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Outdoors



Vol. 14, No. 6

Division of Fish and Game

December, 1963





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No matter how many hunts he makes nor how many bucks
he downs, the hunter will forever remember his first trophy.

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The Whitetail

New Jersey's Big Game

By Robert E. Mangold
Bureau of Wildlife Management



The New Jersey deer herd has increased to near-over-population abundance with an annual reported kill of 5,000 to 6,000 bucks.

PB

THE WHITE-TAILED DEER is New Jersey's big-game animal, being present in all but one of the 21 counties of the state. It was not always so common, however. In the early 1900's few deer were to be found north of Ocean County, and even in the "pines" deer were scarce. The legal kill reported for 1909 was 86 bucks. Since that time, with protection and a short season on bucks, the deer herd has increased to near-overpopulation abundance, with an annual reported kill of about 5,000 to 6,000 bucks. Because deer have increased to such numbers, game managers have recommended cropping surplus deer as good management of the herd. This "bonus" deer harvesting has resulted in an increase in the total legal kill of 11,702 deer since 1959. During the same period, 27,114 deer have been harvested by buck hunters and bow and arrow hunters.

How could the deer increase to that extent? What are the "facts of life" of the whitetail? Let's take a brief look at some of these facts.

The Rut

The breeding season, or rut, begins late in October and lasts as late as January (see Table 1). The peak period, however, is the first three weeks in November for the adult deer in northern New Jersey and the last three weeks in November for the adult deer in the Southern counties. In addition, a signifi-

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cant number of fawn does breed their first year, but several weeks later than the adults.

The Fawning Period

Because the gestation period of the deer is about 201 days (from 189 to 222), most New Jersey fawns are born between the last week in May and the third week in

when the reddish summer coat of all deer is replaced by the heavier, greyish winter coat.

Growth of the fawn is rapid and the rich doe's milk is supplemented more and more by leaves of grasses and forbes, grain, acorns, twigs of brush and trees, as well as farm crops. By mid-December the buck fawns in northern counties weigh about 66 pounds and the does aver-

Table 1. Periods of Rut, as Determined by Aging Fetuses

Age and Location	Number of Pregnant Deer				Total	Peak
	Oct.	Nov.	Dec.	Jan.		
1951-54						
Northern Adults	6	138	3	0	147	Nov. 2-17
Southern Adults	1	39	10	0	50	Nov. 15-30
Northern Fawns	0	11	14	1	26	Nov.-Dec.
Southern Fawns	0	2	4	1	7	Dec.
1957*						
Northern Adults	4	119	6	0	129	Nov. 3-23
Northern Fawns	0	7	6	1	14	Nov. 17-Dec. 7
1961**						
Northern Adults	5	404	27	10	446	Nov. 3-23
Southern Adults	0	240	16	5	261	Nov. 10-30
Northern Fawns	0	17	13	3	33	Nov. 17-Dec. 7
Southern Fawns	0	2	9	2	13	Dec. 1-21

*Collected Feb. 24 to March 27, 1958, at Harbournon.

**Collected Jan. 31, 1962, statewide Hunters' Choice season.

June. Some are born as early as the first week in May, and some as late as the middle of August.

When the fawns are born they weigh about six or seven pounds and are nearly helpless. Within a short time, however, they can walk and run and follow the doe. The spotted coat so attractive to us and such good protective coloration to the fawn, lasts about three months,

age 62 pounds, hog-dressed.

The sex ratio of the fawns before birth (or fetuses), has averaged about 105.4 males per 100 females (see Table 2), or about 51.4 percent males. The sex ratio of the fawns during their first winter was found to vary depending upon when the sample was taken and how it was taken (see Table 3). When sex ratios were taken for

fawns hit by cars in the fall (Jaw Collections in Table 3), it was found that bucks far outnumbered does, but that during the hunting season of 1962, the sex ratio was nearly even. Taken together, there were 112.5 bucks per 100 does in a sample of 4,930 fawns.

cent of 468 doe fawns examined were pregnant, typically bearing a single fetus but occasionally bearing twins; in the southern counties 26.6 percent of 109 doe fawns were pregnant.

