THE CONSERVATIONIST

State of New York Conservation Department October - November 1963

Our Common Ground

To question the wisdom of long-established law sometimes seems heresy. Yet after surveying centuries of English law, the eminent Justice Holmes asserted, "The life of the law is not logic, it is experience."

Thus, the essence of our responsibility in carrying forward our present series of articles on the Forest Preserve is to consider not only the "logic" of the legislative action of 1885 to establish the Preserve, but the more than three-quarters of a century of "experience" under that law as a guide to shaping the best possible policy for the Preserve to meet the needs of today and the future.

In meeting this responsibility, we are at the same time fulfilling a pledge to our readers—a pledge that was made more than 17 years ago when this magazine began its existence:

"To bring the story of conservation to the people of New York State; to create thereby, a clearer concept of the vast scope of conservation and a better understanding of how vitally we are affected by the way we manage our soils and water, our forests and our wildlife resources. We think that this magazine forms a bond between us; a common ground where we can join to solve these problems so important to our welfare."

Let us use this "bond"—this "common ground" to consider dispassionately the origin and history of the Forest Preserve; the nature of the Preserve today; and the problems with which we must deal if the Preserve is to fulfill its great potential for the people of this State—for all the people.

We commence our consideration in this issue with the history of the Forest Preserve—the first of a series of three articles by Pieter W. Fosburgh—a conservationist, an author, and a man whose knowledge and love of the Forest Preserve are unchallenged.—Editor.

Sewerage Amendment

Proposed Constitutional amendment Number Five on the ballot in November, deals with municipal sewerage debt. If approved, the amendment would permit the exclusion from Constitutional limits, of municipal debt incurred for construction of sanitary sewers and sewerage treatment facilities.

Reliable experts assure us that approval of this amendment is important in order to aid the entire State pollution control and water resources program, by encouraging municipal action. For this reason alone, we recommend a vote of approval.

THE CONSERVATIONIST

State of New York Conservation Department

OCTOBER-NOVEMBER, 1963

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Contents

First Cover, ERNEST SMITH; *Second Cover*, DANIEL F. ANKUDOVICH; *Third Cover*, H. WAYNE TRIMM; *Fourth Cover*, JOSEPH DELL

By courtesy of the Rochester Museum of Arts and Sciences, the front cover shows a Seneca carving a mask for the Society of Faces. Painted by Ernest Smith, a Seneca of the Tonawanda Reservation.

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Our

WILD turkeys are baffling and bewitching New York hunters. Because there are more and more hunters, and yet the bird is thriving and spreading in the State. Amateur hunters tootle desperately on their turkey calls, while the wary birds cock a quizzical ear—and take off with the beat of powerful wings.

From the numbers of wild turkeys now reported to us by our field men, one would never suspect that this grandest upland bird of them all had once been absent from the State for almost a century. But he was. Originally the turkey enjoyed the primeval woodlands of most of New York outside the Adirondacks, Catskills and Tug Hill, but by 1850, after most of the State south of the northern mountains had been ravaged by fire, axe and plow—he was no more.

This same pattern of "progress" was followed in most of the eastern states, and only in a few mountainous parts of the Appalachians did he survive. But much of the thin, hilly soils soon began wearing out and the return of the forest began in the late 1800's and early 1900's. Intensified by reforestation, much of the Southern Tier woods grew back and by 1948 reports of turkeys had been received from several places in that region.

Interest in the bird grew with this revelation, and visions of re-establishment and possible hunting took shape in Department minds. By 1952 the "turkey program" was a going thing, with the first several years after this devoted to the release of birds reared on game farms obtained as poults from Pennsylvania.

The Pennsylvania Game Commission had developed a strain of wild turkeys which had done very well in that state; it was New York's intent to hold to this strain. More on this later. Up to 1959, when the game-farm part of the operation was terminated, over 3,100 turkeys had been released in 22 counties *(Map 1.)*.

According to plan, game farm stocking was discontinued in 1959 in favor of trapping turkeys from flocks already established in the wild (from game farm stocking) for transfer to suitable, new, unoccupied areas. This program would utilize nature as our hatchery. Birds which had succeeded in adapting to the wild, or their offspring born in the wild, would become the nuclei for new populations in new areas.

Beginning in Allegany Park in 1958 as a pilot study, and then improved and perfected during 1959 and since, cannon-netting of turkeys in the wild for stocking of other areas has been carried on. Up to this past spring (1963), a total of 292 birds has been moved from areas of abundance to likely-appearing sites, where many have taken hold. This thinning out of the flocks in the winter, by means of the projectile-carried net, to stock in areas of no, or few, turkeys has many advantages. By choosing the most dense concentration sites for trapping, the possibilities of starvation, predation or disease are reduced, remote as they are, and of course the method does provide wild-hardened birds for trial in the transfer area.

Well-meaning sportsmen have tried to help us during this program, usually in the most spectacular way they could think of, by also releasing birds. Sadly, we had to discourage this type of help due to experience with other supposedly "wild-strain" turkeys. Quoting the entire

form letter, which we found necessary to use in answering many of these offers, may be enlightening:

We are reluctant to give out any permits for releases of wild turkey. There is good reason for this. An important consideration in our turkey restoration program is the fact that we are working with, and have had excellent success with a proven, wild strain bird which is acclimated to our habitats and weather conditions. This stock came from the Pennsylvania Game Commission. It is extremly unlikely that any commercial dealer in "wild" turkeys can offer a bird with anything near its quality. Therefore any releases of purchased stock have a much poorer chance of success and there is the further danger of crossmating, with dilution of the existing wild strain.

Another important factor is disease. The turkey is very susceptible to pullorum and other recognized poultry diseases. The release of diseased stock could endanger both our own releases and the operations of commercial turkey ranches. That the threat of disease is a real one is shown by the fact that the one group of turkeys, other than from the Pennsylvania Game Commission, purchased by us for test had to be destroyed when blood tests gave positive reactions. These had been certified as pullorum free.

Thus, in consideration of the success exhibited with the proven bird we are working with, and the potentially great hazards inherent in using any others, we are extremely reluctant to allow stocking of purchased birds. On the other hand we welcome the interest of would-be co-operators and will give full consideration to any areas recommended suitable for future stocking with birds to be trapped and transferred.

It is our intent to establish the wild turkey in all areas where there is sufficient range for the provision of hunting opportunity without annual stocking.

This is our policy to date, and we think it has helped in the way the turkey program is paying off.

Turkey flocks which have established themselves either naturally or via game farm or transplanted birds have, in practically every case, done very well for themselves. Study of most of them has revealed that establishment has usually meant a growth in the size of the flock of up to 20 to 50 birds and then a splitting of this flock into two or more, each with their own territory. So it has gone on, until much of the best of the possible turkey range is now populated. There are other places, however, which are deserving of trials, and these areas will be tested as wild birds become available via trapping from well-established flocks.

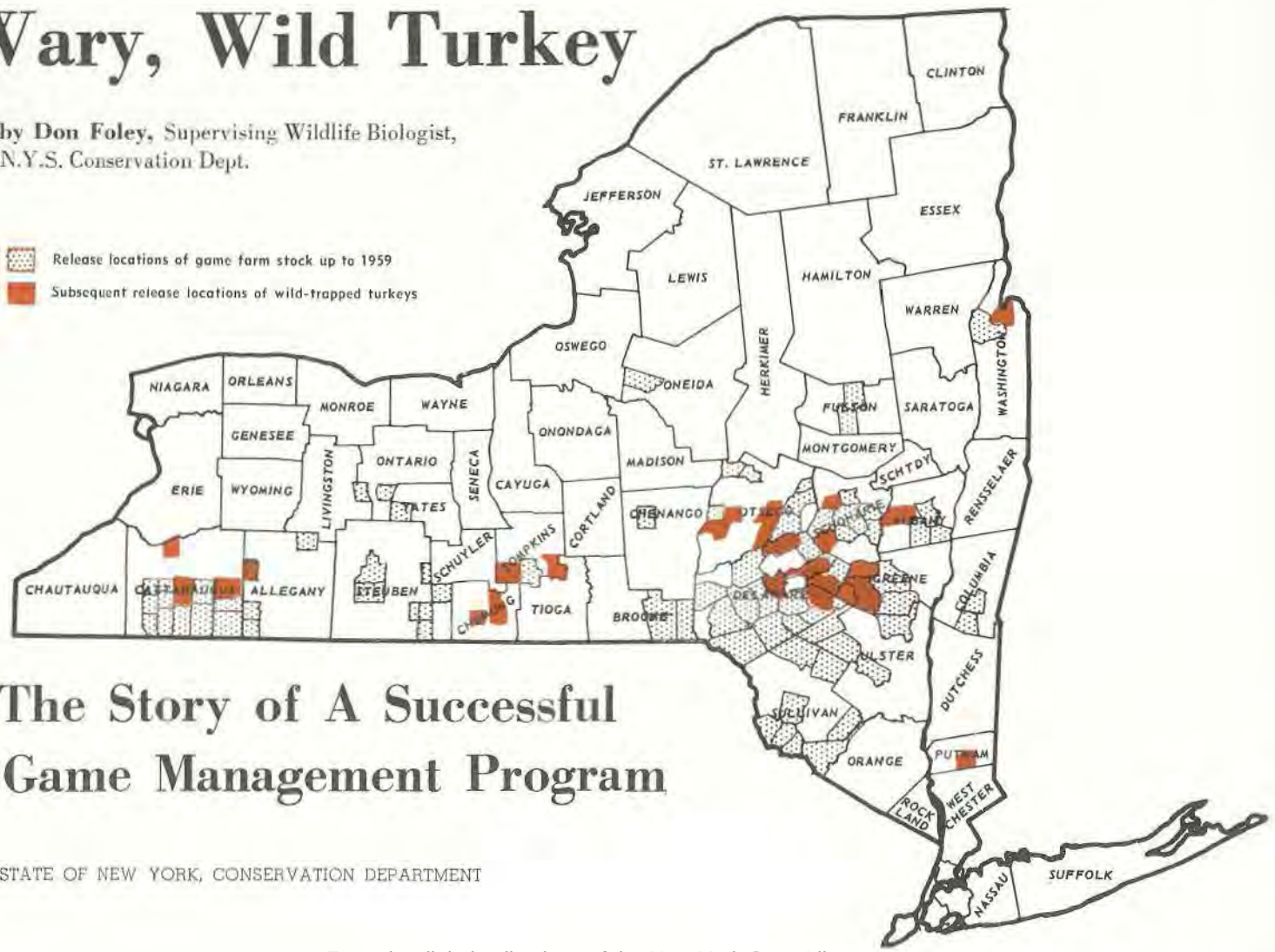
Which counties enjoy the highest turkey populations? They are without doubt Steuben, Allegany, Chautauqua Cattaraugus and Delaware; lesser numbers inhabit Chemung, Schoharie, Greene and Tompkins counties, and possibly there are a few in Fulton, Washington, Columbia, Ulster, Oswego, Livingston, Erie and Sullivan counties. A survey going on right now should add a lot more to our knowledge of wild turkey density and distribution.

With the birds taking hold so well, it was decided to have the first modern open season in the fall of 1959. While we estimated the turkey could well with-

(*Continued on page* 30)

Wary, Wild Turkey

by Don Foley, Supervising Wildlife Biologist,
N.Y.S. Conservation Dept.



The Story of A Successful Game Management Program

STATE OF NEW YORK, CONSERVATION DEPARTMENT

Hunting Seasons for 1963

by **Albert G. Hall,** Chief, Bureau of Game, N.Y.S. Conservation Dept.

IN presenting a summary of our 1963 small game seasons a columnist for a prominent daily paper commented on how complicated our regulations were.

I have sympathy for him and his brother columnists for it is not an easy matter to present our seasons clearly and easily to the public. They represent studied decisions based on a complexity of factors. Environment, land-use, game species differences and their biology—and people—all have to be considered.

In New York State there are great differences, regionally, in land-use, game range, climate, and interests of people. From Long Island to the Canadian Border and from the Massachusetts Border to Lake Erie, these differences become acutely significant. Thus, our seasons become complex in order to provide maximum hunting opportunity within safe biological limits, with consideration for all the above factors. Weaving this pattern is not easy.

As far as small game is concerned, the basic pattern is the same as in 1962 *(see chart)*. We will have an early opening, October 7, for ruffed grouse, woodcock and squirrels or forest game species, and a later opening, October 21, for pheasants and cottontails or "farm game" species. The same exceptions will apply. The only *changes* from 1962 are as follows:

a. The farm game season in Jefferson and Lewis counties will open at the later date of October 21. Hungarian partridge will also open in Jefferson county on October 21.

b. Fulton and Saratoga counties have been added to the list of counties in which hen pheasants may be taken. Hen pheasants may also be taken in the towns of Easthampton and Southampton, Suffolk county, east of the Shin-

nenock Canal and Inlet during the period November 1-7.

c. Varying hare may be taken in Cayuga county east of Route 41A from January 1 through February 29.

d. Albany, Dutchess, Herkimer, Jefferson, Lewis, and Oswego counties have been added to the list of counties in which pheasants can be hunted on Sunday.

These changes are minor in nature, have little biological significance, but are important to local interests and the public in general.

We have had a controlled turkey season for the first time in that part of Delaware County south and east of the West Branch of the Delaware River, running from October 7 to 9 with a one-bird season limit. In addition, a turkey season in Allegany, Cattaraugus, Chautauqua and Steuben counties will again be held, running from October 21 through 26.

For big game we are continuing the party permit season, providing more areas and larger quotas. *(See map for area outlines; detailed description of area boundaries are listed separately.)*

The Northern Zone deer season will open October 25 while the Southern Zone season will open November 18. The deer season in both zones will close December 3. There is the possibility that special post-season hunts may be held in some areas. If they are, details will be announced later.

The party permit type of season provides one of the best means yet devised to accomplish additional harvests where needed without over-harvest and in an orderly fashion. Such harvests continue to be necessary in many of our Adirondack counties because of poor range and winter starvation. In the Catskills, crop damage, range deterioration and heavy localized winter starvation require additional harvests periodically. In the Central and Western counties, buck-only harvests will not prevent range damage; so to maintain the good range we have in this area we must harvest antlerless deer as well.

We have increased the number of party permit areas to spread out hunting pressure in some instances, and to provide more adequate pressure to increase take in other instances. To simplify boundary recognition we have used roads wherever possible.

The usual bowhunting seasons for archers will prevail during the period 14 days prior to the regular big game season. From October 11 to October 24 in the Northern Zone and from November 4 to November 17 in the Southern Zone, bowhunters will be permitted to take a deer of either sex. In Westchester county the bowhunting season will be from November 1 to December 31 for deer of either sex.

Another first for 1963 is the special early bear season from October 1 to 10 in all of Clinton, Essex and Hamilton counties, and the party permit area part of Franklin, Warren and St. Lawrence counties. The regular bear season coincides with the deer season in both zones except that in the counties of Delaware, Greene, Sullivan and Ulster bear may be taken through December 18.

The purpose of this early bear season is experimental to determine how effective it can be in reducing bear damage complaints. It is possible—depending on weather and food supply this year—that bear will den early, resulting in an insufficient take during the regular season. Thus, abundant bear would be on hand in some sections to do more damage next year. In order to keep damage at a minimum we hope the early season will balance off any reduced take during the regular season.

The Federal government prescribes the framework within which we select the waterfowl season. We had to select, as did other Atlantic Flyway states, for upstate New York a season of 50 or 40 days straight, between the dates of October 5 and January 5, for ducks and coots; and for geese and brant 70 days between the dates of October 1 and January 15. For ducks we had the option of a 50-day season with a 3-a-day, 6-in-possession bag limit, or a 40-day season with a 4-a-day, 8-in-possession bag; for coots 8 daily and 16 in possession under either option. If a split season were selected a 10 per cent penalty in the number of hunting days had to be accepted for ducks and coots—no penalty for selection of a split goose and brant season. We selected a straight 50-day season for ducks and coots—October 18 to December 6—to provide maximum hunting opportunity. We also selected a straight goose and brant season—October 18 to December 26. Bag for geese is 2 a day, 4 in possession; and for brant 6 a day and 6 in possession. (Note: A bonus bag of 2 scaup daily, 4 in possession is allowed in addition to the basic bag.)

For Long Island we had the privilege of selecting a season that would coincide with that of Connecticut or New Jersey. Both selected a split season. We chose Connecticut's which runs from October 19 to November 2 and December 6 to January 4, 1964 for ducks and coots, and from October 19 to November 16 and December 6 to January 15, 1964 for geese and brant. By doing so the best of the early and late shooting on Long Island should be provided. Bag limits are the same as for upstate.

Shooting hours, except for waterfowl, will be from 7:00 a.m. to 5:00 p.m., prevailing time. For waterfowl from 12:00 o'clock noon, Eastern Standard Time, on opening days to sunset, and from sunrise to sunset thereafter.

Finally, one basic experimental change will be tried in 1963. The hunting license tag, commonly called a "backpatch," will not have to be worn while hunting in the Northern Zone *only*. This requirement has often been criticized as being an inconvenience and of little value. The problem was discussed with the Farm Bureau, the Grange and the New York State Conservation Council with the result that legislation was introduced and passed providing that the hunting license tag will not be required to hunt in the northern zone for a trial period of three years.

There it is in brief—as best I can simplify it—and I still sympathize with the sports writers. However, I should suggest that the answer to easy analysis is to determine the area you want to hunt and refer to the Hunting, Fishing and Trapping Guide. By doing so you only have to know the regulations for the area you hunt—not those for the whole State.

Good luck, good hunting—get to know the landowner and respect him—he's just as friendly as you are, often a good hunter, and most important, he is your host.

NEW YORK WATERFOWL SEASON—1963-64

DUCKS

Upstate—October 18—December 6.
Long Island—October 19—November 2 and December 6—January 4.

GEESE & BRANT

Upstate—October 18—December 26.
Long Island—October 19—November 16 and December 6—January 15.

Sunrise-Sunset tables for the vicinity of 12 cities are available free from all Regional Fish and Game offices as well as from Albany.

OPEN SEASON FOR SMALL GAME—1963-64

Species	UPSTATE			*Limit**
SQUIRRELS (Gray, Black & Fox)	October 7-December 31		in all counties	5 4
RUFFED Grouse (Partridge)	October 7-December 31		in all counties	
HUNGARIAN PARTRIDGE	October 7-October 26	(1)	in Clinton, Franklin, & St. Lawrence counties	3
	October 21-November 9	(1)	in Jefferson County	3
PHEASANT-COCKS	October 7-October 26	(1)	in Clinton, Essex, Franklin, Hamilton, St. Lawrence and Warren (except town of Queensbury) counties	2(a)
	October 21-November 9	(1)	elsewhere	2(a)
PHEASANT-HENS	October 7-October 26	(1)	in Clinton, Essex, Franklin, & St. Lawrence counties	2(a)
	October 21-November 9	(1)	in Delaware, Fulton, Herkimer, Lewis, Montgomery, Orange, Otsego, Putnam, Rockland, Saratoga, Schenectady, Schoharie, Sullivan & Westchester counties	2(a)
COTTONTAIL RABBIT	October 7-February 29		in Clinton, Essex, Franklin, Hamilton, St. Lawrence & Warren (except town of Queensbury) counties	4
	October 21-February 29		elsewhere	6(c)
RACCOON (Hunting)	October 7-February 29		in Clinton, Essex, Franklin, Hamilton, St. Lawrence, & Warren (except town of Queensbury) counties	NO LIMIT
	October 7-March 21		elsewhere	NO LIMIT
QUAIL	October 21-November 9		in Orange, Putnam, & Westchester counties	4(d)
VARYING HARE (Snowshoe Rabbit)	October 25-December 3	(2)	in Northern Zone as defined on page 5 (guide)	3
	December 4-February 29		in Clinton, Delaware, Essex, Franklin, Fulton, Greene, Hamilton, Herkimer, Jefferson, Lewis, Oneida, Oswego, Otsego (south of D&H RR), Rensselaer, St. Lawrence, Saratoga, Schoharie, Sullivan, Ulster, Warren and Washington counties	3
	January 1-February 29		in Cayuga (east of Rt. 41A), Chenango, Cortland, (east of Rt. 11), Onondaga (east of Rt. 11), Madison counties	1

LONG ISLAND (Nassau & Suffolk)

SQUIRRELS (Gray, Black & Fox)	November 1-December 31		5
RUFFED GROUSE (Partridge)	November 1-November 30		1
PHEASANT-COCKS	November 1-December 31		4(a, b)
PHEASANT-HENS	November 1-December 31	in Suffolk County, (except town of Easthampton & town of Southampton east of Shinnecock Canal and Inlet, Nov. 1-7 only)	4(a, b)
COTTONTAIL RABBIT	November 1-January 31		5
RACCOON (Hunting)	November 1-February 29		NO LIMIT
QUAIL	November 1-December 31		6(d)

* Daily; no season limit except for pheasants on Long Island and for quail.

(1) Sunday hunting prohibited, except in Albany, Clinton, Delaware, Dutchess, Essex, Franklin, Greene, Herkimer, Jefferson, Lewis, Orange, Oswego, Putnam, Rockland, St. Lawrence, Sullivan and Ulster counties.

(2) Use of dogs prohibited.

(a) In counties where both sexes may be taken limits shall be the same, whether bag be all cocks, all hens, or a mixture.

(b) On Long Island, 30 per season.

(c) In Allegany, Cattaraugus, Chautauqua, Fulton, Herkimer, Jefferson, Lewis, Oneida, Oswego, Saratoga, Steuben, Warren, Washington and Yates counties, 4 per day.

(d) In Orange, Putnam and Westchester counties, 10 per season; on Long Island, 40 per season.

Adventurous Hunting or Derring-do in Field and Forest

by Keith W. Mickel

WHY spend the price of an expensive new automobile for a hunting trip to Africa, Alaska, India, or other regions where dangerous game is found? With the proper attitude, an average sportsman can create the same elements of danger, excitement, and suspense on a rabbit hunt.

The hunter who survives an adventurous hunt for small game or deer can consider himself to have earned the same elite status as the sportsman who has spent much time and money in order to face the charge of dangerous big game.

The average sportsman does not attain elite status because tradition, a desire to be law abiding, and sportsmanlike attitudes prevent him from hunting small game and deer in an adventurous manner. Let's contrast the attitudes and actions of the average sportsman with those of the elite adventurer and note the advantages which the elite enjoy.

Safety is for sissies

The average sportsman feels that he has a responsibility to himself and to others to learn the principles of safety and to practice them until they become automatic. He always keeps the muzzle of his firearm pointed in a safe direction and treats every firearm as if it were loaded. He knows his gun and ammunition and keeps his gun in a safe firing condition. He is sure of his target and a safe backstop for the bullet before firing.

The elite adventurer cannot share the almost psychopathic concern of the average sportsman for safety since it is obvious that danger is the essence of adventure. There is something about looking into the muzzle end of a gun barrel that really shouts "DANGER" as much as a dozen charging African lions. This is high adventure! When one is fortunate enough to have companions of the elite adventurer type, a day afield is like a lifetime of safaris.

This same type of high adventure is potentially present while hunting alone; the elite adventurer will experience it while climbing fences or stumbling over rough ground. A firearm that is used as a walking stick or probe can easily become clogged with mud, snow, or other debris, and subjects the firer to unexpected thrills when the gun blows up in his face—or his partner's.

Eliminate the handicap of sportsmanship

The average sportsman feels that the game of hunting should be played according to the game laws, which are designed to: insure safety, insure other sportsmen an equal chance of seeing game, insure hunting for future generations of sportsmen, and insure a sporting chance and a death without suffering to the game hunted. He feels that winged game should be shot on the wing. He earnestly hopes that if he can't make a clean kill, he will make a clean miss.

While bagging at least his limit of game, the elite adventurer breaks as many laws as possible and thus creates real suspense. Incidentally, his hunting kit should include names and phone numbers of lawyers who are adept at winning cases on legal technicalities.

One of the most successful elite adventurers never shoots ducks while they are swimming on the water—he waits for them to come to a dead stop and then blasts them with his 10 gauge shotgun. When bird hunting with a companion who is a good wing-shot, one should try to time his shot with that of the companion and yell "I got him!" This takes considerable skill and practice, but is an effective and exciting way of getting game.

It is not essential to sight in one's firearm or to practice to improve skill before the season opens. "Posted" signs, highway signs, and mailboxes offer an excellent means for sighting in a rifle, patterning a shotgun, or improving skill during the hunting season. (*It also increases your chances of a sporting joust with a Justice of the Peace.*—Editor)

Showing the landowner who is boss

The average sportsman knows it is illegal to refuse to leave the property of a landowner if the landowner tells him to do so. He asks permission to hunt, does not hunt near dwellings, does not destroy fences or crops, and leaves gates as he found them. He may even share his bag of game with the landowner or purchase some produce from a landowner-farmer. Real friendships have been formed between landowner and sportsman.

The elite adventurer does not believe in appeasement. Refusing to leave the property heightens suspense immensely—both before and after the police and conservation officers arrive. In addition, the land may be posted in the future and the signs will offer target practice, and trespassing on posted land is always exciting.

The future

Frankly, prospects for future membership growth of the inner circle of elite adventurers appear dismal. The average sportsman shows extreme intolerance toward the elite adventurer and regards him as emotionally unstable or a psychopathic criminal.

Some average sportsmen are mistaken for members of the elite because their actions—caused by ignorance or plain carelessness during the excitement of the hunt—resemble high daring. But hunter safety training programs have drastically reduced these pseudo-elite.

Discouraging, but true, hunting is a safer sport than ever. However, the elite adventurer can always find adventure in common-place activities. Indeed, utilization of shakey stepladders or slippery bathtubs can furnish high—and risky—adventure right in one's own home.

The average sportsman is a congenial hunting companion. He treats other sportsmen with the same respect and consideration that he would like to receive from them.

When hunting ducks from a blind, the elite adventurer should fire at every duck he sees, both within range and beyond. This will keep the ducks high. It will keep the blood pressure of hunters in neighboring blinds even higher. These hunters may hurl insults and, if they are of the adventurous type, they will hurl charges of shot in the elite adventurer's direction. There are actual records of duck blind wars—a high form of adventure.

