

NJ Periodical

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November 1969



SHOFFSTALL

To Thwart a Thief

By John Madson

Gun thefts are on the rise. Many of the victims are gun dealers and collectors, but most are sportsmen. There's not much the honest, run-of-the-field hunter and shooter can do about it except insure, take certain precautions, and trust to luck.

Your guns may be fully covered in your home policy under "household contents"—but don't count on it. Check with your agent to be sure. You may even want to insure them under a special rider. In any case, be sure that an exact valuation is placed on each gun, by serial number, and that you have a full list of the serial numbers of your guns on file.

What can be done to keep guns from being stolen?—Little enough—but these steps may help:

While on a hunting trip, even for the day, never leave guns or gun cases in a car where they can be seen. If you stay in a motel, always take your guns in with you at night. A thief can spot a hunter's car a mile away, and knows it's a treasure trove of guns, cameras, and binoculars. We know city shooters who won't even put sportsmen's club decals on their car windows.

If you have a gun cabinet at home, place it where it can't be seen from the outside. Better yet, keep your guns hidden. We know a hunter who keeps a full gun cabinet stocked with "loaner" guns as a decoy for burglars, and his good guns are stashed elsewhere. A farmer friend keeps only his work guns at home—a couple of .22's and an old shotgun. The rest of his muskets are kept hidden with a friend in town. One of our local trapshooters, who also lives on a farm, may take his best guns with him in the trunk of his car when he leaves for home for the day.

Don't keep guns where they can be seen by casual visitors in your home, and never display them to strangers. It doesn't pay to advertise.

In fact, some of this increase in gun thefts may be a reflection of all the publicity that guns and gun ownership have gotten recently. And as restrictive gun laws increase and tighten, we can expect a corresponding increase in the underworld traffic of hot guns. #



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

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Cover—"Ring-necked Pheasant"—Shoffstall

The ring-necked pheasant is New Jersey's most popular game bird with over 114,000 hunters bagging some 448,000 birds a year. Although an exotic introduced successfully around the turn of the century, the pheasant is now the most prevalent game bird in many parts of the state. For more on the pheasant see pages 12 and 26.

Vol. 20, No. 5

November, 1969

Publication Office: The Division of Fish and Game
P. O. Box 1809, Trenton, New Jersey 08625

Editor: R. Adams

Second class postage paid Trenton, N. J. 08608, and additional mailing office.

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

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

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Opening Day:

Different or Durable?

By Edgerton Grant
Public Relations Section

Photography by Harry Grosch

"How about a different opening day story this year?", my boss Bill Peterman urged as small game season approached last fall. The suggestion seemed worthwhile, if hard to achieve. Eventually we came up with the idea of following the activities of a party of hunters on a State Wildlife Management Area.

The Assunpink Tract in Monmouth County was chosen, as one of several outstanding areas acquired in recent years through the Green Acres Program. Wildlife Biologist Frank Tourine, in charge of the area, readily agreed to line up a group of sportsmen. I arranged to meet wildlife photographer Harry Grosch early on the big day; at our rendezvous, I found that Public Relations Assistant Bob McDowell was joining the expedition.

Hunters were scattered as we entered at about 8:15, a far cry from the scene usually observed at more northerly public areas. We found Frank's house and met our victims, his uncles Anthony and John Tourine and affable Earl "Moon" Mullins. There was

. . . Opening Day

time for a cup of coffee before Frank left to set up a bag check; wildlife biologists get few opportunities to enjoy their favorite sport.

Looking out over the adjacent field, we saw a brace of pheasants and attempted to mark their direction. The tract had been well stocked from the Forked River State Game Farm and the Edward H. Roth State Quail Farm. At 8:55 we went outside. Silence still prevailed, although other hunters could be seen approaching. John declared, "I don't like to go near too many gunners," and we changed course slightly.

"I'd hate to see a bird get up now," Tony remarked. Our watches showed seconds before 9:00 when the "fireworks" started, to use Bob's word. Harry exclaimed, "It looks like an army behind us!" However, the crowd spread out as they reached the open fields, and general order prevailed.

Just then a pheasant got up on our right. Five shots sounded in rapid

succession, but the bird escaped unscathed. Another rose right over a hunter's head and dived to safety before a shot could be fired.

Bob scouted through a patch of woods, calling us over when he spotted a ringneck walking along the ground. John took aim, and the bird was down as quickly as Bob kicked him up. It was almost too big to fit in John's game pocket.

We tried another field, and Earl demonstrated his calling technique without luck. The lull allowed me to chat with Tony about their hunting experiences. Until the previous year they had hunted private land in Morris County but now preferred the Assunpink. Earl went back to the house and returned with a pair of valuable added companions, "Beagles for bird hunting?", I asked. John replied, "These are pointing beagles".

For the first hour I had righteously devoted myself to pen and paper. Now I decided I could capture the flavor of the day better with gun in hand. While



John makes his way through rough cover



*Earl brings two
valuable additions*

I got my gun out of the car, a hunter stopped to ask whether hen birds were fair game on the state-owned area; I confirmed the new policy, aimed at providing more pheasants and making more efficient use of game farm production.

As we talked, a shot rang out, and Tony had his first bird. After I re-joined the group, Earl's gun barked a little way away. Bob wondered why he fired so low, and I explained, "Rabbits don't fly."

We tried new areas and found tough going in spots. I was soon faced with a brook, which Bob had crossed some distance away. "Come on," he called, "It's not deep." I stepped in and found mud above my ankles, but made it across before the water quite reached the top of my low boots.

A quail rose in the adjacent field,

and John fired. The whir of wings still sounded in the woods ahead of us. We followed and found one of the dogs displaying interest though not exactly pointing. Bob told me to get ready, but I was still behind a tree when the bobwhite rose. His position permitted a clear and successful shot.

Emerging from the woods, we found Earl pursuing an elusive woodcock, flying back and forth just out of range. We zeroed in, and Tony got a shot with disappointing results.

One pheasant later, we returned to the house for a brief rest. "Look at the fat on that cockbird," Tony said, as we examined the bag. Besides three pheasants and a quail, we had seen rabbits, a woodcock, and more ring-necks, certainly an ample variety of game for a couple of hours. Earl, the last to return, reported one piece of



This pheasant eluded five shots and kept right on going

. . . Opening Day

bad news, the disappearance of Mark, younger of the two beagles.

Harry, Bob, and I left to look over other sections of the tract, while the party sought new fields to conquer. We soon encountered two men and a proud boy lurching by a tree. After Harry pictured the youngster's bag, I asked how they liked the tract. They had returned as a result of enjoying good luck finding birds last year. Other reactions were also favorable; one nearby nimrod felt it was less crowded than other areas he had tried.

The most enthusiastic was Art Coakley, a fishing boat captain from Neptune. It was his first visit to Assunpink, and he called it "fabulous". He described the pheasants as "beautiful", and praised the management program.

"We've gotta find a girl hunter," Harry insisted. Hardly had he said it, when Bob spotted a nice looking blonde in a passing Volkswagon and waved it to a stop. To our surprise, the occupants were Sharon Riley, mightiest huntress of the Fish and Game office staff, and her husband, Vinnie. The previous year, Sharon had taken up hunting and bagged the first

*Tony and his first
bird of the day*



*It was almost too big
for John's game pocket*

. . . Opening Day

rabbit to cross her path with a 12-gauge shotgun almost as big as she was. Now she had her own 20-gauge. Vinnie had bagged three quail.

We talked with another group who mentioned seeing a fox cross the road. As we chatted, Bob noticed a beagle sniffing around the game bags. "Is that your dog?" he asked and was told they had never seen it before it wan-

dered up. "Mark", Bob called, and the dog's response showed we had found our lost companion, a good mile from Frank's house.