The crowning glory of the adult buck is his antlers. These are not

Table 2. Fetal Sex Ratio

Year	Source	Males	Females	Males per 100 Females
1958	Harbourton	123	138	89.1
1962	Permit season			
	in northern counties	369	309	119.4
	in southern counties	179	184	97.3
1959-60	Jaw collection	22	19	115.8
1962	Jaw collection			
	in northern counties	53	62	85.5
	in southern counties	52	45	115.6
	Totals	798	757	105.4

During their first fall, many doe fawns are bred and bear young when they are about one year old. In the northern counties 37.2 per-

cent developed noticeably until the second year. Growth begins in May or early June and the developing antlers are said to be "in velvet."

*A week-old fawn
with the typical
protective
spotted coat*



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Growth is made by deposition of bone from a rich supply of blood on the outside of the developing antler, the bone hardening from the head outward toward the points. In late summer or early fall, growth is complete and the buck

ten points. A small proportion of the yearling bucks bear spikes, or single points. As a buck gets older (If he is able to sneak through the hunting seasons), the diameter of the antler increases. The number of points may or may not increase, as this is more dependent on the quality of food rather than age.

*A five-year-old
buck in velvet
at Forked River
Game Farm,
July 1963*



rubs against trees, fences, or any convenient object to rid the antlers of the drying velvet. After the antlers are formed, the neck muscles develop, giving the buck a more massive appearance and providing strength for the coming fights between bucks during the rut.

Bucks

The antler development is dependent on the quality of food which the buck eats. In Region II (Hunterdon, Mercer, Somerset, and southern Morris Counties) it is common to see antlers with six or eight points and occasionally with

Occasionally in Region IV (Ocean, Burlington, Atlantic, Camden, and Cumberland Counties) bucks as old as 3½ years will only bear spikes in the poorer-soil areas of the pine barrens.

During the first fall as an adult the sex ratio is changed drastically. Many more bucks are hit by cars, and at this time too, the young adult bucks are targets for the hunters. In Region II, as many as 90 percent of the bucks killed in the hunting season are yearlings, or bucks bearing their first set of antlers. This means that nearly all of the adult bucks alive in this re-

gion are harvested during the hunting season each year. In contrast, Region IV bucks averaged a little less than half yearlings in 1962.

Sex and Age Ratios

The age of a deer is estimated by an examination of the teeth. Fawns develop teeth regularly until they are about a year old, when the com-

ling bucks, 12 yearling does, 20 adult bucks, and 28 adult does.

While the bucks in the northern counties seldom live beyond their third fall (93 percent of 1,381 bucks aged were less than 3 years) and not unusually beyond their second fall, the does live somewhat longer. A total of 4,040 northern

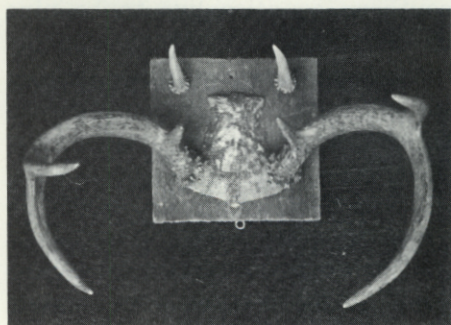


*The 1962 antlers
shed by the same
Forked River
Game Farm buck
after the 1962 rut*

plete number are present (dental formula $\frac{0-0-3-3}{4-0-3-3}=32$). At about a year and a half the milk premolars are shed and the adult premolars erupt. After that time age is estimated by the amount of wear on the grinding surfaces of the teeth.

In the fall and early winter before the December deer season, for each 100 deer in the woods in the northern counties, based on available data, there will be about 19 buck fawns, 18 doe fawns, 18 yearling bucks, 17 yearling does, 5 adult bucks, and 23 adult does. In the southern counties for each 100 deer in the woods there will be about 14 buck fawns, 13 doe fawns, 13 year-

adult does aged in the fall averaged about 40 percent yearlings ($1\frac{1}{2}$ years), 33 percent $2\frac{1}{2}$ years, 15 percent $3\frac{1}{2}$ years, and only 12 percent older. Very few live beyond their sixth fall. Bucks in southern



Spike and six-point antlers—both from yearling bucks. Food quality makes the difference

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counties live longer than bucks in northern counties. About 38 percent of 1,485 bucks aged in southern counties were yearlings, 33 percent were 2½, 19 percent were 3½, 7 percent were 4½, and 3 percent were older. In the southern counties 620 adult does were aged between 1951 and 1962. Of these, about 31 percent were yearlings, 29 percent were 2½, 18 percent were 3½, and 22 percent were

ern adult does averaged about 1.5 young; the southern fawns averaged about 0.3 young. Compared with other states our deer have a fairly high capacity for reproduction. Perhaps a better yardstick for actual production is the number of fawns present in the fall. In the northern counties sex and age ratios collected during the January 31, 1962, Hunters' Choice season indicated about 93 fawns per 100 adult does, while in southern counties there were about 69 fawns per