When everything else fails, criticizing a companion's hunting dog may create excitement on an otherwise dull trip.

CHIEF OF POLICE

AUTO REPAIRMAN

DOCTOR

RECREATION DIRECTOR

HOUSEWIFE

A Hunter Training

IN a Lake Champlain community a doctor got an emergency call to the scene of a shooting accident. At the scene he found the victim was a ten-year-old boy, beyond help—and was a close friend of the doctor's children.

The accident happened as two men were shooting from the lake shore at tin cans bobbing in the water; a bullet ricocheted and struck the youngster who was riding in a boat. Appalled, at the tragedy, the doctor vowed that he would do all within his power to prevent shooting accidents. He became a Hunter Training Instructor and now takes time from his practice several classes each year.

The faces in the pictures above are just a few of the more than 6,000 Hunter Training Instructors now certified by this Department. We wish we had the space to print pictures of each of them. You met some of the Instructors if you attended a Hunter Training Class.

If you are only vaguely aware of Hunter Training, the law requires each applicant for a hunting license to present proof of a previous license or a certificate from a Hunter Training Instructor before the license may be issued.

Instructors are certified by this Department after completing an examination and appearing for an interview with the local Conservation Officer or, in New York City and adjoining counties, a screening committee.

Every occupation and profession is represented. There are artists, businessmen, carpenters, doctors, engineers, firemen and zoologists. Few are retired, so this work is done in their spare time. In 1962 these Instructors reported training more than 110,000 new hunters. The number of man-hours is astronomical.

A Syracuse surgeon includes student nurses in his training sessions. "If they don't become hunters they may be wives or mothers of hunters," he says. "Besides, I don't want one of them to tell me the victim of a shooting accident is filled with buckshot when actually he was shot with a 7½'s." A New York City school teacher and the school custodian team up—on their own time—to train new hunters.

A Rochester husband and wife team held a training session on a Saturday prior to the hunting season. More than 80 students appeared. They trained, examined and certified 79 of them, completing the job at 11 P.M. A farmer operates two classes each fall on Sunday afternoons. Two brothers in a religious order hold classes at a summer camp and at the school where they teach in the fall. A housewife, irked at being left alone when her husband conducted classes, sat through a course and became so interested that she is now an instructor.

Special problems arise. Deaf mutes apply for training as well as persons who cannot speak or understand English. Some cannot read or write. Yet each applicant has an opportunity for training. An instructor is found who knows sign language or who can, by written word and demonstration teach the lesson of safety. A number of instructors speak at least one foreign language. An applicant who cannot write is examined orally at the close of the course.

Every instructor has signed a pledge: "I will accept my responsibility as a Hunter Safety Instructor to pass along to those entrusted to me as much skill in safe handling of firearms as possible, and that I will not knowingly certify any person who is not a safe hunter to send afield." They try to live up to the pledge.

The course, as outlined in the National Rifle Association Instructor's Guide, consists of gun and hunting safety, good manners and landowner-hunter relations. It requires at least four hours to complete and is followed by actual firing (usually with a .22 caliber rifle) and a written examination. The result of the examination alone is not the deciding factor in issuing the certificate. Students may fail because of improper attitude,

SCHOOL PRINCIPAL

POSTMASTER

FARMER

RETIREE

APPLIANCE REPAIRMAN

Instructor is....

By Brian Bergin

Co-ordinator, Hunter Training Program

too much horseplay or lack of attention. The jolt of failure is usually hard enough to prevent these faults in the next class.

Why do so many people take on this unpaid—and often thankless—task? For one thing, they know that hunting is a safe, clean and relaxing sport. They want to do their part to promote and perpetuate the sport—and safety. They are aware that hunting accidents caused by the carelessness of a very few are magnified out of proportion until the non-hunter is convinced that the man with a gun or longbow is a sadistic killer who shoots at every moving object. The Instructors are also aware that each shooting accident gives the anti-gun campaigner another reason to cry for the enactment of laws drastically curtailing our right and privilege to use firearms. Nearly all Instructors and ex-service persons who know that in the countries where firearm registration was required by law and which were taken over by a dictatorship, it was a simple procedure to review the records and disarm the entire population completely.

All Instructors know that hunting is one of the safest sports. A Safety Council news release in November of 1962 reported that more than 40 high school boys died as a result of football injuries in September and October. Yet, no serious effort is made to outlaw football.

So the Instructor, alone or with others in his rod and gun club, service club, veterans' organization, civic or church group, devotes as much of his spare time as possible towards making sportsmen out of all hunters. He attempts to make each trainee aware of the responsibilities involved in hunting. For parents who may be taking the course or just sitting in with their children, the Instructor has a special word: "Teach your children to handle their guns—toys or real—as if loaded. Your home and hunting will be safe from gun accidents."

Instructors have their problems. At the top of the list is the chap who decides to go hunting at the last minute. When he finds that he requires the training, he makes a run to the Instructor and demands immediate service. Told that no more classes will be held immediately (the Instructor wants to do a little hunting), the applicant may offer a "five spot" or abuse or both. No Instructor has been accused of throwing an applicant into the street but some Instructors have admitted the thought passed through their minds.

The last minute applicant ranks with the father who calls the Instructor and says, "I'm taking Junior pheasant hunting tomorrow and leaving at 4 A.M. I've taught him all there is to know so just leave his certificate under the milk bottle." Other applicants call Instructors at all hours and want to take the "test." Many are shocked to learn it is a four-hour course of instruction.

Other problems exist, such as lack of meeting and range facilities, no variety of guns for demonstration purposes, and the trainee who carelessly bumps the sights of the Instructor's deer rifle.

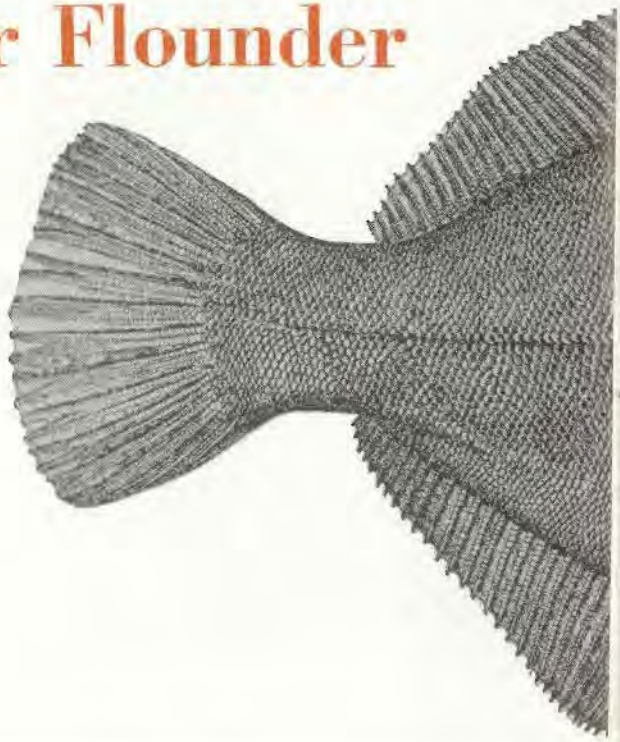
But the job is done very well. There were more than one million hunting licenses issued in New York State in 1962 and there were 102 hunting accidents, of which 11 were fatal. This is the best record since we have been keeping such statistics.

It is not naive to look forward to an accident-free year, for it is the goal towards which each instructor reaches. With their interest, ambition, resourcefulness, patience and sweat it is within the realm of the possible.

In Appreciation

Those who benefit from the program are not only the hunters, but everyone who may possibly come in contact with a gun or longbow. It is time that all recognize the Hunter Training Instructor and extend to him a helping hand and a word of appreciation.

Fooling the Winter Flounder



by **John C. Poole,** Senior Aquatic Biologist

YOU can't help but respect winter flounder fishermen who purchase canned corn to bait a fishing area. This alone shows imagination, and some inner strengths too, for just facing up to the crowded aisles in the local supermarket for the can is reason enough to receive some small medal. Other fishermen with equal imagination stir up the bottom with clam tongs in order to attract the fish to the worms so released from the sand and mud. All this fervor occurs in the coldest months of the sport fishing year.

I have even heard of some fishermen who make quite a ritual of the affair. They sprinkle the corn in a wide circle, add spokes by dropping it in lines to the center, and then happily fish at the hub of their wheel. This sort of large-scale operation really requires a No. 10 can of corn. Baits for the hook vary—bloodworms, sandworms, even earthworms. I haven't heard of anyone who puts a corn kernel on the hook, but I am sure that somewhere there must be someone who does.

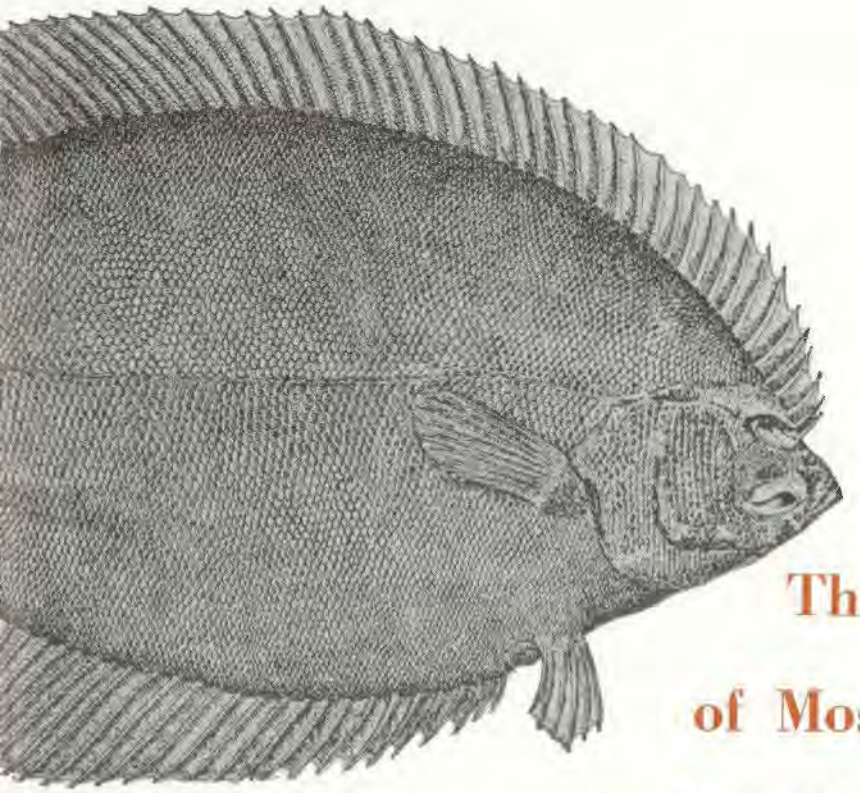
The fishermen are to be admired, and I think, too, you have to admire the fish he seeks. The winter flounder is the object of the majority of the salt-water anglers in New York. It is generally as important as the fluke, and these two flatfish make up over 90 per cent of the catch in the bays of Long Island. Year after year, the winter flounder withstands this fishing pressure, and throughout it all, I don't think that deep down underneath, the fish gets the full appreciation that it should. It is rather comical that certain fish can cause a romantic shine in the eye. Not so the winter flounder. It is the work horse, the old mare. It must be a matter of graceful lines and beautiful colors, and also the picture that fishermen have of themselves as they search, with poles akimbo in the cockpit or beach buggy, for graceful, swiftly moving fish. As picturesque as it can be, those swift ones, such as striped bass, bluefish and tuna, are sporadic and hard to catch.

Flounder fishing, Northport Harbor, L.I.

Witness for example the honest surf-caster who says that he has been looking, with poles akimbo, for that first striped bass since three years ago.

The winter flounder angler is not so frustrated, for he can tell you, in most cases honestly, that yesterday he caught 15, and was low man to boot. Just this past year, anglers in Moriches Bay caught roughly 700,000 winter flounder, and in Great South Bay, 1,500,000. These statistics are some of many collected each year from angler interviews and analyzed by Phil Briggs, Conservation Biologist.

Such figures, when combined with an-



The Object of Affection of Most Salt-Water Anglers in New York

nual commercial landings of 1,500,000 pounds in New York, give some measure of the winter flounder's unpicturesque role in things. These large catches have been going on for years, but of course there have been some changes in the fishery itself. The otter trawler, which once landed so many flounders in the bays, is now largely limited to fishing in the inshore ocean waters. A minimum size limit of 8 inches has been established for the commercial fishery, and there are restrictions in Long Island Sound on the mesh size of the "cod-end" of trawls.

These management measures were proposed and accepted as means of increasing the numbers of larger, more marketable fish. The sport fishery, as foreseen by many as far back as 1920, has developed and overtaken the commercial fishery. Look, for example at these figures: In the Moriches-Shinnecock bays area, 206,000 winter flounder were caught from rowboats in the months of March through June in 1938; during a similar period in 1962, 713,000 were caught in these bays by anglers in rowboats.

The winter flounder couldn't care less about these changes, for up to the present he has done very nicely. This is remarkable, particularly when you think of the number of nets that have pursued him and the number of hooks waiting at the hub of that corn wheel. This remarkable ability to maintain itself in numbers and size of fish is due to the productivity of the bays. A large part of the winter flounder's life is restricted to these bays and their tidal creeks. Fish less than 2 years of age are restricted largely to these habitats where they feed upon small crustacea, worms and molluscs. It is only after this that they move into the ocean and deeper waters of the Sound, and then they remain there only from June through September each year.

Back they come to the bays in the fall to settle down in preparation for their spawning in early winter. The eggs are produced in great numbers. For example, recent research in Rhode Island indicates that the average number of eggs per female is 610,000. Mortality is high, and for larvae and juveniles has been approximated by studies in Connecticut to be 99.99 per cent. This sounds tragic, and at first thought one might be concerned, but because of the large number of spawners, the population maintains its abundance.

What is of concern, however, revolves in New York at the moment around two features of the life history of the flounder. Interest centers upon learning more about the distribution of young fish near the shore. This shoreline to a large extent is no longer mud, sand, tidal grasses and sloping beach. It is bulkheads, boats and deep water. What effect these changes will have on the young stages of winter flounder is unknown. The purpose at present is to obtain an idea of the habitats suitable for young in the various bays and to determine what effect shore development will have upon the flounder population. This will take time, and evaluation will be interesting.

The second important feature of current life history studies is concerned with growth rates of the winter flounder in various bays. Past research has shown that adult flounder are likely to spend most of their lives close to home. There is good evidence that local bay populations can be managed separately. What needs to be verified is how much growth rates differ bay to bay. Current research is directed toward learning this. This certainly will not be the end of it, for many problems remain and others will develop. Perhaps corn won't work anymore, and some effort will be spent in pursuit of a new baiting vegetable—say diced beets. There seems to be no question, however, that the pressures of the sport fishery will require continuous investigations leading toward better management.

Careers in Soil and Water Conservation

by Irving B. Stafford,
State Conservationist Soil Conservation Service, Syracuse

ON the wall of an ancient temple at Karnak, an inscription tells of the work of some of the first conservers of soil and water. In 1472 B.C., they built terraces to prevent erosion and grow wheat on the slopes near the Lebanon Mountains. For hundreds of years they were successful, then war halted their work, and today the area is a wasteland.

To prevent such a progression in this country, there is a broad national program to protect and improve our soil and water resources. In this program there are many varied opportunities for a career.

The soil and water conservationist begins with soil and water. But his work continues with plants and animals in their intricate relationships to soil and water. He must concern himself with plants, whether they be grasses, legumes, shrubs, trees or algae; with animals, whether they be mammals, birds, fish, insects or earthworms. He works with people, too. The landowner enters the scene first. He is usually a farmer, but land needing conservation treatment may be owned by individuals other than farmers, by groups such as sportsmen's clubs or by units of government at any level. Planning also is done by Watershed Associations, Soil Conservation District Boards, County Boards of Supervisors, Planning Commissions, subdivision developers, zoning boards and others. Such landowners and planning groups frequently need and benefit from advice and consultation available from soil and water conservationists.

This, conservation of soil calls for an intimate knowledge of its makeup, its capabilities for various uses, the forces working on it, the several treatments or combinations of treatments that may protect it and improve it for its planned use.

Conservation of water demands wise management. Perhaps drainage is needed. Perhaps diversion from one area to another is called for. Flood prevention or sediment reduction may be the problem. Irrigation water supply and distribution may be lifesavers to farming areas, even in our humid East.

Indeed, everyone is affected by soil and water conservation.

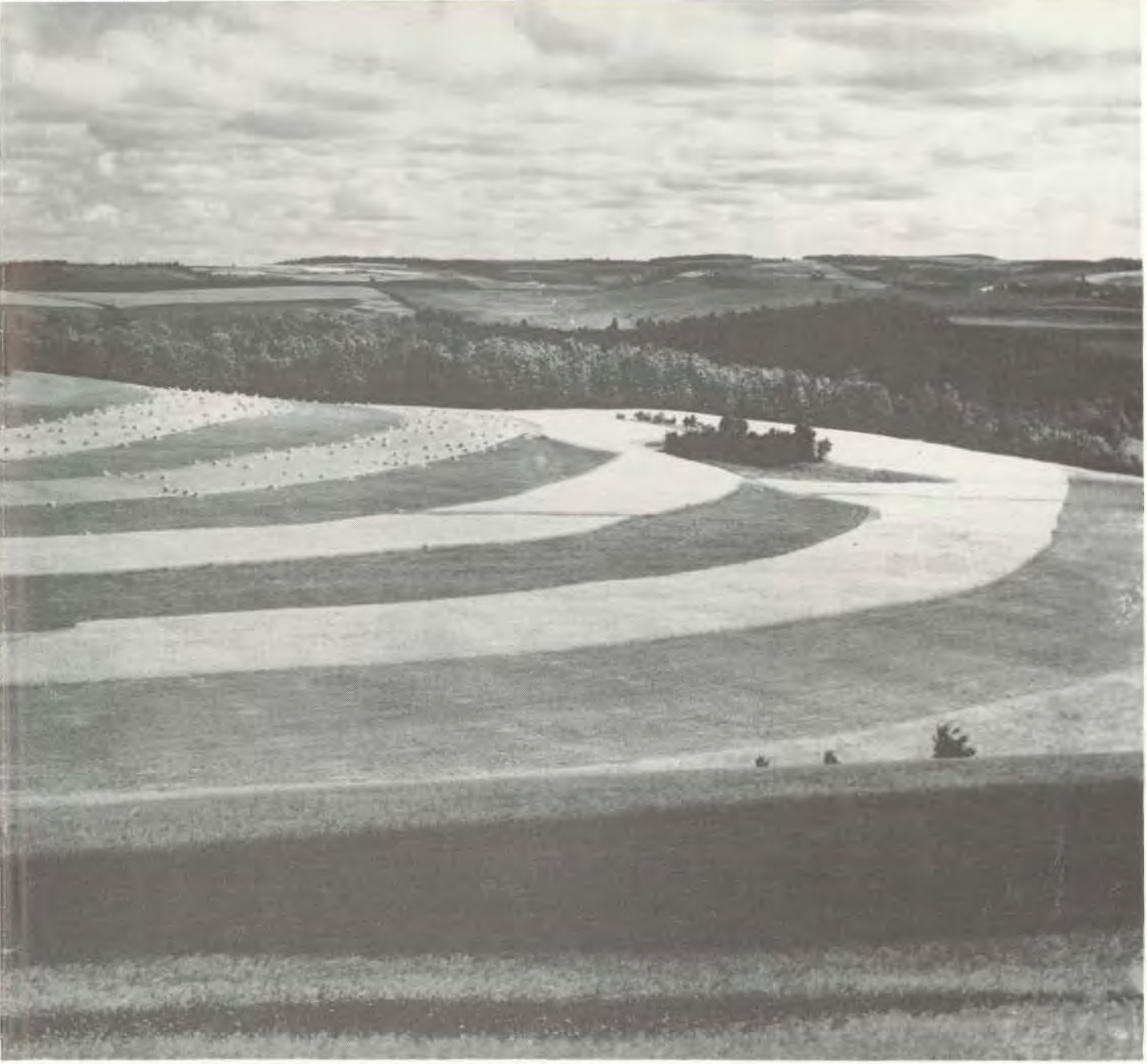
If the soil on a farm is washing or blowing away, declining in productivity, too wet or too dry, the soil conservationist can help. If your favorite trout stream is getting too warm, too muddy, is drying up or is being ruined by frequent floodings, the soil conservationist knows why and can often help solve the problem.

If the new, proposed subdivision, airport, supermarket or adjoining parking area is apt to run into difficulties from poor drainage, lack of suitability of the soil for septic tank filter fields or in providing adequate support for the buildings or other planned structures, the soil conservationist can suggest remedies or alternative locations.

If floods raise havoc by the sheer force and volume of water or by depositing unwanted sediment, the soil conservationist can help prevent them. If upland game is getting scarcer, warm water fishing areas are too few or there are not enough duck resting and nesting areas, the soil conservationist can help.

Is the fishing stream or water supply polluted by silt, soil, sediment? Does the small community need a source of municipal water or outdoor recreation facilities? Does the farmer need a stock water supply, an irrigation system and the water to feed it? The soil conservationist can help. This isn't to say he always has all the answers but he has many of them, and knows where to find the rest. All of us may be affected by the work he can do. His skills are used in solving or helping to solve a wide variety of problems frequently encountered.

Let's get back to the basic question—that of careers in soil and water conservation. I can speak best of careers with the Soil Conservation Service of the U. S. Department of Agriculture, although many other government agencies and private enterprises employ men with knowledge in this field or use men with various segments of these skills even though they may not refer to them by that name. The Soil Conservation Service has drawn together a staff skilled in a wide range of technologies. Here are engineers, agronomists, biolo-



A product of soil, water conservation: Strip cropping, Steuben County

gists, soil scientists, geologists, hydrologists, range conservationists, economists, administrative people, and many others. I will tell you about just a few of them.

The first man on the ground is often the soil scientist. He maps the soils in the detail necessary, recording on aerial photos the kind of soil, the slope and the estimated amount of past erosion. He gets this information by boring into the soil and observing what he pulls up on his auger, by studying road cuts and other soil profiles exposed by excavation, digging pits when necessary by hand or by machinery to get further details. He studies the vegetation, the lay of the land and interprets other clues to make his final determination. The resulting map has detailed practical information for land areas as small as half an acre. Since the map is on aerial photos it is usually simple to locate any given spot on the ground. From this map other, more generalized, maps can be prepared for special purposes to show only wet soils, only acid soils, only shallow, stoney or steep areas or what have you, with only minor attention to other differences not particularly important for the purpose in mind.

Agronomists keep abreast of soil, crop and pasture management methods for protecting soil and maintaining and improving its productivity. They advise on types of crops, rotations, soil treatment, and seeding methods. They devise and adapt methods of establishment of vegetation for conservation purposes, especially on difficult sites.

Woodland conservationists help landowners solve problems on existing woodlands, and give advice on what areas of the land should be in trees, what species should be planted on the basis of soil and other physical conditions, and what conservation management practices need to be applied.

Biologists help landowners and op-

erators with the wildlife aspects of soil and water conservation, such as the establishment and management of food, cover, and water for game, fish pond management, and the use of hedges, field borders and open patches in woodland areas for wildlife benefit.

And engineers belong on the team. They help plan, design, stake out, and supervise the construction of many conservation improvements on individual farms and in watershed projects. These may be farm ponds, dams for upstream flood protection, irrigation or drainage systems, water disposal systems, cropland terraces and the like. Some of these men start out as civil engineers, some as hydrologists, some as agricultural engineers, some in other areas of the engineering field, but there is a place for each in conservation work.

Then there is the geologist. It takes his knowledge to decide whether a site will stand the weight of the structure planned for it, whether a proposed reservoir has the proper soil conditions to hold water, whether fill material is suitable, where the sediment deposit in the stream or on the flat originated and how well the established measures for sediment control worked.

The plant materials specialist seeks out new plants and adapts known plants for use in solving or helping solve conservation problems. Perhaps the area needs more winter food for game, or better plants to withstand a constant flow of water in a waterway, or cover for a dry slope with low fertility, or bank protection for a stream, or better windbreaks. The plant materials specialist studies the problem. He decides the characteristics needed in plants that may solve that problem. Then he reviews the plants in use and other plants that offer possibilities. He selects the best, tries them out, learns how to propagate, plant and manage them. The best are then increased and made available to the seed and nursery trade for the public.

Since we need to know what the economic effects are or may be, we need economists. They collect and analyze economic data related to soil and water conservation work. They estimate flood and sediment damage, and the results of poor land use. They also work out benefit-cost analyses to help determine whether proposed improvements should be undertaken.

There is also snow surveying. Its results are vital to great areas of irrigated land which depend upon water from melting snow to fill the irrigation reservoirs. Someone needs to find out in advance how much water yield may be expected in each reservoir from each season's snowfall, so that farmers and ranchers, irrigation companies and others may plan their operations soundly. Snowshoes, skis and special snow vehicles are tools of the trade, for snow samples must be collected for laboratory analysis in order that dependable forecasts may result. Collecting snow samples may be only part of the job of a regular employee who spends the bulk of his time on other conservation activities, but there are a few full-time jobs in this field.

A soil surveyor mapping

Now we come to the man we call soil conservationist. He needs to know the fundamentals of the scientific fields just mentioned. He is the man who deals directly with the landowner and helps develops a conservation plan that sets forth the land treatment measures needed. Taken into account must be the basic resources of the land, water, plants and animals, their past as well as present use, the plans, goals and desires of the owner, the economic impact of contemplated changes and the balanced interrelationship of the various components of the resulting plan. He must be able to work effectively with groups such as a Soil Conservation District—an agency established under New York State law by a County Board, itself, watershed associations, has such a law, with minor differences, but fundamentally the same); the County Board, itself, watershed associations, planning groups, firms of consultants, sportsmen's organization and the like.

on an aerial photograph

He must also be able to work co-operatively with the several specialists who contribute segments of the knowledge necessary in developing sound plans.

