water—water," hit upon the Saranac River which, below the Village of Saranac Lake, seldom freezes up. So toward evening the loon was launched in the river, wished God speed.

Considerably revived by all this atten-

tion, the loon sped all right, but not down the river. Instead, he reversed, went upriver into the village, tramped out on the bank and with remarkable common sense (for a loon) proceeded upstreet to the residence of the local veterinarian, Dr. Bouton. Here he took his post and awaited entry.

This maneuver paid off even better than he may have hoped. The "Doc." not only took the loon into the house but installed him in a waterfilled bathtub—liberally stocked with the good Vet's pike-fishing minnows.

At this point in the saga, the Saranac Chamber of Commerce, which can smell a good publicity story as far as the next, got into the act. With snow and ice on all sides and the mountain temperature standing at a -25° F, where, they thought, would they like to be if they were loons? Why Bermuda, of course! Would Colonial Air Lines fly the loon to Bermuda—to take up residence there in the city zoo? They certainly would! Would the good Dr. Bouton, who was thinking some of taking a bath and who's supply of pike-minnows was running low, part with his red-throated guest? He certainly would!

But what of protocol? Who had the authority to give the loon in bondage to the Bermuda zoo? What about an exit visa from New York State? How did the Federal Fish and Wildlife Service feel about the extradition of a protected species? So the word went out—from Saranac to Ray Brook to Albany to Washington, and the questions were pondered.

The days passed. The loon paddled back and forth in Dr. Bouton's bathtub. Dr. Bouton noted in his diary that 1955-56 would be remembered as the Winter without a bath. Worst of all, the pike-minnows were gone!

Then from Washington to Albany to Ray Brook to Saranac the word returned. The bird's papers were in order; he was free to travel—and travel he did! Dr. Bouton, cake of soap in hand and a grin on his face could, by leaning forward in the bathtub, see from the bathroom window the air liner winging South—the red-throated loon safely aboard.

At the Ray Brook office, "Greenie" Chase was only half through a sigh of relief when the 'phone rang. "Say," said a voice, "about that loon. How come Bermuda when the Winter range, according to ornithologists, is the Atlantic Coast from New England to the Gulf of Mexico?" Then, without pause for reply, "Tell you one thing though, there will be hell to pay in the United Nations if Bermuda doesn't clear with England on the entry of this Canadian alien from New York."

The Crosley survey

Just how important to the states' and the national economy are hunting and fishing? The answer to this question, so vital to conservation agencies in planning to meet present and future management needs, is to be sought this year in a study conducted by Crossley S-D Surveys for the U. S. Fish and Wildlife Service.

Some of the questions the survey is expected to answer include: How many persons above 12 years of age hunted or fished in 1955? How much land and water will be needed for hunting and fishing, and how big a demand should be anticipated in the future? What is the impact of hunting and fishing on the travel industry, service stations, restaurants, hotels, and retail stores? What will be the demand for various kinds of equipment?

Tennessee, Texas, Iowa, New York, Nevada, Wisconsin, and Maryland have engaged the statistical firm to undertake individual economic studies in their states in addition to the national survey.

Deer check—1955

Ever since the Fall of 1941, Department field men have been operating deer check stations in major big game hunting zones of the State. The information secured on age and sex composition of the herd, general condition of the deer, antler development and allied data has been invaluable in recommending proper hunting seasons and other techniques.

In addition, the operation of check stations permits a direct regional sample of deer taken. These figures combined with information secured at freeze lockers, meat packers', deer camps, etc. provide the grist for I.B.M. analysis of reported deer take to determine the actual take each year.

The whole operation depends, of course, on the co-operation of the sportsmen. On this score the game men have no complaints. Deer hunters are, by now, familiar with the check station locations and the work being accomplished. In ever greater numbers they, voluntarily, are stopping in to have their deer checked; many driving out of their way to do so.

Last Fall, with three stations operating in the Adirondacks, five in the Catskills and six in the Southern Tier and Western counties, game men examined 4,239 bucks and 1,420 does for a total of 5,659 deer. This took some hustling during the peak periods. At the South Wales (Erie County) station, for instance, the three-man biologist crew checked a total of 810 deer on December 3 between 10 o'clock in the morning and 9 o'clock that night.

On the same day a four-man crew at Binghamton checked 390 deer and the South Geneseo crew checked 335 deer.

When the usual miserable late Fall weather is stirred into this picture it adds up to some cold, weary game biologists with aches in the backs and "cricks" in the necks. They're convinced, however, that in no other manner can so much accurate information be gathered—essential to future good management of the deer herd and, to a man, they're appreciative of the continued co-operation of the sportsmen in making this research program a success.

Conservation advisory committee

In early February, Conservation Commissioner Louis A. Wehle held the first meeting of his newly appointed Advisory Committee to review the Department's accomplishments during 1955 and to discuss future plans. The ten-member Committee, the Commissioner commented, brings broad experience and ability to bear on the problems of natural resource conservation and its counsel is certain to result in real benefits to the Department and significant service to the people of the State. Committee members, announced earlier to the press, are:

Dr. Gustav A. Swanson, Head, Department of Conservation, Cornell University.

Dr. Hardy L. Shirley, Dean, N. Y. State College of Forestry, Syracuse University.

Robert Thompson, President, N. Y. State Conservation Council, Waverly.

Clarence Morcy, President, N. Y. State Chapter, Izaak Walton League, of America.

Howard M. Woods, Rochester.
James Lonergan, Ticonderoga.
E. S. Cookinham, Poland.
Frank C. Ash, Fulton.
William Paulsen, New York City.
Harold C. Kimball, Yonkers.

Among the major topics discussed at the Committee's first meeting were:

1. The 1956 State Fair at which, thanks to Governor Harriman's selection of conservation as the over-all theme, we shall be afforded an unparalleled opportunity to bring home to thousands the vital importance of good conservation.

2. Scheduling of conservation "town meetings" to be held this Summer throughout the State—affording all who are interested in the functions of our Department an opportunity to express their views.

3. A thorough review of our game stocking program to determine among other things, the feasibility of stocking quail in up-state areas, and "hardening" pheasants under natural conditions

to develop the best pheasant program.

4. The fisheries program, both trout and warm-water species, including hatchery production—to include consideration of a new ultra-modern hatchery on the St. Lawrence Seaway.

5. A number of additional fish and game problems including acquisition of public fishing rights on streams, lake access, stream improvement, status of striped bass, coyote control, Conservation Law and law enforcement including Protectors' salaries and reorganization of our Special Game Protector force.

6. Considerations concerning the Forest Preserve including a summary of progress in land acquisition, plans for future acquisition (including acceptance of gifts from large land-owners), extension of the Blue Line, sale of detached parcels, liberalizing present restrictions on essential highway improvement and thorough review of forest recreational demand with respect to present facilities and future plans.



Chautauqua musky

Among western New York's greatest attractions for anglers are the huge muskalonges that prowl the depths of Chautauqua Lake. Each year during the open season (July 1—October 15) fishermen wrestle some 30 tons of these fresh water tigers from Chautauqua's waters—some of them in the record-breaking class. The largest reported to date for the 1955 season was the 42½-pounder pictured above. It was taken on live bait early in October by Bernie Anderson of Jamestown.

What price Reynard

No matter what wildlife drama may currently be playing, Br'er Fox can be counted upon for a feature role—or

anyway waiting in the wings for a cue. Last year in Illinois and Wisconsin he had the cue and marched on stage.

In Illinois, according to the Wildlife Management Institute, the red fox got a thorough "going-over" by Dr. Thomas G. Scott of the Illinois Natural History Survey. Scott's studies, which were comparable to work done in New York and elsewhere in the country on this species, showed that the red fox seldom exerts important pressures on wild prey; that he eats large amounts of fruits and insects in season; that he doesn't fit the villain's role in which he is usually cast. As for control, Scott feels that improvement of habitat for game on the land, including provision of escape cover, is more beneficial than any amount of fox control. With respect to the bounty system as a control measure he finds it not only expensive but a failure in accomplishing the purpose. He adds that "If the bounty system could be properly administered; if its costs were not prohibitive and if it were an effective method of population control one of the chief results would be maintenance of a healthy fox population."

Copies of Scott's booklet are free on individual request from the Illinois Natural History Survey in Urbana.