Taking the wayfarer home, we came across the hunters who had finally shot the fox, Stewart Foote and William Hipple of Trenton. After admiring the animal's handsome red tail and listening to McDowell spin a yarn about calling fox with a rabbit call, we dropped Mark off and headed north.



*Kenny Rossetti of Trenton admires his pheasant
Are Larry and Edgar Whitehead a little jealous?*



Mark, our wayward dog, seems happy Bob McDowell found him

Pheasants galore and more than a few quail and other species had been evident in our random sample of sportsmen's bags. This was borne out when Frank reported the results of his formal check: 488 pheasants were counted, nearly double the 1967 harvest, with an increase of 250 hunters to 975; quail and rabbits also showed in good number, though down slightly from the previous year. Thus, I had to laugh a few days later when Al Guido of Commissioner Roe's office complained of seeing "more trout than

pheasants" during his day at Assunpink. Still, his report indicated good potential angling in the upper reaches of Assunpink Creek.

In retrospect, I find my tale is clearly one of hunting success, though scarcely a "different story." Yet, I wonder if the many hunters who turned out for opening day would really want it different. Certainly, many regard this outdoor recreation as a tradition in New Jersey, which they hope to enjoy this fall and in years to come. #

Fisheries Agreement

Increased opportunities for important marine research and better protection of American fish resources in the mid-Atlantic area should result from an international agreement recently signed between the U.S. and Poland.

The one-year agreement provides special protection for fluke, porgies (scup), red hake, and silver hake, species of special importance to U.S. fishermen including those of New Jersey. Polish vessels will have greater rights to unload and transfer catches in U.S. waters and easier access to certain U.S. port facilities.

Specifically, designated offshore wintering grounds of these species will be off limits to large vessels during the winter months. This area is outside the three-mile limit of U.S. territorial waters and the nine-mile contiguous fishing zone of the U.S. At no time will the Poles fish within this 12-mile limit.

Polish vessels will avoid large concentrations of these species throughout the year and will make special efforts to limit incidental catches. The Poles are primarily interested in herring and mackerel.

Three specific unloading and transfer zones inside the 9-mile U.S. contiguous fishing zone will be available for Polish vessels during the winter and early spring. Their fishing techniques involve the transfer of catches from the regular fishing vessels to "mother ships" which process and transport the fish back to Poland.

One of these legal unloading zones is off the New Jersey coast south of Atlantic City. While Garden State citizens should be alert to report any actual fishing activity to the U.S. Coast Guard, New Jerseyans should not be alarmed by the transfer operations.

Both governments have agreed to allow a limited number of fishing and supply ships into certain ports of the other country; mid-Atlantic ports involved include New York, Philadelphia, Norfolk, and Baltimore. During a recent inspection of Russian vessels, already operating under a similar agreement, New Jersey Fish and Game Councilman Raymond T. Richardson observed that they occasionally had a problem obtaining such basic needs as fresh water, as one example of need for such access.

Most important is the provision for joint research on fish of common concern to the two nations; this includes exchange of representatives on the fishing grounds as well as research expeditions. Man's knowledge of marine resources is still extremely limited, and scientific findings can lead to additional protection for any threatened species.

Similar agreements with the Soviet Union have been in effect for the past year-and-a-half, resulting from concern about heavy Russian fishing off the Atlantic Coast. Although there was some initial misunderstanding, most American fishermen have come to recognize that they have served to restrict Russian activities in the mid-Atlantic area, particularly since the protected wintering zone was redefined last winter. The fact that this agreement did not cover

Soviet satellite countries was a problem largely corrected by the new agreement with Poland, the most active of these nations.

Several New Jersey Fisheries Biologists have participated in joint U.S.-Soviet research, gaining substantially in their knowledge. The Russian agreement has been a major topic of discussion at both the 1968 and 1969 New Jersey Fishermen's Forums. The principle of fishing on the high seas, as interpreted by both countries is specifically upheld under the agreement.

The U.S. Delegation to the conference in Warsaw was headed by Ambassador Donald L. McKernan, Special Assistant to the Secretary of State for Fisheries and Wildlife. He was accompanied by fishing industry leaders and technical advisors. The agreement provides for a further meeting before its expiration next June to review its effectiveness and consider future arrangements for conservation and research involving marine fishery resources. #

Justice and Treasury Departments Cool to Firearms Licensing

Unlike in former years when outdoorsmen found the Departments of Justice and Treasury eager to endorse restrictive laws regarding the purchase and possession of sporting firearms, the recent hearings on pending proposals by the Senate Subcommittee to Investigate Juvenile Delinquency revealed a constructive shift in philosophy, the Wildlife Management Institute reports.

Both departments balked at S. 100, S. 1432, and S. 2433, bills generally seeking to require the registration and licensing of all firearms. Such a requirement, according to Donald E. Santarelli, Associate Deputy Attorney General, "would constitute an unwarranted invasion into the province of state and local governments." Along with other witnesses, Santarelli urged the committee to approve S. 845 and similar bills to eliminate burdensome record keeping by revising the definition of ammunition in the Gun Control Act of 1968. The Justice Department official expressed favor of mandatory jail terms for the use of guns in crime, but he said that experience thus far under the 1968 Act has not been sufficient to suggest that longer and stiffer penalties are needed. #

In hunting, the finding and killing of the game is after all but a part of the whole. The free, self-reliant, adventurous life, with its rugged and stalwart democracy; the wild surroundings, the grand beauty of the scenery, the chance to study the ways and habits of the woodland creatures—all these unite to give to the career of the wilderness hunter its peculiar charm. The chase is among the best of all national pastimes; it cultivates that vigorous manliness for the lack of which in a nation, as in an individual, the possession of no other qualities can possibly atone.

—Theodore Roosevelt

Pheasants Plentiful

New Jersey's most popular game bird, the ringneck pheasant, again appears to be in good supply. Results of the fourth annual spring "crow count" census of male pheasants by the Bureau of Wildlife Management of the Division of Fish and Game show a 6.7% increase in the number of adult cockbirds in the survey area, using identical methods. The number of male birds estimated has increased each year of the survey, and these increases have generally been borne out by fall hunting success, as well as by the survey trend itself.

The major increase was found in Hunterdon County, heart of the state's prime pheasant habitat. The surrounding farm belt of Somerset, Middlesex, east Monmouth, and north Burlington held its own, as did moderately productive areas like southern Morris and Warren counties and Salem County. Natural pheasant populations remain scarce in the Sussex County area and the Delaware Bay area outside the Salem farmlands.

In all, 16 routes were surveyed during the mid-May breeding season. Wildlife Biologists traversed these rural routes during the early morning, stopping regularly to count the calls of male pheasants, which crow at regular intervals during the mating season. A total of 387 calls were heard this spring, compared to 362, 346 and 331 for the three previous years. The count in the central farm belt has increased every year, and the route in Morris County was substantially above the 4-year average this year.

Principal Wildlife Manager George P. Howard tempers his optimism by noting that other factors, such as sex ratio, brood production, and survival under unpredictable weather conditions are other important factors governing pheasant abundance. Nonetheless, the spring census of cockbirds is a readily available index indicating good prospects for hunters.

In addition to native populations, pheasants are reared at two State Game Farms, Rockport and Forked River, and by 4-H cooperators. All indications are that over 60,000 pheasants will be produced, as in recent years. These birds are stocked on State Wildlife Management Areas and other lands open to all licensed hunters, adding to sporting opportunities for Garden State nimrods during the season opening November 8. #

In-City Hunt Areas Noted

Again this year, certain areas within the city of Phoenix will be open to small game hunting with shotguns. Through the joint efforts of the Arizona Game and Fish Department, the Phoenix Police Department, and the land owners involved, a number of blocks of otherwise inaccessible land have been made available to local gunners.