So far we've been discussing professional work. There is also much need for sub-professional assistance. Careers are available here too for the man without a college degree or its equivalent. He must, however, have a farm background. Most of the professional employees use the assistance of men with lesser training or experience in work ranging from the driving of stakes in an engineering survey party, through the collection of information needed by the professional, up to work which borders on and even sometimes reaches the difficulty and responsibility of the professional himself in the simpler phases of his field of work. Such men are recruited from the ranks of the graduates of high schools or such schools as New York's Agricultural and Technical Institutes, or from those who have some college training but no college degree.

College training is required for eligibility for all the professional positions. The soil conservationist should have a Bachelor's degree with a major in an agricultural subject such as agronomy, soils, agricultural economics, horticulture, and the like, or in engineering, geology, biology, or other closely related field. It is desirable also to have a farm background, so that he may work directly with farmers, understand them and be accepted by them. For the other professional positions, a major in that field is needed. More than thirty colleges and universities offer degrees in soil and water conservation.

For Federal positions, under Civil Service, the detailed requirements for eligibility may be obtained from any Civil Service Commission office or from an office of the prospective employing agency. Private employers, state and local governments each have their own standards for employment, probably similar, but not necessarily identical with those of the Federal Civil Service.

The Soil Conservation Service offers a unique opportunity for conservationists through its student trainee program. At the end of the first year of college, a student may qualify for a student trainee appointment by successfully completing a written examination, or he may wait until the end of his sophomore or junior years to enroll in the program. Placement officers in these colleges are generally familiar with this program. On passing the test the student may receive a "permanent appointment" with the Soil Conservation Service and go to work for them during the summer at $319 per month according to present pay scales. When school starts again he is given leave from the job, returns to school and reports back to work at the end of that school year, at a pay rate of $343 a month. This same pay rate applies for the next summer as well. Upon graduation if he does well at the work and likes it, he may be promoted again to a full-time professional position at $4,565 or more per year. Among many advantages to this arrangement are the following: The trainee has a job for the summers of his college years and upon graduation. Employer and employee have plenty of opportunity to study each other.

As the name suggests, the student trainee is learning the business. He serves as a helper to the various professional employees. He will work with an engineer for a period, a soil conservationist at another time, with the soil scientist at still another, and so on, so that he has an opportunity to view the broad scope of the work. His assignments will be progressively more responsible and more difficult. He may well serve in different localities each summer to broaden his experience.

Most of the conservation positions I have discussed are with the Federal government. The Federal pay scale is designed to be competitive with comparable positions with private employers. Pay adjustments are made to maintain this relationship. Present starting pay for professional positions ranges from $4,565 to $6,650, depending upon the particular position and the qualifications of the individual. Starting pay for sub-professional jobs ranges from $3,560 to over $4,500. Periodic pay increases are earned as long as satisfactory work is done. The amount of the increase is determined by the grade; the higher the grade, the greater the increase.

Higher-grade positions normally are filled by promoting someone already in the Service, through the SCS Career Development and Promotion Plan. Under this plan you have the opportunity to develop so you can accept greater responsibilities. SCS provides intensive and specialized training under competent, experienced technical men, both on the job and in group training centers.

Salary is not the only consideration when viewing a new job. The Federal government has a fine retirement plan, an established system of earned vacation and sick leave and other benefits which are optional. Worth noting is the fact that many Federal conservation employees are located in smaller towns where living expenses may be less than they are in the larger cities.

If a soil and water conservation career appeals to you, there is plenty of opportunity. The interest in conservation has broadened greatly and so has the demand for conservationists.

Recent estimates indicate that between 10,000 and 15,000 professional soil and water conservationists are presently employed in this country. Probably there are another 5,000 in sub-professional jobs. Government is the biggest employer but private organizations have conservationists on their payrolls too. State and local government probably come next to the Federal government in number of soil conservationists employed. And do not overlook the fact that colleges and universities need these men for teaching, research and extension activities.

New York State's Forest Preserve

by P. W. Fosburgh

Part I—*History*

ON May 15, 1885, the Legislature of the State of New York passed an act "to establish a Forest Commission, and to define its powers, and for the preservation of forests." This act established simultaneously the Forest Preserve and an agency to administer it. The three-man Commission was empowered "to employ a forest warden, forest inspectors, a clerk and all such agents as they may deem necessary." And the Trustees of Public Buildings were directed to supply the commission with suitable quarters, "with proper furniture and fixtures, and with warming and lights."

From this modest start the present Conservation Department has grown.

To conduct its operations, the Commission received $15,000. The Commissioners, appointed by the Governor, served without compensation. They inherited problems which dated back to the end of the Revolutionary War. At that time, title to vast tracts of land which had formerly belonged to the Crown or its subjects reverted to the newly-established State of New York. The State could think of nothing better to do with these lands than to put them on the market. The theory was that if such lands were in private ownership, and so taxable, then the revenue to the State would be increased and its problems of ownership lessened. To expedite the disposal of these State-owned lands, a commission was established and the members paid according to the amount of land they sold. The more the better, no matter what the price.

The almost incredible folly of this policy persisted until 1883, when the Legislature withdrew from sale what little land was left. But the damage had already been done. Hundreds of thousands of acres had passed into private ownership for as little as five cents an acre. To get it back—once the idea of the Forest Preserve had been conceived—often cost more than ten times the original sales price. Furthermore, it was common practice for operators to acquire lands from the State, take off the timber, and then get out, leaving the tax bills unpaid and the scalped land back in the lap of the State.

There was another convenient way of disposing of public lands. In the latter half of the 19th Century, it was State policy to encourage the building of railroads, particularly into the Adirondack area. As an inducement, the railroads were offered—and accepted—about half a million acres of public lands, to do with as they saw fit.

When the Forest Commission took over in 1885, there were only about 700,000 acres of State land left in the Adiron-

An early fire scene at Long Lake West

In THE CONSERVATIONIST *for August-September, 1963, we published an article,* "The Forest Preserve and the Gasoline Engine," *noting that the phenomenal development of the internal combustion engine is but one element among many that have evolved to alter the original concept of the Forest Preserve in New York. There are other and even more fundamental elements which demand thoughtful consideration if this vast, unique, and complex association of natural resources is to fulfill its great potential to those who own it—the people of the State of New York.*

The key to intelligent consideration of these elements is, of course, understanding—of what the Forest Preserve really is; of why and how it came to be; of the nature of the Preserve today; of the social and economic forces which have evolved so dramatically since creation of the Preserve in 1885.

In this, the second of our four part series of articles on the Forest Preserve, P. W. Fosburgh, past editor of THE CONSERVATIONIST *and authoritative spokesman on the Preserve, reviews its history; what it really is; why and how it came to be.*—A. W. BROMLEY

The High Peaks region

dacks, and about 50,000 in the Catskills. And the condition and status of these remnants were indescribably chaotic.

On even this remnant of forest domain, the Commission faced three major problems: (1) How to prevent trespass upon State lands, (2) how to "prevent further ravages by fire," and (3) "what system can be devised which will, in time, make these forests not only self-sustaining as to cost of management, but in addition, a source of wealth and revenue to the Commonwealth."

In attempting to solve these problems, the Commission was thwarted by the long standing indifference of the Legislature. As early as 1872, Ver Planck Colvin, most famous of all Adirondack surveyors, had suggested the creation of an "Adirondack Park," and in the same year a Commission was appointed to "inquire into the expediency of providing for vesting in the State the title to timbered regions lying within the counties of Lewis, Essex, Clinton, Franklin St. Lawrence, Herkimer and Hamilton."

The Commission's report was promptly pigeonholed by the Legislature, which continued to regard State-owned properties as a "piece of commons." This attitude apparently reflected the prevailing public point of view, and in spite of repeated entreaties and admonitions from a succession of Governors who wanted some positive action taken to protect our public lands, none was.

The situation was critical. Organized gangs, among them "The Grenadiers" and "The State Troopers," moved onto State property and took off the timber, often setting fire to what was left in order to cover up their thefts. When hailed into court, which happened rarely, they would plead that the boundaries of State-owned land were poorly marked.

And so they were. The original great purchases of Colonial days, including McComb's and the Totten and Crossfield, had been surveyed with uncanny accuracy, but the marks of the surveyors had largely disappeared by the time the Forest Preserve came into being, more than a hundred years later, and only the most experienced surveyors could find them. Most of the trespass, however, was deliberate, the perpetrators knowing that the State had little law and little power to stop them.

Another form of trespass was the presence of innumerable squatters, who had moved onto State lands and there established residence in anything ranging from spruce bark shanties to substantial camps. They claimed proprietary rights, and in many instances, a divided title with the State. In settling such disputes, until 1893 it was the policy of the State to take the easy way out and decide in favor of the squatter, who thus got title to more of what might have been the Forest Preserve.

As to the immense damage done by forest fires, the principal villains of the piece were the railroads, ironically subsidized in most cases by the State, itself. Sparks from the stacks, or coals from the fire boxes, were held responsible for the burning of at least half a million acres of Forest Preserve lands and probably a good deal more. It was not until the railroads were required to burn oil rather than coal that this source of trouble was greatly reduced. But again, the damage had already been done.

Even after the establishment of the Forest Preserve in 1885, there remained the critical and always controversial question of whether the timber on these state properties should be made available to the lumberman. It is evident that between 1885 and January 1, 1895, when the Forest Preserve was given Constitutional protection, the Legislature was subjected to, and usually submitted to, the pressure of powerful lobbies representing commercial interests which included the railroads, the so-called "squatters," and the lumbermen. The lumbermen had the loudest voice, and the one with the most influence in the Legislature.

The question of whether or not any cutting of timber should be permitted on the Forest Preserve remains basic to this day, and has been controversial since 1893. In that year, the Legislature passed a law giving the Forest Commission authority to buy, sell and exchange lands, to lease cottage and campsites, and to sell spruce, tamarack and poplar

For those who had taken an active interest in the protection of our public properties, this bill was too much to swallow. The Forest Preserve was being sold out. Led by the New York Board of Trade and Transportation, the New York Chamber of Commerce, and the Brooklyn Constitution Club, a group was dispatched to Albany to attend the Constitutional Convention of 1894. Its announced purpose was to place a permanent cloak of protection around the Forest Preserve by establishing it in the Constitution, rather than leave it subject to the changing moods of successive legislatures and their agent, the Forest Commission.

The efforts of this unofficial group and its supporters prevailed, and the Forest Preserve was given Constitutional protection. Just how much protection is indicated by the differences in wording between the statue which established the Forest Preserve in 1885, and the wording of the Constitutional article.

Catskills, from Haines Falls

The Act of 1885 provided that the lands constituting the Forest Preserve "shall be forever kept as wild forest lands. . . . they shall not be sold nor leased or taken by any person, corporation, public or private."

The Constitutional provision went significantly farther. It stipulated that "The lands of the State now owned or hereafter acquired constituting the Forest Preserve as now fixed by law, shall be forever kept as wild forest lands. They shall not be leased, sold, or *exchanged*, or be taken by any corporation, public or private, *nor shall the timber thereon be sold, removed, or destroyed*."

No more leasing, selling, or exchanging of State lands in the Forest Preserve. But above all, no more cutting of timber. The key clauses, which remain in effect to this day, were that these State properties were to be "forever kept as wild forest lands," . . . "Nor shall the timber thereon be sold, removed, or destroyed." In the latter clause, the inclusion of the word "destroyed" was intended to prevent the flooding of Forest Preserve lands, since such flooding would inevitably destroy the trees on the inundated area.

It was recognized, even by its authors, that this wording of what is now Article 14, Section 1 of our State Constitution was a measure taken in desperation; after years of neglect and abuse our public properties needed the utmost protection, and in view of the brief but sorry history of these properties, it is not surprising that the protective measures taken tended toward the extreme. They reflected the feelings of the first Forest Commission, which reported that: "There is so much tending to destroy, and so little to conserve, that the Commission feels constrained to throw around the remnants of forest lands belonging to the State, all the protection that ingenuity and the counsel of many minds can suggest."

In commenting on these provisions in his "History of the Adirondacks," written 40 years ago, Alfred Donaldson wrote that: "The experience of the years fully justified this 'Gibraltar of Forestry.' Its best friends were quite aware, however, that it embodies the wisdom of necessity, not of choice. The need of the moment called for forest salvation pure and simple; it allowed no play to the desire for scientific development."

Continuing, Donaldson wrote: "The plea is made that the bad days in the Adirondacks are over, and that the time has come to open them to scientific cutting and replanting—which is true conservation. The justice and wisdom of the theory no one will deny, and popular sentiment is undoubtedly inclining more and more to give it a trial. It seems highly probable, therefore, that the forest struggle of the future will center around the safeguards of such a trial, rather than in unyielding opposition to it."

As an historian of the Adirondacks Mr. Donaldson was the best. But as a prophet, he was right in part only. The 12 amendments to Article 14 have done nothing to permit scientific management of either forests or wildlife. They have mainly applied to the building or rebuilding of roads or highways through the Forest Preserve, the construction of reservoirs to regulate the flow of streams, and the construction of ski facilities.

In stating his views as to "the forest struggle of the future," historian Donaldson's wish was father to the thought. There has been little give and take between the two opposing groups which formed even before the Forest Preserve received Constitutional protection. Rather, the lines have hardened.

"STOP THIEF"
New York Herald, April 20, 1903
Copyright, 1903, The New York Herald Co.

On one side are the protectionists, still haunted by the memories of our dismal past and by fears of what may come if the Constitutional protection of our Forest Preserve is altered in any way. On the other side are those who believe that, as Donaldson put it, "the bad days are over," and that the changes in both the Forest Preserve and the public's use of it warrant a careful reappraisal to determine whether, under proven scientific management, new policies based on new information and adjusted to meet new needs should be devised and put into operation.

This conflict in point of view has profoundly influenced the history of the Forest Preserve. No doubt it will continue to do so. The protectionists have had the advantage from the start, when they worked so successfully for the establishment of the Preserve, and their increasingly emotional appeal to the public has attracted a following which continues to dominate thinking and policy with regard to the Preserve. This group is well organized, articulate, and ener-

getic. Its views have prevailed, and the basic clauses of Article 14 remain intact.

Nevertheless, much timber has been cut in the Forest Preserve, and by the State, itself. This has been done mainly in the construction of recreational facilities, notably the campsites, which almost everyone believes are necessary and desirable but which are certainly of doubtful Constitutionality. Article 14 does not even mention recreation.

To meet this situation, The Conservation Department has been forced to rely upon opinions of Attorneys General and on court decisions which, on the whole, represent a strange compromise between the public will on the one hand, and the law on the other. We have consistently paid lip service to the Constitution, and then asked our lawyers to find means of circumventing it.

Our lawyers have been forced into some rather devious reasoning. Campsites, for example, (which, of course, involve the clearing of timber) may be built so that campers can be concentrated and supervised in suitable areas. This lessens the danger of forest fires and so promotes the primary purpose of Article 14, which is the preservation of the Forest Preserve.

Early problem: Re-establishing old lot lines by survey

This was the opinion of an Attorney General. Such opinions have the force of law, unless successfully contested. They may be reversed at any time by another Attorney General. Our public campsites have been built on this shaky foundation.

As an example of a court case affecting the Forest Preserve, one of the most significant decisions was handed down by Justice Harold Hinman in 1930, in connection with the proposed construction of the Olympic bobsled run near Lake Placid. Justice Hinman would not permit its construction on Forest Preserve lands. "No artificial setting," he ruled, "is required for any of these (Forest Preserve) purposes. Sports, which would require a setting that is man-made, are unmistakably inconsistent with the preservation of these forest lands in their wild and ntaural state which Providence has developed." The highest court of the State approved.

This is an opinion frequently quoted by those who would have no change in the basic clauses of Article 14. But campsites are man-made, and so are boat launching sites and many other of the recreational facilities demanded by and now supplied to the public.

Looking back at the mistakes of the past, and looking forward, the State Planning Board in 1935 reported:

"The intended purpose of the Constitutional restriction should be maintained, but the Board recommends that a careful study he made of all the effects of this provision (Article 14, Section 1) with a view to determining the desirability of giving the Conservation Department authority in proper places for the clearing of timber in order to create artificial lakes and provide necessary and desirable facilities for public campsites; also for the cutting of timber to provide food for deer and other wildlife where necessary."

These recommendations of the Planning Board received little consideration and no action. But the issue was not dead. In the fall of 1951 the Conservation Department, in its magazine THE CONSERVATIONIST, initiated a discussion and study of the Forest Preserve which continues to this day.

The Department inquired, editorially, as to whether the present wording of Article 14, Section 1 continued to serve the best interests of the people. Are forests best preserved by prohibiting all cutting? Is such a prohibition conducive to an abundance of wildlife? Is it in the best interests of the State's economy, particularly the economy of the Forest Preserve regions? And does the present wording of the article permit adequate development of recreational facilities?

The Department pointed out that in asking these questions, it sought nothing more than the right answers. It acknowledged its obligations to help in finding them, but pointed out that the ultimate decisions would be made by the people and their elected representatives.

There immediately ensued a debate which became so vigorous and of such wide interest that at the request of the Conservation Commissioner, the matter was referred to the Joint Legislative Committee on Natural Resources. It appointed a Special Advisory Committee on the Forest Preserve, and this, along with its parent committee, continues to study the Forest Preserve and make recommendations with regard to it.

Their work has not been merely academic; it has already resulted in the passage of legislation to protect the State's interest in the matter of disputed titles, and to rearrange the Blue Lines defining the Adirondack and Catskill parks so as to include some valuable

(*Continued on page* 28)

Boreas Pond in the Adirondacks

The Seneca Green Corn Ceremony

A Revealing Glimpse Into the Life and Mind of New York Indians

by William N. Fenton,

Assistant Commissioner, New York State Museum and Science Service, State Education Department

I SAW my first Green Corn Dance at Coldspring Longhouse on the Allegany Indian Reservation of the Seneca Nation, about 1920. At that time my family summered at nearby Conewango, where our forebears settled and farmed more than a hundred years ago.

Even though we were used to seeing Indians on the farm, and had seen them play ball (both their own lacrosse and our baseball) at town picnics, nothing underscored the distance between Seneca culture and that of the surrounding white farmers more than attending one of their "doings" at the Longhouse, seeing them dance to the measured cadence of drum and rattle and turn with the great swells of singing; and listening to their speakers intone long periods of ritual prayers in the Seneca language without seemingly ever moving their lips.

The memory of their singing haunted me for years. Immediately we children had tried to reproduce the songs without success and gave up. Afterward as an undergraduate at Dartmouth College, I once heard Roland Sundown sing these songs in a fit of homesickness, and when I decided to be an anthropologist I went back to Coldspring to do my first field work. For thereabouts, many years earlier, my grandfather and Amos Snow hunted together and were lifelong "friends," a particular relationship in Indian society that I was to learn and benefit from. And, as an artist, my father had encouraged Jonas Snow to carve for him, because Jonas was a gifted maker of False Faces, the grotesque wooden masks of the medicine society. So it was not surprising that I came to live in a tent with the Senecas at Jonas Snow's place, and learned to sing their songs in the evenings thirty years ago.

Today there is a new generation at Allegany and few of the old people that I first knew are left. But the Senecas still cherish their valley where the brush overgrows the graves of their ancestors, where the girls still have long eyelashes from looking at the hills, great glacial morraines that the Creator had left over when he had finished the world, and where the younger men who have come back from the wars in Europe and the Pacific, having listened as boys, now help the old people keep up the yearly round of ceremonies at the Longhouse. Integrated schools have made the Seneca young people more at home in Salamanca, but very few white residents of the area even today really know anything about Seneca culture. It is more known in the learned world through the writings of anthropologists.

Down river is Kinzua, which first meant "fish on a spear," and as such symbolizes the Senecas' attachment to the river. It has become a threatening word now; meaning disaster to Senecas. The building of a huge earth dam on the narrows of the Allegheny River, some twelve miles below the Pennsylvania State line, will create a huge reservoir that threatens to innundate or render uninhabitable 9,000 acres of the best bottomlands below Salamanca, leaving only the steep hillsides, the city itself, and the lands east of it.

Even though the Senecas are no longer farmers, agriculture having generally declined in much of southwestern New York, they have no intention of living like muskrats. Nor can they revert to hunting. The few Indian farmers like the "John boys" who still raise Indian corn, both white and calico for their own use and for sale to the Longhouse people, see little opportunity to continue farming, which would be their first choice—what with the remaining habitable lands cut up for new suburban developments, for highways, and for other improvements that are being planned. One such settlement has been projected for Jimersontown just below Salamanca, and the Longhouse adherents are planning to move to higher ground south and west of Coldspring Creek toward Steamburg. Snow street and the site of the present Longhouse is within the "take area," below 1,365 feet, and might occasionally be under water.

But the Senecas have a long history of removals—from the Genesee to Buffalo Creek after the Revolution, and from there to Cattaraugus Creek in 1838; and although the Allegany settlement is an old one, the site of their cooking fire has moved up the river twice during the previous century. There is quiet confidence that they can rekindle their fire, erect another Longhouse more suited to the present century, and carry on the yearly round of thanksgiving festivals in honor of the Creator, as ordained by their prophet, Handsome Lake.

The Longhouse people are the followers of Handsome Lake who rose to preach at Cornplanter's settlement just below the State line nearly one hundred and seventy years ago. The prophet's teachings made certain compromises with white culture, accepting several teachings and practices of the Quakers who were among them, and condemning other frontier evils which disrupted Seneca society: especially did Handsome Lake condemn whiskey drinking, card playing, fiddle dancing, gossiping, spouse swapping, and witchcraft as cardinal sins. The prophet received his revelations in a series of dreams or visions which were followed by public recitals, and his preachments are remembered and recited verbatim by native preachers under the watchful scrutiny of the "Guardians of the Good Message," the so-called "Keepers of the Faith," who are charged with fostering the recitation of *Gai'wi:yo:h.*[1]

The Code of Handsome Lake urges

The White Man's Thanksgiving Day is observed at this time of year. The Indians of New York have a Harvest Dance, but somewhat earlier they also observe a much more elaborate ritual which includes the same basic theme of giving thanks. This article about the Green Corn Ceremony helps explain the Indian and how his views reinforce the basic tenets of conservation.

The Green Corn Ceremony is one of the two big religious holidays in the Iroquois ceremonial calendar. It is the highpoint of the summer cycle, balancing Midwinter Festival, which comes at the new year, and which incorporates the same rites with different emphasis. Green Corn Ceremony epitomizes man's relation to all living and growing things, especially his food crops; just as Midwinter Festival stresses his anxieties and the obligations incurred by dreams while the earth sleeps. Green Corn is a joyous season and the Indian gives thanks that he has survived another year to see the corn and to take part in the ceremony. It is the gratefulness of the Indian for the gifts of his Creator that concerns us here and that will be explained because Green Corn Ceremony is a living thing that is still going on in New York State and is likely to continue as long as there are Senecas.—EDITOR

the retention of the best of Iroquois culture, especially the festivals that return thanks to the Creator for the "Three Sisters, our life supporters"—maize, beans, and squash—by naming the little children and celebrating the Four Sacred Ceremonies in his honor. The date of the Green Corn Ceremony naturally depends on when the corn is ready, but the "head ones" have the responsibility of setting the date, which may be adjusted to such conflicting events as "Indian Day" at the State Fair. It is usually a week end when the men can get off from work: this year it was August 23-26. There is seldom much notice, and the officials, themselves, do not know until their meeting, usually at a Sunday night social dance at the Longhouse, just when they will hold the ceremony to honor the Green Corn, that it has once more come into the milk, and that the Senecas have survived another year to see the ceremony of Henontekhwé:es ("they gather in the food").

Most American Indian societies have some explanation of how maize was first introduced among them. There may even be a dramatic ritual forever reminding them of this episode. And there may also be an origin legend of the rites which honor the maize, beans, and squash. The Seneca have all three.

In the Iroquois cosmology, their account of the beginning of the world, includes an episode in which a fatherless child, the culture hero, who returns again and again with cultural gifts, brings maize, beans, and squash to the people who then are hunters, instructs them how to plant, cultivate, and harvest. There is even a legend of a wild species of corn, as if it were discovered and domesticated. But as if they always had it. Skywoman is described as bringing an ear of corn in her descent to the back of the turtle on whom the earth is formed and taking it to her

Tree of life in celestial dome,
showing man's relation to natural and supernatural forces

grave, after which the first couple find it growing on the earth mound from her breast, together with bean and squash plants. The tie between Earth Mother and the Three Sisters is thus close, indeed.

The Seneca concern for the Three Sisters extends through autumn and winter months when the earth sleeps and the Three Sisters are safely put away to rest. At the Great Midwinter Ceremony, which marks the new year and lasts for nine days, the climax comes on the sixth night at Coldspring, when the Husk Faces burst into the Longhouse. First come two messengers from opposite ends on the dead run, wearing husk masks and carrying long poles. No one dare oppose them, lest he get knocked down. They make two such feints, and on the third, capture one of the old men to serve as their speaker. Meanwhile the whole company, of up to fifty Husk Faces, including most of the youth of the community (who have been outfitted in a nearby house by the two lady Keepers of the Husk Faces in the castoff garments of the countryside) have signalled their arrival by drumming the sides of the building with staves. They are dressed as the opposite sex.

Their captive speaker presently makes several returns, but keeps going outside to be prompted, and announces that where they come from on the other side of the earth it is summer and there they till prodigious crops of corn, beans, and squash which they plant between the stumps in a burnt-over ravine. Their leaders are named: "Long Ears Of Corn." "Big String Beans." "Giant Pumpkin." "Dumplings." etc. They have many new babies, which they are carrying. They ask the privilege to stay for a social dance with the people, and especially request the Old-time Women's Dance in honor of the Three Sisters, of which they carry specimens. This all is supposed to augur good crops in the ensuing summer. It has always impressed me as being a dramatic representation of the gift of domesticated crops by an alien people.

There is deep cultural memory of the origin of the Green Corn Ceremony. John "Twenty" Jacobs of Quaker Bridge, Keeper of the Gai'wi:yo:h, related in 1933:

"The Green Corn Dance came to the people when they were together, just after some had crossed, and they were living on opposite sides of the stream. The Creator sent the Four Persons to be near his people. That is why this one man, a stranger of indeterminate age, came down. But he knew everything, and he told the people how it would be in the future—just how they would do things.