Underlining the ineffectiveness of the bounty system as a control measure, the Wildlife Management Institute reports that in Wisconsin, where the Conservation Commission has paid bounties on foxes since 1945, the number of red foxes bountied *annually* has increased by more than 15,000. The tab for this ten-year program of "control in reverse" was \$600,000—in fox bounty payments alone.

The Institute adds that "Only in special instances do informed biologists condone the payment of bounties for the taking of troublesome animals. Work in the various states has shown that the general bounty system is a waste of public funds. General predator control work brings little recognizable benefit to wildlife, and control efforts might better be focused directly against those few individual animals that become bothersome to landowners."

Whooping cranes

Twenty adult whooping cranes with eight of their young have winged into the Aransas National Wildlife refuge and vicinity, safe from their flight across Canada and the United States, Wildlife Management Institute reports. For the nearly extinct whoopers, these eight fledglings make up the largest crop of young birds to return since the Aransas refuge was established on the Gulf of Mexico nearly 20 years ago.



Lands for hunting

Dear Sir: First let me compliment you on a very fine publication for the conservationist and sportsman alike. And next a tip of the hat to the Conservation Department for the good job they have done for the fisherman. But the real reason for this letter is to point out how badly they have failed the average hunter—meaning the individual who does not own hunting land or belong to a club.

I was born and raised in the country and have witnessed the change from open hunting to a succession of "No Trespass" signs and cannot blame the land owner for posting if for a good reason, but in many cases the reason is not well founded. However, this limits most of the average hunters to state owned lands.

Most of the state owned lands are "Away Back In" or on the tops of mountains and the land surrounding it is privately owned and mostly posted, which makes it inaccessible, except for an entrance at either end or at such widely separated points that hunting (especially for big game) is limited to a perimeter area near the entrance.

Can you enlighten me as to why the Conservation Department does not obtain "Rights of Way" at several of the most easily accessible points and post notices to this effect, the same as is done on state controlled waters for fishermen?

G. L. Van Wagenen, Syracuse

• We assure you that the Conservation Department is doing everything within its power to provide sporting opportunities for all hunters.

If you consult the Adirondack and Catskill Land Maps issued by this Department, we think you will see that most of the areas marked in red are not so inaccessible as you might assume. All of these areas are open to public hunting, and with regard to many of them you can drive up in your car, get out, and take off with your gun.

We appreciate, however, your concern about the posting problem and the lack of lands available to the average hunter. But you may be sure that all lands presently owned by the State within the Blue Lines will always be available to the hunter or the fisherman. We do not, however, contemplate making some of the interior tracts available

Letters to The Editor

to every one by supplying access roads; on the contrary, we believe that large portions of the State should be retained as wilderness areas—available only to those who can and will make the effort to get into them.

For additional efforts by the Department to solve the public hunting problem, see the lead article in this issue.—Editor.

Panthers—black and tawny

Dear Editor: I have been much interested in your story in the December-January issue of THE CONSERVATIONIST about our wilderness having been invaded by panthers.

I call your attention to some pages in a recent book (pp. 102-109) in which the sudden appearance in unknown numbers of tawny panthers, black panthers from India, Canadian lynx and Bengal tigers in the forest clothing Mount Monadnock in southern New Hampshire is reported, "authenticated" and enormously enlarged upon by the properly terrified citizenry of the surrounding communities. The story, given with all its lurid details, may amuse the CONSERVATIONIST reader, or possibly suggest an explanation of how panthers have come to be so numerous in our northern New York counties.

The book is an autobiography entitled "It's Me O Lord," published by Dodd, Mead & Company. And it is by—forgive me—yours truly,

Rockwell Kent, Au Sable Forks

Byddgeleert

Gentlemen: Reading the article in October-November issue of THE CONSERVATIONIST on British Forest Conservation recalls the history of the town mentioned in Wales named "Byddgeleert". Translation to English is "Gelert's Grave". A monument stands there to commemorate a brave and faithful dog named Gelert. Many years ago a hunter left his dog in the home to guard his infant son. Returning later he found his house blood-splattered and disordered, and his baby missing. Instantly the hunter slew his dog, believing that he had destroyed the child—only to find beneath the bed the body of a slain wolf. And in the folds of the disturbed bedding lay asleep and unharmed the baby.

William C. Roden, Wappingers Falls

"Duck stamp" for woodcock?

Gentlemen: In your December-January issue which I received just today, I was reading your "Letters to the Editor" section and was surprised when I read your answer to a letter from Stanley J. Pasek of Grand Island. He asked if he needed a "duck stamp" to hunt woodcock. Your answer was, and I quote: "No stamp required—just a hunting license." End quote. I don't agree with you.

I have in my possession (and I just checked with it) a "1955 Regulations in Relation to Migratory Game Birds in N. Y. State" put out by the N. Y. Conservation Dept. It specified that woodcock is a migratory bird of the "shorebird" species. At the very end of the pamphlet it states: "(Note: All persons over 16 years of age hunting migratory waterfowl, in addition to the N. Y. State hunting license, are required to have a Federal Migratory Bird hunting stamp of current issue validated by their signature on the stamp. The fee for this stamp is \$2.00 etc.)"

I also have a "United States Department of the Interior, Fish and Wildlife Service regulations" relating to migratory birds and certain game animals 1955, Regulatory Announcement #47. It also specifies in Article 6.1, *Woodcock*, a Migratory Bird of the "Shorebird" species.

From Article 6.3(c), I quote: "No person over 16 years of age may take migratory waterfowl unless at the time of such taking he has on his person an unexpired Federal migratory-bird hunting stamp, validated by his signature written across the face thereon in ink. Persons not over 16 years of age may take migratory waterfowl without such stamp." The "duck stamp," as it is referred to by quite a few, is actually not a duck stamp, but a "migratory Bird Hunting Stamp".

Now you see why I didn't agree with your answer, and if, after all this, I am wrong, I apologize.

Robert Beideck, Rochester

• No need for apologies; the wording of the various regulations (both State and Federal) is certainly susceptible to misinterpretation. But the fact remains that the "Duck Stamp" is not required for the hunting of woodcock which, although migratory, are considered, upland game birds—not waterfowl.—Editor.

Pheasants should stay home

Gentlemen: Enclosed you will find the tag of a beautiful cock pheasant shot on November fifth of this year. It was shot in Dead Crick below Vergennes, Vermont.

As you know, the pheasant season in Vermont has been closed for a number of years and is still so today due to shortages of the birds. Programs have been set up by Fish and Game Clubs and the Vermont Fish and Game Service to restock and increase the population but these attempts seem futile with the pheasant trying to survive hard winters in this State and also trying to avoid falling prey to the fox and other villainous varmints of the Vermont Forests.

Here are the circumstances which led to the death of this bird. While jump shooting for Blacks and Mallards in the early morning of the fifth of November on a cold, windy, bleak day, the bird flushed about 40 yards in front of me right out of marsh grass standing about five feet high, and before realizing that it was a pheasant I was shooting at I fired and downed the bird. These are the actual circumstances under which this happened.

I was very sorry upon closer examination that I had shot this beautiful bird, thus breaking the law. I thought seriously of turning the bird over to a Game Warden and trying to explain the circumstances but refrained from doing so. I always try to be an active sportsman staying within the boundaries of the law, participating in sportsmen's activities.

I was very much surprised to see that this was a New York State pheasant which apparently must have a long line of history, apparently having migrated across Lake Champlain to the Vermont shores. He seemed to be a very old bird, very rich in color and plumage.

I could not refrain from writing to your Department and turning this information over to you. I figured it would be very helpful in the study of the pheasant and its apparent migration.

I would appreciate it very much if you would write to Walt Hickey, (Sports Editor) in care of the BURLINGTON FREE PRESS here in Burlington, Vermont—telling the history of this bird and the circumstances under which it was shot. He may possibly put a small article in the paper, thus enabling me to hear your viewpoints on this happening and see that you received my letter.

Unsigned, Burlington, Vt.