Hunting Accident Report

New Jersey hunting accident statistics for the 1968-69 seasons have been released and cover the period from June 30, 1968, the end of the last fiscal year, through February 1, the last day of the small game season. Accidents rarely occur during the fox or woodchuck seasons, and these will be included in the tabulation for the Annual Report of the Division of Fish and Game.

Accidents included 54 with firearms, one with bow and arrow, and one fall, eight less than the previous year. One accident was fatal, the smallest number in ten years, contrasting sharply with the high figures of seven and six for the two seasons since July 1, 1966.

Since firearm safety training was made mandatory in 1955, fatalities have averaged under 3.4 per year, compared to six per year over the preceding six years.

Of accidents, 37, including the fatality, occurred during the regular small game season, 7 plus the fall during the firearm deer season, 7 during waterfowl and rail seasons, one during bow and arrow deer season, and 3 during special small game seasons. Almost half the small game accidents took place on the opening day.

The one fatality resulted when a youth leaned his loaded gun against a tree, while his companion climbed up to check the condition of a tree stand. As the second youth shook the stand, the gun was dislodged and discharged, hitting the first hunter.

Although this year's record is the best in several years, most of the accidents could have been avoided through greater attention to basic safety practices. The fatality and about ten other accidents could have been averted by the simple precaution of unloading guns while resting or crossing precarious ground.

Failure to make sure of a clear target before firing, especially in dense cover, remains the most common cause of accidents, probably including most of those listed as unknown. Hunters should also make efforts to wear conspicuous clothing, especially when the woods and fields are crowded. These points will receive increasing emphasis in the firearm and bow safety programs, so that hunting will continue as a safe and enjoyable outdoor recreational pursuit in New Jersey. #

Causes of accidents are broken down as follows:

Out of sight	10	Jump ditch	1
Swinging on game	10	Cross fence	1
Ricochet	5	Horseplay	1
Line of fire	4	Defective weapon	1
Accidental discharge	3	Arrow fell	1
Tripped	2	Fell from tree	1
Dropped gun	2	Unknown	11
Weapon fell	2	Other	1

State Trophy Deer

A listing of New Jersey trophy deer has been compiled by the Division of Fish and Game. The official Boone and Crockett measuring system was used to score antler size and quality, with special permission of the Boone and Crockett Club. Two measuring sessions were held this summer, following completion of the initial competition for 1968 deer. Additional sessions will be announced to accommodate hunters who learned too late of the measuring dates.

State Records recognized as a result of measuring to date are: typical rack taken with firearm, 160 1/8 Boone and Crockett points, taken by Fred Space of Beemerville in Sussex County in 1950; farmer Space is now a member of the State Fish and Game Council, and his deer made the Boone and Crockett listing for 1950; typical bow and arrow, 141 7/8 points, taken by Edward Kayes of East Brunswick in Monmouth County in 1953; non-typical firearm, 166 2/8, taken by John R. Bedell of Spring Lake in Monmouth County in 1954. No non-typical heads taken by bowhunters have been entered to date.

Some 32 heads were brought in for measuring at this summer's sessions at Clinton and Colliers Mills Wildlife Management Areas. More than 20 were measured for the 1968 competition, following submission of preliminary scores



Ted Fennimore and an unusually fine car-killed buck with 23 points

by hunters. Public Relations Assistant Robert McDowell expressed gratitude to all hunters who brought in racks, as they provided interesting information about the Garden State deer herd.

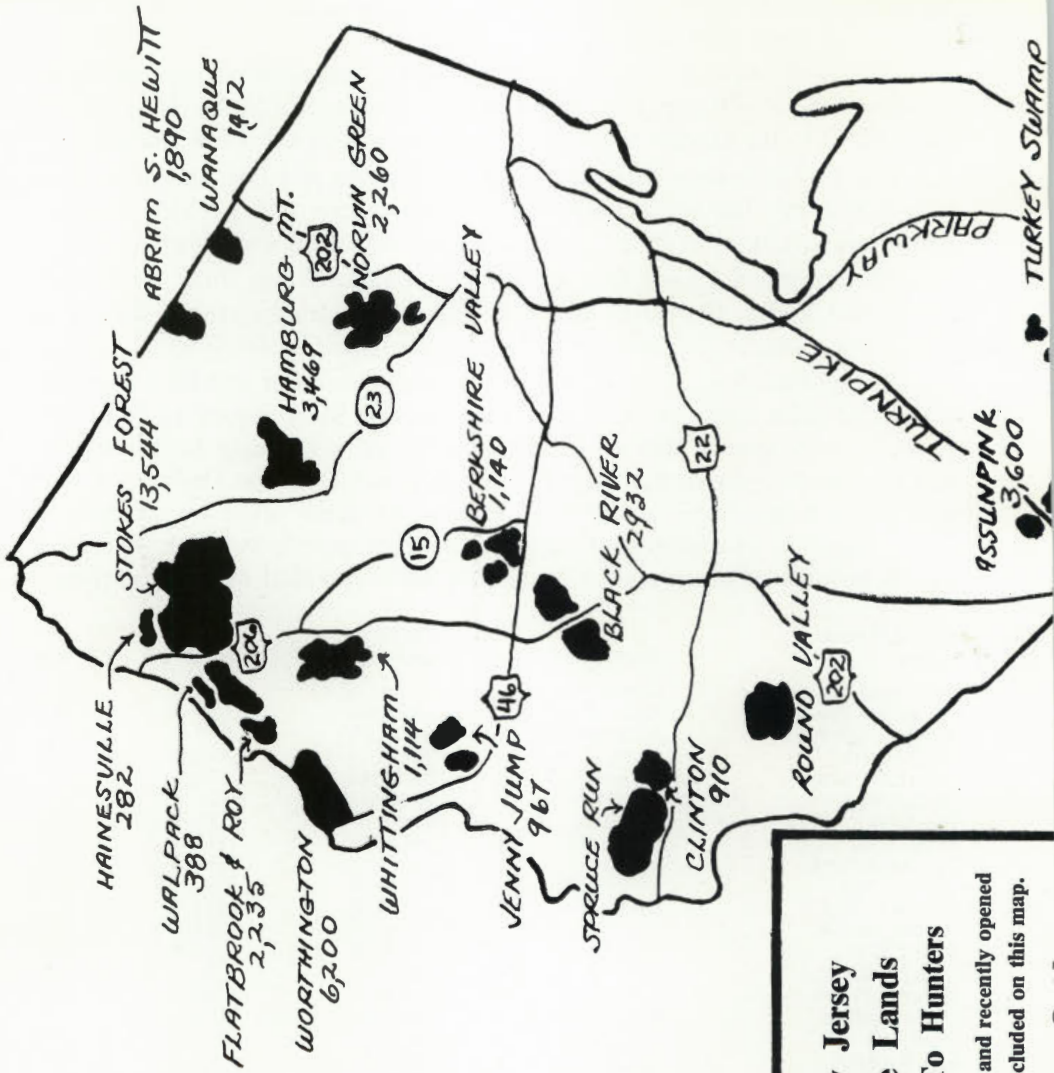
The record deer in each category will be recognized at next spring's Convention of the New Jersey State Federation of Sportsmen's Clubs. Trophies will be awarded to the hunters who bagged them, as well as the 1969 winners.