"He told them that when the corn and other garden crops are usable, they must have a meeting and notify all the people to come and return thanks with dances for the green corn. This would usually fall in August. (When you see that every crop is doing well, then set the date. They say that the people and the corn are sisters; now we like to be in the fields where the corn whispers to us as we work among it hoeing.)

"Now, the first time the people danced the Great Feather Dance, and, in about the middle of the dance, they had a rest, and then the women danced The Old Time Women's Dance, for this is a corn dance. And the Corn says: 'That is for us and we like to be in this party. We and our sisters, the women, shall have this dance together.' The men sing, and the two women who lead the dance are the head ones and they carry ears of corn in their hands. And so they think that the corn is in that dance."

All the songs describe the planting, germination, and progressive growth of the corn until it is gathered at harvest time.

All this recital is sung at the Green Corn Ceremony, according to Chief Jacobs, who also indicated that it was also sung at planting to bless the corn, at Strawberry Festival to encourage it to grow, and finally at Harvest or Bread Dance in the fall, for now the corn is back home again to rest for the winter. It is now sung only twice a year. I am told, at Midwinter and at the Green Corn Ceremony. We can thus document a cultural loss in thirty years.

And so the officers of the Longhouse, of whom there are four principals, two men and two women, selected equally from the two sides of the tribe, and who are known in English as the "head ones," or the chiefs, watch the corn and when it is ready, call a meeting of the faithful, or minor officials, of whom there are ideally sixteen, a man and a woman from each clan, and who are known collectively as the Honóndion:t, at the Longhouse of a Sunday evening to set the date for the Green Corn Ceremony. Present also are the two Keepers of the Good Message, one of whom is Wampum Keeper for the congregation. After the customary Address of Thanksgiving, there is usually preaching from the Prophet's Message, followed by Confession over the wampum strings which are circulated among those present. A second opportunity to repent is provided for the whole community several days later, to allow everyone to get ready for the ceremony itself. Confession is not new to, nor introduced among, the Iroquois. Speakers, singers and other officials for the festival are then appointed.

The First Day

Not only must everyone repent, but the singers should take emetics beforehand, and the little children must have Indian names in order that the Creator may know who is present. Although the ceremony at Coldspring would appear to occupy four mornings until noon, the first morning is not properly a part of the festival, but is preliminary and set aside for the naming of children. Since they make soup especially for them, it is quaintly called hadiksa?dó:? (literally "they boil the babies"). This occasions many jokes, particularly at the expense of the eight-year-olds who like to "horse around" the building. Following a general thanksgiving to all of the spirit-forces, comes a Feather Dance for the officials who are assisting the cooks, cutting wood, fetching water, and running errands. Then comes the event of the day: The speaker rises and declares:

"Now the door stands open for giving names.

"Now the wind is blowing through it.

"Now you shall give names to the children whom you have regarded as babies, so that they will have names to depend on. Perhaps he will be lucky wherever he travels on this earth. He might even grow up to be a great man. Now be quick about it."

A speaker, for each of the clans, prompted by the matron who gives the names from the free names belonging to that clan, announces that his clan has a child to name, and that its father is of such a clan (for the Senecas like all the Iroquois are matrilineal), and he repeats the name that all may remember it. For a boy the warriors shout, but a girl passes unnoticed.

When the door is closed, for another six months, the Great Feather Dance is celebrated. Final announcements for the morrow await a distribution of the soup that is carried into the Longhouse in great steaming cauldrons.

The Second Day

Runners go through the community on the second morning collecting food for the cooking, for this is the In-gathering proper, and the day is named for its main event, the Great Feather Dance. On this day the preliminary announcements to the people contain a statement on the general health of the settlement. The preliminary Feather Dance is followed by the Traditional Women's Dance in honor of the Three Sisters, in which

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Longhouse Portraits

by H. Wayne Trimm

IT was a warm spring day and the willows stretching fieldward along the streams were soft yellow-green against the still brown landscape. There was an open friendliness about the awakening earth, contrasting strangely with suspicious, closed-faced looks with which the people of this Nation greeted me. I was a white man in the land of the Indian, a people who had been conditioned by years of mistreatment by my race.

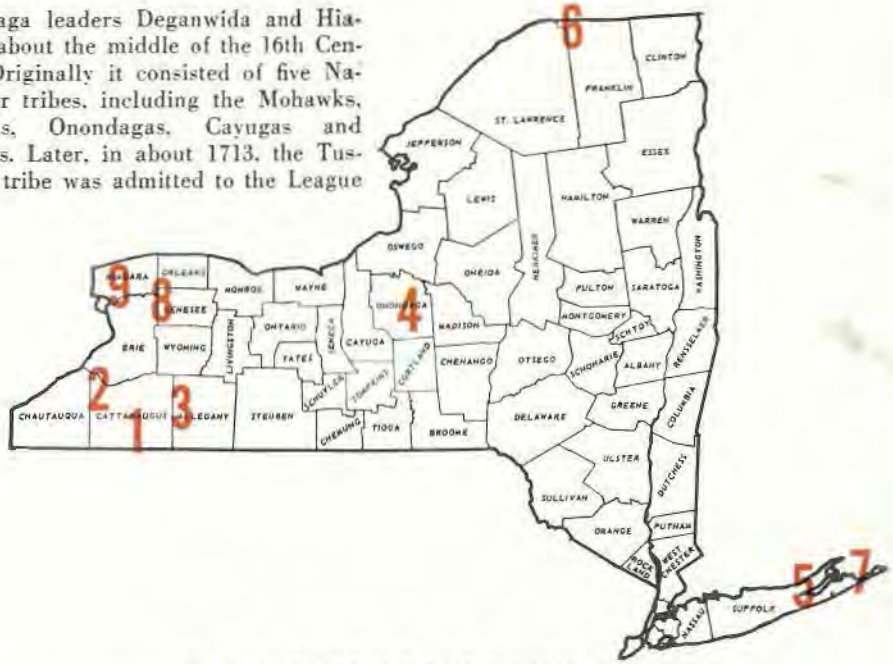
I wanted to tell them, "I'm not like the rest. You can trust me. I'm here to learn and to try to understand." But I knew it would be in vain. Those who wanted to trust me would do so by their very natures. The others would stand aloof.

I was going the rounds of seven of the nine Indian reservations in New York, making sketches and gathering material for the portraits of the current chiefs which appear in this issue's centerspread. As I traveled I talked to these men and began to learn a little of their governmental structure which is the modern adaptation of the Six Nations of the Iroquois League, something of the problems with which they have to deal and, to a small degree of their way of thinking. These men, and the tribes they represent are today's heirs to *Ho-De-No-Sau-Nee*, the ancient Confederacy.

New York State's area was once the center of many small groups of woodland Indians who roamed the country hunting and fishing. They also practiced agriculture, bringing under cultivation tobacco, maize, white potatoes, pumpkins, buckwheat, squash, lima and string beans and melons. They lived on and with the land, utilizing trees, shrubs and minerals for food and medicine. Their dwellings were made of logs and bark, each housing several families. They were called "Longhouses" because of the distinctive size and proportions of their homes.

As long as these groups stayed in their own areas all was well. But the human being is restless and soon there was travel and trade and consolidation into tribes. Thus several main groups or tribes were formed in upstate New York. Sensing a need for common defense and an opportunity to solve common problems, the Iroquois League was formed.

The Iroquois League of Indians (*Ho-De-No-Sau-Nee*) was organized by the Onondaga leaders Deganwida and Hiawatha about the middle of the 16th Century. Originally it consisted of five Nations or tribes, including the Mohawks, Oneidas, Onondagas, Cayugas and Senecas. Later, in about 1713, the Tuscarora tribe was admitted to the League



INDIAN RESERVATIONS IN N.Y.
1. Allegany (Seneca). 2. Cattaraugus (Seneca). 3. Oil Spring (Seneca). 4. Onondaga. 5. Poospatuck. 6. St. Regis (Mohawk). 7. Shinnecock. 8. Tonawanda (Seneca). 9. Tuscarora.

after being driven from their North Carolina home by the whites. The Onondagas, being the founders, were keepers of the central fires and head of the councils. Even today the *Ta-do-dă-ho* or tie-breaker of the council is an Onondaga.

For two centuries this republican-type League flourished until the tribes became involved in the white man's wars. The League was generally allied to the English against the French. During the American Revolution part of the League sided with the British and part with the Colonies. While the close-knit unity of the League was broken there is still an active attempt being made to keep it alive and functioning. Each tribe of the League has its own leaders. Some are hereditary chiefs and some are elected officials bearing various titles. It is the duty of each leader to meet at intervals in council and, while representing the people of his own tribe, to try to arrive at conclusions which will benefit the League members as a whole.

Originally all of Upstate New York was Iroquois, but the tribes have either moved or have been restricted to relatively tiny parcels of land which even today are being reduced in size by dams, power projects and seaways. *(See map for location of reservations.)*

Some of the Mohawks sided with the English during the Revolution and at war's end moved to Canada with their allies, while others settled at the St. Regis Reservation on the St. Lawrence River at the town of Hogansburg. Here the chiefs are elected by the tribe.

The Oneidas sold most of their land and moved to Wisconsin. Only a few remain on the 350 acres of their original reservation.

The Onondagas retain about a quarter of the lands they owned at the end of the Revolution. Originally these lands included the present site of Syracuse. The Onondaga Reservation is now located six miles south of Syracuse.

The Cayugas have scattered, some moving to Ohio and Oklahoma. Others settled on the Cattaraugus Reservation of the Senecas.

In 1838 one group of Senecas separated from the main tribe, sold lands alloted to them in Kansas and bought reservation land near Batavia. This is the Tonawanda Reservation whose land title is held "in trust and in fee for the Tonawanda Indians" by the Comptroller of the State of New York.

The Senecas have three reservations, the Cattaraugus, the Allegany and the Oils Spring reservations. The city of Salamanca, occupied under a ninety-

(*Continued on page* 26)

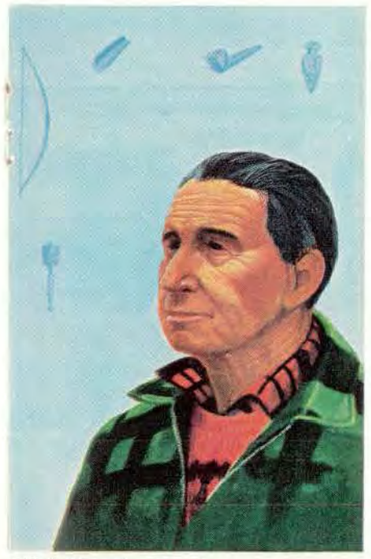
SOME INDIAN LEADERS OF NEW YORK

George Heron, President, Seneca Nation of Indians

Here are present leaders
chosen by the tribes for their government.
Painted from life by Wayne Trimm

George A. Thomas, Thadadaho, Onondaga

Chief Sanford Schenandoah, Onondaga Reservation



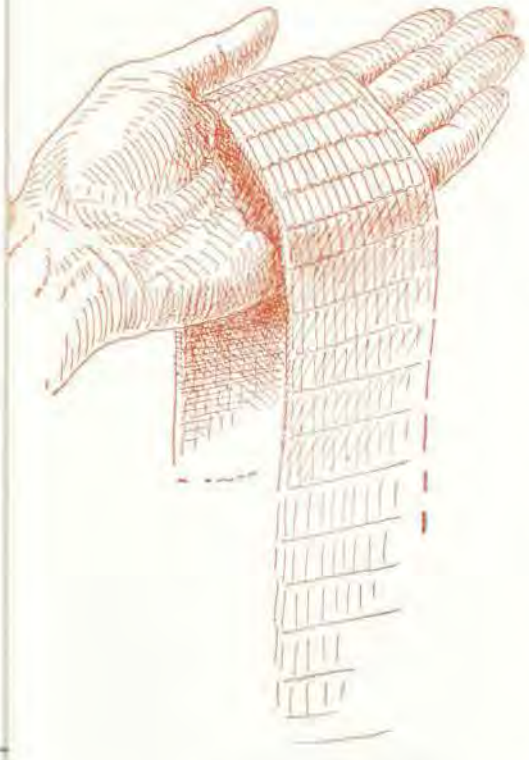
Chief Elton Greene, Tuscarora

Chief Noah Ransom, St. Regis Indian Reservation, Mohawk

Charles Smith, Trustee,
Shinnecock Reservation

Basil Williams, Treasurer, Seneca Nation of Indians,
Cattaragus Reservation

Chief Corbett Sundown
of Tonawanda Reservation, Seneca



(*Continued from page* 23)

nine year lease and several small villages in the area are in the Allegany Reservation. Rentals due the Seneca Nation are collected as part of the city taxes of Salamanca. The Seneca Nation is a democratic government with an elected president, vice-president, senate and legislature.

The Tuscaroras, after much mistreatment in North Carolina, finally relocated on a reservation near Niagara Falls. The Senecas and the Holland Land Company gave them about one-third of the reservation and the rest was partially paid for by the sale of Tuscarora land rights in North Carolina.

The Shinnecocks of Long Island, probably of Algonquin origin, were not in the Confederation of the Iroquois. They were a seafaring group, active in trade with the tribes in Connecticut and were also great whalers and fishermen. They, and the closely related Poospatucks have reservations near the eastern end of Long Island. These tribes are organized like the townships of Long Island and have "trustees" rather than chiefs for their leaders. Land was granted them by the Colonial government in the name of the King, an act recognized as valid by the State of New York, but not by the United States Department of Indian affairs. It was these Indians who taught the early settlers of New York the whaling trade and many Indians shipped as crews of whaling vessels. On one such whaling expedition a large number of Shinnecock men were lost.

The original purpose of the Six Nations Confederacy was for mutual defense. Such a need, of course, no longer exists. But the secondary purpose, that of solving common problems is still a unifying factor. I found, in my contacts with the Indian leaders of today, that once I got past the conditioned reserve many of them seem to feel toward a strange white man, there was a desire to be friendly and to explain their situation.

The impression I received from my talks with them led me to understand that today's Indian is caught between two worlds. Economic and social pressures are forcing him to become more and more a "white man" in thought and action. At the same time he wishes to retain the traditions and culture which make his people unique. For years the Indians have seen treaties ignored and promises broken. Even today they feel the wheels of progress grinding away at their lands as acre after acre is whittled from their reservations. (St. Lawrence Seaway, Niagara Power Project, Kinzu Dam).

It is not surprising that, with such pressures, some Indians feel resentment toward white men and tend to become secretive and clannish. An Indian religion based on the old teachings and prophecies of a Seneca named Handsome Lake is having a revival in some areas. It retains much of the tradition of Indian culture, while providing the religious security many need. It seems to have gained strength as pressures have increased.

The Indian population is growing too, on land that is often poor and restricted. Housing on reservation land often constitutes a problem. Young people are maturing in a society which considers cars, TV, good houses and material possessions on a normal part of existance. Many will have to leave the reservations to find education, jobs and suitable places to live. With such a move most may lose their tradition of language, song, ceremony and culture as they compete in a "white" society. This is a dilemma which most of the leaders I talked with recognized. Some feel that a compromise is possible, and I sincerely hope that this is true.

Based as it is on Nature and natural phenomena, the traditional heritage of the Indian is a cultural resource as worthy of conservation as are our material natural resources.

When I had finished my rounds of the reservations and had met today's leaders of *Ho-De-No-Sau-Nee*, I felt a new respect for New York's Indians and a sympathy with their current problems. I had a feeling of pride that from somewhere in my family's past, I too have Indian blood and that I am, by adoption, a Tuscarora.

Seneca Ceremony

(*Continued from page 22*)

the leaders carry ears of new corn. Then comes the ritual of changing children's for adult names, and giving names to persons adopted by the clans. In contrast to names given at fairs and for political purposes, these are real family names and imply an obligation as well as genuine acceptance. Few white people appreciate this. (The experience of being stood up and marched the length of the Longhouse and sung over by one's sponsor is not soon forgotten, if you know what they are saying.) The exact meaning of the name is unimportant, so long as it understood, recognized, and remembered for its previous holders.

It is difficult to convey in words what hearing, seeing, and participating in Great Feather Dance means to an Iroquois. As one of the Four Ceremonies, it belongs to the Creator. One dresses and paints for it, and every faithful longhouser must go around at least three laps, if he only walks. In the words of Twenty Jacobs:

"The Great Feather Dance is about heaven, and the people are having it there every day. They all feel well and are happy. The others are happy because they are watching it. The Creator left it to his people, to help them, and so that they might enjoy themselves. He thought the people would be lonesome without them."

There are over one hundred Feather Dance songs, according to the singer. The late Chauncey Johnny John was one of the greatest, and he recorded for me in 1941 in an album which I published.[2] There is no set order, but the songs commence on the earth, refer thanks to roots and herbs, the bushes, the saplings, the timber, running streams, game animals, the Three Sisters, birds, the Thunders, and all the "Appointed Ones" beneath the sky dome. It follows the paradigm of thanksgiving, explained below. Chief Jacobs maintained, to the amusement of others, that even the flying squirrels and bats have a song about their contest with the birds and animals as to whether they belonged on the ground or in the air.

It is an honor for a boy who has received a new name to lead the Feather Dance. The stacatto of the turtle rattles beaten on the singer's bench remains with him to the grave.

The program of this day recurs five times throughout the cycle and is the key pattern which gives structural unity to Seneca ceremonies at Coldspring Longhouse.[3]

Part of the Green Corn Ceremony, sketched by the Seneca, Jesse Cornplanter

The Third Day

The third day is the occasion of personal commitment and sacrifice; it has three main features, but takes its name from two of them—Adon:wen? ("Personal Chant") and Gonéoon? ("Skin, Drum, of Thanksgiving Dance"), which, with Feather Dance, are the second and third of the Four Ceremonies of the Creator. The day features a community tobacco sacrifice. The day starts with the collection of tobacco and food from house to house. (*Nicotiana rustica* L. is the native or "genuine Indian tobacco." which is used for the ceremonies).

At the Longhouse, following the customary thanksgiving and announcements, an appointed priest sends up the thanks and hopes of the community to the Creator for cultural gifts, the blessings of life, and the hope for their continuance another six months, putting a pinch of tobacco in the fire for each thing thanked during an hour. Then the men individually return thanks that they have lived to see the ceremonies again, starting with chiefs and officials, then the older men and warriors, each chanting his own song, ending with the singing of the Prophet's own song.

Finally, comes the costumed Drum or Thanksgiving Dance, which as its name implies is interspersed with prayers to the stations of the pantheon, starting on earth. The dance leader carries a miniature bow and arrow, which he then hands to the priest, and takes it back after each prayer. This relic commemorates Handsome Lake's conversation with the Four Angels, of the Creator's Appointed Ones, when their speaker had a bow in his hand.[4] It ends with the usual speeches and the carrying in of the feast, which is distributed to all.

The Fourth Day

On the eve of the Great Bowl Game or the Peach Stone Game, the fourth sacred ceremony, which concludes the festival, they always have a social dance at the Longhouse, to relieve some of the seriousness of the ceremony and to make appointments for the last day.

Two events occur. Between social dances of free choice, which invariably start with "Quiver" or "Stomp Dance," the town divides in halves—Bear, Wolf, Beaver and Turtle vs. Deer, Snipe, Heron and Hawk clans, for the game next day.

They appoint collectors to match the wagers and referees to watch the pits and score the beans. The Bowl Game symbolizes the struggle between the Creator and his evil twin brother for control of the earth, and the moieties exchange the role of playing for the Creator at Green Corn and Midwinter. The scoring is too complicated to describe here, but the game goes on, for days if necessary, until one side has won all 102 beans and the bets.

The second event occurs in the afternoon when the Society of the Women Planters, the Sisters of Our Life Sustainers, sing the rite of Thonwí:sas, returning thanks individually and collectively for the vegetable crops. This is equivalent to Personal Chant of the men. Individual songs are sung to the accompaniment of a box terrapin rattle struck in the palm of the left hand and the pounding of broom handles, like

pestles, on the floor. The rite ends with a round dance in which the women form a procession behind the matron who sings the corn's songs.

It is believed that the songs came to the people through a dream long ago. An old legend known to Fannie Stevens, its last holder, from whom I recorded the songs, refers to the capture of two women in the Cherokee wars and tells how they brought the songs to the Seneca. Once the rite starts, it is believed that the wind stops and that all of the spirit-forces, such as the moon, that are in league with women, pause to listen. The procession of singing women acts out the drama of the Three Sisters going out into the fields in spring, spending the summer there, and returning ripened to the Longhouse.

Thanksgiving Pattern

A constantly recurring feature of Iroquois ceremonialism is the pattern of Thanksgiving, or Ganon:nyonk. It is the pattern of sequence that opens all meetings and it recurs in the theme songs of Feather Dance and Drum Dance and in other contexts. The paradigm expresses a basic concept of Iroquois religious philosophy, the belief in the thanksgiving function of ritual: "each ceremonial observance is intended to thank the Creator and his agents for certain phases of the world structure from which all the benefits of man are derived, as a result of his position in this structure and his relationship to all the other members and parts of it."[5] Man's relationship to the Spirit-forces and woman's particular relationship to the Three Sisters. Our Life Supporters, and to the Moon, is, best expressed in the image of the celestial tree that stands at the center of the earth beneath the sky dome and holds in its branches the hierarchy of spirit-forces and shelters the other cultural gifts that commence on the earth and go up to heaven. There are sixteen of these stations, comprising the pantheon, in the order of their enumeration in the Thanksgiving Address.

Future of the Senecas

1. The people—man, woman, two children
2. The earth—island on turtle's back
3. The plants—herbs, shrubs, poles
4. The water—the sea around, streams
5. The trees—pine, elm, maple
6. The animals—deer, bear, wolf, beaver
7. The birds—snipe, heron, hawk, crow
8. The Sisters—maize, beans, squash
9. The wind—a revolving sphere
10. The thunders—anthropomorphic, carrying splint baskets, draining water, shoot arrows of lightning
11. Elder Brother, sun—warrior
12. Grandmother, moon—old lady
13. Stars—points of light, dipper, Pleiades
14. The Four Beings—messengers of Creator to Handsome Lake
15. Our Leader—Handsome Lake
16. The Creator—an Indian with white dog

What does tomorrow hold for the People of the Longhouse? The present leaders of the Coldspring Longhouse believe in the continuity of their ceremony—that it will go on even after the present building is torn down and a new, more modern one is built. The threat of the Kinzua Dam has produced a heightened interest and greater attendance at the ceremonies this past year. More than thirty ladies had the traditional costume of legging, skirt and overdress of calico, while thirty years ago there were only one or two.

A religion of hunters and horticulturists has survived the abandonment of gardening by women, and now the decline of farming by men, who in the Eighteenth Century scorned the plow as beneath the warrior's dignity. Can it face the further decline of spoken Seneca? In Oklahoma, where the language is fast fading they use interpreters to translate the ceremony.

The building itself is more than a church: it is a community center for all kinds of meetings. It has always been known in "Reservation English" as the "Council House," a synonym which expresses its public character. But the Longhouse with its ceremonies, both religious and secular, is the hearth of Iroquois culture to which even the descendants of old Seneca Christian families feel a strong pull. And even those Seneca who have been educated through the university level know that historically the Longhouse writ large was the perennial symbol of the old Iroquois Confederacy, and that although these buildings are no longer the common residences of joint matrilineal families, nevertheless, in its present form, the Longhouse is the guardian of an ancient fire that grows dimmer each year but has not gone out in three centuries.

The Longhouse people have a quiet dignity, and although their material possessions are not impressive, they have demonstrated an amazing ability to maintain their cultural integrity in the face of a society that is bent on making everyone over in its own image. I don't know how they are going to like suburbia. Some of them prefer individual housing on scattered plots with plenty of brush between neighbors. "Who wants to bring a deer into a housing development?" There is a powerful urge to withdraw from the white man and his schemes. With changed environment and new activities, will the Indian take to the tourist business?

It is already apparent that the Indian is an attraction, perhaps the only *unique* asset besides the scenery that southwestern New York can offer, and he has a long tradition of "show business." Would it be a betrayal of American ethnology for the anthropologists, who have learned so much from the Iroquois, to assist him in developing an Indian Williamsburg?

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1. Wallace L. Chafe, *Handbook of the Seneca Language*, New York State Museum and Science Service, Bulletin No. 388, Albany, 1963. This is now the standard orthography. Dr. Chafe has a dictionary and grammar in preparation.
2. W. N. Fenton, ed., "Songs from the Iroquois Longhouse," *Folk Music of the United States*, Album VI, Washington: The Library of Congress, 1942.
3. W. N. Fenton, "An Outline of Seneca ceremonies at Coldspring Longhouse," *Yale Univ. Publ. in Anthropology*, No. 9, New Haven, 1936. 11. John Witthoft, "Green Corn Ceremonialism in the Eastern Woodlands," *Occ. Contrib. from the Museum of Anthropology of the University of Michigan*, No. 13, Ann Arbor, 1949, 22, 25.
4. Wallace L. Chafe, *Seneca Thanksgiving Rituals*, Smithsonian Institution, Bureau of American Ethnology Bull. 183, Washington, 1961.
5. Witthoft, *op. cit.*, 21.
6. Wallace L. Chafe, *Seneca Thanksgiving Rituals*, p. 17-21.

New York State Forest Preserve

(*Continued from page* 19)

properties. Even more important, the work of these committees in cooperation with the Conservation Department has resulted in three Constitutional amendments of considerable importance: the first two (1957) permitted the relocation and rebuilding of certain highways through the Forest Preserve, and authorized the State to dispose of troublesome and comparatively worthless parcels of land, up to ten acres in extent, outside of the Park "Blue Lines" but still legally within the Forest Preserve. A third Constitutional amendment (1959) authorized the use of a small amount of Forest Preserve lands for the construction of the Northway.

Perhaps the most significant work of these committees, however, has been in the field of study; for the first time in its history, the Forest Preserve has been subjected to an intensive, on-the-ground survey, not to determine its meets and bounds, but to discover just what it actually is, and what its potential may be for the future.