• *To unsigned, c/o Walt Hickey, Burlington Free Press: Your bird was one of 57 pheasants released by the Conservation Department and a local sportsmen's group on July 7, 1955 in the vicinity of Crown Point, Essex County. These birds at the time of release were approximately 10 weeks of age and were reared at Delmar, one of the Department's Game Farms. Chances are this bird flew across Lake Champlain at some point near this release site—a "hop" of about half a mile, though conceivably it could have tramped up to Port Henry and crossed the Champlain Bridge. In either event, a 2½ mile trek inland would have landed the pheasant in the Dead Creek area. This is*

not an unusual distance for pheasants to travel from a point of release.—Editor.

A bowl for the Stockbridge Bowl

Dear Editor: As you may recall from previous correspondence, the Stockbridge Bowl Association is an organization of conservation minded people, many members, myself included (i.e. my son) being your subscribers.

I wonder whether THE CONSERVATIONIST could make mention of our need for a slab of native black walnut which may have been drying and forgotten in someone's attic or barn for the past 10 years. The carver's blueprint calls for a piece about a yard long, about 20" to 22" wide and 5" or 6" thick, air dried and free of checks.

We would be glad to pay transportation or pick it up, pay hardwood price for it and include in the legend at the bottom of the bowl a mention of the seller. Thanks for any help you can give us.

Nathan George Horwitz, President,
Stockbridge Bowl Association,
Lenox, Mass.

• *The Association does good work for Conservation, and if we—or rather, one of our subscribers—knows of a suitable chunk of wood, please pass along the information.—Editor*

Moral support—mutual

Dear Sirs: Someone, please, to my rescue! Here I am, housewife and mother of 4 small children who should be minding the affairs of my home, and somehow I am in the midst of a heated discussion over hunting. Each year several letters appear in *The Watertown Times* reprimanding the hunter for "murdering" and destroying nature's beauty, and each year I become more infuriated.

Now to be perfectly truthful, the only time my husband and I argue is in October and November. Naturally, I can find a million and one things to do around the house when the weather is just perfect for hunting. Actually I think my feelings are pure envy for not being able to join him, for to me it is one of the greatest sports known.

So, I wrote a letter to *The Times* stating my feelings, and wouldn't you know, a few nights later 2 more articles were written by anti-hunters. One stated that I should read some works written by naturalists so that I might change my mind about the "barbaric custom;" the other was quite lengthy but really said nothing except that it was directed to me.

Now I don't believe in taking up space in *The Times* for an argument that could go on indefinitely, but I would like to defend myself just once. You see I signed my name, and all of the opposers are L.M.P., X, Trufax, and Animal Lover.

There must be some way to tell these persons that our sportsmen are not out to destroy nature, but that the hunter has an intense love of nature.

Mary Jane Kavanaugh, Watertown P.S. My husband is now having your grand magazine, THE CONSERVATIONIST, sent to his office. Our oldest boy (6) and I usually had it worn to pieces before he had a chance

to read it. We all enjoy it so much and hope you will be able to expand more and more as time goes on.

• *Thanks for everything, and good luck.—Editor*



A tall tail

Dear Editor: One of these pictures may be interesting enough to put in your CONSERVATIONIST.

The cock pheasant that belonged to this tail was shot around 20 years ago by Walter L. Chase in the Town of Stillwater, Saratoga County. Outside of the extraordinary tail (53 inches) and spurs of 1½ inches in length, the body and coloring was normal.

Mr. Chase didn't realize at the time what a beautiful trophy he ate for supper. The man in the picture is Sam Baertschi, 5 ft. 2 inches tall, a friend of the family. I write a column for the General Electric Works News and any information on this subject would be greatly appreciated.

Ray Pacelli, Ballston Spa

• *We're afraid that any additional information will have to come from you, not us. But the tail looks as though it belonged to a Reeves pheasant, an exotic occasionally introduced into this country.—Editor.*

Record deer head?

Dear Editor: Enclosed is a picture of a deer head I shot 32 years ago in the Town of Clifton, St. Lawrence Co.

This head has 21 or 22 points. I would appreciate knowing if this head ranks in size with others on record.

Albert Gayne, Gouverneur



Dear Editor: Enclosed is a picture of a twelve point buck I shot in the Adirondacks in the Fall of 1953.

Besides being a big set of antlers, the tines nearest the skull are nearly six inches long. I have seen many heads, the longest tines being about four inches. I have come to the conclusion that bucks such as mine are quite uncommon.

Donald Kapfer, Boonville



Dear Sir: I am enclosing a snapshot of a fairly good buck's head shot at Senora, Steuben Co., about the first year the deer season opened in that county back in the 30's. Shot by Fred Kelly, Sr. I did not measure the head, but it had about 33 points and was very old.

Olie DeMun, Wells



Mostly about mergansers

Dear Sir: On page 37 of your August-September number, you have an item stating that at the May meeting between all sea-coast states conservation representatives and the Fish and Wildlife Service, it was unanimously voted not to include shelldrake in the daily bag limit of four ducks. However the Fish and Wildlife folks *did* include shelldrake in this year's bag limit of four ducks. Do you know why this was done?

Our flights here last about two weeks and I am looking at 2 to 3,000 out front right now. These birds are the greatest fish destroyers we have and I have shot them here full of small flounders and smelt, and in the Spring they are great destroyers of fingerling trout and other game fish. Very few gunners bother them, and I believe I have the only set of good shelldrake blocks in this area. I sure got a kick out of shooting them in my "front yard."

I have lived on the shore of this large bay for many years and there are just as many shelldrake as there were 60 years ago. Most people think these birds are useless for food, but if dressed immediately after shooting and the breasts removed, they are delicious fried or in a casserole. If you know why these birds were dropped from a limit of 25 to one a day in combination with other ducks, I certainly would appreciate this information.

Harry C. Burns, So. Duxbury, Mass.

• It is true, as reported in the August-September issue of THE CONSERVATIONIST that the Atlantic States Waterfowl Council did recommend to the U. S. Fish and Wildlife Service that mergansers be dropped this year from the daily bag limit. Other recommendations were also made as reported in the article and it was possible for the representatives of the various Atlantic coastal states and the Service to come to a satisfactory agreement on almost all of them. In the case of mergansers, however, the Service held that there was some indication of a down-trend in their numbers and they felt that the separate legal bag limit of previous years was out of tune with the times and that it encouraged using this species as live targets—resulting in a resource waste. The Service also pointed out that wherever mergansers were a serious predatory menace, permits could be obtained to shoot them.
—A. W. B.

A. N. Cheney and his gun

Dear Sir: In your August-September issue there appeared a short article by myself entitled "A. N. Cheney and his Gun". On page 41 of your October-November issue, you published a letter from Mr. Dan Brennan, Fayetteville, in which he stated that "someone has slipped up". He disputes my quotation from Dr. Holden's "History of Queensbury, N. Y." in that A. N. Cheney did not die in 1860 but rather about the year 1900. He does admit, nevertheless, that Dr. Holden was a "very erudite" gentleman.

I took this question to my friend Mr. Robert Carter, retired treasurer of the Glens Falls Insurance Company. Mr. Carter has a large fund of knowledge as to the early history of Glens Falls. At the same meeting at the Crandall Library there was present Mr. Frederick B. Richards, now some 90 years young, very keen of mind and until recently the secretary of the New York State Historical Society from the date of its founding. Both gentlemen agreed upon the following facts:

A. N. Cheney, the elder, was at one time treasurer of an insurance company now incorporated in the Glens Falls Insurance Company. He died comparatively young and the year 1866 sounded about right. The A. N. Cheney to whom Mr. Brennan refers was the son of the A. N. Cheney who owned the gun in our local museum. He (the son) *did* die about 1900 and was co-author with C. F. Orvis of their book on fly fishing, of which Mr. Carter has a copy.

I would not take up your valuable space simply to show that the someone who slipped was Mr. Brennan, but I am anxious to definitely date the unusual pistol in our collection which unquestionably belonged to A. N. Cheney, the elder, who died in 1866.

William H. Hill, Fort Edward

Delivery trouble

Gentlemen: My Oct.-Nov. issue just came creased and torn on both covers. Careless handling, doubtless in mail somewhere along the way. Spoils the fun and pleasure, both of seeing the beautiful plates and the reading as well. No way to treat Clayt Seagears nor his ducks, nor anyone else.

I have spoken to the local post office, but it occurs to me that if you have received other like complaints, it might be in order to address our packaged prayers for relief to the 4th Ass't Post Master General in charge of conserving THE CONSERVATIONIST.