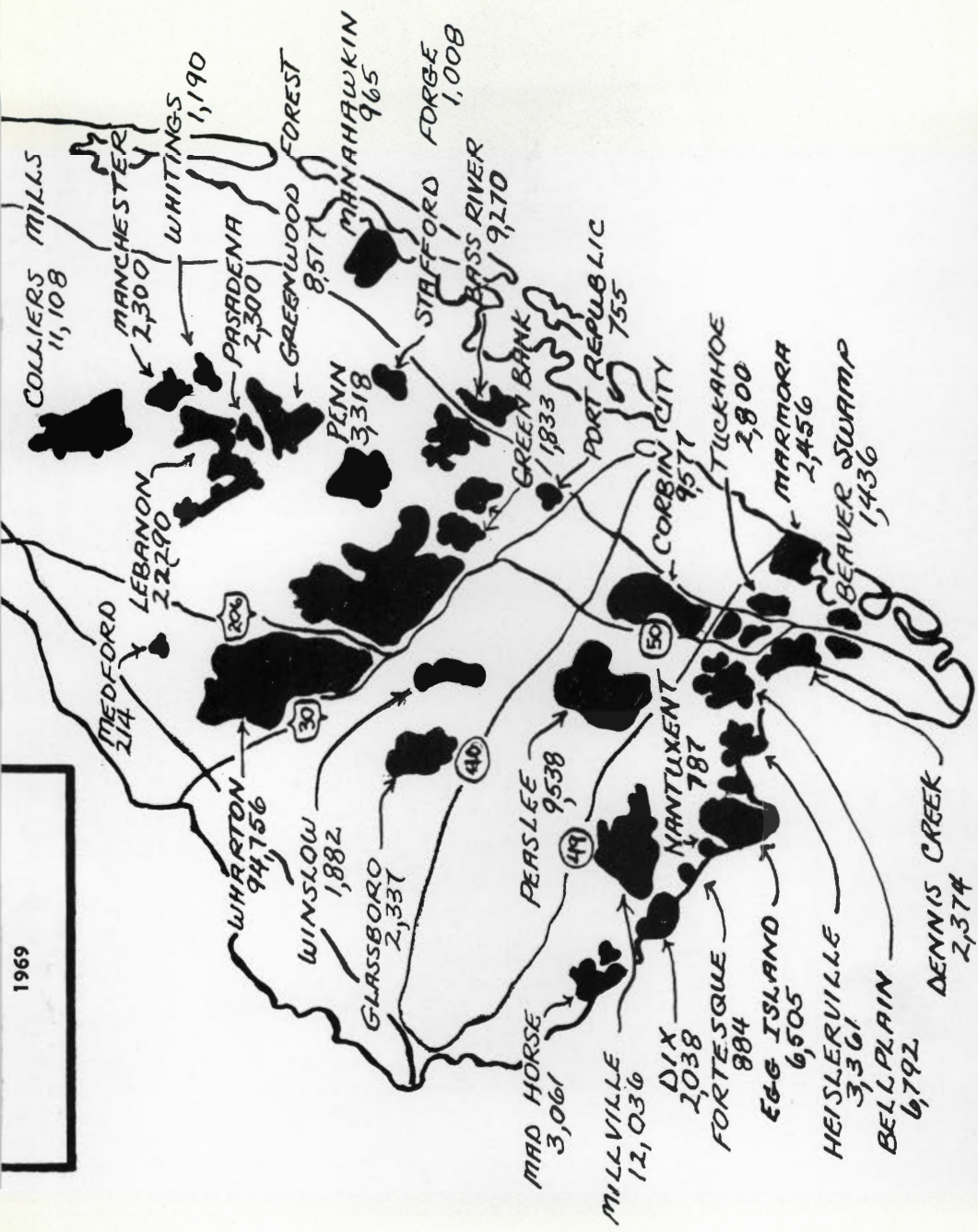
A list of all firearm deer scoring over 125 points and bow and arrow deer over 100 points has been established. Additional deer will be added as new entries are measured until the length of the list necessitates a higher minimum.

Three hunters gained the distinction of double listing, John Bedell, the non-typical leader, George E. Leber Jr., whose top trophy ranked second in the firearm category, followed closely by his son, and Charles Gray.

One outstanding rack had to be disqualified because it had been repaired, a 142 6/8 point deer shot by L. P. Potter of Toms River. Boone and Crockett rules are very specific that no broken or repaired skulls may be considered, and all deer recognized must be taken in fair chase. The State Division of Fish and Game is interested in measuring any trophy heads taken by accident or other means, as examples of the quality of antler growth available, but these cannot be included in the regular listing. The list of qualified racks is as follows:

Typical Firearm: Hunter	Home Town	County where taken	Score	Year
Fred Space	Beemerville	Sussex	160 1/8	1950
George E. Leber Jr.	Yardville	Burlington	151 2/8	1967
George E. Leber 3rd	Allentown	Monmouth	148 4/8	1965
Wilburt Zarin	Salem	Salem	145 5/8	1968
George Alsheimer	Jamesburg	Middlesex	141 5/8	1967
Thomas Hope	Woodbury	Gloucester	140	1968
Troy Clark	Clarksburg	Ocean	138 5/8	1968
James Allen	Mullica Hill	Gloucester	137 3/8	1968
Dale VanDermark	Newton	Sussex	135 6/8	1968
Carmen Clark	Cream Ridge	Monmouth	135	1957
Charles H. Gray	Mount Holly	Burlington	134 1/8	
Herman Johnson	Neptune	Monmouth	133 6/8	1942
Edward Linke	Jamesburg	Monmouth	132 7/8	1932
George Leber Jr.	Yardville	Ocean	129	1956
Warren Pittenger	Branchville	Sussex	128 6/8	1968
Linden Matheys	High Bridge	Hunterdon	127 4/8	1950
David Goff	Cream Ridge	Ocean	125 7/8	1965
John R. Bedell	Spring Lake	Ocean	125 7/8	1946
Charles Gray	Mount Holly	Ocean	125 5/8	1960
James O. Peale	Lebanon	Hunterdon	125	1957
Typical Bow and Arrow:				
Edward Kayes	East Brunswick	Monmouth	141 7/8	1953
John Young	Walpack	Sussex	123 1/8	
Niel Zullo	Rahway	Somerset	109 3/8	1967
Frank Clark	Wayne	Passaic	103 3/8	1968
James Kelly	Burlington	Burlington	100 6/8	1968
Non-Typical Firearm:				
John R. Bedell	Spring Lake	Monmouth	166 2/8	1954
Michael Wosytowsky	Somerville	Somerset	140	1968







Jack Howard with the prime yearling he bagged

Fawns, Yearlings, and Adults

An Evaluation of Data Collected during the 1968 Deer Seasons

By Robert C. Lund
Bureau of Wildlife Management

WITH THE 1969 SEASON just around the corner, the 1968 deer season is ancient history to most of us. However, the tabulation and evaluation of data collected in 1968 and earlier deer seasons is still being carried on by biologists assigned to the deer project. It is hoped, through this effort, that a better understanding of the white-tailed deer in the Garden State will result.

The collection and study of information concerning the deer harvest is a necessary part of deer management which the Division of Fish and Game has engaged in for several years. The 1968 season was no exception and the following is a discussion of the more interesting and important aspects of the study.

An excellent sample of the harvest was obtained for most of the regions in New Jersey during 1968 with 38.3 percent of the total reported deer kill being examined (6-day buck and 1-day either sex). The data obtained were tabulated by county and region to reflect the differences inherent to various areas of the state occupied by deer.

One of the most important pieces of information collected through the examination of hunter kills, is the percent

of yearling males in the buck harvest. In New Jersey, the yearling buck is the deer harvest. This is especially true for the northern and central regions of the state, where yearlings often comprise from 80 to 90 percent of the total buck harvest. Even in the southern regions, yearlings account for from 30 to 50 percent of the kill. Obviously, the number of yearlings harvested determines whether the season is good, fair, or poor.