In comparatively few years, we have come a long way. As historian Donaldson wrote, "The bad days are over"—the days when the first Forest Commission huddled into a small office with "warming and lights" and tried to get along with an appropriation of $15,000.

Now we have a Conservation Department with a State-wide organization, with administration centered in a modern building on The State Campus in Albany.

So has grown the interest in—and the public support of—conservation in all its aspects. In particular, our Forest Preserve has been given recognition and care long overdue.

Buck "Rubs"

by C. W. Severinghaus,
Supervising Wildlife Biologist,
N.Y.S. Conservation Dept.

IT was a clear fall day. The leaves were damp and the woods were quiet. Jack Hunter had left his house before daybreak. In the semi-darkness, he had climbed to a hardwood ridge and for a couple of hours had sat on a rock. Deer, he reasoned, would be moving during the early morning hours in search of food and Jack had hoped they would feed through his woods. But, none passed his way.

So another try at finding a deer was needed. His first move off the rock was a little difficult because he was cold and his muscles had stiffened. But the damp leaves made it possible to sneak along quietly, always looking low and as far out as eyes could see.

He traveled for a while and then noticed the bark had been rubbed off a sapling. It wasn't much but it did mean a buck had been there. A more careful look showed that the white wood of the sapling was dry and slightly checked. Obviously this "buck rub" had been made several weeks ago. Yet, it was reassuring to know that a buck, big enough to be looking for a fight, might be in the area.

The "buck rub" stimulated his senses and Jack's eyes and ears were more alert. Concentration, however, took its toll during the next couple of hours. So again he sat down. His eyes moved across the woodland, penetrating each depth. His mind drifted to the several "buck rubs" he had seen.

"Interesting, isn't it?" he thought, "how a buck's life changes. Here I am looking and hoping to see the buck that rubbed up those saplings. But what was the buck doing?"

And his mind drifted from the woods to a book and some of the articles he had read.

A buck sheds his antlers each year.

Among thousands of bucks, the first will shed his antlers during the last few days in November. Prime age bucks shed them more rapidly than the younger ones. So, by mid-December, two-thirds of the big bucks (3½ years old) have lost their antlers, a third of the two-year-olds and less than a quarter of the yearlings. Rarely will a buck hold his antlers until late February or early March.

The shed antler leaves a raw pedicle which is covered over during the winter by the growth of velvet-covered skin which closes in over the circular scar. New growth of the antlers starts in April or May, and they grow all summer. The antler hardens by September and the velvet is shed. In this shedding, the velvet dries as the blood supply is shut off. Then the velvet cracks. No force is needed and the process is generally completed in half a day.

When a buck's antlers are growing they are relatively soft and quite easily broken. The velvet has a rich supply of blood and nerves. These nerves make it possible for a buck to learn, by touch, how much space his antlers require. Kinda like a boy and his growing feet.

If an antler is cracked while in the velvet, the blood vessels are usually broken also. A blood clot will form. If the crack occurs while the antler is growing, the break will heal. But the healing usually creates a swollen place and the blood clot leaves a darkened area on the antler when it hardens and the velvet is shed.

During the few hours while the velvet is cracking and falling off, the antlers can look as if they were trimmed with short strips of rags.

And now it is September.

That buck has had an easy life for several months and an urge stimulates him in many ways.

Jack's eyes noticed something is moving down in the woods. Two, three, four legs move, a dark brown body, its neck is behind a tree. A hemlock is in the way. It's got to come out in sight again, but as time passed his thoughts drift again.

"Stimulated in many ways."

"He grew fat and reached his weight in late September."

Wish I could have seen more of that one; wonder if I should move. Maybe another one is coming. Deer are usually led by a doe, a matriarched unit, consisting of the doe's offspring and sometimes trailed by a buck.

"A buck attains his best weight in late September. As he goes into the rut, his muscles are relatively weak. So training is what he needs and he picks on a slender springy sapling. By pushing, twisting and shaking that sapling, he flexes the muscles of his neck, shoulders, back and legs. The expenditure of energy is tremendous but his muscles harden as a result of training against any object he may view as a potential opponent or obstacle. A buck in wire fence pens will run his antlers into the fence and shake it with such force that the fence trembles for many feet either side of heavy steel posts."

"Buck rubs are the results of 'sham fights.'"

"The stimulus of the rutting grows as the season progresses. An individual buck has been known to lose weight from 225 to 207 pounds in eight days. A 20 to 25 per cent loss in weight by mother bucks is usual during the rutting season. They often eat little and irregularly for the few weeks of the peak of the rut. And many an old time market hunter knew that the most edible bucks are shot prior to the rut."

"Wonder how many bucks there are in these woods?" Jack thought.

Then the leaves were shuffled around,

and looking up he noticed the beech trees.

Beechnuts, and a careful look showed they were quite common.

"But could it be where bucks had fought?" he thought. And again his mind reflected on the many hours he has spent with books. These condense many years of experience in the field.

"Battling bucks are not often observed" he recalled. "Yet each year there must be many thousands of them. Such conflicts determine physical superiority and procurement of a mate is associated with dominance.

"Dead bucks are rarely found, and with the thousands of bucks shot each fall, wounds resulting from fights are equally rare. A fight, therefore, is a test of strength and endurance. It is usually joined by a clash of antlers and continues by pushing, twisting, lifting, shoving, and attempting to break the other's guard. Quick reflexes, fast moves of the feet and body to retain balance, and a quick powerful twist of the neck and shoulders must be parried. Deep, prolonged surges of power originating from feet push hard on the ground, test endurance. Moments of relaxations, followed quickly by a power thrust which includes a twist or a lift, or one which came from an off-angle, test reflexes and agility.

"And, finally, one buck faulters. The apparent victor feints a power thrust, the apparent loser moves to meet it with his antler. If he has had enough, his parry is weak. If he is still full of fight, back to it they go. The victor can be recided in minutes; may take hours. The ground cover may be undisturbed, half an acre may be torn up, leaves buried in dirt, soft vegetation trampled out of sight. The victor stands his ground, the vanquished backs off, turns and runs away. A long battle results in physical exhaustion, the difference between victor and vanquished being relatively small."

"Which bucks fight?" They all probably do. Dominance is relative. It is headed by the best and somewhere down the line each one learns to know his place.

"But, next year? Age takes its toll; youth grows, develops and learns."

"Wish I could see one." Jack reflects, as he realizes his dreaming has interferred with his hunting.

So how does the rutting season end, Jack asks himself.

"Well, the hectic days of the rutting season usually end during December. The does determine this. Their cycle starts in late September, the first among thousands. It peaks in mid-November. The last doe, is bred in early February.

"All is not lost, however, because the rutting season is usually followed by a few weeks of plenty. Deer become much quieter then, feed heavily and regain much of their lost weight.

"With the shedding of antlers, the bucks become rather timid and virtually lose their bully dominance of smaller bucks and antlerless deer."

It's cold, Jack notes, where did the sun go? I'm stiff and shivery. Guess I'll move a bit.

Something moved, a deer! Look carefully, hold that rifle steady. Maybe it's a spike. Look up over the sights. It's moving again, walking along, turning up the hill. Something between the ears. Spikes! Cover its chest with the front blades, squeeze easily—"Bang"—a jump. It's gone.

Did anyone ever tell him to center the front blade in the rear sight?

Our Wary, Wild Turkey

(*Continued from page 3*)

stand a limited hunting season, we also entered this phase with some trepidation. After all, here is where we could make or break the experiment, and no one had shot a wild turkey in New York in generations. We naturally tended to be cautious, and this first season was limited in scope (2 counties), short in duration (three days) and early in the season (October 5-7). The two counties (Cattaraugus and Allegany) had the best populations but the season was short and early so that hunter participation would not be too great. The warmness of the season in early October would be a deterrent to many, and leaves on the trees would help the turkeys.

Any small game license holder was entitled to hunt turkeys as long as he observed the special rules governing turkey hunting. The turkey bag limit was set at one bird of either sex, to be taken only with a shotgun loaded with shot not larger than number #2. The use of dogs, calls and blinds was permitted. On the basis of check station data and roving patrols it was estimated that about 250 birds were taken.

Since 1959, three other open seasons have been held, and what has happened? Well, we have found that this wily bird can really take it, match wits with just about any hunter, and provide a "new" kind of sport for which *exhilarating* is the best word I can think of. Not too many birds have been taken, compared to the number of hunters in pursuit, but just the sight or sound of a bird has often made a confirmed gobbler hunter on the spot. In some sections gunners have switched allegiance from other species of upland game to our bearded friend, and there have grown up new segments of old industries to serve these modern demands: At least a half-dozen different varieties of turkey calls, training records, types of guns and shells, books on turkey lore, types of clothing including camouflage, and even new twists to wild turkey cookery.

The first two years only a three-day season in two counties (Cattaraugus and Allegany) was held. We had to go easy until we could see how many hunters would be attracted and how the birds would react. All conditions were considerably below minimums to sustain healthy turkey populations; thus the 1961 season ran for five days in four counties (the two above plus Chatauqua and Steuben), and the 1962 season in the same four counties ran for six days including a Saturday. This last season also happened to include the first tracking snow, since dates were later and leaves were down.

Every year the estimated take was below what was considered safe limits of harvest for that year, so we are not apparently cutting into our capital. Total estimated take for all years up to and including 1962 has been about 950 birds. While this article is in press an announcement on the 1963 season will be made probably including at least parts of some Catskill counties. We can make an additional prediction too, to the effect that by mid-afternoon of the second day of the turkey hunting this fall in western New York we will have taken our turkey "bait" back. In other words, by that time, we will have harvested more birds than were originally released from the game farms into those four counties. All the rest ever to be taken from them will be pure "gravy."

Where do we go from here with the turkey in New York? Well, we've certainly come a good ways since the days when there were none—absolutely none—in the State; or even from the first few reports of straggling flocks. Plans are to continue with the trap-and-transfer program until the rest of the potential turkey range becomes occupied, hopefully so the birds become abundant enough to be huntable again over perhaps half of the State. We will have to continue to maintain this valuable resource at optimum abundance levels through all possible management techniques on State and private land, through wise control of open seasons and quotas, and through a better understanding of the needs and requirements of this grandest upland bird of them all.

The Back of the Book

DDT and lake trout

Some lake trout waters under study by the Conservation Department have been found to be adversely affected by accumulation of DDT (a commonly used insecticide) on lake trout fry.

As a consequence of these findings, the Department will discontinue the use of DDT in its forest pest control programs in watersheds inhabited by lake trout, and discontinue its formerly limited use for the control of black flies and mosquitos at State campsites in these watershed areas.

A scientific paper setting forth the details of New York's research study in this field was presented at the annual convention of the American Fisheries Society by George Burdick, Aquatic Biologist, in charge of water pollution studies for the Department's Division of Fish and Game. The study revealed that DDT is accumulated in the fatty tissues of lake trout, including its eggs, causing serious mortality in the young fry.

Essential forest pest control programs in these watersheds will be continued but through the use of other pesticides already on the market which are known to disintegrate much more quickly than DDT. Prior to the spraying season next spring the Department will prepare suggestions for the guidance of the public in the use of DDT on privately-owned lands in lake trout watersheds.

The study of the effects of DDT on lake trout waters, is only one part of the State's total effort on the complicated problems posed by pesticides. An Interdepartmental Committee representing the Departments of Health, Agriculture, Education, Commerce, and Public Works, as well as Conservation is at work on the whole scope of the problem.

Miracle additive

A fishing line company reports that claims for their new monofilament line have resulted in an unusual request from a lady. She would like to get some of the "miracle additive" they use in their new lines, so she can use it on her husband. She says he's out in the sun a lot, and she wants to feed this miracle ingredient to him so he won't get "stiff, wiry and hard to manage."

Firearms and education

Education, proper supervision and preventive safeguards are the answers to safety problems concerning household objects that hold a potential danger for any members of the family—including firearms.

Sporting firearms—and there are literally tens of millions of them in the United States—hold a huge potential for recreation, pleasure, sport and applied skill. They hold a very small potential for danger relative to their use, numbers and in comparison to other sports.

Nuisance bear travels

Last year, 24 nuisance bear complaints in the Adirondacks were handled and of these 15 were live trapped and transferred.

One bear had an interesting history as a confirmed nuisance. In August of 1958, it was trapped as a "nuisance" at the Balfour Lake Boys Camp in Essex County and transferred 31 miles to Tupper Lake in St. Lawrence County. Next, came a "nuisance" call in July, 1959 from a girls camp on Balfour Lake—same bear. Trapped this time, it was removed 32 miles to the northeast. Next report, fall of 1959, on its way back, it was collected by a hunter.

Records show that of 11 bears trapped and transferred from 10 to 46 miles (average 27) they were retrapped or shot from 3 days to 14 months later (average 7 months) within six tenths of a mile of original capture.

The Conservation Department still has over 150 ear tagged bears at large and anyone seeing a tagged bear or knowing of it being taken (nuisance or during gunning season) should report the circumstances to the Delmar Wildlife Research Laboratory, Delmar, N.Y. (Tel: HE 9-9906)

Antler growth

A large bull moose grows heavier antlers than any other antlered mammal living in the world today.

Coyote and bobcat "bugs"

The "bugs" that haunt all new operations haunted two items in the article on small game take in the August-September, 1963 issue.

In a hurry to make press dates, the usual double, and often times, triple check on data did not bring the bobcat and coyote check to the usual accuracy.

As a result, the corrected tabulation shows that only 907 coyotes were taken, instead of the estimated 1,387, and 1,760 bobcats were collected instead of 5,814 indicated by small game license holders.

All other species-take figures proved correct as published.

Spare time conservation!

Why not learn about conservation in your spare time! Many people are now doing it in an interesting, inexpensive way through Cornell University's home-study course, "Conservation of Natural Resources."

In a day when this nation is experiencing dramatic changes in the use of natural resources, the ordinary citizen can no longer afford to be uninformed. Is it, for example, necessarily against conservation principles to cut trees in areas primarily being managed for aesthetic and wildlife purposes? Should we be concerned when highway improvement projects cut into forested hillsides and muddy the streams and rivers nearby? The enlightened answers to these questions can only come from a proper awareness and understanding of the character and potentials of the natural resources involved.

Since the Cornell course was first offered in 1961, some 650 students from all walks of life have absorbed principles and problems in water, soil, forest and wildlife resources, as well as discussions and conservation history, wildlife law and ecological principles.

A Long Island doctor responded in this way: "It is with the greatest reluctance that I find myself at the termination of our course 'Conservation of Natural Resources.' This has been the most satisfying, informative and interesting course I have taken since medical school. As an 'arm-chair conservationist,' I previously had many pet theories regarding wildlife management, forestation, and wildlife stocking. Having completed this course and becoming aware of the enormous complexities of conservation, I have suddenly found myself inarticulate."

Persons of both sexes, ranging in age from 14 to over 80 years, have earned certificates as a result of taking this course which consists of seven printed lessons, each attractively bound and illustrated.

As a result of its favorable reception and continuing expressed need for such educational effort, the six months course will be offered again this fall beginning in October. Those interested may enroll by sending a check or money order in the amount of $13.50 made out to Cornell University and sent to Dept. of Conservation, Fernow Hall, Cornell University, Ithaca.—A. Dickson

Pilot tree farmer

An airplane pilot-tree farmer is aided in his forestry operation by a nearby sawmill firm and approximately 40,000 board feet of logs are cut each year with all trees selected according to good forestry practices by professional foresters. He is James W. Allen of Alpine, N. Y.

The 40,000 feet is roughly equal to the annual growth on the 493 acres. After the area has once been completely worked over, the growth rate will be at least double what it is now with the lessening of competition for sunlight and water.

Capt. Allen speeds up the growth of younger, healthy trees by getting out his chain saw to cut down diseased and undesirable trees. He has planted about 75,000 seedlings on idle acres. The spacious Allen home is partially heated by a wood-burning furnace with the wood coming from tops left behind in logging operations and weed trees cut out in improvement work. This saves about $500 a year, besides it's good for his two boys to have healthy, constructive outdoor work to do.

Rare male prerogative

Only the male katydids, crickets and cicadas sing. The females are silent.

Build better brushpiles

The cottontail rabbit—as well as most other wild creatures—find winter presenting more critical problems than any other time of the year. The stark, frigid appearance of winter landscape reflects a drastic decline in available food and cover. Also, diminishing food supplies and increased exposure to extreme weather and predators makes winter a very tough time indeed for cottontails.

Brushpiles have long been recommended as an excellent means of providing additional winter cover for cottontails. While built mainly to provide shelter, much of the woody material

used in brushpiles, as well as the sprout growth resulting from brushpile cuttings, provide a much needed and readily available source of winter food.

A recently completed study indicates that the manner in which brushpiles are built can be very important to their appeal and value. Just piling a bunch of branches together won't usually do. On the basis of our experience, here are some guidelines for the construction of really useable brushpiles:

1. Brushpiles should be big—no less than five feet high and preferably eight feet or higher. The width should be twice that of the height.

2. Brushpiles should be built by stacking several layers of limbs and twigs on a substantial log base. Material within a layer can be placed in the same direction, but each layer should be stacked at right angles to the one below it so that a "cross hatch" pattern results.

3. A base of logs at least six inches in diameter should be used with layers of progressively smaller woody material toward the top. A layer of heavy limbs on top is desirable to hold the smaller twigs in place and compact the pile. Twigs of a favored food species such as apple can be included as a lower layer.

4. Brushpiles should be fairly compact. However, it is important that sufficient openings be available and that these be large enough to permit easy access by cottontails, but small enough to prevent the entrance of larger predators.

5. The lower layers, at least, should be built of logs and limbs of the most durable species available. Extensive use should be made of preferred food species and much of this should be in a position available to cottontails. Brushpiles built of deciduous or hardwood material appear to be superior to those built mainly of conifer or evergreen stock.

Aside from construction, an important consideration in building brushpiles is their location. Brushpiles should be built as close as possible to natural winter food supplies. Thus, in searching for food, rabbits will be less vulnerable to predation.

In the Northern States, the carrying capacity of wildlife habitat is largely governed by the amount and interspersion of available food and cover during the winter. In the case of the cottontails, this winter "road block" can often be helped considerably by the judicious construction and placement of brushpiles.—U. ALKON

Plantation forest fires

Nearly 20,000 acres of forest and grass land were burned over last year in New York. Fortunately, this constitutes only one-tenth of one percent of the protected area in the State. Nevertheless, it is small comfort if you happen to be one of the unfortunate plantation owners whose trees were part of this statistic. Of the various kinds of forest property in the State, coniferous plantations are the most susceptible to fire. Of these, it is the young plantations—up to 15 years of age—that are the most likely to be burned because there are large accumulations of inflammable, dead vegetation.

As a plantation owner, you should have a fire plan for preventing fire and, to fight it should fire break out.

If you are starting a plantation, consider the location. Keep it well away from highways and railroads. In planning its layout, think of easy access. Make sure that it will be possible for at least 4-wheel-drive equipment to get into the plantation readily. Plan, too, for fireguards—plowed or vegetation-free strips —around and through the plantation. If the plantation is fairly small, a peripheral fireguard may be all that is necessary.

Your plan should provide for a cache of suitable hand tools—a shovel or two, some old or cheap household brooms, an axe, a saw and a back-pack fire pump full of water. These especially should be in handy readiness during the periods of high fire hazard during the spring and fall. It is well too as a precaution, to know on whom you can call for help should a fire break out. Contact neighbors, and have the telephone numbers of your local fire department, fire warden posted in some convenient place. Another thing to be sure of is the exact location of your plantation and how to get to it. Be sure of road names so that when you give directions, they will be easy to follow. If you do not live close to your plantation, be sure to alert neighbors so that they can inform you of a fire outbreak on your property.

Lost hunters costly

Search for lost hunters is a drain on the resources of any conservation department and it happens each year. Search is costly notwithstanding the danger to searchers and the searched for.

A hunter should know his way and carry a map and compass. Hunters too should write down or leave notice where they plan to hunt and when they plan to return—just in case; and then stay in that area.

Ruffed Grouse Society

We just received the first issue (Vol. 1—No. 1) of the publication produced by "The Ruffed Grouse Society of America" of Monterey, Virginia.

It's a nice little paper and presents information on "The King of Game Birds" that heretofore has been pretty much restricted to a few rather technical publications, wildlife biologists and a relatively few inveterate sportsmen whose hobby it is to hunt and admire this grand game bird.

Annual and life memberships are available by writing to the Society at the above address and indications are that the publication will be distributed regularly in the future.

Computed forestry

A new Computer Center at the College of Forestry, Syracuse University, will now assist technologists in the problems in laminate beam design, mechanical properties of wood, control of paper quality and production on the paper machine, molecular weight determinations via the ultra-centrifuge, studies in polymer and cellulose research, tree species selection in reforestation programs and seed orchard layout.

Much of the research at the College involves numerical analysis, and many of the College's seniors and graduate students take courses in numerical analysis, linear programming and operations research problems at the Computer Center and College of Engineering. With the addition of the new facility additional courses in Basic Computer Engineering and Computer Techniques can also be taught at the Forestry College.

Can hazard

A chuck was found wandering helplessly on one of the back roads in the Town of LeRoy, Jefferson County by Bill Benson. He was faced with a horrible death had not Bill happened along and put him out of his misery. Pollution can happen on land as well as water.

Rabies—new developments

Two promising developments in the long-range battle to control rabies in foxes—the major wildlife vector for the disease in New York State are now in effect. First—the National Institute of Health, U.S. Public Health Service, has granted funds for stepped up research and secondly, encouraging preliminary results have been obtained from experiments already being carried out by the Conservation Department. The latter centers around a plan for suppressing reproduction of foxes to reduce the rate of transmission of the disease from fox to fox with synthetic antifertility hormones fed to vixens just before or after breeding.

Laboratory studies at Cornell will be carried out at the College of Agriculture, with field studies being conducted by the Conservation Department and centered around developing adequate fox census techniques, the development and testing of baits which will be attractive and suitable as carriers for the antifertility agents, and the application and evaluation of field trials. Laboratory tests at Cornell will evaluate drugs having a potential use as antifertility agents and their effect on test animals and penned foxes.

There were only 92 cases of rabies reported in 1961 and 107 cases last year but there had been an average of 460 cases a year since 1945—with more than 90 per cent of all wildlife cases found in the fox. Livestock losses, cost of human treatment, mental anxiety and public concern all contribute to the seriousness of the problem. Because the disease concerns wildlife, livestock and humans, much of the work for reducing the disease in New York State has been guided by the Interdepartmental Rabies Committee, comprised of representatives from the Departments of Agriculture, Health and Conservation.

Boat law enforcement

The 45 counties which conducted State navigation law enforcement patrols during 1962 were granted just over $173,000 in State aid. More than 70 per cent of the funds distributed went to navigation enforcement agencies in New York City and the two Long Island counties of Nassau and Suffolk. Several counties conducted patrols with their own funds.

The Conservation Department's Motor Boat Regulation Fund is made up largely of fees received from boat owners for registration of their vessels.

The increased enforcement on the State's waterways is evidenced by increasing arrests reported by counties for navigation law violations. In 1960, 1,134 arrests were made and in 1962—2,212. During the three years since the program's inception, boating fatalities have been reduced to an annual average of 69, 15 below the average for the previous decade.

Storm warning stations

Navigation pennants were unfurled at Sylvan Beach and Shackelton Point on Oneida Lake to mark the opening of New York's first experimental small-craft storm warning stations. The storm alert centers are examples of co-operation aimed at promoting additional boating safety on the State's inland waterways. They are headed by the Conservation Department's Division of Motor Boats in co-operation with the Bureau of Canals of the State Public Works Department, and receive support from the U.S. Weather Bureau, Cornell University and the Division of State Parks.

A part of the Barge Canal system, the small-craft storm warning stations on Oneida Lake will provide much needed navigational assistance to commercial shippers as well as pleasure boat enthusiasts. Oneida Lake lies in an east-west direction and is influenced by the State's prevailing westerly winds, and is considered by most accomplished boatmen to be one of the most treacherous inland water routes in the State.

The systems will receive two daily storm condition reports from the U.S. Weather Bureau in Syracuse. The Sylvan Beach station will be operated by personnel from the adjoining Verona Beach State Park while personnel at the Cornell University Shackelton Point Research Laboratory will post the warning flags at Shackelton Point. Sylvan Beach is located at the eastern end of Oneida Lake. Shackelton Point is near Bridgeport along the south shore. A third station near Brewerton on the west end of Oneida Lake is being considered for future development.

Maple decline

The decline of sugar maple trees in New York State, apparently does not stem from a single cause. A recent Cornell University study indicates that a complex of environmental and other factors has resulted in the dying back of branches in the crowns. Experiments indicate that none of the possible causes was by itself the reason for branch decay. Affected trees were found in soils of various types and textures, well and poorly drained. When organisms from these trees were inoculated in healthy and weakened trees there were no severe effects. Insect injury was not the primary cause, and grafting experiments revealed no evidence of a transmissible virus.

Seven study plots were established in affected areas of western, central, and northern New York in order to conduct these experiments, observe symptoms from year to year, and analyze possible causes. Local environments were studied in detail, trees were cut and dissected, and roots excavated. Studying of the annual ring records of affected trees did indicate some relationship between recent dry periods and decline. There was no evidence of fall, winter, or spring cold injury significantly affecting the trees after particularly dry or wet falls.

Fluorescent safety color

Fluorescent orange or red material as part of hunting clothing is recommended for both small game and big game hunters. Wearing of these safety colors has been proven to reduce hunting accidents and, in some states it is required. Another distinct advantage—it helps other hunters, even your own hunting companions to see where you are!

Fish noodles

Something new may be added to the millions of pounds of noodles that Monsignor John Romaniello of Hong Kong distributes to needy people in the Far East.

Father Romaniello noticed, when he first went to Hong Kong, that surplus foods from the United States arrived regularly but the food was in unfamiliar or unusable forms. Now, "Romy's noodles" are famous in Hong Kong, in the Philippines, Macao, Taiwan, Vietnam, and Korea. He conceived the idea of converting wheat flour, plus some of the corn meal and milk powder, into noodles, and now has nine "factories" in Hong Kong alone manufacturing noodles for free distribution to Red China refugees and others.