Sidney A. Sherwin, Batavia

• We have our problems, and so does the Postmaster. With a circulation such as ours, something is bound to go wrong somewhere.
—Editor.

A fair start

Dear Sir: Mrs. Marko is my beautician and she tells me that many of her customers have subscribed to THE CONSERVATIONIST, after having seen her copy in the beauty shop.

You're very welcome!

Mrs. L. Allen Woodstock

• That's an outlet we hadn't thought of. Thank you, please.—Editor



The 12th egg

Memo to Pete Fosburgh:

Re the article on turkeys on pages 12 and 13 in the December-January issue of THE CONSERVATIONIST:

The picture of the hen turkey on page 12 was taken by myself, not Robeson, in Allegheny State Park, on April 29, 1953. After I took the picture I caught the bird, discovered that it was a hen, and took it to the camp where I was staying. She was confined in the nearby Chic Sale, where she promptly proceeded to lay an egg on the seat. The egg failed to bounce on the concrete floor, so I examined the remains and found that it had been fertile. I leave it to your imagination to decide why it was so easy to catch the hen. She escaped the next day when I let her out to give her feed and water.

If you will look carefully at the picture of the nest you will see that there were 12, not 11 eggs therein. I'll bet you get a lot of fan mail on that one. The picture was taken by Bob Carl, who found the nest on May 21 near East Brook, north of Walton, Delaware County.

Ralph H. Smith, Wildlife Res. Lab.,
Delmar Game Farm

• *It took some retouching to bring out that 12th egg. See above.—Editor.*

Big white pine

Editor: This is about a large white pine, perhaps the largest of its kind in the State. Last Tuesday my wife and I "discovered" it on the left bank (facing downstream) of West Canada Creek where it crosses Route 28 the first time below Trenton Falls. I measured the circumference carefully with a line and when we reached home found it 170 inches. That, divided by 3.1416, gives a diameter of 4.5 feet. The old monarch seems to be in fairly good condition considering its advanced age and all the storms it has weathered.

Jess Dildine, Geneva

• *The pine may not be the largest pine standing in the State, but it is certainly close to it. In our official big tree list, copy of which is enclosed, you will note that there is a 15-footer reported from Hamilton County, but we never got any height data to complete the record. I believe this was reported by A. T. Shorey in the vicinity of Eighth Lake. The largest of which we have complete verified records is from St. Lawrence, measuring 14' in circumference and 141' in height. This was growing in what*

was probably the last extensive stand of virgin pine in the Adirondacks along the Oswegatchie River, south of Wanakena. Most of this stand went down in the 1950 blow, though I understand that there are still some of these large pine standing.—E. W. Littlefield

Peace

Dear Sir: I thoroughly enjoyed your article on Verplanck Colvin in the February-March issue of 1954. Daniel Lynch was my grandfather, so naturally my interest in anything pertaining to that part of the country, and the work he did there, is very keen. I am enclosing a letter of Mr. Colvin's written to my grandfather. How they both despised war!

Mrs. Philip B. Sheridan, New York City

Verplanck Colvin: Sends his kindest regards to his friend, Daniel Lynch, and is very glad to hear from him. I notice the 83d year of your birth—and trust your superb health and the good words you send to me will arouse your energy to more excellent works as the years pass by. I have never forgotten you, and impress upon you that you have not lived too long—as you give pleasure to your friends.

Your letter revives pleasant memories of the thousands of square miles we worked over under the authority of the State Government describing the vast geographical areas over the Wilderness of Northern New York. I can never forget your participation with me in the surveys on which I was engaged by the authority of the State of New York. Right glad am I to hear from you.

The war times that now threaten the safety of mankind over the World are distressing. Peace and righteousness must replace the dreadful slaughter of war—before American youth participate.

I pray for peace over all the World; and wishing you health and happiness, I am glad to hear from you, seeking—as a servant of Christ—security for all mankind, as the wish of your friend of very many years.
V. C.

Albany, New York,
November 29th, 1917

Logging at Au Sable

Dear Sir: In looking through THE CONSERVATIONIST of October and November, I became interested in the two pictures of the old log chute on page 42. My housekeeper, Mrs. Delia Peckett, informs me that her father was the contractor engaged to build that chute.

He was Jerry Bola, Sr. who lived in Au Sable Forks and his son, Emery Bola, still living in Au Sable Forks and now 76 years of age, worked on the construction job.

The slide was seven miles long going far back into the woods and was built about in the year 1895. The logs were floated and held in a boom directly in front of the pulp mill in Au Sable about twelve miles away. That mill is still in operation.

Mrs. J. Hubert Stevens, Lake Placid

• *Many thanks for the information.—Editor.*

The right spirit

Dear Sirs: I am fifteen years old and have a junior hunting license. I also have great respect for the laws. What I want is to be a junior game warden. If I can be one please let me know as soon as possible.

Samuel Tratt, Moravia

• *We need your help—and obviously we're getting it. But officially there's no position such as Junior Game Warden. In case you're interested in becoming a regular Game Protector some day, we're enclosing some reprints that might be of interest.—Editor*

Non-resident license

Dear Mr. Fosburgh: A friend of mine owns about 100 acres of farmland (including woods) in the State of New York, but he resides in Pennsylvania.

Is he entitled to a New York State big game license or must he buy a visitor's big game license in order to enjoy some hunting on his own property for which he pays taxes?

Frederick W. Neuman, Cochechton

• *He must buy a non-resident license.—Editor*

"Sea lilies"

Dear Sir: I received the latest copy of THE CONSERVATIONIST and I noticed the article on Prehistoric Indians of New York State by Dr. William A. Ritchie. In this article some beads were illustrated.

I am enclosing some samples of some articles I dug from the ground. They were excavated beneath a huge rock on the side of a hill, and they were about six inches below the surface. I unearthed over a hundred of these, all below the rock. I was wondering if they could be some sort of Indian relic, as within a mile of the spot where excavated there was an Indian camp. This camp was along the Wallkill River and my grandfather as a boy found large numbers of arrowheads, fish scales, etc. when the hill had been plowed.

The samples I am sending you may be something else, but I am curious as to what they are.

Robert Evans, Walden

• *We forwarded Mr. Evans' letter and samples to Dr. Ritchie, who replied: "I regret to inform you that they are not Indian beads but fossil crinoid stems of the Devonian geological period. Crinoids, sometimes referred to as sea lilies, were ancient marine invertebrate animals, not plants, which grew in the warm seas covering large parts of New York State several hundred million years ago. For further information I refer you to the 'Handbook of Palaeontology for Beginners and Amateurs,' by Winifred Goldring, New York State Museum Handbook No. 9, 1950. The fossils are being returned to you."—Editor.*



Time out for lunch at our De Bruce camp
(photo by Niles Fairbairn)

Howland's Island

Dear Editor: It's with great pleasure that I am sending you \$5.00 for 3 years' renewal subscription to your magazine. In a separate letter I am also sending in my archery deer report tag, my first deer via this method. This deer was shot on Howland's Island.

When the Dept. announced Howland's Island would be open this year for deer, I immediately went through all my past issues of your magazine (and I have them all) for information concerning this refuge. See page 5, February-March 1954 issue; the aerial photograph was studied by my party of 4. We selected our area of hunting on the basis of this photo and the permit sketch.

The area proved to be great, and we had all the action 4 archers would want in a day's hunt. We had never been on this Island, but we sure would like to go back. But it is difficult to concentrate on deer hunting when one sees so many ducks and geese in the air and on the ponds. After downing my deer, I spent the rest of the day taking movies of the waterfowl. So you see, I had shooting galore.

Leon P. Haber, Lockport

Largest state park

Dear Editor: Enclosed is a clipping from *The Buffalo Evening News* 10/31/55. Upon reading this I immediately thought of our Adirondack State Park which I am sure is much larger than the one mentioned in this clipping. What say you?

Chester G. Spence, Orchard Park

"Merriweather, Mich—The largest state park in the United States is 47,000-acre Porcupine Mountain State Park in the western end of Michigan's upper peninsula."

• *The Adirondack State Park is not really a Park at all. It is simply the area described by the "Blue Line" within which the State intended to acquire property. State lands within this Blue Line—in other words, within the Adirondack Park—constitute the Forest Preserve. But 60% of all the lands within this Blue Line are privately owned.*

So, as far as a solid lot of property constituting a Park is concerned, State holdings in the Adirondacks really don't qualify.—Editor.