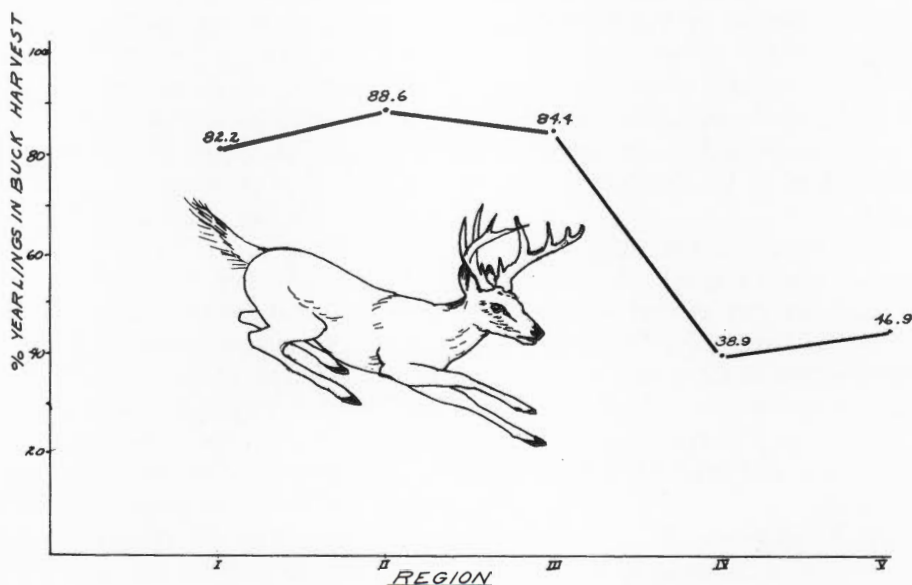
It is known fact that most healthy animal populations are composed principally of young individuals. Healthy populations can produce and support large numbers of progeny and a healthy population is produced and supported by a quality environment. The white-tailed deer is no exception. Figure 1 helps to illustrate the relationship between quality habitat and deer numbers. Large numbers of fawns are produced and harvested as yearlings in Regions I, II, and III (northern and central portions of the state) where habitat conditions are generally favorable. However, in Regions IV and V (southern portion of state) where food and winter cover are often inadequate, large fawn crops and high fawn survival rates are not common, and the

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and Adults

percent yearlings in the kill is reduced. Does need high quality forage and adequate winter cover to prevent the useless waste of energy necessary to the maintenance of body temperature. The fewer drains on the doe's energy supply, the greater chance for the fawn to be carried successfully. If the doe comes through the winter in poor con-

and is believed by many biologists who have worked in this area, to be of more importance than was first indicated. This is the seeming relationship between the scrub oak acorn crop and the percent of yearlings and the 2½'s in the harvest. Actually, it is the acorn crop of the previous fall which appears to be the important element. For example, the acorn crop in the fall of 1967 is believed to affect the yearling buck harvest in 1968. How can this

FIG. 1.— PERCENT YEARLINGS IN THE 1968 BUCK HARVEST BY REGION



dition, even if she gives birth, she may not be able to supply the new born with adequate milk and the fawn will die.

Another factor which may have an effect on the number of yearling bucks harvested in Region IV (Ocean, Burlington, Atlantic, Camden, and Cumberland) has recently been recognized

be? It has been known for some time that food supplies available the winter before the animals second fall (first set of antlers) are of prime importance in determining the extent of antler growth. This is especially true for yearling animals which require more bone building nutrients than older animals due to the fact that their skeletons are

still developing and body growth takes precedence over antler growth. In Region IV, for example, acorns from scrub oaks provide a source of high quality food during the fall and winter period and this is an unreliable source at best. Apparently, many yearling bucks are unable to consume sufficient nutrients following a poor acorn year to grow legal antlers. This theory is supported by the fact that many of the yearling males trapped and marked during the winter of 1969 in this area have never had antlers, and some of the male fawns had not even developed buttons (the pedicle from which the antler grows).

In the fall of 1962 the acorn crop was reported as excellent and the percent yearlings in the 1963 harvest was high for Region IV. The 1963 crop was poor and the yearling percent

crop was reported to be fair to poor and the percent of yearlings in the kill fell to the lowest percentage recorded. Reports indicate that the 1968 crop has failed and if the pattern holds true the outlook for 1969 in the southern region is not bright (see table).

It is interesting to note that the percent of the 2½'s in the kill goes up as the percent yearlings go down. Apparently, following a poor acorn year it takes an additional year to grow legal antlers since by now the skeletal growth is nearly complete and more nutrients can be diverted to the development of antlers. One might now be saying, "Well if we don't gettem as yearlings we'll gettem next year". This brings up another characteristic of wild animal populations. The longer a given group of animals of the same age class remains in the population, the fewer there will be. In other words, if

Comparison of the Regular Firearm Buck Kill in the Counties of Atlantic, Burlington, and Ocean (Region IV) with the percentages of yearlings and 2½ year old bucks and the fall acorn crop.

YEAR	BUCK KILL (6-DAY)	% YEARLINGS	% 2½	FALL ACORN CROP
1962	1,396	47.9	33.1	Excellent
1963	1,925	46.7	30.8	Poor
1964	1,573	43.1	37.7	Failed
1965	1,380	40.9	44.0	Good
1966	1,674	48.9	30.2	Excellent
1967	1,403	47.9	30.2	Fair/Poor
1968	1,076	38.5	40.0	Failed

dropped in 1964. The crop failed in 1964 and the yearling percentage was further reduced in the 1965 season. Good to excellent acorn crops were recorded for 1965 and 1966 and the number of yearlings harvested increased. In the fall of 1967 the acorn

you wait the additional year to harvest a buck as a 2½ there won't be as many to harvest. Disease, accidents, predation, poaching, vehicle collision, and other mortality factors all take their toll if the hunter does not. It is felt by many biologists, that it makes

. . . Fawns, Yearlings, and Adults

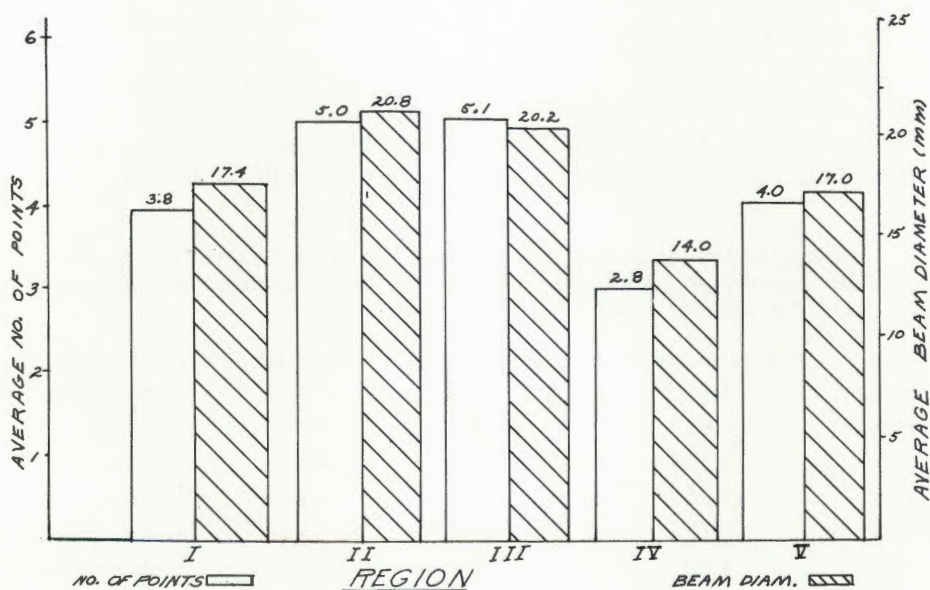
more sense to harvest some of these animals as fawns and bald yearlings during an either sex season than to allow non-hunting mortality factors take the lion's share.