Nutritious as the noodles are, they still do not supply the necessary amounts of animal protein for continued good health but fish protein concentrate, a white, flourlike powder made from fish, contains nearly all the essential amino acids necessary for human health. It is lightweight, easily transportable, and virtually impervious to spoilage.

It is estimated that by utilizing the unharvested fish in United States waters alone, enough fish protein concentrate could be obtained to provide supplemental animal protein for one billion people for 300 days at a cost of less than a half a cent a day per person.

Fifty years for Earl

Earl J. McGuirk, veteran photographer for the Conservation Department, is off to a new assignment—retirement—and with just as much enthusiasm as the terrific amount he generated throughout his career with the Department.

Earl's career with the State has been an interesting and varied one and his enthusiasm for every assignment has been spontaneous. He made one of the first aerial shots of a forest fire in New York State—from 8,000 feet near Saratoga Lake in 1934.

Every Governor since 1916 has been the subject of his camera, too, and one of the assignments—not quite conservation—that he still remembers vividly was photographing the death house at Sing Sing prison and the "electric chair."

It was in 1913 when Earl first took employment as a clerk with the State—in the Comptroller's office. Here he got started on his photographic career and in 1915 joined the Conservation Department and has worked as a "still" and movie photographer ever since. Earl has many conservation movies to his credit and literally tens of thousands of still photographs, many of which have appeared in THE CONSERVATIONIST and a host of other news media. Right up to his retirement, Earl would accept any photographic mission with the utmost zeal and enthusiasm and this spirit rubbed off on many other photographers who have worked with him over the fifty years.

A man of many interests and with an unusual interest in civic and social activities, Earl was an unequaled organizer. He has been president of the Albany Boys' Club, Commander of the American Legion in Delmar and Chef de Gare of the 40 and 8. He holds life memberships in the American Legion, Bethlehem Rod and Gun Club, Delmar and Elsmere fire companies. At one time he and his brother had their own orchestra with music fests extending over a period of three decades.

One of the most popular and most widely known members of the Conservation Department's staff, he will be missed greatly, especially by his close associates in the Division of Conservation Education. Nevertheless, he is entering his retirement at age 70 just as though it was his first assignment with the Department—full of enthusiasm.

Drainage ban

Drainage of wetlands required by wildlife cannot be accomplished with public funds (Federal) according to a provision retained in the Agriculture Appropriations bill for 1964.

The purpose is to slow the drainage of wetlands required principally for waterfowl nesting purposes. It does not ban drainage at the landowner's expense, but it does deny the use of public funds for that purpose. In addition to reducing the amount of wetlands drainage, particularly in the North Central States which provide a large part of the small wetlands areas needed by nesting waterfowl, the provision helps channel requests for Federal drainage assistance into other programs. These in turn give the wildlife agencies an opportunity to buy or lease more suitable wildlife areas.

Water saw

Powerful jets of water traveling at three times the speed of sound may replace saws in the lumbering and wood machining industries of the future, according to researchers at the University of Michigan.

They could sever rather than saw down forest giants and remove tree limbs as logs are prepared for the mills. Smaller jets might be used for machining furniture parts.

The process would save between 10 and 13 per cent of log volume normally lost as sawdust and bring about a saving of time because of greater speed of operation and minimum of equipment maintenance.

Chain saws and totem poles

The ancient Indian art of totem pole carving has yielded to a modern touch. An expert carver in British Columbia has been using power chain saws the last several years to help cut his work time on totem poles—one of which stands 55 feet high.

Ants

There are more than seven thousand different kinds of ants.

Bird booklet price

"Enjoying Birds in Upstate New York," a booklet from the Cornell Laboratory of Ornithology which we described in the June-July issue sells for $1.95 plus 15¢ for mailing costs. It seems that quite a few of our readers assumed that it was free—as are most Cornell Bulletins.

Good to Know—A to Z

Alcohol and gun powder don't mix . . . Be conscious of the example you set when afield . . . Complete consideration is due the landowner . . . Don't be a game hog . . . Educate youth about sportsmanship and safety . . . Favor the fellow hunting with you . . . Give wildlife a break and work for its conservation . . . Help maintain wildlife habitat . . . Influence others to become good sportsmen . . . Join a good sportsmen's organization . . . Keep track of your hunting partner's position . . . Leave some game for seed stock . . . Make certain of your target before you shoot . . . Never use a gun scope in place of binoculars . . . Obey fish and game laws . . . Practice safe gun handling at all times . . . Quit harping about game shortages until you've thought the problem through . . . Retrieve all game killed and see that it is not wasted . . . Share your game with the landowner . . . Tell your friends about the A B C's of sportsmanship . . . Unite your fellow sportsmen to work for conservation . . . Value and protect your privilege to own and bear firearms . . . Work for sound game management measures . . . X marks the spot where carelessly thrown smokes land . . . Young America's field sport depends on you . . . Zeal for promoting *Sportsmanship* will pay big dividends.

Youth Camp Dedicated

E. W. Sears of the Department shows visitors some of the work projects performed by Youth Camps on State Forests

The Charles Loring Brace Youth Opportunity Camp near Masonville, in Delaware County, New York, was dedicated on August 8, 1963.

This is an Opportunity Camp located on State Forest lands to which boys 15-17 years of age are referred by social agencies and the courts. At the camp the boys do conservation work, and receive vocational and academic training, as well as remedial instructions and group and individual counselling.

This is the fourth camp, sponsored by the N.Y.S. Division for Youth as a forestry camp to be dedicated to the rehabilitation of Youth. It is a co-operative venture between the Division for Youth, which is responsible for the rehabilitation of the boys, and the Conservation Department, whose forestry personnel plan the work to be done and give general supervision of the work projects through the Division for Youth. Boy Supervisors in the field.

Conservation projects which the boys perform include tree planting, forest plantation thinning and pruning, construction of roads and access trails, construction and maintenance of recreation facilities, fish and game habitat improvement and forest stand improvement. It is estimated that there is enough conservation work now available within 15 miles of this location to keep the camp fully occupied for at least twenty years.

R. M. Hick, who is District Director for Lands and Forests, at Stamford, has general supervision of conservation projects to be performed by Camp Brace. Douglas Blakelock is the Youth Camp Conservation Supervisor at the Camp.

Hunting pressure valve

A natural tendency to limit exertions on an input-output basis is apparently a trait of human nature. In other words, humans labor when the rewards are equal to or greater than the value of the time, money and effort exerted to obtain them. The same philosophy seems to apply to millions of hunters, too, because study after study has shown that hunting effort—especially for rabbits, grouse, pheasants, squirrels, and other small game—dwindles rapidly long before the animals are reduced to anywhere near a level that would jeopardize the following year's breeding stock.

Small-game hunters generally harvest too little game, not too much. Shooting wildlife on experimental areas at rates three to four times those known to be achieved by hunters, biologists have shown that much larger bags of game could be taken. Most hunters lose interest in tramping the fields once the animals are scattered from their more accessible haunts, and as gun pressure decreases after the opening day "bulge", the chances of over-shooting small game become more and more remote. This human trait of matching input against output is more instrumental in controlling the harvest of small game than season lengths and bag and possession limits.

These reasonably well-established facts have prompted most game biologists to recommend the longest possible small game seasons in order to supply extra outdoor recreational opportunity for those hunters who wish to take advantage of it. Hunters benefit from it, also the businesses that supply goods and services, and most important, future game stocks are not jeopardized by under harvesting.

Larry Liddle retires

Forest Ranger Lawrence K. Liddle of Forestport has retired from the Department. A World War II veteran, Larry came to work as Forest Ranger in 1945. His service included the critical years following the "blowdown" of 1950, during which time vigilance was required to prevent major forest fires. His wide experience will be missed.

Dutch elm resistance

A few American elm trees which appear to be resistant to Dutch elm disease are growing at Cornell University. Among them could be trees that will give the nation elms that withstand this disease which has troubled scientists for years.

The trees were among 15,000 young specimens gathered from throughout the United States and planted at Yonkers, N.Y., 25 years ago by Donald S. Welch, plant pathologist at Cornell, who recently retired. The trees were repeatedly inoculated with the fungus which causes Dutch elm disease, and the majority wilted and died. When the trees were moved to Ithaca in 1948, there were only 200 left. The inoculating was continued and now 130 elms are left and most of these trees have at one time or another shown symptoms of the disease.

Unfortunately, most of the resistant elms are trees of poor form, slow growth, or have other undesirable features but some, ranging in height up to 50 feet, are horticulturally desirable specimens.

Plans are to continue testing the surviving trees and to begin propagating vegetative cuttings from the most desirable trees.

Key to insect swarming

The discovery of what makes locusts form huge and devastating swarms at certain periods of their life history is believed to have been solved by a group of British biologists who have been experimenting on the brain cells of locusts with radio-active salts. The swarming reaction seems to be triggered by a hormonal reaction between two groups of cells in the insect's head.

Locust swarms in India, Africa and the Middle East sometimes extend over ten square miles and contain countless billions of insects. The locusts do a vast amount of damage by eating at least their own weight in green vegetation each day.

If the reaction could be inhibited by chemical means, locusts would become no more harmful than large grasshoppers, the group of insects to which they belong. The scientists are investigating the possibility of such action.

The swarming tendency seems to be controlled by a pair of minute, spherical glands, under the female locust's brain. These glands, in turn, are regulated by hormones passed down from neurosecretory cells at the top of the insect's head. An exudation from male locusts called a phermone, at times covers the whole body of the mature male and acts to stimulate the females.

When locusts jostle together in large numbers, either because of abundant food and good breeding conditions or because a diminishing food supply crowds them together, their instinct is directed toward flight, sometimes causing them to travel up to a thousand miles in search of new breeding grounds.

Syracuse College of Forestry

Did you know: The College of Forestry at Syracuse University was established in 1911 and is one of 55 units of the State University of New York . . . it is the largest forestry college in the United States with a student body numbering close to 1,000 . . . the Ranger School at Wanakena, established in 1912, is a division of the College . . . and is the oldest school of its kind in the western hemisphere.

The College offers science, art and engineering covering five curriculums and 11 majors to train forest chemists, landscape architects, pulp and paper technologists, wood products engineers and general foresters.

Six degrees—bachelor of science, bachelor of landscape architecture, master of science, master of forestry, master of landscape architecture, and doctor of philosophy are offered . . . one of the world's largest collections of authenticated wood sample specimens is housed there . . . a full-size pulp and paper mill and a sawmill are part of the education-research facilities and the Tree Pest Information Service offers free information and publications on tree and plant diseases, insects and fungi.

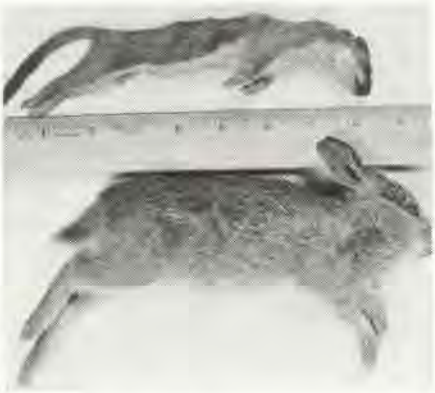
The 15,000-acre Huntington Wildlife Forest, near Newcomb, Essex County, N.Y., is maintained by the College for the study of the life habits of the forest animals of New York State and the 2,300-acre Pack Demonstration Forest near Warrensburg, N.Y., is operated by the College to demonstrate good management of forest land.

Forester McCasland retires

After 34 years of forestry work, Herbert J. McCasland, Forester of the Conservation Department at Westport retired in June of 1963.

Herbert earned his Degree at the State College of Forestry, Syracuse, in 1924. He also attended St. Lawrence University and taught five years in the public schools of New York. He was closely associated with the Blister Rust Control Program and supervised Pest Control Crews from five CCC camps and men on the WPA program during the depression years. In 1944, he took charge of the Farm Forestry work in northeastern New York.

Herb was well known for his talks to schools, Granges, and on television, and he planned and helped with forestry exhibits for fairs and civic organizations. He started the Conservation Exhibit Grounds at Westport Fairgrounds in 1948 and is very proud of the Grounds as it has developed into a good forestry exhibit.



Wild drama

Standing in his lumber yard in Delmar, Dick Long heard a rustle and an anguished squeal behind him. Turning, he saw a weasel and a young rabbit tumbling between the rows of lumber—the weasel had a vise-like grip on the rabbit's neck. Dick ran to aid the rabbit and destroyed the weasel but the attacker had already won—the freed rabbit staggered a few steps and died.

The weasel, an adult female, weighed in at 70 grams—the cottontail at 190 grams.—NICK DRAHOS

The ich or *ichthyophthirius*

Fishermen sometimes notice open sores on the bodies of fish, especially bullheads and ask whether this is a disease affecting the edibility of the catch.

These fish have *ichthyophthirius*—commonly called "The Ich." A protozoan which, when it comes in contact with a fish, bores into the epidermis, then deeper into the flesh, finally coming to rest just below the skin's surface, with a rapid breakdown of the surrounding cells. It appears as a small grayish-white patch on the body or fins and sometimes develops into open lesions. After the parasite has completed its growth it drops from the fish to the pond bottom and releases thousands of new protozoa and these swim around in search of a host fish. Few species are immune to the disease and it is one of the more common infections.

Bullheads are particularly susceptible to the disease during midsummer when they frequent shallow areas where water is sluggish and disease bacteria are more prevalent.

The fish are perfectly all right to eat when thoroughly cooked. All fish, whether salt-water or fresh-water species, should always be cooked thoroughly to destroy microscopic parasites present in their flesh.

Lake George

Lake George has had at least five names. Different Indian tribes gave it such names as "Andia-ta-rock-te" meaning "Place where the lake closes" and "Caniad-eri-oit," or "Tail of the lake." Father Isaac Jogues, the first white man to look upon the lake, named it "Lac du St. Sacrement" on the eve of Corpus Christi and in honor of the Day. J. Fenimore Cooper, author of the famous Leather Stocking tales, called it "Horicon," the "silvery water". General William Johnson, as he was encamped on the present State Battleground campsite at the head of the lake during the Battle of Lake George in 1755, changed the name to Lake George in honor of King George II, of England, who had made him a baronet.

Emmeline Moore Ph.D.

In 1944, Dr. Moore retired as Chief Aquatic Biologist and resided in Slingerlands until several months before her death on September 12, 1963. She became nationally famous among conservationists for her direction of the New York Biological Surveys, 1926-1939. She entered the Conservation Department in 1920 as Investigator of Fish Culture. In 1927, she was honored by election to presidency of the American Fisheries Society. The Department's marine district research vessel, "Emmeline M.", was dedicated in her honor. A large number of persons now engaged in fish conservation activities in a number of states worked under Dr. Moore's able direction in the pioneer days of the Biological Survey.

Bracken, maidenhair and walking ferns

Ferns were the first plants on earth to have a true root system and a system of channels—vascular tissues—that conduct water and dissolved chemicals from the roots to the leaves where food it manufactured by means of specialized cells containing chlorophyll.

Ferns, instead of having flowers followed by seeds, reproduce by means of spores so tiny and light that, like dust, they are carried everywhere by winds: sometimes around the world in jet streams at high altitudes. However, some kinds, notably the Bracken, Maidenhair and Sensitive ferns, also spread widely by means of creeping rootstocks called rhizomes.

The Bracken or Brake, most widely distributed of all ferns, is common in Great Britain, continental Europe, Africa, and thruout North America. Most ferns are found in rich, moist shady places and limestone cliffs but not bracken. It prefers and thrives on poor barren soils, sandy semi-shaded ridges, old pastures, dry open woodlands and burned-over areas. There are lots of this "weed" in the Palos preserves and those in southeastern Cook county, Illinois.

It is one of the earliest ferns to appear in spring and continues to produce big coarse leathery leaves, some erect and some nearly horizontal, until killed by the first frost in autumn. The leaves, from 3 to 5 feet tall, have three triangular parts and each of these is cut into segments which, except near their tips, are cut again into narrow subleaflets.

This is one of the few kinds of ferns with any practical value. It is used for packing fruits and vegetables because it

seems to retard mildew and decay, and by florists. In Europe, where in some places it becomes much taller, bracken is extensively used for thatching roofs and as bedding for animals. The Japanese relish the coiled fronds or "fiddleheads" when they appear in spring, as tender and delicious as asparagus tips, and Ojibwe Indians use them in soup. Their hunters eat nothing but that soup when stalking deer. Ojibwe women drink a tea made from its toasted leaves to relieve headaches, and make a strong decoction of the leaves for expelling worms. The long tough rhizomes were woven into baskets.

The lovely Miadenhair Fern is famous for the unique pattern, like a lacy fan, of its delicate leaves. Most abundant in limestones country, it grows in the rich moist soil of deep woods.

There are 226 species of maidenhair ferns, all but 5 of them tropical, and some of those are giants. Ours is widely distributed from Alaska and northern Canada to Georgia and Louisiana. The Southern or Venus Maidenhair Fern, equally lovely, extends from tropical America to Florida and California.

There are several peculiar kinds of ferns that do not look like ferns at all. One of those oddities is the unique and rather rare Walking Fern. It produces clusters of narrow tapering evergreen leaves that are not divided into leaflets and have long slender tips. It not only produces spores but each tip, arching outward and hairlike at the end, may take root on mossy rock and start a new plant.

Never disturb a fern. Love 'em and leave 'em.—Nature Bulletin, Forest Preserve District, Cook County, Ill.

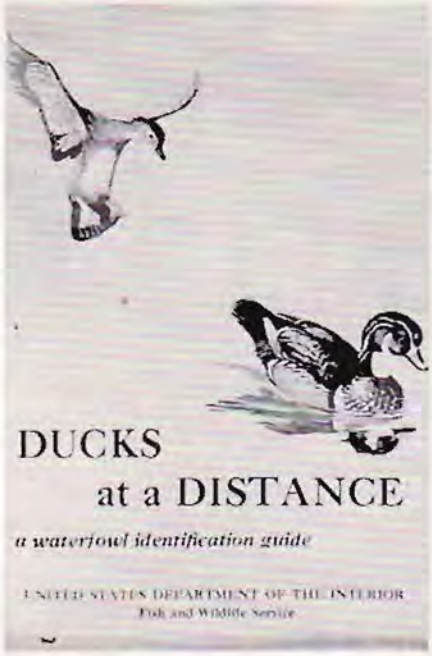
Wood chip "airlift"

Wood chips will soon be transported by air with a new pneumatic chip handling system which will move chips through ducts by a stream of high pressure air rather than riding on the old type system of conveyor belts.

Research has shown that wood fiber stored in chip form will retain its capacity for producing top quality paper and linerboard three times longer than in log form. The chip method enables the company to store a larger capacity of wood fiber outside the mill.

Fourteen million hunters

A total of 14 million hunters in 49 states purchased one or more hunting licenses during 1962 and the hunters paid in nearly $64 million. New York hunters got over 950,000 of these.



"Ducks at a Distance"

A new full-color waterfowl guide, "Ducks at a Distance," published by the U.S. Fish and Wildlife Service, illustrates all of the major species of ducks and geese in fall migration plumage. Unlike some field guides which show mating colors, this bulletin offers invaluable identification clues for students, hunters, or those who enjoy a bird walk in the autumn. It includes shapes, colors, voices, flight patterns, rising views and flock formation.

This waterfowl guide can be secured from the Superintendent of Documents, Government Printing Office, Washington 25, D.C., at 25 cents a copy.

Skeet—an American bird

Many of our sports had their roots in foreign lands but the sport of skeet shooting is totally American. It was developed as "clock shooting," about 1915—as a pleasant pastime and, practice for hunting.

For a variety in target angles, shooters moved to different positions and the circular "clock" evolved. The trap—or target throwing device—was placed at 12 o'clock. Two shots were taken at each "hour," making 24. The 25th shot or the last shell in the box was fired on an incoming target from the center of the "dial."

The new game caught on and few changes were made over the next ten years until 1923 shortly after the size of the circle was reduced from 25 yards to 20—because a hen farm was built in the field adjoining the original shooting ground and the shooters could no longer fire in the direction of the henhouse. The problem was solved by placing another trap at 6 o'clock that threw targets over 12 and then, both angles could be fired from one side of the circle. The farmer who raised chickens nearby probably never knew that he influenced the format of what is today a major international sport.

The modern skeet field looks much like the original half circle with a high traphouse at the left and a low house at the right. Shooting starts at Station 1, by the high house, and shots are fired at targets from each house singly. The five-man squad continues around the circle, taking turns, to Station 7 by the low house. Station 8 is right between the two traphouses and you have to be fast to catch that clay sailing almost over your head. That squad finishes their "round" of skeet by refiring at Stations 1, 2, 6 and 7 but this time—"doubles." Both targets, from high and low houses, are thrown at once. You have to break one, then the other. Any score over 20 out of 25 is considered good with most shooters scoring between 14 and 20 and a beginner may break only 6 or 9 his first time out.

Skeet targets all are broken at about 22 yards and a shotgun with an open bore is best and events are fired with 410, 28, 20 and 12 gauge guns but it's best to learn with the 12 gauge. Hunters shoot skeet today to sharpen their skill and thousands of shooters follow the sport for the competition itself, and skeet is one of the shooting events at Olympic and International Shooting Union competitions.

Pollution control

A new waste control reservoir costing approximately $1,000,000 is now in operation at the Olin Mathieson Chemical Corporation to prevent stream pollution at its Saltville, Va., plant. The new facility will provide the company with an additional 75 acres of waste disposal space, enough to satisfy anticipated plant requirements for the next 50 years. The Saltville Works employs 1,400 people and has an annual payroll of $7,000,000. It is the largest chemical manufacturer in the east and operates on an around-the-clock, seven-day-a-week basis in the production of soda ash.

As an indication of the scope of the project, construction of the reservoir made it necessary to move an entire community of sixty homes, relocate a 100 year old cemetery and a section of a state highway, change the course of a river bed, and excavate more than 225,000 cubic yards of dirt and rock.

It is a long step forward toward "clean water".

New pulpwood supply

Pulp wood from state-owned reforestation areas outside the forest preserve will soon be available in large volume for pulp using firms in the Northeast.

Many of the state reforestation areas that were planted in the early 1930's are now ready to be harvested—on a selective cutting basis. A recent, partial inventory of 700,000 acres of reforestation lands showed more than 800,000 cords of marketable pulp wood that should be removed as "thinnings".

The harvest of plantation stock will be performed as a silvicultural operation aimed at improving future production of state forest areas. In addition to long-range beneficial effects on these forests by managed cutting at this time, a valuable source of material for pulp users will be made available and important fringe benefits to private woodlot owners throughout the state will, no doubt, accrue. Owners of small private woodlots who were unable to attract large pulp users due to the relatively small number of marketable trees on an individual lot. Now major firms should find it profitable to move into state reforestation areas where a sizeable volume of pulp wood is available, and they probably will be willing to pick up trees from small woodlot owners in the vicinity.

Many of the reforestation areas are in economically depressed areas of the state and it is hoped that the success of the pulp selling venture will have a favorable impact on the overall economy of these sections. Labor represented by private enterprise could earn several million dollars in the cutting and processing of the 800,000 cords of pulp wood that would be made available.

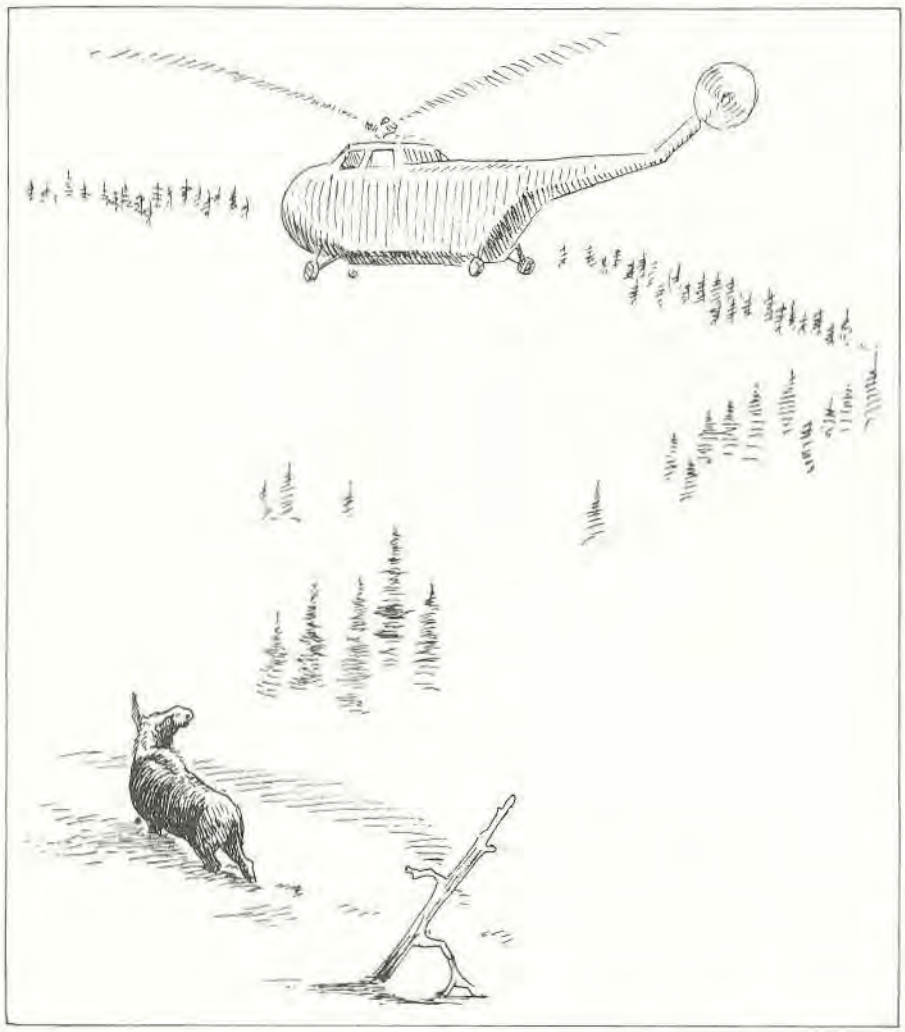
Management plans now in effect call for sales to the highest bidder. The thinning, involving mostly trees six to 12 inches in diameter, will be carried out under supervision of Conservation Department foresters.