Coyotes

Dear Sir: Once again I had the pleasure of hunting deer in the Cedar Lake country the first two weeks of November. It was interesting to note the scarcity of doe sign as compared to previous years and also the increase in coyote sign. In one spot alone, between "Little Round" and "Big Round" mountains, I counted the tracks of five (5) coyotes in one group. In several other instances, I crossed coyote tracks running in pairs.

Not being an expert in animal tracks, I have assumed they were those of the so-called Adirondack coyote. If this is so, it would appear that the coyote population has substantially increased. The question I have in mind is: What relationship, if any, is there between what appears to be a smaller doe population and the increase in number of these larger predators? It seems to me that young deer would be excellent natural food for the coyote, particularly if they do their hunting in pairs as the tracks seemed to indicate.

George T. Butler, Jamestown

• *Please see page 8.—Editor.*

Blue Mt. Lake Museum

Editor: Many thanks for your fine piece on the Blue Mountain Lake Museum on page 37 of the December-January CONSERVATIONIST. We're sending reprints to a number of people. It's going to be a great help to us.

The similarities between the names of the early Blue Mountain Lake hotels are confusing so it isn't surprising that the photograph in the upper left-hand corner of page 8 is a case of mistaken identity. The photograph shows Holland's Blue Mountain Lake Hotel as it looked, I would guess, about 1890. The museum is being built about a half mile up the road towards Long Lake on the site of Merwin's Blue Mountain House.

Harold K. Hochschild,
New York

Editor: In regard to picture in upper left hand corner of page 8 of your latest issue. I lived a good share of my life at Merwin's Blue Mt. House and have seen a number of pictures of the place but never one that looked like this. The Blue Mt. Lake House was a different place and was located near the lake near where Potter's cottage colony is now. I'm wondering how Mr. Miller could set it on Merwin's Hill in front of the Blue Mt. House?

Mrs. Russell Merwin,
Indian Lake

• *As you'll note above, Mr. Harold S. Hochschild has also called attention to the picture, identifying the old hotel as Holland's Blue Mountain House. Similarities between names of the early Blue Mountain Lake hotels, are, admittedly, confusing. We identified it as an early Blue Mountain House; where we erred, as we informed Mr. Hochschild, was in identifying the cabin at the left as Merwin's. Here again, similarity of Adirondack structures threw me off base.—R. B. M.*

Entirely about cats

Dear Sir: Pat Barry, in the April-May CONSERVATIONIST, asks for information on the housecat's wanderings, its "standing as a predator" and its stomach contents.

Having over a period of years owned something like fifty cats (there is a large turnover because of the predations of human hunters), I believe myself qualified to answer his questions.

1. The true (well-fed) house cat is not given to much wandering, except, of course, during breeding periods, when he will go to any length to meet up with a personable and willing female. He does not wander to any extent because, like most other animals, he has a certain territory staked out as his own; let him cross the boundary line of that territory and chances are he will be considered a trespasser and get beaten up by the cat whose property he has invaded. During the aforementioned breeding periods he considers this a reasonable hazard, but normally it is something he prefers to avoid. Our male cats "wander" something less than a quarter of a mile in each direction. The dinner call brings them all home in five or ten minutes, unless one or the other of them happens to be busy ogling some charmer. The female cats are much more restricted. I should say their range does not extend over two hundred feet.

2. I have always trained my cats to retrieve (as the Egyptians once did) and can therefore report accurately on their predations. When, perhaps as no more than a kitten, one of our cats makes his first catch, I immediately take it away from him, even though it may be no more than a grasshopper, and substitute a small piece of meat. Since cats much prefer their meat unadorned with fur, undigestible wings, legs, etc., they are soon eagerly bringing me everything they catch, usually alive and unhurt, in anticipation of the reward. Thus I made the discovery that may interest others besides Mr. Barry: Cats usually (again, if they are well fed) specialize in making their catches. One of ours brought in nothing but live frogs. Another, shrews. Another, field mice. Still another, chipmunks. One we still have never brings in anything but live snakes. Out of all those we've had through the years, only one specialized in birds. I did everything I could think of to break him of the habit, but never succeeded. However, he didn't last long. While he was busy stalking a bird one day another predator (fox) stalked *him*—and that solved that problem.

Once, as an experiment, I allowed one of our male cats to have all the raw meat he wanted. He gave up hunting entirely.

3. As for the stomach contents, I can tell you exactly what the stomachs of our cats contain: One of the prepared dried foods (trade name furnished on request), horse meat, milk, a bit of whole wheat bread, a bit of cheese, and in season, a couple of blades of grass. If Mr. Barry wants to do some harmless research on this subject, I suggest he catch the nearest cat and put some salt on the base of its tongue. Then he'll know.

Era Zistel, Haines Falls

Dear Sir: While looking through some back copies of THE CONSERVATIONIST I saw a photograph of a dead fox hanging in the crotch of a tree (August-September 1954 issue—page 35) which reminded me of a very similar incident that I came across many years ago and which may prove interesting to your readers and especially to Mr. H. C. Furman, who supplied the photograph.

During the Winter and Spring of 1916-17 I was living on my brother's farm located in Putnam County, New York. About a half-mile from the house was a wood lot with a spring where we obtained our drinking water. I used to take a horse and light wagon and several 40 quart milk cans and go there every two or three days. One day while waiting for the cans to fill I noticed a sapling nearby with a fork or crotch in the center about four feet off the ground. A perfect specimen of a large red fox had its neck firmly wedged in the fork. It had undoubtedly sprung at a bird or squirrel in the sapling and in descending was thus trapped. Its hind feet were only a few inches off the ground which, however, was sufficient to prevent it from obtaining a purchase and thereby freeing itself.

I have often thought since then that such an accident could only happen to a wild animal "once in a lifetime," but after seeing Mr. Furman's photograph I now know that I was mistaken.

Harold R. Callisen,
Nutley, N. J.

Nomenclature

Dear Sir: In response to your request for a more suitable name for the "Potholes" you so interestingly discussed on page 14 of THE N. Y. S. CONSERVATIONIST, October-November 1955, I wish to submit my suggestions: Pondlet or Pondling.

Webster's Collegiate Dictionary does not list these two words but it does give this information:

Pond:—"A body of water, usually smaller than a lake"

-let:—"A noun suffix having a diminutive force"

Diminutive:—"Below the average size; very small"—"A derivative denoting something small or young of the kind . . . (gosling, eaglet, lambkin)"

So why not add a word to Webster's by adopting either "Pondlet" or "Pondling" in place of "Pothole".

Mrs. William A. Cunningham,
New York City

• *Little water areas in the west are referred to as "potholes" and when we in New York started creating miniature marshes or wild-life ponds the name was simply transferred here. It has always distressed me however, because the transplanted western name didn't fit into its new surroundings.*

Pondlet is much more dignified and will, I am sure, appeal to the more aesthetic among us. Even Webster should be interested. Why don't you make application?
—Ben O. Bradley

Editor: Many of your readers write of mines in N. Y. State. As a boy at camp at Paradox, N. Y. (Essex County) forty years ago, I used to hike to the mines at Hammondsville, which no longer exist. These mines were active during the Civil War and, I think, up to about 1890, and produced iron for cannon. I have myself picked up implements used in the mines, and burros' shoes. The mines at that time in the lower levels were filled with ice, even in August, and we used to pick strawberries at higher levels.

I have been down to the last level in the mines and have seen the last pick marks left there. Above ground the church, powder-house and school still stood and about 700-1,000 people must have lived there when the mines were active. Now the entire site must be overgrown and returned to the wilderness.

The approach to the town, as I remember it, was south from Route 73 between Paradox and Eagle Lake, about 3 miles off the main road.

Julian W. Schwab, New York



Binding the magazine

Sirs: How to bind THE CONSERVATIONIST: As shown in the picture, lay a year's issues on a hard surface and drive in four 1/2" long flat headed wire nails on a line 3" apart and within 1/4" of the back edge of the magazine. Now turn and nail the other side. Then cover the nail heads and magazine backs with 2 strips of 3/4" colored adhesive Mystik tape. The year can be added with calendar figures and covered with Scotch tape.