Table 3. Sex Ratio of Fawn Deer

Year	Source	Males	Females	Males per 100 Females
1951-54	Northern counties	354	324	109.3
1958	Harbourton	62	55	112.7
1959	Antlerless season in northern counties	991	862	115.0
1962	Permit season in northern counties	647	632	102.4
	in southern counties	133	135	98.5
1959-63	Jaw collection in northern counties	297	222	133.8
	in southern counties	127	89	142.7
	Totals	2,611	2,319	112.5

older. Occasionally does from southern counties live to be nine or ten years old or older.

Rate of Reproduction

In order to learn something of the reproduction of deer over 2,000 does have been examined during the period between January and April when they were carrying young. The adult does from northern counties averaged about 1.8 young; the northern fawns averaged about 0.4 young. The south-

100 adult does. This may not reflect actual field conditions as the data may have been influenced by hunter opposition to shooting fawns.

Management

When a deer herd is small, it is best to reduce or not have any hunting season. As the deer herd begins to increase a short open season on bucks only, after the rut is nearly complete, serves to allow an annual harvest of bucks as well as provide adequate breeding stock

to increase the herd. When the herd becomes so large that it constitutes a threat to itself by the dangers of overpopulation, or that it constitutes a threat to human welfare—such as numerous deer-car accidents or excessive agricultural damage, a herd-reduction program is necessary. However, between the situations of overpopulation and underpopulation there is a broad area where, in addition to the regular open season on bucks, a controlled harvest of antlerless deer can be taken. If properly regulated, this can not only result in an increased harvest of deer and little

regulations for different sections of the state. This, we believe, is good deer management. And, we propose continued refinement for better management.

Hunting Prospects

For the deer hunter in New Jersey, 1963 prospects are for a good year, with a harvest of more deer than the 5,000 to 6,000 bucks harvested in recent years. The total 1963 harvest will probably be in the neighborhood of 7,000 to 8,000 deer of which about 5,000 will be bucks during the regular deer season, about 1,000 will be bow and

*A deer is aged
by comparison of the
teeth with those
in the jaw of
a known-age*



reduction in the spring herd, but could also result in increased survival of fawns per adult doe in the fall. In New Jersey we have areas which fit into each of these categories. This is the reason why the deer seasons in 1962 and again in 1963 have had several differing

arrow deer, and about 2,000 will be party permit deer. It is felt that the kill in the southern counties will not change significantly; that the kill in the northeastern counties will continue the downward trend begun in 1958, before the party permit system was developed; and

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that the kill in the northwestern section will remain about the same

mation on the 1963 deer harvest, it is requested that successful hunters on Monday, December 9, 1963, bring their deer to the state check-

Table 4. 1962 Legal Deer Harvest

County	Firearm Buck Season	Bow and Arrow Season	Party Permit Season	Hunters' Choice Season
Region I				
Sussex	495	50	232	—
Warren	608	94	219	—
Passaic	92	12	—	3
Bergen	—	3	—	205
Northern Morris	118	34	1	—
Region II				
Southern Morris	427	114	105	—
Hunterdon	885	213	490	—
Mercer	213	76	79	—
Somerset	391	104	143	—
Region III				
Monmouth	105	21	41	—
Middlesex	68	18	—	22
Essex	—	3	—	122
Union and Hudson	0	0	—	0
Region IV				
Ocean	388	40	87	—
Burlington	608	98	167	—
Atlantic	400	62	82	—
Camden	62	7	—	—
Cumberland	148	10	38	—
Region V				
Cape May	87	8	25	—
Gloucester	34	5	—	—
Salem	29	6	—	—
Totals	5,158	978	1,709	352
Grand Total				8,197

or increase slightly. The kill in 1962 is reported in Table 4.

In order to help the Bureau of Wildlife Management obtain infor-

ing station nearest them. Locations of the stations may be found in the Compendium of New Jersey Game Laws as well as the local papers. #

The list of Deer Checking Stations is shown on the opposite page for your convenience and reference.