Managed thinning—as apart from clear cutting—is an important part of the Conservation Department's multiple-use concept of forest management and the openings created by thinning will provide areas for new growth which is an excellent food and cover source for wildlife.

It is well known that public use of the state reforestation areas for hunting, fishing and camping is an important part of New York's outdoor recreation program and the bulk of the state's reforestation areas are located in central and southwestern New York where there is much need for recreational lands.

The most recent inventory showed 400,000 cords of pine, 100,000 cords of larch, 210,000 cords of spruce and 90,000 cords of white pine. It's interesting to note that the 800,000 cords piled four feet high and placed end to end would stretch from Albany to Chicago. In terms of a finished product, the pulp wood from this amount could be processed into newsprint weighing 800,000 tons — enough paper to publish an average sized daily newspaper for about 120 years.

The initial sale of pulp wood is not a "one shot" offering, but the first step in a marketing program aimed at bringing back to New York State some of the large wood using companies who have looked to other areas for supplies of pulp and timber resources. Trees planted more than 30 years ago are beginning to pay dividends to the people of the state and in the years head, even larger trees will be sold as they approach sawtimber size. Once commercial loggers realize that New York can offer a large and steady supply of trees, new outlets for timber sales will be opened to the small private woodlot owners who make up an important segment of the economy of the state.



"Choppers" for moose

Wildlife biologists in Ontario have developed a neat scheme for getting ear-tags on moose. They do it by helicopter. In early July, aquatic foods are at their best and biting flies are at their worst. The two combine to lure moose to open water. Biologists patrol such areas in the flying "eggbeaters" and herd the moose out to swimming depth by hovering over their backs. Once swimming, the big animals (even bulls) are in a poor position to argue. The helicopter settles behind them, then taxis forward until the animal is confined between the pontoons.

The rest is simple. One man slides along a pontoon, grabs the beast by the ear and affixes a metal tag.

LETTERS

to the editor

Pigeon from Mars

Dear Sir: The other day I was walking by a lake in Prospect Park, Brooklyn. Suddenly a pigeon dropped into the lake. My first thought was that the pigeon was sick or injured. The bird, however, floated upright in the water, holding its head and tail very high. It then dipped its head into the water a couple of times shaking it each time as birds do in bathing. It then took off from the water and landed in a tree. It took off, not as a duck does, but vertically. The bird was in the water for only five seconds.

As this act seemed deliberate on the part of the pigeon, I would like to know if this is at all common. I have never seen or heard of a pigeon doing this before.

Leonard W. Gattuso, Brooklyn

• *This behavior is unusual for a pigeon. Are you sure it was such a bird.*—Editor

Objects to treatment

Dear Sir: Joyce Rippolon ("Serpent of Rocky Ledges—The Copperhead"—August-September, 1963) repeats, with a variation, the traditional treatment for snakebite: "Make short parallel cuts over the fang marks, instead of the old "X" cuts. Suck the poison out with your mouth or preferably a suction cup."

Who says so? I've seen this advice in print a hundred times, but almost never signed by an M.D. As yet, I've seen nothing in medical literature to validate it.

Some of my friends in the zoo business who handle snakes daily and have been bitten more than once insist that cut-and-suck is needless and dangerous butchery, likely to do more harm than good. They also decry the use of a tourniquet.

Their advice? If you can get to a doctor within a few hours, do so, with a minimum of excitement and exertion. Then insist that he telephone the nearest major zoo, to be put in contact with someone who knows about snakebites, since most doctors have never seen a case and don't know the best treatment.

Of course, they're laymen, too. Isn't it time to provide outdoorsmen with authoritative medical advice, backed by the evidence of research and case studies? THE CONSERVATIONIST would perform a useful service by asking top medical scientists for this.

John Perry, Washington, D.C.

• *We heard of an old-timer by name of "Rattlesnake Pete" who used to cut open his snake wound, pour in black powder, and light it up. But how about purchasing a snake-bite kit with antivenom?*—Editor

Crossbow and logic

Dear Sir: Mr. Jule Marshall of Greenwich, Connecticut (CONSERVATIONIST, April-May, 1963, p. 41) may be "one who is steeped in archery" but he is also steeped in fuzzy thinking when he equates the tools used with the resultant product. If the power-saw lobby succeeded in having a "law" passed to prohibit the felling of trees with axes, some persons would still use axes. To ban crossbows because the "criminal element" may choose to use them is sheer nonsense. Does the poacher care that his tools are illegal when his very trade is illegal in the first place? Of course not. Shall we ban automobiles because the "criminal element" uses them every hour of the day?

Poaching existed before the invention of crossbows, stranglings existed before the invention of nylon stockings, murder existed before the invention of firearms. Mr. Marshall fails to see the point of the discussion. May I mention that New York State's crime rate has risen at a fantastic rate since the passage of the Sullivan Law which was supposed to prevent criminals from having pistols? The crime does not depend upon the tools used by the criminal, Mr. Marshall. Cain didn't kill Abel with a crossbow or a pistol, Mr. Marshall—crime is in the mind of the criminal not in the tools he happens to have available. The owner of a crossbow is not, because of such ownership, a poacher. Most poachers, I suspect, use a good deal of wire or string—shall we make wire and string illegal, Mr. Marshall? When some of the medieval Popes outlawed the use of crossbows, except against infidels, they did so because the weapon was efficient. Perhaps Mr. Marshall's deer are not infidels!

R. G. Schipf, Carbondale, Ill.

• *Your logic is good, but why not be more sporting about it—use a long bow?*—Editor

Smart bear

Dear Sir: The article, "Cold Storage Bear," in your Feb.-Mar. issue, was very interesting as well as informative. You ask for any information readers may have on the subject of the possibility of hibernating bears freezing down and dying in the den when the spring thaw comes.

For many years I hunted bear in the Catskill Mountains in company with Merwin ("Mike") Todd, who was tower man for the Conservation Department on Balsam Roundtop Mountain. I first started hunting with Mike in 1911, when I was in my early twenties. Before Mike's death, two years ago, he told me he had killed twenty-seven bears during his lifetime. I also hunted bear with Dave and Niles Fairbairn of Seager, Ulster County, both of whom were "old-time bear hunters." Personally I have killed only five bears, but I have helped kill many more. You help kill a bear when you are on the bear hunt where one is killed, but when you do not fire the fatal shot. I do not claim to be wise in the way of bears, but naturally I learned much from hunting with these bear hunters of bygone days and from my own experiences of over fifty years in the woods hunting bear and deer.

It is my belief that bear will seldom, if ever, hole up on the warm or south side of a mountain. Mike Todd claimed they never holed up, except on the cold or north side. He said always that bears did this so that they would not freeze fast in the hole when the March sun warmed up the snow and

would let water run in on the den floor during the day, then freezing at night would freeze the hibernating animal fast. The hole on the cold side of the mountain would not be subject to this thawing and freezing. Don't ask me how the bear knows which side of the mountain is north. We can say it is instinct—which is only a word we humans use to explain the doings of animals which we are not intelligent enough to comprehend.

In writing of the color of bears, Mr. Randall says, "the color is a uniformly high glossy black with slight variations." He mentions having seen two with slight dull white markings. My observations have been that most bears have a brown muzzle and many have a white spot (a few hairs) of white on the chest. In 1936 I helped kill a bear which had four pure white feet—the white went back almost to the ankle. Freaks of this kind are sometimes found in all animal life, I suppose.

It is my opinion that the bear population has remained about the same during the last half century. They may seem scarce some years, but bears are great travelers. They go where the food is—always.

Now that I am no longer able to travel the mountains, I find your magazine a wonderful source of information as well as a way of holding my interest in the great outdoors.

Waldon DuMond, Seager

Prefers girl in canoe

Dear Editor: The pleasure of hunting is not so much shooting things as it is in roaming the fields and woods. The small game you shoot is full of shot and hair and the birds full of broken feathers. Young people, if they must hunt, should not shoot until they have a good mark as so much game that is shot gets away only to die. Over my honey-house door are two racks of horns from deer that got away. The dog brought in a leg bone of a deer shot off above the knee.

Hunting is quite dangerous with so many hunters in the woods. My brother-in-law sold his gun and bird dog after he lost the sight of one eye partridge hunting. Johnnie, an acquaintance over sixty-five, who hunted all his life, dusted a companion in the back with small shot.

Over the knoll came my new neighbor from the city with his wife and teen-age daughter. When I asked him what he shot he said, "I was getting over the fence and the gun went off."

Two young men went hunting at our place. They did not see anything to shoot so one of them pulled the trigger with the gun on his shoulder. Away went the gun and the other barrel went off. I heard the quick shots and thought something was wrong. That little lady they call luck was with them.

They tell about the farmer, old enough to know better, getting behind a tree and wiggling his whiskers along one side. That joke cost him the sight of one of his eyes.

Instead of teaching that fifteen-year-old boy to hunt, tell him to get a canoe with a nice hefty girl in the front seat for ballast, or take their field glasses and a camera to get them in the open.

There is one thing to hunt that does not require a license. That is the site of an ancient Indian camp. All he needs is a stick and go through the corn rows to get quite a thrill collecting the different stone agriculture tools and implements of the chase.

William Goldsmith, Middletown

Greedy duck

Dear Editor: My daughter, Dora, took this picture of a duck whose eyes were bigger than its throat. Her photography isn't too detailed but if you use a magnifying glass you will see the south end of a 2½-inch catfish whose spines allow only a one way trip down the duck's throat. It was one of the many I missed during last year's split season, I imagine.

Donald H. Bush, Ludlowville

Dangerous sport

Dear Sir: On July 6 we drove up to Speculator dump to see the bears, which we've been doing for a long time. We were there not too long and a group of teen-age boys, and everyone saw one bear, and then one of the boys took a rock and hit the bear in the side and that was the end of the bears that night. I wonder if we could have reported them to anyone and if it would be possible to have someone, even a volunteer, to watch the people, say just on a Saturday night. I hope something can be done to protect our bears.

Mrs. Coughlin, Scotia 2

• *Our Game Protectors do their best, but they can't cover every spot where misbehavior occurs.—Editor*

Deer and color

Dear Sir: I'm writing you for some information. Do you know if deer are color blind? I have been told they are but from my experiences as a hunter for 52 years makes me doubtful. Also wouldn't they pick up an orange color much quicker than black, red or brown?

• *Deer are color blind, but they can detect differences in color as differences of shade and they can detect unusual outlines or unusual masses of shades. Thus you have probably noticed that at short range deer will pick you out as an unusual object in the woods, and this is because of your unusual shape and the different tone of your clothes from the surroundings in the woods. Also they can detect movements even as slight as the wink of an eye. As to deer detecting orange better than other colors, it would depend on the contrast with surroundings and whether the orange was solid and in one mass. There is a new camouflage cloth out consisting of mottled orange and brown which is very visible to a hunter because of its bright color but apparently not so visible to deer because of the outline and mass.—Editor*

Hare—bear—scare

Gentlemen: Attached clipping self explanatory (car-bear collision near Woodgate).

Two years ago, I missed hitting a bear at the same location. Missed it by a hare—that's right—I hit the hare first, slowed up—otherwise would have hit the bear.

How about a road sign at this location—"Bear Crossing."

No charge for my expert advice.

W. Clark M.D., Utica 2

Snow fleas

Dear Sir: While hunting rabbits near home last January 7 I happened on to a deer trail in six inches of snow. There was one large hoof print and from curiosity and habit began to follow it. After following it for a few steps, I noticed flecks of dirt surrounding each depression and for the next 10 or 12 steps these increased until at that point there were three steps which were heavily peppered with this matter. In fact it was difficult to distinguish snow underneath. I scooped up some snow for closer examination and discovered that these tiny bodies were actually alive and jumped about as nimbly as crickets. They were 1/16 of an inch in length, without wings, and very dark—perhaps black.

Can you explain this apparent phenomenon since this is the first time in 40 years of hunting that I have encountered it?

H. F. Laman, Waverly

• *I would assume you were seeing snow fleas.*

You will find a short statement about them in THE NEW YORK STATE CONSERVATIONIST, *Volume 17, Number 1, Page 44, August-September, 1962.—C. W. Severinghaus, Supervising Wildlife Biologist*

Details on bounties

Dear Sir: I understand that the counties have full control over varmints and bounties, but it has been my experience that you have a lien on information.

A friend and I are planning to trap this winter. We need to know what animals are classed as varmints and how much bounty is paid in Saratoga, Fulton, Herkimer, Hamilton and Warren counties. Is there a published list of the counties, varmints and bounties available for public distribution?

I am particularly interested in foxes. What counties classify these animals as varmints and how much bounty is paid? Can you refer me to any issues of THE CONSERVATIONIST: (I have them all for the last five years) that will give any information pertaining to trapping in general?

What part of the animal is required in order to collect the bounty, where and to whom is it submitted, and when is the bounty paid to the trapper?

Graham L. McGill, Galway

• *The latest list (1960) of counties which pay bounties indicate that of those counties you mention, only Herkimer and Warren counties pay a bounty. At that time Herkimer paid a bounty on bobcat ($25) while Warren paid bounties for bobcat ($25) coyote ($25), fox ($3), porcupine ($.50) and snake ($5). Before you consider trapping for bounty, I suggest you write the county clerk in each of the counties involved and ask:*

1. *Species for which bounty is paid and amount.*
2. *If non-residents of the county are eligible for bounty payments.*
3. *If sufficient funds are presently available to make bounty payments. (In some instances money appropriated for bounty payment is exhausted before the end of the fiscal year.)*

Each county has different requirements for submitting animals for bounty payment. Information as to part of animal submitted, individual to whom animal is taken, etc. can usually be obtained from the county clerk.

"Pennsylvania Trapping and Predator Control Methods" is obtained from: Pa. Game Commission, Hanesburg, Pa. Price 25¢.

I'm sorry I can't be of more help on your bounty questions but each county is different and county regulations change from year to year.—Samuel Linhart, Senior Wildlife Biologist

Conservation camps pay

Gentlemen: Ever since I went to Conservation Camp. I have read THE CONSERVATIONIST because I derived so much pleasure from the great variety of articles.

This spring, when I took Biology Achievement Section of the Graduate Record for entrance to graduate school, I was surprised to find that I had the answers to the ecology questions, not from any college courses I had taken, but from reading THE CONSERVATIONIST.

Boy! What an interesting textbook you publish. Harry Sommer, Chathan

• *Harry is a real conservationist. As a seventh grade student, he won a trip to Ray Brook Conservation Camp. While in Chatham High School, he took part in the Conservation Department's pheasant rearing and reforestation projects. As a college student (University of Vermont) he served as a counselor at our DeBruce camp.*

He was graduated this June from the University of Vermont with honors for research in quinones of the hemlock. This fall he started two years on a Science Foundation Research Fellowship at the University of Maine before entering the Army as a Second Lieutenant.

Ecology? It's the study of organisms and their relation to their environment.—R. B. Miller

New idea

Dear Sir: I have a new idea for THE CONSERVATIONIST magazine. It is an idea to feed the birds. We'll put the seeds in a airplane. If there is a bomb chute, put the seed beside the bomb chute. And then when you are ready to drop the seed, pull the lever and slowly drop the seed down the bomb chute. And if you do this idea, all the forest birds will get some food during the winter.

Michael Urbain, Tarrytown

• *It was very nice of you to write about your suggestion for help to feed the forest birds. We need new ideas from everyone, and particularly young people, in order to keep up with the job of taking care of wildlife.*

Your idea is somewhat similar to one that used to be carried out by a man who was called Johnny Appleseed. Many,many years ago, he went through the forests throughout the eastern states spreading apple seeds, so that they would grow into trees which would feed birds and animals and it is believed that many of the old trees which we find in woods and pastures came originally from Johnny Appleseed's idea.

I hope you will continue to keep thinking of ways to help birds and animals because all of them do need food and shelter in these hard winter months. Why don't you and some of your friends put out food for the birds at your homes outside the windows and then watch what kind of birds come and maybe you can identify them from bird books. Maybe you can build a bird feeder from the pictures which are shown on the inside back cover of the December-January CONSERVATIONIST *which I am sending to you. Do let us hear from you again and if your parents should be coming to Albany and can take you along we would like to have you visit our office and our zoo in Delmar.—James E. Gavagan, Managing Editor*

Pectinatella

Dear Sirs: Enclosed is a clipping from a Canadian newspaper that was handed to a fishing buddy of mine. We had fished Lake Erie all last summer and never came upon or heard of anything like this and neither has anyone else I have talked to. Is this fact or fiction? If fact, are these things common to fresh-water or did they come up the St. Lawrence Seaway? Is there any chance they will spoil future fishing for Lake Erie sportsmen? Is there any way of controlling these creatures?

Your answer in THE CONSERVATIONIST will be eargerly awaited. Also do you have any answers to the questions on the enclosed clipping?

Irving Dewitz, Buffalo

• *The large objects described and shown in the news photos you sent are Bryozoan colonies, genus* Pectinatella. *These colonies are made up of numerous small animals known as zooids. These secrete a gelatinous material. However, these masses are found only in summer and* Pectinatella *winters over in a small stage known as a statoblast.*

The natural distribution of Pectinatella *is very wide and presumably it has been present in Lake Erie an indefinite amount of time. It may be assumed that these organisms, in common with many living things, have a wide seasonal variability. Possibly they may have become unusually abundant in Lake Erie in 1962.*

The news clipping you sent is interesting but in my opinion a bit on the sensational side. The statement that these things "puff out their chests at night" is a bit overdone since they have no chests. Also the "horrible, wheezing noises" are a bit hard to understand in the absence of any noise-producing structures.

There is actually no scientific information, so far as I am aware that indicates any cause for alarm. These masses of jelly-like material are generally regarded as harmless.—John R. Greeley, Chief Aquatic Biologist

'Chuck in tin can. (Submitted by Elmore Bement, Buffalo)

Bass parasites

Gentlemen: Several years ago I caught several smallmouth bass in a large farm pond, and discovered that they were infested with worms. These worms are whitish-yellow and look like a piece of fat about ⅜ to ½ inch in length. I first discovered them in the belly cavity and then found more scattered throughout the flesh.

My son-in-law caught bass and walleyes in a lake northeast of Peterbourough, Ontario, which were infested in exactly the same manner.

My first question is whether fish containing worms such as these can be eaten?

I would also like to know whether the fish in a pond will eventually free themselves from the worms, or if anything can be done to purify the pond?

Thank you for any information you can supply.

Donald Swanson, Jamestown

• *Exact identification of fish parasites is sometimes difficult even for a specialist in this field, which I am not, even assuming specimens are available. I am not at all certain the parasites you found scattered through the flesh and in body cavity are the same or that the ones you found in walleyes are the same as those in the bass.*

However, I can definitely say that in the opinion of parasitologists you could safely eat these fish, cooked, of course. Eating of raw fish is known to transmit parasites to humans in some parts of the world. In New York State it may be entirely or relatively safe to swallow uncooked fish for fish parasites are generally specific for their own host species. But very few persons would care to test this out.

Fortunately, many fish parasites are internal and are discarded when the fish are dressed. Some are encysted in the flesh and are not easily found and removed. A common type in the flesh of bass is the "yellow grub" (Clinostomum). *This is a tremotode parasite with a complex life cycle having stages spent in fish, birds and snails.*

Effective control of snails might be expected to clean up the infestation of yellow grub locally.

The size of parasites you describe in bass is not typical for yellow grub as they are usually smaller. The size of up to about ½ inch for internal parasites would be about right for the bass tapeworm (proteocephalus) *which is found as an immature stage in various internal organs of bass. Control of bass tapeworm is not generally practical. Maybe complete extermination of all fish and restocking from a disease-free source would work.—John Greely, Chief Aquatic Biologist*

History of tranquilizer gun

Dear Sir: In the late '30's, in connection with certain deer trapping operations, the thought occurred to me of using a syringe (drug-filled) propelled from a gun. We were trapping deer on the Georgia Blackbeard Island National Wildlife Refuge, of which I was then in charge. The deer were shipped to Florida for release in depleted areas. The trapping mortality often ran as high as 15 per cent and this prompted the suggestion which was duly forwarded to Washington. I have noted in a recent article in *The National Geographic Magazine*, that grizzly bear have been "trapped" this way and also that the method has come into rather widespread use. The source of the general idea was even indicated. The original thought was that of using a bow and arrow or an air-driven gun and the basic idea then was borrowed from South American Indians and their blow gun darts and the pygmy Africans who use drugged spears on large game.

I am now wondering if the conservation departments throughout New York and other states use the gun propelled mercy syringe, or whatever it may be called, for control of individual animals, rabid animals and similar cases or for scientific investigation, tagging and also any other details you may be able to furnish.

E. P. Creaser, Sr., Hempstead

• *The tranquilizer or CO_2 powered rifle, propelling a drugged dart is now used by several conservation departments, zoos, ranchers and many other organizations and people throughout the world. You may have read recently about some of the tagging and relocation of large animals in Africa—the CO_2 gun played an important role in the success of these operations.*

In New York State, this gun has been used to immobilize both deer and bear. Nuisance deer have been drugged for relocation and deer in wintering areas have been drugged for ear-tagging and releasing. Trapped black bears have been drugged for ear-tagging and releasing.

The effectivenes of this device depends on the skill and experience of the person using it and the type of drug employed. Most drug dosages are based on the animal's weight, so some skill is required to correctly estimate weights, especially with the individual variation of weights found in deer and bear. We have used Anectine (succinylcholine chloride), a muscle relaxant, successfully on both loose wild deer and bear. It is relatively fast acting, but requires a close estimate of the animal's weight; the difference between an overdose and underdose is quite critical. Artificial resuscitation has been used successfully for both deer and bear where an overdose was administered and respiration ceased.

At present, we are experimenting with a cross bow to propel drugged darts in hopes of gaining more range and accuracy than the CO_2 powered weapon. Work is also being done to develop new types of darts for more economy and efficiency.—Stuart Free, Senior Wildlife Biologist

Correction

The statement in the article on the Forest Preserve and the Gasoline Engine which appeared in the August-September issue of the Conservationist, stated that the Joint Legislative Committee on Natural Resources found outdoor public recreation to be the "major function" and "greatest value" of the Forest Preserve. That statement does not fully reflect the Committee's present position on this matter. That position is contained in Section V, Paragraph 1, of the Statement of Policy on the Forest Preserve, adopted by the Committee March 7, 1963, which reads as follows:

"That the principal uses of the Forest Preserve, each of utmost importance, be regarded as watershed protection and public outdoor recreation of a type that is consistent with the preservation of natural conditions."

R. Watson Pomeroy, Chairman
Joint Legislative Committee
on Natural Resources

Persnickety pileatede

Dear Editor: I am employed by the New York State Electric and Gas Corporation as a lineman; and, therefore, I am outside for the majority of my work.

I have noticed on several occasions that pileated woodpeckers will peck at utility poles and in a short time destroy them. These woodpeckers will even peck at newly-treated poles. I am wondering why this occurs when one knows that there are no insects which they could be pursuing.

Would you kindly inform me why such a strange thing should occur.

Joseph C. Bridge, Chatham

• *To a woodpecker a telephone pole can look like a very possible container of grubs, and thus, he may attack it. Also the pileated woodpecker chops out a nest 3 to 3½ inches at the entrance and extending downward from 12 to 30 inches. You may have observed either nests or the beginning of nests. —Editor*

Toads in Corning

Gentlemen: "Whence came the Toads?" Tell me, did the influx of toads come down in the recent rain?

Tuesday evening, August 20, this city (Corning) was invaded by thousands, yes, tens of thousands of toads who seemed to be enjoying a banquet of flying ants. In going out to mow our lawn, it seemed alive with the little fellows hoppity hopping all over the place, which brought up the old fallacy, "did they come down in the rains"?

I have been leaving boards and other cover in my garden this year for the toads and am wondering if this has anything to do with the absence, or rather quite an absence of Japanese beetles. Have the toads been helping with this pest?

Joseph Wood, Corning

• *No, there has not been any scientific evidence of it "raining toads" anywhere. The big ones do gobble down the beetles. —Editor*

Paddle eaters?

Dear Editor: On a canoe trip between Rochester and Utica, we sighted two lamprey eels, two miles from the northern shore of Oneida Lake, north of Bridgeport on July 11. The sightings were four miles apart, and in each case a lamprey eel attached itself to the stern paddle. We believe that lamprey eels may have been responsible for the number of large dead fish we also spotted while crossing the lake. Each fish had a hole ground in its side about three inches behind its gills.

We would like to know if any lamprey eels have been sighted on Oneida Lake, or any other Finger Lake, before. Also, have lamprey eels ever attached themselves to other animals besides fish?

Stephen Thomas, Charles Hiler,
Harvey Hotto, Rochester

• *Lampreys have been reported attaching to boats but your observation of them attaching to a canoe paddle is perhaps the first instance of this behavior reported. The landlocked sea lamprey* (Petromyzon marinus) *is found in Oneida Lake, Seneca, Cayuga, Lake Champlain and Lake Ontario and several other New York waters. There has been no major change in status of lampreys in these waters in contrast to the increase in upper Great Lakes are a subsequent to invasion of this large area. Enclosed is a* CONSERVATIONIST *reprint giving further information on lampreys.*

In Oneida Lake lampreys prey upon the "tullibee" (a subspecies of lake herring designated by the name Coregonus artedii hankinsoni). *It is likely that the fish you saw with holes were tullibee but lampreys also attack other species. The tullibee is a cold-water fish that is not commonly caught or noticed by anglers. High summer temperatures are believed to force these fish to concentrate in deep cold water and make them more vulnerable to lamprey predation. Over a long period of years many observations of substantial mortalities have been observed.*

As to your question about lampreys attaching themselves to other animals than fish, they are not known to feed on anything other than fish blood. Under aquarium conditions they will attach to a human hand or arm but I have never known anyone who left a lamprey attached long enough to test whether they would drill a hole as they do before feeding on fish.—John R. Greeley Chief Aquatic Biologist

Egg-eating 'coons

Dear Editor: As a subscriber to THE CONSERVATIONIST could you advise me on how to stop raccoons from eating turtle eggs at a nearby pond?