This binding is durable, since it is almost impossible to loosen the nails with ordinary use. If desired, the covers can be stiffened with a light cardboard and covered with clear plastic sheet fastened with Mystik tape.

Bernie E. Hayes, Wellsville

King size woodcock

Dear Editor: During the latter part of October I was hunting woodcock about 30 miles north of Utica during a very cold, very wet morning. I missed a comparatively easy shot on a woodcock which was almost twice the size of the ordinary bird. One of my companions missed it when it flushed a second time.

My brother-in-law, hunting with me in the early 30's, missed one of these several times one morning and my father told us at the

time that it was a large English woodcock. Apparently they are pretty rare in this section of the country and I am wondering what your experience has been with them. Is this a distinct variety or is it a throw-back?

W. N. Macartney, Utica

• *We checked with our Bureau of Game, and they informed us that there is no authenticated record of a European woodcock being taken in this country.*

It is true that this subspecies is larger than our native bird, but as a woodcock hunter you also know that there is a great variety—especially with regard to size—in our native and flight birds.—Editor.

Rebuttal

Dear Editor: Enclosed find my renewal for another year of your fine magazine. I believe it is doing outstanding service in the cause of preserving our natural resources.

I noticed in the Dec.-Jan. '55 issue you had another letter claiming you promote killing and not conservation. Good conservation calls for the harvesting of crops, both vegetable and animal. Just as it is criminal to let a stand of young trees choke each other for want of thinning, so would it be criminal to let the deer herds starve because of overcrowding. The wilderness area herds amply prove this point. Please continue your articles on hunting and fishing to teach more of us to be sportsmen and not just hunters and fishermen.

Anthony Vasko, New York

Dear Sir: Rarely am I goaded into writing a letter to an editor; Ida M. Mellen, however, wrote a letter published in the December-January issue that has sprung me into action, and I'll bet there are at least a thousand more with me. She states in part: "Of course everyone interested in conservation feels as I do that the name of the magazine is the most absurd misnomer that could well be imagined. If you had the courage to publish this letter you would find everyone in agreement with it who approves of conservation."

Without going into a detailed description of what I consider the field of conservation, I would like to go on record as follows:

1. I am interested in and approve of conservation; 2. I do not consider the title of the magazine "the most absurd misnomer," or for that matter any other kind of misnomer; 3. I think that you and your magazine are a good and valuable force in the important and expanding field of conservation; 4. I hereby enter one humble vote of confidence for your magazine (title and all) and for the job you are so successfully accomplishing.

John E. Haas,
Gettysburg, Pa.

Dear Sir: After reading the Ida M. Mellen letter in the Dec.-Jan. issue, I am filled with absolute disgust.

You are doing the greatest possible service for our State, and literally doing it around the clock. And then to straighten up from your labors and get slapped in the face with that Ida M. Mellen letter—I don't see how you have the guts to stick to it.

Melvin F. Orr, Corning

Opinions on Doe-Day and Monday Opening

Dear Sir: Would like to suggest that if you ever have another doe day like this year that it be for county residents only; there are enough hunters in these counties to do all the herd reduction that is needed. And that way the law might be enforced. Dec. 3 we home folks tried to hunt with our shotguns, while outsiders used 30-30 and larger rifles, so they got most of the deer. I counted over a hundred does and fawns killed within a radius of 3 miles around my place.

I have 73 acres in my farm and it so happens that there is a very good deer runway across it. At one time I counted 90 hunters on the 73 acres, 15 of them with high power rifles. I wanted to hunt myself but had to get off my own place just for safety. In the afternoon I shot a buck and three men, all strangers, stepped out and cut my buck's throat before I could get to it and 2 men pulled their guns on me while the third one dragged the deer away. So the only way out that I can see is to post—which I figured I would never do. All around here are planning to post.

Guy Hewes, New Berlin

Dear Editor: While out deer hunting this last deer season 1955 I drove over in Livingston Co. to my old favorite spot. Went to park car notice a post and all along. So I went to nearest house ask the ladie that answer door if I could hunt as I had hunted that land for quite a few season. She replied no. I started walk away thank her. Just then her brother came in yard she spoke to him saying I wish to hunt. He went on telling me why they posted was of fences being cut gates left open shooting to close to house. I agreed with him. With that he invited me inside call his sister back and had her write me a permit to hunt. I felt much better and went on hunting. I see 3 doe close range but in thick pine and hemlock and know if I shot it made a cripple and not a clean kill so I past it up, going home empty handed I still felt happy of the sport. Being in my old favorite spot brought memories back to me of the past.

While hunting I meet the father in the large woods. We stop talk for a few minutes I interduce myself to him. He didn't ask me for permit but I showed him it. Or I felt guilty to him not to show it.

Now to show my appreciation for their kindness I notice he smoke Camels. So I am buying him a box or carton and mailing him with a sportsman Xmas card or picture of deer.

I believe if all hunter who wish to hunt on posted land ask permission and it best to ask posted or not, then at least send a greeting card. Would show that farmer that you appreciated of him letting you on his land. That he trust you to be and treat his land and propert like you would your own while their. I believe would be less posting land.

John H. Caton, Rushville

• We think so too. And we wish we had more sportsmen like you.—Editor.

Dear Editor: Having just finished another deer season here in the Southern Tier and with the sound of D-Day, or rather Doe-Day cannonading still ringing in my ears, I'm compelled to write this to express my sentiments.

First of all, in the section of Chemung County in which I hunted it sounded like the second invasion of Omaha Beach. Plenty of slugs were whistling about, and the shooting was continuous from 7 until late in the afternoon. I've been told by a number of friends it was like that where they were hunting also.

To make things worse, a thick blanket of fog covered the woods and hills cutting visibility down to 25 or 30 yards. One thing we can all be thankful for under such adverse circumstances is that there weren't more accidents.

Perhaps the fog cover was nature's way of protecting her deer herds, who knows?

What I'm leading up to can be summed up in one phrase: "Too many hunters concentrated in too few counties." Of course I'm basing my opinion on what I saw and heard in Chemung Co. but I'm certain the other 14 had just as large concentrations of hunters if not greater.

Last year (1954) I thought you fellows in the Department were on the right track when you opened the two wilderness areas for doe hunting. Especially so since it was done in a safe and sane way by setting a certain quota of special licenses at a nominal fee for each area.

But what happened here? Just 15 counties opened in the whole state, with hunters from all over flocking into them for one day, D-Day. It seems to me we should take a lesson from our neighboring state of Pennsylvania.

If and when an antlerless season is deemed necessary (and we all know they are occasionally for proper herd management) then one day should be set aside. In all fairness have it on Saturday, the last day of the season. It should be as nearly statewide as possible including the Adirondacks and Catskills.

Last but not least, charge an additional fee of say \$1 for the special antlerless license. What real sportsman would begrudge that?

Now comes the payoff: Assign a certain quota of licenses to each county, with residents of that particular county having first choice. The number to be determined from preseason reports from your district game managers and protectors. They are in a position to know the size of the herds in their own localities and just how much thinning out they can stand due to the condition of the range, etc.

Also you'll be able to get somewhat of an idea as to how many licenses to issue from your kill records of previous years, that to be accomplished by figuring the ratio of successful hunters against those not successful according to the number of licenses issued in that particular county. Sounds com-

plicated, doesn't it? But I would like to see something done along these lines in the future so there will be no repetition of the great number of hunters in certain areas like there was this past season.

I know you'll agree with me when I say we're all striving to improve hunter-farmer relationships, but I can't help but feel that these relationships took quite a drop this past D-Day. Only time can tell.

F. W. Knowles, Waverly

Dear Sir: As soon as my subscription to THE CONSERVATIONIST runs out you can bet that it will never be renewed. I cannot stand the hypocritical attitude maintained by your organization via your editorials and feature articles regarding the deer season for 1955.

You steadfastly campaign for fair play and game conservation, with which attitude I heartily agree, while on the other hand you allow a partial doe season for various counties of the state. As I write this, I am somewhat sick to my stomach, having seen a dead male fawn, not over 3 ft. in length tied to the fender of a proud hunter's auto. I have never killed a deer but have shot several times at good sized male deer. I enjoy seeing both male and female even if I'm not able to kill a buck. I doubt very much if my children will have the thrill of seeing this fine animal very much longer, especially in southern Cayuga County.