Other data recorded during the deer season included number of antler points per buck and basal diameter of the main beam. Here again, these data

Figure 2. It can be seen that in the more fertile central portions of the state (Regions II and III) yearling bucks achieve a greater degree of antler growth than yearlings from both the north (Region I) and the south (Regions IV and V).

A good question at this point might be why, if the southern regions are considered marginal deer range, can such excellent racks, as those submitted to the deer award program this

FIG. 2.— REGIONAL COMPARISON OF ANTLER POINT TOTALS & BEAM DIAMETERS FOR YEARLING BUCKS HARVESTED IN 1968



illustrate the relationship between a quality deer herd and the quality deer range. Within a given age class, deer inhabiting good range will produce antlers with heavier beams and more points than those from poorer areas. This point is graphically illustrated in

year, be produced? The answer is age. South Jersey bucks live longer than North Jersey bucks, and up to a point, the longer a deer lives the larger antlers it will grow. During 1968, Regions I, II, and III reported only 4.8 percent of the buck kill 3½ and older, while



A typical roadside deer checking station, above, with George Howard of the Bureau of Wildlife Management, right, aging a deer



Regions IV and V reported 31.4 percent in this age group. Possibly, the dense cover of the southern regions permit a number of bucks to escape the hunter and reach a more advanced age class.

During the one-day, either sex, season held on December 21, 1968,

2,116 animals of various age classes were examined and the percent of fawns in the harvest was tabulated for each region. Region II recorded the highest percentage of fawns, 47.8 percent compared to 43.2 percent for Region I and 35.5 percent for Region III. There was no either sex season

. . . Fawns, Yearlings,
and Adults

held in either Regions IV or V, so a direct comparison is not possible. However, data was collected from certain

Ocean County). Fawns from Region II averaged ten pounds heavier than those weighed from Region I and twenty pounds heavier than those from the military areas. Additional weight information will have to be obtained



Deer legally killed, tagged, and reported by sportsmen

military installations found within these regions where 35.4 percent of the reported kill was fawns. The better the range, the more deer produced and the more game tags filled.

A limited amount of weight data was obtained for Regions I and II, and for two military installations (NAD Earle, Monmouth County, and Fort Dix,

from all regions before an accurate picture of habitat and growth relationships can be drawn.

Because of a reduction in the reported 1967 buck kill, from a record high in 1966, no either sex season was held in Regions IV and V in 1968. A further reduction in the reported buck kill in 1968, has caused the Fish and

Game Council and the Bureau of Wildlife Management to recommend a buck's only season in this area for 1969. The Bureau of Wildlife Management still considers the harvesting of antlerless animals a necessary aspect of sound deer management, however.

It is difficult, if not impossible, to understand how the harvest of such small numbers of antlerless deer, as have been reported during the special seasons held in southern New Jersey since 1961, could have caused the substantial reduction in the reported buck kill that has been experienced. It is more reasonable to assume that a combination of causes is at work. Anyone or more of the following may be responsible:

1. The relatively poor quality of the South Jersey deer range, the deterioration in the quality of deer wintering areas in Region IV, plus the unreliability of the annual acorn crop, prevent many bucks from growing legal antlers at 1½ years of age. This means that they are unavailable to the legal buck hunter until at least 2½ years of age. The normal attrition affecting the Region IV deer herd between 1½ and 2½ age classes would mean that less deer were available to the hunter under a bucks only season.
2. The percentage of animals harvested but not reported is considerable for Region IV and many other areas

under the present method of deer reporting now authorized by the Division (as many as 35 percent of the deer killed in Ocean County during the 1968 season were not reported to the Division as required by law). Some biologists working in this area feel that the incidence of non-reporting is increasing.

3. During poor acorn years (1967-68) deer in the southern regions are very susceptible to baiting. The fact that the reported bow and arrow harvest for the southern region did not show a decrease for these years but rather an increase to a record in 1968, bears this out. Possibly the bow hunter and the illegal hunter take a larger than normal proportion of the bucks available during poor food years leaving fewer animals for the firearm hunter.
4. Reproductive success is probably reduced due to the unavailability of quality forage.

The animal that is harvested and not reported, this unknown mortality, is probably deer management's biggest problem. Meaningful management recommendations cannot be made if the data on which they are based is incomplete or inaccurate. The support and cooperation of the deer hunting public is the heart of sound deer management. #

Vindication for the sportsman concerning littering came recently from statistics gathered by Keep America Beautiful, Inc. Of all categories of people using the outdoors, sportsmen were the least offenders with litter. They were responsible for only five percent of the litter in rural areas investigated. Picnickers were responsible for 25 percent and passing motorists for 70 percent.

The Pheasant

Species:

The Pheasant

Phasianus colchicus torquatus

General Characteristics:

The ring-necked pheasant male needs little description since this distinctive bird is a favorite of New Jersey hunters. The black-necked male has no white collar and is darker in color. Males total length about 30 to 40 inches; females about 20 to 24 inches; males weigh about 3 to 4 pounds; females 2½ to 3 pounds.

Range:

Found principally in the better soil regions, especially from Monmouth and Mercer counties northward, but also scattered along coastal marshes. Stocked throughout the state by the Division of Fish and Game.

Life History:

The pheasant is not a native bird, but was imported into New Jersey by Richard Bache, Benjamin Franklin's son-in-law. It was first successfully introduced in the wild in 1887 by Rutherford Stuyvesant at Allamuchy. In the wild, the nesting season begins in April or May after the hen has been fertilized by her polygamous "husband." The clutch ranges from 8 to 13 eggs, averaging about 11. The period of incubation is between 23 and 25 days. Nests are often made in alfalfa and other crop fields, and if the hay is cut early, many nests are lost, as well as some hens. Young pheasants develop rapidly and can fly short distances when about a week old; they are fully feathered at about 5 weeks and nearly full grown by 20 weeks. Pheasants are birds of the fields and hedgerows, seldom found in the woods unless chased there. "Ring-necks" are individual birds and while often found in flocks, do not "covey-up" as do quail.

Environmental Resistance:

Weather—Cold weather has little effect on pheasants except when extended periods of ice storms encase seeds and other food in heavy ice.

Precipitation—Little effect.

Predators—Great horned owls, foxes, house cats, crows, rats, skunks, and weasels.

Parasites—Lice, louse flies, caecal worms, tape worms, gape worms, and other round worms.