Does are deer, too, and should be harvested in moderation

Deer Checking Stations

It is requested that any deer killed on *Monday, December 9, 1963* be taken to a Division checking station where sex and age data will be collected. Locations of the checking stations are:

1. Atlantic County. Walt's Amoco Station, Junction Routes 50 and 40, Mays Landing.
2. Burlington County. Red Lion Esso Station, Junction Routes 70 and 206, Red Lion Circle.
3. Hunterdon County. Fair Grounds, Route 69, Flemington.
4. Mercer County. Smith & VanDyke Esso Station, Pennington Circle, Route 69.
5. Monmouth County. Davis Esso Station, Junction Routes 33 and 34, Collingswood Circle.
6. Morris County. Par-Troy Sunoco Station, Boonton Reservoir, Route 46, Boonton.
7. Ocean County. Public Shooting Grounds, Route 539, Colliers Mills.
8. Somerset County. State Police Barracks, Route 22 Somerville.
9. Sussex County. Farmland Dairy Bar, Junction Routes 15 and 206, Ross's Corner, Augusta.

These checking stations will collect sex and age data only on a voluntary basis, on both regular license bucks as well as permit deer. This information is used by the Bureau of Wildlife Management to manage better our New Jersey deer.

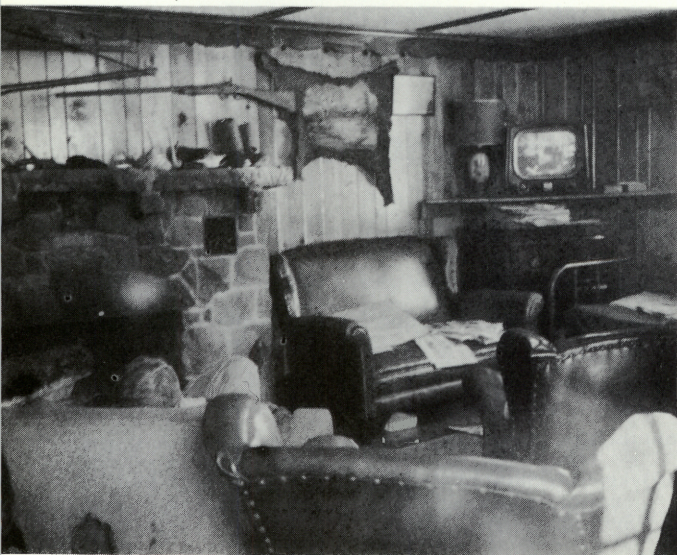
The History of The Four Sixes Deer Club

As related to E. E. Downer by President John Bishop

Fifty years ago a group of hunters from in and around Elmer joined together and traveled by horse and wagon down to the "Sawdust Pile" on Jackson Road near the village of Weymouth, where they pitched their tent and hunted deer as an organized club. The following year they returned

served as the camp until it burned in either 1921 or 1922.

Until that time the club had no regular name. However, as is often the case when disaster strikes, there resulted a better organized club. The members built a new building on the site and carried forward with an organization that



Inside view of the section of the clubhouse built in 1944 showing the large sandstone fireplace built by Arthur Downer with stone from the Weymouth ruins. A piece of local iron inset is engraved with "6666" for the club. The fireplace also boasts a beatilator made especially for it by S. W. "Jiggs" Downer who demonstrated the quality of the material by testing it with a load of buckshot

and camped at the fork of Jackson and Mays Landing Roads. Then in 1915 and 1916 they camped at Estellville, returning to the original camp site again in 1917. The next year they stayed in a house standing nearby, and in 1919 they bought this house and the 22 acres of ground on which it stood. It

has survived the many trials that have caused other clubs to split up or go out of existence.

The Name

The new building was of cement block construction and more suitable for its purpose. Each member was assessed for his fair proportion

of the cost, which was \$66.66. Thus a new name was born and the club has been known as the Four Sixes ever since.

At present there is only one of the original members still living. But, the clubhouse has many pictures on its walls and many stories

presiding over sons Walter and Reeves and grandson Bob Hiles. Another member, Aubrey Green is the son of charter member Wesley Green.

The late Walter Johnson, charter member and treasurer for many years, was father in law to Byron

*One end of the clubhouse
with former member
Wilfred Houghton
of Elmer standing
under four bucks
taken by club members*



are told each year that refresh old memories and pay tribute to those distinguished and colorful members who have gone to the happier hunting grounds.