To what extent has your department fallen when they come out in their official publication pleading for better sportsmanship, and then come up with this colossal farce of a doe season? Why not declare an open season on deer until they are completely wiped out? No doubt your magazine has enough pictures of deer to keep some of your readers interested for several years after the deer are on their way to being just a memory.

I know you people have a fine bunch of alibis for allowing such a slaughter of does and fawns. Until my subscription to THE CONSERVATIONIST runs out I will look forward to reading your elegant, flowery drivel as to how your statistics show that the doe season was a complete success both artistically and financially. (You *did* sell a lot of deer licenses).

I'm wondering whether your Departmental deer experts sat in their plush Albany offices and phoned the various Capital City lobbyists who represent the Sportsman Clubs, Farm Bureau or other farm organizations to find out the deer situation; or did they ascertain the feasibility of a doe season from the game wardens and resident farmers who live in the areas where the deer were to be slaughtered.

I don't write this expecting it to be printed in THE CONSERVATIONIST but I do feel, after the Saturday slaughter, that your Commission is very poorly named.

Henry Bradley, King Ferry

Dear Sirs: I hope this letter will meet with the approval of many mothers, wives (and

hunters) in Western New York, concerning the open hunting season in the Southern Tier on Thanksgiving Day. That day was set aside for families to join with their loved ones in a festival of gratefulness for their many blessings.

With every year, an increasing number of hunters leave home Wednesday evening for that big day in the woods. It strikes me that the children of this generation will grow up with a lost sense of the true meaning of the Thanksgiving tradition.

I would like to see a petition find its way to Albany, requesting the opening be set for the first week in December by 1956.

Rida S. Spross, Rochester

Dear Sirs: This last hunting season for deer was too cold and uncertain in Orange County, N. Y. If it could be put back to Nov. 1st to 15th and have all game hunting open at the same time, it would be fair to all hunters, and would discourage poachers and jacking.

I think that licenses should be issued to those who can produce proof by letter from gun club or farmer that they have land to hunt on; otherwise they should be informed where State provides land for hunting.

Pete V. Smith, Brooklyn

Gentlemen: Question opening day setting on Mondays—for pheasant and deer in lower New York—we white collar workers get slim picking when the game has been shot over by the local townsmen for a week. Why not open on Saturday—so we can all get in the field. Seems premeditated. Is there a good reason?

Michael Davis Barnett, Darien, Conn.

• *There is indeed a reason, and we think a very good one. In common with Connecticut, New York—particularly the Southern part of the State—is pretty densely populated and hunting cover is within easy range of Metropolitan hunters. As a consequence, the countryside has been overwhelmed when the season opens on a weekend and this has resulted in the past in so much ill feeling on the part of the landowners that for the last several years our Southern zone openings have been on Mondays. It appears that this spreads the pressure more generally through the season even though, as you have pointed out, those living at any distance away find it difficult to get out on the opening day.*

We feel that the improved landowner relationship more than compensates for the inconvenience caused the hunting fraternity, and this is of paramount importance, since the landowners after all are hosts for most of the hunters in the State.—A.W.B.

Dear Sirs: Noticing the change in deer season dates in my zone (Southern), I was wondering if the opening of the season on a Monday was for the purpose of somewhat reducing the deer kill in this area. Having read Mr. J. Meyer's letter in the Oct.-Nov. issue (1955) I agree that the opening of the season on a weekend would be beneficial to the working man. However, this would be quiet a blow to our deer population.

The season this year allows the animals to recuperate from the first days of hunting, since there are considerably less hunters out

on a week day than there would be on a weekend. Our deer are extremely well fed in this area and need no large yearly reductions in their numbers to lessen crop damage and starvation.

Jack Hope, Hurleyville

• *The Department feels that a Monday opening is best for deer season in all sections of the State, except the Adirondacks. Experience has shown that weekend openings result in a concentration of hunters which is most distasteful to landowners—and so, in the long run—not beneficial to hunters, since the posting signs go up rapidly when the landowners become discontented.—Editor*

A moose tree

Dear Editor: Perhaps you would be interested in an oddity that exists near this community.

It happens to be an oak rather than a maple "moose." Apparently an accident made a sharp Z-shaped fold in this tree when it was just a sapling. I would estimate the stump diameter to be 40" now and the "nose of the moose" is six feet above ground level.

John L. Weaver, D.D.S., Nunda



Posting

Dear Editor: Many of the sportsmen of this State are becoming alarmed because of the increasing tendency of small groups to purchase, or rent, large tracts of land and then

to immediately "post" the property against hunting and fishing by their fellow sportsmen. We who live up here in the mountains are fortunate in having large areas of State land nearby, but sportsmen of other areas will soon find themselves excluded entirely from hunting and fishing if this "posting" continues at its present rate.

Numerous proposals are being made to alleviate the situation, such as the Isaac Walton League proposal of Town Permits, but all of these proposals—even if 100 percent successful—can only help a little. We can never hope to really solve the problem unless we are willing to face the real issues. For example, our present Posting Law permits a single person or a group to close off huge areas to licensed hunters and fishermen, and gives the owner or lessee the right to put the State's game and/or fish to the exclusive use of a select few. Does not the fish and wildlife of our streams and woods belong to all of the people of the State?

No one will protest the right of any property owner to exclude trespassers of all kinds, but why should the Posting Laws in this way serve to permit an owner or renter of land to have the exclusive use of fish and game that belongs to the people as a whole?

Or, since the State has the right to determine where, what and when hunting and fishing may be done, is it necessary that the New York State Hunting and Fishing license include the right to hunt and fish on "posted property"? If an area is "posted" against one licensed hunter or fisherman, then let it be closed to *all* hunters and fishermen. This would protect the right of anyone merely wishing to exclude trespassers and put out of business those trying to monopolize or commercialize our game and fish resources.

C. E. Collins, Garondah Lodge,
Rainbow Lake

• *We are sure you realize that there is more to writing a law than merely having a good intention; any law of the State must be enforced. Enforcement of the posting law is particularly difficult, since the law and its enforcement involve some of the basic principles on which the society of this country is founded. We here in the Department, perhaps more than any one else, appreciate the basic facts with regard to ownership of game on the one hand, and the rights of the property owner on the other. But to come up with a solution that will be satisfactory to everybody—that's something else again.—Editor*

Credits

First cover, pages 2, 3, 5, 6, 17, 20, 24, 25, 29, 30, 32, H. Wayne Trimm; second, fourth covers, Hy. S. Watson; 7, H. T. Pfitzenmeyer; 8, 9, Doug. Finch, Ed. Maunton, Roy Irving; 10, Meade C. Dobson, Dr. Desnoes; 11, 15, 16, 18, 21, 22, 35, Irving; 12, 36, Earl McGuirk; 26, P. W. Fosburgh; 28, Louis Agassiz Fuertes, N. Y. S. Museum; 34, R. S. Bergh, Middleburgh; 37, Albert Farrere; 39, Jamestown Post-Journal; third cover, Clay. Seagears.

Fish are Worth Their Salt

IF you *don't* wag your tail when you get home at night. If your nerves are needles and your disposition's dour and if your heart is songless and your digestion's poor—let us suggest a simple remedy.

You need a little something around the house—like on the sideboard in a liquid container.

You need an emerald-eyed, voodoo-faced Spiny Box Fish (center of colored picture opposite) swimming around with its fantastic friends in the gin-clear fluid of a salt water tank. These characters all look like people *you* know. The little Cow Fish is Captain Bligh—with horns. The File Fish once sold you something way too tight. The Trunk Fish was that great big freckled Mama last Summer on the beach.

But perhaps your nerves are soothed only by the spectacular. The Spiny Box Fish is still your boy. On occasion it gulps in water until it takes on the proportion and appearance of a golf ball following two rounds of play by a 30-handicap man using only a spade mashie. Round but lumpy. Next it sort of sloshes itself, probably to clear its pipes. Then, by convulsive movement, it suddenly deflates with a resultant jet-propelled dash across the tank like the crazy swoop of an untied five-cent balloon. This usually makes quite an impression on the other fish. Also sometimes on the Spiny Box Fish itself—especially if it is facing too near the glass when it deflates. It is a very soothing pastime to sit there and say BOING-G-G at the precise moment.