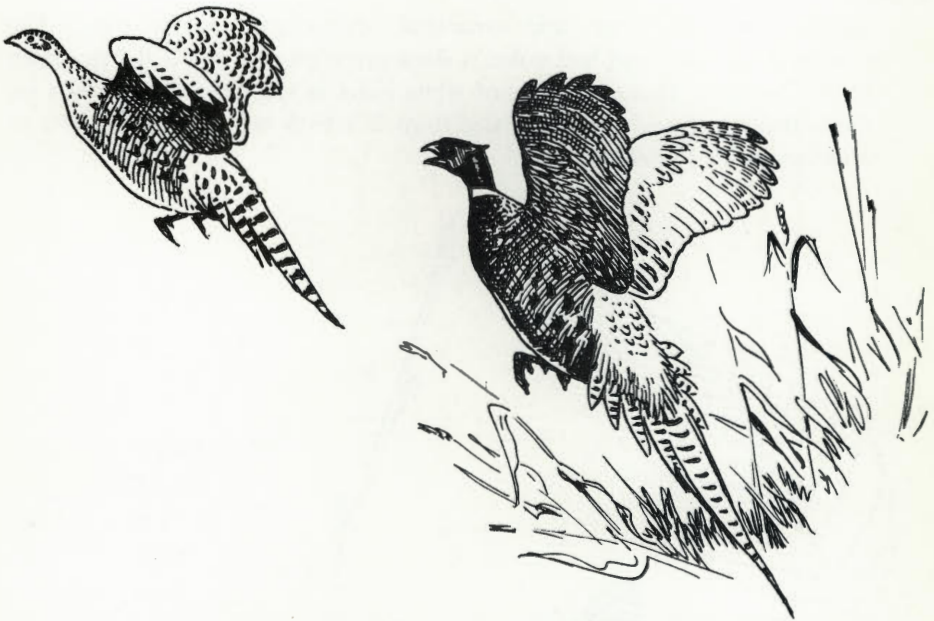
Diseases—Fairly resistant to disease in the wild. Game farm birds subject to many poultry diseases. Pheasants may be killed by ingesting insects or seeds sprayed with insecticides or herbicides.

Hunting—Pheasants are legal game, but in good pheasant cover, many birds live through the hunting season. Hunting pressure is heavy on this prize bird. Regular open season is in November and December.

Management:

Pheasants are most often found in areas where field corn is planted as a farm crop. Artificial plantings of corn or food patch mix will help to encourage pheasants when planted in conjunction with good escape cover such as hay fields, marshes, or brushy swales.

Because the best pheasant ground in New Jersey is not extensive,



A pair of pheasants—female on the left, male on the right

much of the state is not even fair pheasant ground. Forests contain few or no pheasants. The food of pheasant chicks is composed of insects. As the pheasants get older, a larger proportion of the diet consists of seeds, grain (such as corn), fruits, insects, and even an occasional small rodent. #

Black Birch

(*Betula lenta*)

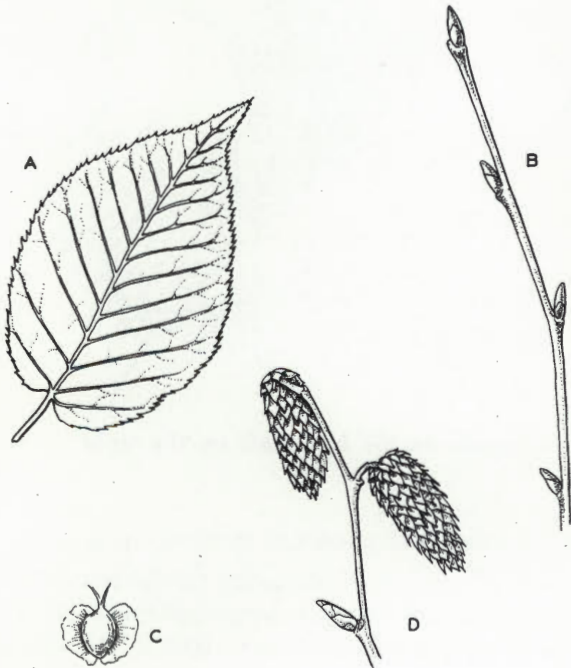
This tree grows in quite a variety of soils. It prefers rich moist sites, but it will grow on mountain slopes, too. It grows in a mixture with other hardwoods, such as maples, oaks, beech, and basswood. On abandoned fields it is quick to seed in. The tree is sometimes known by the name of sweet birch or cherry birch. It has a deep and wide spread root system.

Range:

Southern Maine and the other New England States, southern Quebec and southern Ontario, New York, northern New Jersey, west to eastern Ohio thence south through the Appalachian Mountains to northern Georgia and northern Alabama.

Leaves:

Simple, alternate, ovate, and somewhat heart-shaped at the base. The margin is serrated, and leaf color is dark green on top and a lighter green on the bottom. There are tufts of white hairs in the axils of the veins on the underside. Leaves range in size from 2½ to 5 inches long and 1½ to 3 inches wide. (See figure A.)



Black Birch
A. Leaf
B. Twig, with buds
C. Nutlet
D. Fruit

Twigs:

Slender and reddish brown. They have a strong wintergreen flavor and odor. This flavor is an outstanding characteristic. Twigs have pointed buds that are $\frac{1}{4}$ of an inch long. (See figure B.) Spur shoots are common on older twigs.

On old trees the bark is black and broken by furrows that separate the smooth irregular plates. The bark of younger trees has a sweet wintergreen flavor.

Flowers:

Male and female flowers are borne on the same tree. The male flowers, $\frac{3}{4}$ to 1 inch long, form in the fall. They grow to a length of 3 or 4 inches the following spring at which time the pale green female flowers develop. The female flowers are $\frac{1}{2}$ to $\frac{3}{4}$ of an inch long.

Fruit:

A cone-like fruit that bears tiny seeds during the early autumn. (See figure D.) There are 650,000 seeds in one pound. The strobile or cone-like fruiting body is 1 to $1\frac{1}{2}$ inches long, and it yields a tiny winged nutlet. (See figure C.)

Uses:

Black birch is a medium-sized tree 50 to 60 feet in height and 1 to 2 feet in diameter at maturity. Larger specimens have been recorded. The tree is used for lumber, furniture, woodenware, fuel, and oil of wintergreen. It can be used for fence posts if it is chemically treated. The inner bark is used for making birch beer.

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

Black birch is utilized as food by a number of wild creatures including deer, beaver, and rabbits. The buds are eaten to some extent by squirrels and grouse.

The largest black birch listed by the Cooperative Extension Service for New Jersey, 10 feet and 11 inches in circumference at a point $4\frac{1}{2}$ feet about the ground, is located in Mrs. Harrison's woods, R.D. 1 Bloomsbury.

Predators catch the weak, diseased, and slow specimens and leave the strong, healthy and alert animals to reproduce and perpetuate the species.

Human-like emotions play no part in their actions.

Council Highlights

August Meeting

The open session of the regular monthly meeting of the Fish and Game Council was held in Trenton on August 12. The Council members present included: Acting Chairman Space, Councilmen Alampi, Allocca, Baker, Richardson, Schollenberger, Stabile, Toth, and Webber. In addition to the Council members and Division personnel present the following persons attended the session: George McCloskey, Bill Backus, and Joseph Briel.

Rancocas and Whites Bogs

The Burlington County Federation of Sportsmen's Club contacted Acting Chairman Space and Commissioner Roe in regard to maintaining the Forks of the Rancocas and White Bogs open to hunting during the upland game season. Director MacNamara advised that he discussed this matter with Director Truncer of Parks, Forestry, and Recreation and received assurance that the areas will be available for hunting on the same basis as they were last year.

Juvenile License Law

The suggestion was made by Councilman Allocca that the Council give consideration to revising the juvenile license law to insure closer surveillance of juvenile hunters by the adults accompanying them.

Ordinances by Municipalities

A memorandum from the Office of the Attorney General stating that ordinances passed by local municipalities to regulate hunting and trapping are null and void was read. A copy was to be sent to each Councilman.

Law Enforcement Workshops

The Council noted the remarks of John Gottschalk in his letter of July 11 concerning the Fish and Wildlife Service's program of cooperating with the states in conducting law enforcement workshops.

Fishermen's Forum

Acting Chairman Space designated the Salt Water Fisheries Committee to be responsible for carrying out the Fishermen's Forum to be held on February 14, 1970.

Unit Reports

Robert Hayford, John O'Dowd, Newman Mathis, George Alpaugh, and William Peterman reported briefly on the activities of their units. Captain Mathis advised that delivery of the new patrol boat *Marjorie B. Wilson* was accepted

on August 4 and it was assigned to Captain French for duty between Little Egg Inlet and Cape May. The *Elizabeth C. II* has been assigned to Captain Russack for patrol duty in the Delaware Bay area.