Some Notes

The Four Sixes have long enjoyed an excellent reputation for good sportsmanship and generous hospitality. Evidence of the unusual harmony that prevails among its members can be noted in the fact that in 50 years there have only been three presidents elected. Presently this office is held by John Bishop of Elmer who joined the club in its second year. President John is the first of three generations of Bishop family actively

Downer who served as secretary for a good number of terms, and grandfather to Edmund and Walter Downer. Edmund and Walter presently serve as treasurer and secretary, respectively. This past season saw three of Walter Johnson's grandsons and one of President Bishop's grandsons taking their stands and readying themselves for future membership.

In 1944 a major addition was made to the building along with a central heating system and a modern bath. Later, when the Elmer Hospital was built, the members joined in this worthwhile community project by raising \$1,000.00 as a lasting memorial to its past members.

#



Deer Management Program

Development Phase

By Joseph F. Bauer, Assistant Wildlife Manager

NEW JERSEY at present has approximately six million people living in its 8,200 square miles, and it is the most heavily populated state in the country. Due to its unique location, with mountains, lakes, and shore, and its close proximity to the great cities of New York and Philadelphia, additional millions of people visit the state annually for business purposes and the wide assortment of recreational opportunities.

The presence of high human population, complex highway system, and heavy industry creates

many problems from a wildlife standpoint. The white-tailed deer, our only prevalent big game animal, is the cause of considerable conflict in some areas of the state. Many species of wildlife do not readily adjust to changing environments and changing agriculture. Changing habitat can and does deplete the quantities of wildlife, but this is not entirely true of deer as is proven by the many locations in which whitetails are found in New Jersey.

All wildlife must be considered a natural resource. Deer being a wild-

life crop, the Division of Fish and Game has the duty of devising ways and means of harvesting this species. Constant and careful attention is given to the sociological problems that frequently occur. These problems are of prime importance when directed toward the deer populations in the northeastern part of New Jersey and some of the other farming areas within the Garden State.

Management

Deer management as practiced in its present form was evolved in 1953, cooperatively by the State Farm Bureau, sportsmen, and the

Division of Fish and Game. The sole intent of this program has been to maintain a deer population that will produce a healthy maximum recreational facility and also prevent nuisance and depredation problems to farmers, landowners, and others. Many hundreds of produce growers, orchardists, and nurserymen have availed themselves of fencing and various repellents provided free of charge by the Division.

Control

Various methods and devices are employed in controlling the deer herd and reducing deer damage.

The deer management program is designed to produce a healthy, maximum recreational facility and also prevent nuisance and depredation



. . . Deer Management

Satisfactory results have been attained by controlling herd numbers through deer hunting seasons, fencing areas utilizing steel posts and fence to protect fruit trees, scareguns, repellents, live-trapping, and the establishment of food areas to attract deer and draw them away from agricultural fields. Fencing is the most permanent protection to crops with the least

their drawing ability for deer and are also an attraction for other species of wildlife including rabbits, quail, and grouse. Invariably, where feeding grounds were established for deer, these and other species of wildlife were found in the areas soon after establishment.

Seasons

Several antlerless deer seasons in recent years have accomplished a desired result. Many problems,

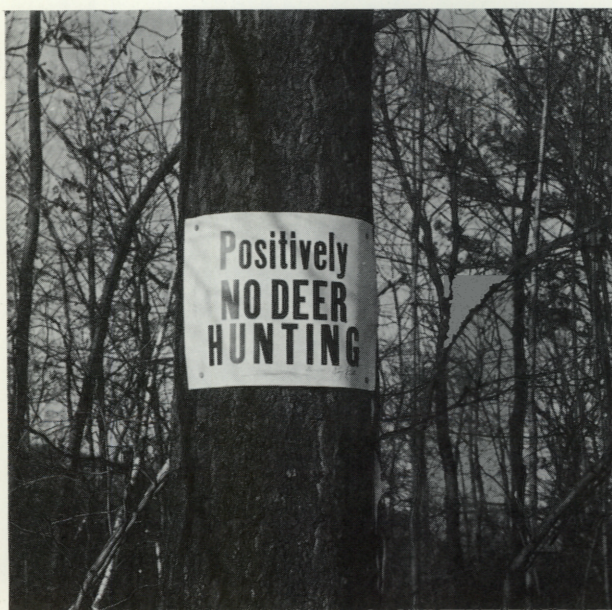


Fencing is the most permanent protection to crops from deer damage

maintenance required over many years of use. Repellents and scare devices are mostly utilized where fencing is not feasible and crops are of short duration. Feeding areas are particularly desirable due to

however, are still encountered when special control of the deer kill in certain areas is considered. In the metropolitan area of northern New Jersey, hunter use of the deer range is very limited. Many muni-

*Live-trapping of deer
in problem areas and
release in wilder
sections of the state is
sometimes practiced*



*In the metropolitan
region of northern
New Jersey much
of the deer range is
not available
to hunters*

. . . Deer Management

cipalities do not allow hunting of any kind. Also, many large private holdings are closed to hunting, and as a result, hunting pressure is directed toward those area least needing herd reduction. This protection further intensifies and multiplies the deer problem in this area.