Or maybe you'd like that little gem-colored West Indian magician called a Blue Head (figure 3 opposite). This one lies down on its side against the sand at night to go to sleep. But first it pulls over itself a shining bubble coverlet neatly secreted from pores apparently between its cycloid scales!

Perhaps you seek the soothing influence of Saratoga. Then buy yourself a male Sea Horse—a "*gravid*" male it should be, preferably of the *Hudsonius* variety. For this is a kingsize (4-inch) Sea Horse with a much-inflated pouch (figure 7) from which in due time will emerge a couple hundred colts and fillies. They're the size of mosquito larvae but perfect little hosses just the same. At this point remove father or all

the children again will be inside and not where Mama tucked them either.

Sea Horses need live food. It must be plenty small to fit the microscopic mouths of the babies. Do not dismay. Mix some salt and borax in a shallow bowl of water. For a buck, buy a small bottle containing a billion or so of the long-dried (maybe for many years) eggs of the brine shrimp collected from the salt beds of Utah. Sprinkle a few thousand of the dust-size particles on the water. In a day the infinitesimal sparks of life have been kindled. The floating eggs hatch into a moving Milky Way of swimming shrimp—soup for your steeds. Salve for your soul if not sauce for your spinach.

But maybe you don't go for fish requiring such dainty food. So you can go to Bermuda and, making like Dr. Beebe, dredge from the icy Stygian depths a Black Swallower. This one is able and willing to swallow whole another fish thrice its size. Which is quite a trick. On the other hand, maybe you'd just like to go to Bermuda.

When you get home you can buy a beast with an appetite adequate enough. This is the grotesque Saragassum Fish (figure 6) which will climb around the coral in your tank, using its pectoral (front) fins like hands and seeking to surround, in one gulp, a friend which needs be only slightly smaller than itself.

The marine aquarium is the newest of the natural hobbies. Even so, the early Romans had 'em. The English had 'em a century ago. But, until recently, salt water was too difficult for the inlander to obtain and control. And shipping difficulties discouraged collectors.

All the big public aquariums are on the seacoast where salt water can be pumped—that is all but the famous Shedd Aquarium in Chicago. It started its marine collection by shipping a million gallons of salt water via 160 railway tank cars clear from Key West. Three small operations currently function in inland Texas, getting their water via tank truck from the Gulf. Once the water is on hand, however, it lasts a long time under proper handling.

The New York Zoological Society's big new aquarium, now under construction at Seaside Park, Coney Island, will pump its carefully filtered sea water at the rate of 1,000 gallons per minute via

120 well-points buried ten feet in the sand. Chris Coates, the aquarium's veteran curator, can handle local fish in that North Atlantic water but eventually he'll use all kinds of gimmicks to maintain fish used to the varying heavier densities of several tropic seas. Part of the aquarium, incidentally, will be open this Summer.

Sea water is a chemically complex thing. It's far from just plain salt and water. For years, chemists have sought the perfect synthetic salt which, mixed with tap water, will keep lobsters alive in inland restaurants. Recently two salts, (Neptune Salts and Marine Mix) have been put on the market. Although they can't be expected to maintain *all* marine tropicals indefinitely, tests have shown that they seem to do a satisfactory job of handling at least a score of the available varieties for reasonable periods.

Last Christmas, needing therapy or something, we bought a 20-gallon tank plus the fish shown in color across the way plus Neptune Salt plus air pump, filter, heater, hydrometer and assorted coral and lugged it home to Bootstraps Farm. As of February 1, the fish were doing fine—and we feel better, thank you. All this stuff came from Jon Groetzing's Westchester Aquarium at White Plains whence Neptune Salts originates. All you do is dump it in your tank and fill her up with tap water at the rate of about five ounces of salt per gallon of water. When your hydrometer reads 1025—that's it.

Today, many dealers in New York City, Florida and California get regular shipments of these outlandish sea fish and most local pet shops will order. They come via air express, mostly from Miami and Honolulu in plastic bags filled part way with sea water, then blown up with oxygen under pressure and sealed. The fish even may be drugged with sodium amytal to slow activity and thus retard the use of oxygen.

BUT, because of the specialized job of collecting out on the tropic reefs and algae-strewn flats and because they're relatively tough to ship, these marine fish are still pretty expensive. A father sea horse, for example, will set you back about six bucks.

But wouldn't you like to *want* to wag your tail again?

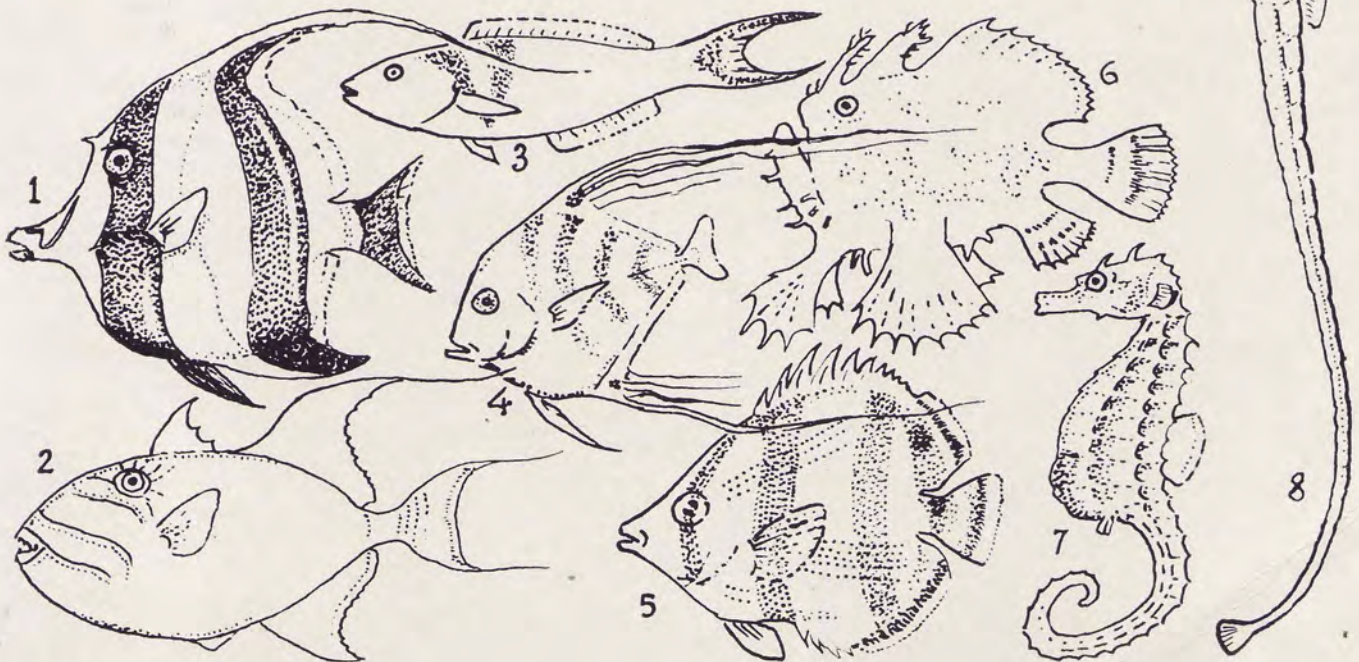
—CLAYT SEAGEARS



CURIOUS CHARACTERS FOR THE SALT WATER TANK

ABOVE, L to R, top row: File Fish; Sea Anemone (Clown) Fish; young French Angelfish; center left (partly hidden): Young Blue Angelfish; center: Spiny Boxfish; bottom, left: Cowfish; right, Shell Fish (Spotted Trunk Fish). All about usual aquarium size.

BELOW: (1) Moorish Idol; (2) Queen Triggerfish; (3) Bluehead; (4) Thread Fish; (5) Banded Butterfly Fish; (6) Sargassum Fish; (7) Northern Sea Horse; (8) Pipe Fish. The Clown Fish and the Moorish Idol are from Hawaii; the others are collected from the Atlantic, mostly Florida and the West Indies but many are Summer drifters to Long Island waters.





TROLLING FOR BLUEFISH—
FIRE ISLAND INLET

*By Hy S. Watson,
in 1904-5-6 Annual Report of
The N. Y. Forest, Fish & Game
Commission*