Nearly all of the spotted turtle eggs are eaten, and this specie is now rarely found.

Is it forbidden to hunt or trap in this area?

Do you know of a chemical repulsive to coons yet harmless to turtle eggs?

John Burnley, East Norwich

• *Unfortunately, there is no way of protecting the eggs of the spotted turtle from the depredations of the raccoons or skunks or any other natural enemies, except possibly to remove the eggs yourself shortly after they have been laid and see that they are hatched in full protection. You might, with the use of stakes and chicken wire, form a protection about the freshly-laid eggs where the mother buried them. I can sympathize with your desires to conserve the spotted turtle, which is not a very common turtle in the State of New York. Populations are generally kept in balance by predation and such natural activities are harshest on the rarer animals, but even the comparatively rare spotted turtle would quickly over-populate a pond if all the young year after year survived. Possibly the chief culprit as far as the spotted turtle goes are the other turtle species which compete with him for food and nesting sites. There are chemicals known to repel mammals, but these chemicals are much more repulsive to the cold-blooded animals and what effect they would have on young turtles no one seems to know. The great danger of using any of these repellents in your area is that they might succeed with raccoons and skunks, but then indirectly they might also eliminate the very animal you wish to save. Much research needs to be done on some of the side effects of the available chemicals, but at the moment, seeing that the turtles have good cover available and good nest building sites which are either so numerous that the raccoon misses some or far enough in the cover that the raccoon is unable to find them all, are the most certain methods of conserving a species.*

We tend too often to depend on chemical assistance in the control of wildlife when natural cover is the best answer, and we are stripping so much of our area of this natural cover. I hope that the 'coons find other sources of food and that your turtles will survive and recover.—E. M. Reilly, Jr., Curator, Zoology, State Museum and Science Service

Likes "Fun Fishing"

Gentlemen: The "Fishing for Fun" experiment is, I believe, the most significant attempt yet made toward conserving and improving our trout fishing. I believe most thinking sportsmen will agree. I had the pleasure of fishing the Amawalk Outlet several times this season. The large numbers of fish which were visibly feeding gave some indication of the success of this ventures. The large trout population disclosed by your electric shocking device furnishes, of course, the ultimate proof.

With one small exception, I believe the rules governing the fishing of these streams are to the point and constructive. I take exception to the "one line" part of the following statement: "A8 person may use not more than one line having attached *not more than one lure* having not more than one single hook point."

In so far as this rule forbids treble hooks, it is to be applauded. But when we are restricted to "one lure" we must forego a traditional method of wet fly fishing; namely, the use of two, and at times, three flies on the leader. This one aspect of the rule goes against the ultimate purpose of the whole venture; which is, I believe, to give greater enjoyment to the sportsmenlike angler. It is a lot of fun to use these various wet fly methods. The large streamer "chasing" the tiny fly. The winged wet fly tied on above the nymph and a small fly dancing on the surface above both of them.

What a pleasant surprise for the fisherman when one of his darn fool stunts actually works! The possibility of doubles with the consequent delay in unhooking one of the fish need hardly be considered. The law of averages would minimize the frequency of such an occurence. Besides, the ultra-sophisticated browns of the Amawalk would hardly be caught two and three at a time like the innocent wilderness brook trout of the upper Ausable.

I believe this aspect of the rules should be given further consideration. Of course, one must retain one's perspective. This is really a very small point compared to the venture at large. The Department is to be heartily congratulated for this bold and progressive step and one can only hope that it may be extended to at least a few other streams.

John Ranner, Brooklyn 25

Dangers of bait fish

Dear Sir: On a recent trip I stopped at Sylvan Beach on Oneida Lake and talked to some fishermen. I was surprised to find some of them using young lamphrey eels for bait. They told me that these eels were sold by bait dealers there.

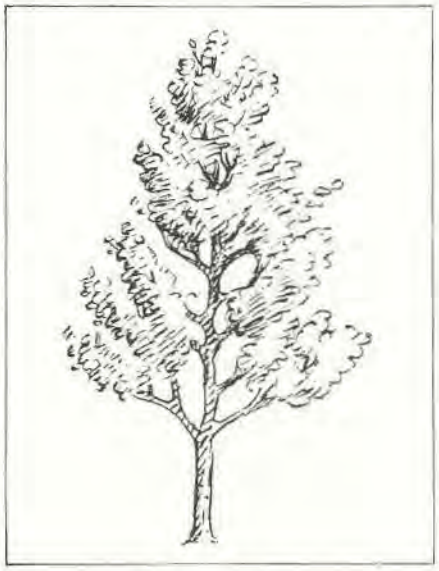
Is Oneida Lake already infested? If not, how can anyone use or permit the use of these fish killers as bait?

Fred Godfrey, Fort Edward

• *Lampreys have long been present in Oneida Lake. They are native to many New York waters, possibly including this one. We have no evidence of any recent spread of lampreys in our waters but the comparatively recent invasion of upper Great Lakes area (above Niagara Falls) has brought them into public attention, leading to numerous inquiries.*

The use of young lampreys (ammocoete stage) as bait is rather local in New York. There may be some theoretical dangers of introducing lampreys by this method. For that matter, the possible detriment to local fish populations via the introduction of various other bait species is a large and unsolved problem.

It would be very good for future fish management if 100% of anglers using live bait would refrain from liberating any unused bait if obtained elsewhere than in the body of water concerned. But even if this dream became a reality there would still be dangers of introducing locally undesirable species by other means, such as liberation of pet goldfish. Although the introduction of a few individuals does not always result in a build-up of the species concerned there is a real element of danger in the liberation of any form of life in an environment where it did not previously exist.—John Greeley, Chief Aquatic Biologist



"A boy's will is . . ."

Dear Sir: On April 3rd of this year, the orders to some of the men employed here at the Reservation, were to cut the old dead maple. Also to split it up for firewood. During the splitting, one of the men noticed a stone inbedded in the wood. He removed the stone with his knife and found two Indian head pennies under the stone. The dates on the pennies were 1884 and 1895. The growth rings were counted from the outside of the stone to the bark and they numbered 57. From the appearance, the hole was chisled square.

Could it have happened that at the end of a maple tapping season, when the large hand-made wooden spout was pulled out, that this was a good hiding place for a small boy to hide his treasure of that time?

Robert A. Clarke, Park Foreman,
Crown Point Reservation

• *We think your guess is good. Certainly, a penny was a greater treasure 57 years ago than today.—Editor*

Where's the shiners?

Dear Editor: We have had a cottage on Oneida Lake since 1943. It is in the Verona Beach area, south of the new State Park.

I am wondering if someone can explain the disappearance of the buckeye or shiner minnows from Oneida Lake. We have fished the east end of the lake up to Buoy #117 nights and we never see any buckeye or shiner minnows at all. There are nothing but small perch minnows. The pike we catch have no other type minnows in their stomach except these little perch minnows. This is a big change from the large schools of buckeye minnows we used to see in 1948 until about 1958.

I appreciate the good work THE CONSERVATIONIST is doing in keeping us informed on the matters pertaining to conservation in New York State. I read each issue from cover to cover and enjoy each article.

Ronald Roff, Vestal

• *I doubt if anyone can offer a reasonable explanation for the decline in the number of buckeye shiners in Oneida Lake. Some people believe that the decline in buckeyes was caused by commercial bait seiners who removed large numbers of buckeye shiners for sale in the early 1950's. This seems to be an oversimplification. In recent years commercial seining of bait fish in Oneida Lake has been virtually abandoned yet the population of buckeyes has not increased.*

No one has studied the buckeye (lake emerald) shiner in Oneida Lake although the New York State Conservation Department and Cornell University have studied several species of Oneida Lake fish. Since there are some 60 species of fish in Oneida Lake competing for food and frequently feeding on each other, drastic changes in abundance are common. A temporary change in water level or fertility of the lake or annual changes in weather conditions may lead to a dramatic increase in one species of fish which in turn affects many other kinds of fish. Because of the interrelationships between species of fish and the many environmental factors influencing survival we often cannot explain changes in abundance.

Recently a noted biologist commenting on fisheries research stated, "It is a growing science with an impressive body of literature but with large and challenging areas of ignorance." You have pin-pointed one of these areas of ignorance.

John Forney, Oneida Lake Fisheries

Celts (Indian type)

Dear Sir: I enjoyed your article on "The Axe" by Gordon C. DeAngelo in your recent February-March, 1963, edition. I would like to pose a few questions and I hope you will answer them.

1. Do these trade-axes have any historical value and what does the cross enclosed by a circle stand for?

2. Where does the stone for the Indian celts come from and how can you obtain it?

Herb Perrin, South Wales

• *The "historical value" of trade axes has not, as yet, been fully developed. Other potentially dateable artifacts, such as glass trade beads and European Kaolin trade pipes, have been given considerable study, and can now be used to some extent as general date indicators on historical archaeological sites. We hope that sometime in the near future the necessary research on the European design and manufacture of trade axes will be carried out, so that this information can be correlated with the many specimens recovered from historic sites here in the United States. Unfortunately, very little has been published to date.*

Regarding the meaning of the circled cross on some trade axes, Beauchamp (see article reference) implied that axes so marked were of French origin, while the unmarked axes were English. To my knowledge this has not been proven, although it is almost certain that the marks do have some relationship to the place of manufacture.

At Nichol's Pond, in Madison County, two trade axes are reputed to have been found, one bearing two circles with single crosses and dots in the quadrants, while the second axe was marked by three circles each containing a cross with two horizontal bars. Perhaps these axes gave Beauchamp the idea of French origin, since some people believe Nichol's Pond was the site of Champlain's battle with the Iroquois in 1615.

So you see, when research gives us the key to the identification of trade axes, they will then have great "historical value."

The Indians probably gathered conveniently shaped "blanks" for their celts and grooved axe heads in rocky stream beds, where such stones are still common today. Although celts were sometimes made of soft shales and sandstones, the better specimens were of hard dense stone such as granite, limestone, gneiss, and basalt. The next operation consisted of pecking the "blank" into the rough shape desired with another hard pointed stone. Finally, the polished surface was made by grinding on another hard rock. I would imagine a modern "recipe" for making a celt would closely follow the Indian method described above.

—Gordon DeAngelo

Key to posting?

Editor: During the early spring of 1963 the Wolcott Conservation Club, Inc. in Wayne County spent some time at its monthly meetings discussing the problem of increased posting of huntable land.

It was brought forth by several members that one big reason for posting is that many landowners would prefer to know who is stomping around on their property. It was also felt that many landowners would permit hunting on their property if they knew who was on it, but at the same time the only signs generally available are those which says: "POSTED—no hunting, fishing, trapping, trespassing," etc. This type of sign, it was felt, usually scares away the average sportsman who for one reason or another will not bother to stop at the house and seek permission to hunt.

With these thoughts in mind, the Wolcott Club made arrangements with the *Lake Shore News* of Wolcott for printing 1,000 signs which read "HUNTING BY PERMISSION ONLY." The signs have a place for the landowner's name and address and include a line which reads, "Respect The Landowner & His Property." At the bottom of each sign, it says, "These Signs Sponsored by The Wolcott Conservation Club, Inc."

The club paid 3.8¢ apiece for the signs ($38 for the thousand) and took them to the local G.L.F. store which does a whopping business annually with posted signs. The G.L.F. had been making about 3¢ on each sign they had sold in the past and felt this to be a fair profit. G.L.F. agreed to buy the 1,000 signs from the club for $20. Thus, the club got a rebate on their investment. The G.L.F., in turn, agreed to sell the signs over the counter at 5¢ each, about half the cost of the regular posted signs. Therefore, G.L.F. still makes its 3¢ profit per sign, and for a small investment the local sportsmen have placed an unusual posted sign in circulation.

If the signs sell well and prove popular locally, the club will have more printed. At the present time it is more of an experimental project than anything else, but we thought other clubs might like to hear about Wolcott's project and try something like it themselves.

Donald E. Hunt, Wolcott

Thoughts on guns

Dear Sir: I read with interest the article "A Gun Law for Boys" in the Oct.-Nov. issue and the comments made on N. Y. firearms laws in general. I would like to add my two cents worth. First on the hunter safety program, I can have nothing except the utmost approval for such a law and pride as a New Yorker that it was my State that inaugurated what has become such a widespread practice throughout the country. Also my continuing amazement that such a law had ever gotten passed at all considering the State's record as the number one proponent of antifirearms legislation. Second, on the Legislative Committee to simplify N. Y. firearms laws in particular relation to hand guns: If anything comes of the committee's work, I doubt that it will have any benefit for residents of N.Y.C. due to the attitude of the N.Y.C.P.D. Although to my knowledge it is legal to hunt with a pistol in N.Y. I myself have been informed on several occasions by members of the N.Y.C.P.D. that it is illegal to hunt with a pistol or revolver in N.Y. State. This information was volunteered not by the ordinary cop on the beat but by members of the force with ranks of Lieutenant to Inspector. Nuff said! Except that knowledge of firearms is notable by its absence in the overwhelming majority of the N.Y.C.P.D.

Third, my own deep conviction of the need for a suitable law relating to the proper calibers suitable for big game. To me the whitetail deer is too fine an animal to be hunted by the average man carrying in his hands what is a totally inadequate weapon. I am not referring to that (regretably) rare individual who would be adequately armed with a .22 rimfire. This applies to the average hunter who lacks either the time or the inclination to become both a good marksman or a good woodsman. Since the law now only prohibits rimfire cartridges or shotguns larger than 20 guage using rifled slugs only I do not feel that the law is adequate to the situation. As will be seen my recommendations are not severe but I feel they are quite liberal.

A. Weapons. 1. All military surplus semiautomatic arms regardless of caliber or subsequent alteration; i.e., customizing or blockage of magazine capacity. Comment: For the reason that they are excessively heavy or use totally inadequate cartridges and it is too easy for those so inclined to carry a blocked magazine or an altered one to show and a full capacity magazine which is easily hidden in a game pocket and just as easily slipped into the rifle when in the woods, and don't think it isn't done.

2. All autoloading shotguns to be restricted to three shot capacity. I have noticed a decided tendency among some users of autoloaders to spray the area and slugs have a decided tendency to ricochet.

B. Calibers. 1. Rifles—all cartridges with a bullet diameter less than 6 m/m (24) cal. except those with a muzzle energy of 1200 ft. lbs. also excepting cartridges of cal. .38 or larger using a bullet weight of 200 grs. or more.

2. Pistol—all cartridges which show a muzzle energy of less than 700 ft. lbs.

Joseph M. Boyel, Jr., Bayside

Credits

Cover I, Ernest Smith; cover II, Daniel F. Ankudovich; pages 2, 3, 7, 21, 23, 24, 25, 26, 29, 31, 38, 40, 41, 43, 46, 47, cover III, H. Wayne Trimm; 4, LeRoy Irving; 10, Steve Pradon; 11, U.S. National Museum; 13, 14, USDA Soil Conservation Service; 17, 18, 19, 38, Nick Drahos; 27, Jesse Cornplanter; 32, Forest Products Industries; 33, Bill Benson; 35, Fred Chambers; 36, John H. Northcutt; cover IV, Joe Dell.

Tips for Getting a "Bow Buck"

(*Continued from page* 48)

If a deer appears, aim for the ribcage lung area, but *shoot only if it is an open shot.* Even grass and weeds can deflect an arrow so it may wound rather than kill. A lung hit will usually bring the deer down quickly. Note the compass direction the deer went after being hit, then sit back and try to relax at least an hour before you start trailing. Chances are you'll find your deer within two hundred yards. I've never had one go even that far. Good luck and good archery!

How to do it Series:

Tips for Getting a "Bow Buck"

by H. Wayne Trimm

[*Hunting with bow and arrow demands specialized equipment and skills. In twelve years of archery, H. Wayne Trimm has taken eight deer, caribou, moose, alligator, bear, small game and fish with the longbow. He has written numerous articles for sportsmen's magazines and archery journals. His suggestions on how to hunt deer will improve your chances this season.*—Editor]

Archery Tackle

1. Start learning to shoot with a bow you can handle easily. For most adults such a bow would be between 30 and 40 pounds of pull. After shooting technique is mastered, increase bow weight until a bow of 40-50 pound pull, or more, is being used. While a heavy bow is favored for big game, since arrows shot from it can penetrate all but the heaviest bones, lighter bows are capable of killing deer if the arrow is well placed. Many women archers using bows in the 35-40 pound class can testify to this. The best rule is to *use the heaviest bow you can use well and accurately.* Most modern composite glass-wood recurve bows of 35 pounds or more shoot sufficiently well to serve for hunting.
2. Make certain the "spine" or stiffness of the arrows matches the bow and that arrows are the correct length for your arm. Arrows unmatched to bow weight are erratic while short arrows are dangerous because of the tendency to overdraw.
3. Have two *good* bowstrings, one on the bow and a spare. Be sure they match your bow-strength and keep them moderately bees-waxed to reduce their reaction to weather. Short pieces of rubber bands tied around the string with a quarter-inch free end will reduce vibration or "twang" of the string.
4. Hunting heads should be of good steel with 2, 4 or more cutting edges. I prefer a two-bladed head with a razor-thin insert which converts to four blades. Sharpen broad-heads daily even if they have only been carried in the quiver. Sharpen first to smooth razor-edge, then use a fine file and make diagonal strokes angling forward. These put tiny hooks on the edge, causing it to cut better.
5. Quivers are a matter of taste. I use both a center back quiver and a bow quiver, removing the former for a careful stalk. The main thing is to have available extra arrows.
6. Practice with your actual hunting equipment. A sandbank is an ideal target area. Outline a full-sized deer. Remember that the "vital" lung area of an adult deer is roughly 10″x10″x12″. Do not draw this area on your target, but learn to visualize it, then *concentrate on that mentally-placed spot.*

Shooting

1. The bowstring should be marked at a spot in line with the arrow-rest on the bow. The string and the arrow form a 90° angle. I have had best results by nocking the arrow about ¼ inch above this spot. Always nock the arrow at the same place on the string. The arrow rest on the bow may be padded with feathers or soft pile to soften the sound of the release.
2. Draw the arrow smoothly, bringing the shooting hand back to the same spot before each release. This spot is your "anchor point." The hunting anchor-point for my present bow is the tip of my first finger at the corner of my mouth. This gives me point-blank range with hunting arrows at 30-35 yards, a distance which should be *maximum* for a shot at deer, though I prefer even less. Choose your own anchor point and stay with it.
3. Release *must be* made at the *anchor point* and must be *smooth* and *fast.* Beginning archers have a tendency to "strum" the string—to pull the hand away from the face as fingers relax. If you must move your hand, let it slide *back*, along the cheek. For hunting I prefer to keep my hand tight against my face, then suddenly relax my fingers.
4. Perhaps the greatest error in shooting a bow is dropping the bow arm before the arrow has cleared the bow. Archery championships and much game have been lost as a result. Keep the bow arm aimed at the target until the arrow reaches the target. This is the "follow-through" in archery.
5. Practice shooting from different angles, for you can't be sure where the deer will be when it's time for "that" shot. Shoot kneeling, seated, standing at right angles, head-on and twisted toward the back.

Clothing and Camouflage

Best hunting outfit in New York State hunting cover is a camouflage suit or parka with dark gray, green or brown outfits running second-best. An unvisored knit cap which can be camouflaged with leaves, feathers, etc., is a good choice and is ideal if the weather is cold since it can be pulled down to cover ears and neck. (A visor may attract attention when the hunter turns his head.)

Of all things that show in the woods, a white human face is most conspicuous. In warm weather I darken my face and the backs of my hands with burnt cork, concentrating on my forehead, cheekbones and rather outstanding nose. When it's cold, a dark bandana tied across my face serves as camouflage and gives extra warmth, while dark gloves protect my hands.

Hunting bows should also be camouflaged to reduce glare. I prefer a "bow-sox" made of camouflage cloth, though some archers spray or tape different colors on their bows.

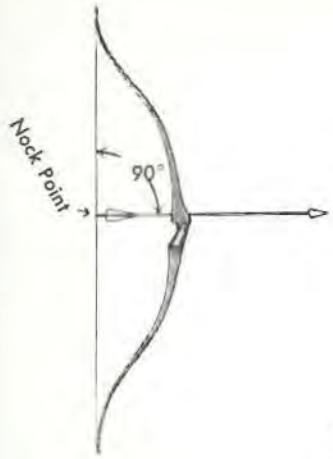
Opinions vary concerning arrow color. Many archers, like my friend, Fred Bear, prefer white arrows so they can tell where the arrow hits. I prefer a dark or neutral-colored arrow with light blue cresting (painted rings) and white feathers. I feel the dark shaft reduces chances of a deer spotting the movement of a raised bow, that blue is easily seen among autumn colors in case I miss and, if I connect, the white feathers are easy to see. Good wooden or glass arrows are both fine for hunting, though I prefer glass. Either may break but glass won't warp.

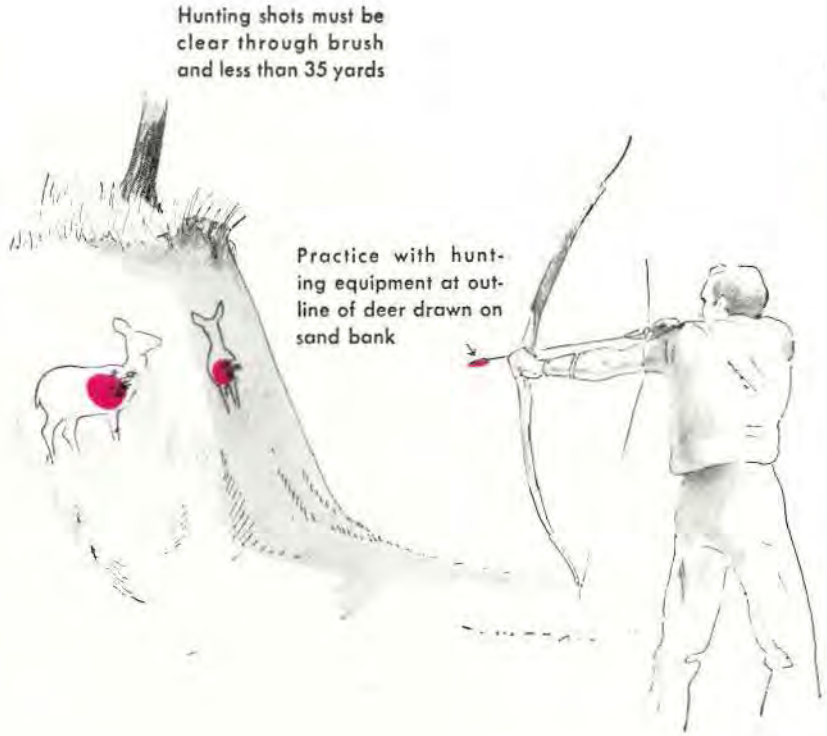
Buck lures and scents can be argued for hours, and I will pass no judgment on them except to say that they tend to alert deer more than I think is wise for ideal bowhunting. I pour cider over the soles and sides of my boots before starting to hunt and feel this works well in orchard areas. Deer calls may be effective if well used, but I feel that they draw attention to the archer's location.

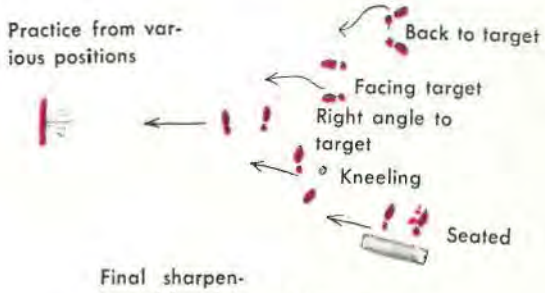
Stands

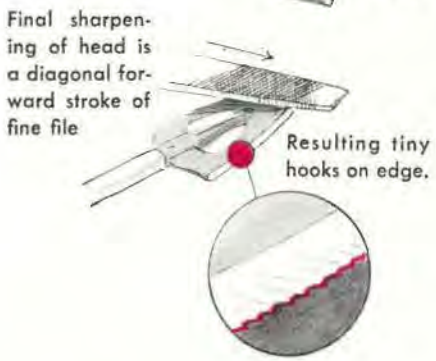
I have found the most successful way to hunt deer is to take a stand, either ground or tree, at a known distance of less than 30 yards from a well-used trail and wait. (A tree stand should be at least 8 feet from the ground.) Early morning or late afternoon are the best times for such stands, and I plan to spend at least two to three hours at such a location.

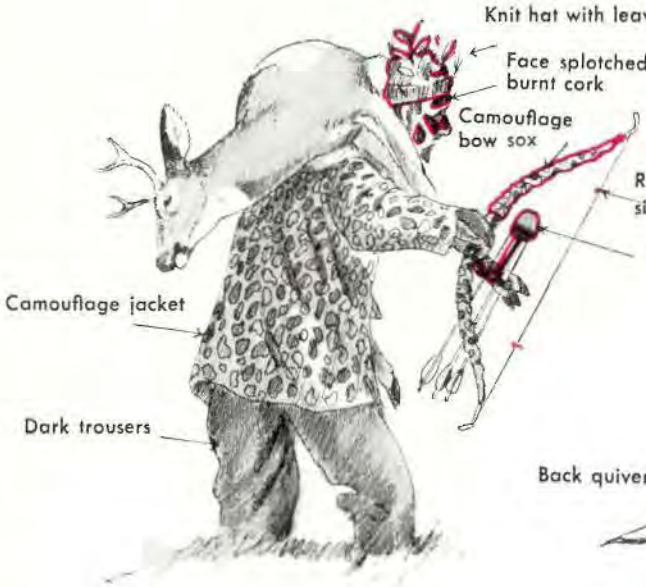
(*Please turn to page* 47)











Autumn trail, Beebe Lake, Ithaca

Kodachrome by Joseph Dell