Deputy Program

The matter of the deputy conservation officer program was referred to the Law Enforcement Committee to review and make recommendations to the Council. Copies of changes proposed by John O'Dowd were to be sent to the committee which was to meet at the Trenton office on Tuesday, September 2, at 8 p.m. #

Bureau of Wildlife Management—36.7% of budget

Activities of the Bureau of Wildlife Management largely fall into the categories of management, propagation, and research, all dealing with wildlife species and their habitat.

Management involves the administration of over 120,000 acres of Division land with emphasis on development of wildlife habitat. Planting of food and cover included seeding of over 1,000 acres in 1967-68, using 9,151 pounds and 933 bushels of seed, and 634 tons of lime and fertilizer, as well as planting 99,443 shrubs and 61,200 tree seedlings. Over 8,500 pounds of seed and 240,700 trees and shrubs were distributed to cooperating owners of land open to public hunting. Additional diversionary food plots were planted to reduce deer damage, and fencing and repellent were distributed. Over 400 wildlife damage complaints were serviced. Possible future land acquisitions were investigated.

Pheasant and quail propagation is undertaken at three game farms, from which birds are distributed to wildlife management areas and other open lands before and during the season. Day-old chicks are supplied to 4-H youngsters who rear them under supervision. 1967 liberations included over 68,000 pheasants and 21,000 quail, including 4,953 pheasants and 8,491 quail from the 4-H program.

Major research projects include: bi-weekly waterfowl survey flights during the fall migration, banding of 4,109 waterfowl, 450 rail, and 634 mourning doves; studies of the effects of pesticide, herbicides, and other factors on the ecology of marshes; studies of water level management and natural controls over insects; investigations of wildlife mortality; estimates of the harvest by hunters of major game species; aging of deer; scientific population censuses of major species; recommendations for 1968 seasons based on correlation of field observations and research findings. #

To avoid the embarrassment and inconvenience of losing your boat keys overboard, use one of the inexpensive key chain buoy floats available at marine dealers. Another item worth attaching to the keychain is a small plastic whistle. It's a handy signaling device.

Guide to

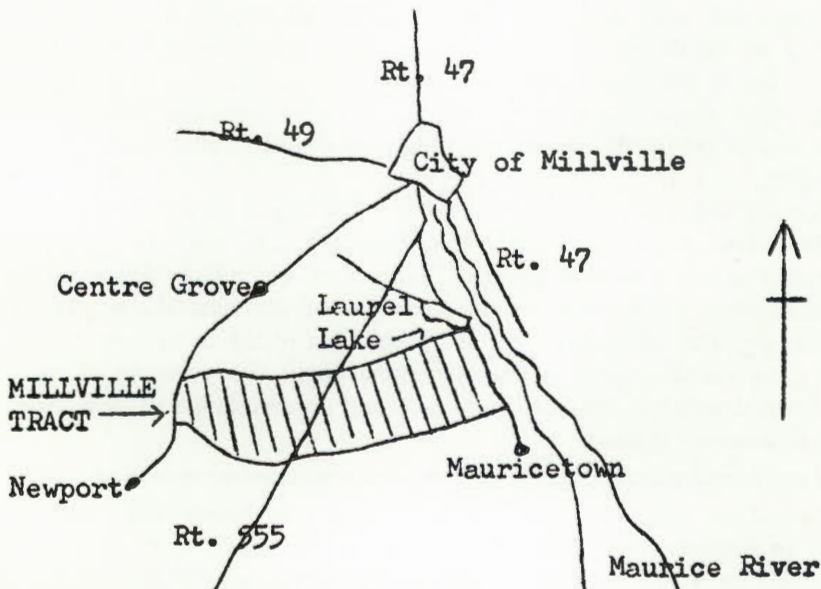
The Millville Tract

The Millville Wildlife Management Area in Cumberland County is one of the largest public shooting and fishing grounds in the state. It totals about 12,000 acres of woodland and fields. The tract is located within the following roads: On the west side, the Millville-Newport Road; on the north side the Millville-Mauricetown Road; on the south side the Haleyville-Dividing Creek Road; and on the east side by the Haleyville-Mauricetown Road.

This tract offers excellent quail and rabbit hunting. Pheasants and quail are stocked during the hunting season. The deer hunting is very good on this tract and ruffed grouse are common in the woodlands.

This tract is managed primarily for upland game through annual food patch and cover crop plantings and cooperative farming with local farmers. This tract is ideal for the bird dog men who like to see their dogs spread out and cover ground.

To reach the Millville Tract, take Route 555 out of the city of Millville, and after passing the Laurel Lake-Bridgeton Road about 4 miles, the first road on the right will proceed to the western side of the tract. The first, second, and third roads on the left lead to the east side of this tract. #



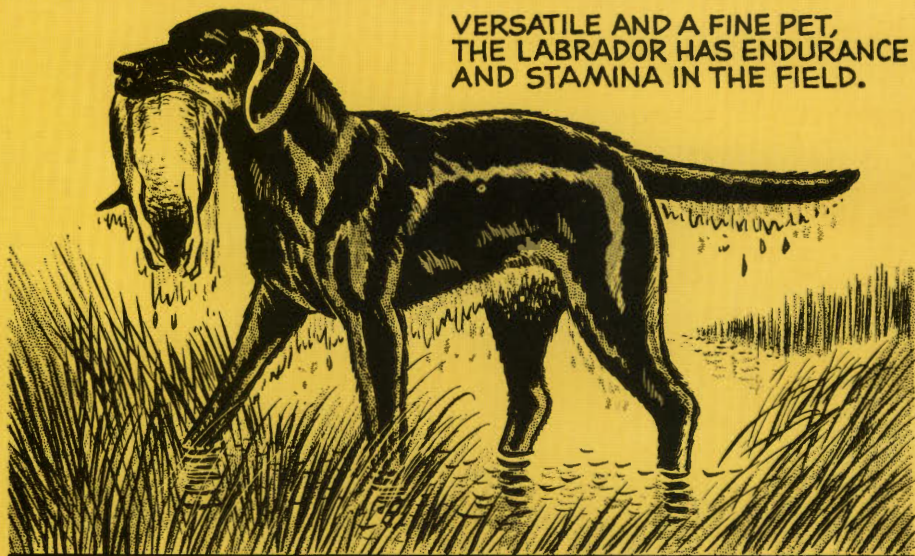
Scale - 1 inch is 5.3 miles.

Fur, Fin ^{and} Campfire

By BILL BERO

A GOOD GUN DOG is the Labrador retriever.

VERSATILE AND A FINE PET,
THE LABRADOR HAS ENDURANCE
AND STAMINA IN THE FIELD.



SOME HUNTERS SAY THEY ARE GOOD RABBIT DOGS AS WELL AS BEING GREAT FOR BRINGING BACK THOSE DUCKS OUT OF THE WATER.

YOUNG LABRADORS WILL GO AFTER A BIRD, EVEN WITHOUT SPECIAL TRAINING.

LABRADORS LIKE THE OUTDOORS. GIVE THEM A COLD SWIM NOW AND THEN AND TEACH THEM HOW TO BRING IN DUMMY BIRDS.

IN PRACTICING RETRIEVING, PLACE THE DUMMY BIRD A SHORT DISTANCE AWAY AT FIRST AND THEN CONTINUE TO LENGTHEN IT.

WORK THE DOG ON A DEAD DUCK FIRST BEFORE GIVING IT A GO AFTER A WOUNDED OR LIVE ONE.



Gun Safety Is No Accident—It's Just Common Sense

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