Special deer seasons, the Division's fencing program, and other methods of damage control over the years have been reflected in a definite reduction in deer damage complaints in most of the southern New Jersey counties. The two main factors in this crop damage reduc-

tion are attributable to the fencing program carried on by the farmers and growers and to an excellent feed and habitat program being carried on by the Wildlife Management Bureau of the Division.

Food Plantings

Establishment of deer food plots over the past ten years has been an important phase of the deer management program. In instances where deer damage was plentiful, the Division created feeding grounds for the purpose of drawing deer from agricultural lands. In time fences were erected to protect crops, but the deer habitat improvement program continued,



Deer food plots are an important phase of management. Soybeans



Brush and stumps piled at the edges of clearings make fine cover

with land being cleared and sown in most of the deer counties in South Jersey.

Food areas, consisting in size from 2 to 35 acres were cleared and sown in the spring and fall to provide an adequate supplemental food supply most of the year for deer and other wildlife species. In the spring, approximately 200 acres of soybeans are sown in these areas. Other planting consisted of *Lespedeza sericea* and *L. bicolor*, burnet grass, millet, and clover. During the fall planting season, some 300 acres of rye are sown to assure a winter and early spring food supply.

Many other species of game also benefit from these plantings. The

deer food plots have created habitat for quail and rabbits which are eagerly hunted. In several instances wild turkeys have been observed feeding in the plots.

Development

Several methods have been utilized to evolve an inexpensive way to create deer habitat and feeding grounds. In order to clear new land for this purpose two large bulldozers are in constant operation removing trees and brush and piling brush on field edges. These fields are subsequently plowed; the roots and smaller stumps are removed by hand; and the fields are then treated with proper amounts of lime and fertilizer. Usually, after two years of soil treatment to dis-

. . . Deer Management

courage undesirable growths, the areas are planted to permanent mixtures, with intermittent plantings of cowpeas, soybeans, and rye.

Generally, the deer food plantings are located in the deer counties, comprising Ocean, Burlington, Atlantic, Cape May, and Cumberland. Some of the larger developments are located on the Wharton tract, at Indian Mills, Penn Swamp, Batsto, and the Green Bank area. Others are located in the Greenwood Forest tract, Pasadena tract, the Whiting tract, and Colliers Mills tract in Ocean County. Extensive development is in progress on the Peaslee tract in Cumberland County.

In conjunction with this work many sportsmen's clubs, farmers, and other individuals interested in wildlife conservation and preservation participate in the planting program. Planting materials and fertilizers are supplied by the Wildlife Management Bureau, and the plantings are made by the individual receiving the seed. These co-operators twice annually plant some 280 acres for wildlife use. More important, wherever these plantings are made, the areas are open for public hunting to licensed hunters.

As the 1963 deer hunting season approaches, it is evident that the deer hunter can look forward to a good harvest either by bow and arrow or firearm. #

This Is Deer Management

A unique definition of Deer Management was supplied by State Budget Director Abram M. Vermeulen at budget hearings of the legislative appropriations committee.

Apparently unaware that Fish and Game monies come from license buyers and not general revenue, Sen. George Harper (R-Sussex) asked, "What is deer management?"

With a straight fact Vermeulen responded, "You've seen those signs along the highway marked 'deer crossing'; haven't you?"

"Yes," Harper answered.

"Well, the \$8,000 for deer management is to teach the deer to cross the road right at the sign," Vermuelen concluded.

Actually, the deer management funds are used in three ways. Fencing is supplied to farmers to keep deer off their land, repellent is furnished to keep them away from crops, and food plots are planted to divert deer from causing crop damage. The food plots also furnish excellent food and cover for small game.

Most important, the deer management program is vital in order to maintain this valuable wildlife resource in the face of housing and other development that encroaches more and more into woodland habitat. #

T r e e S t a n d



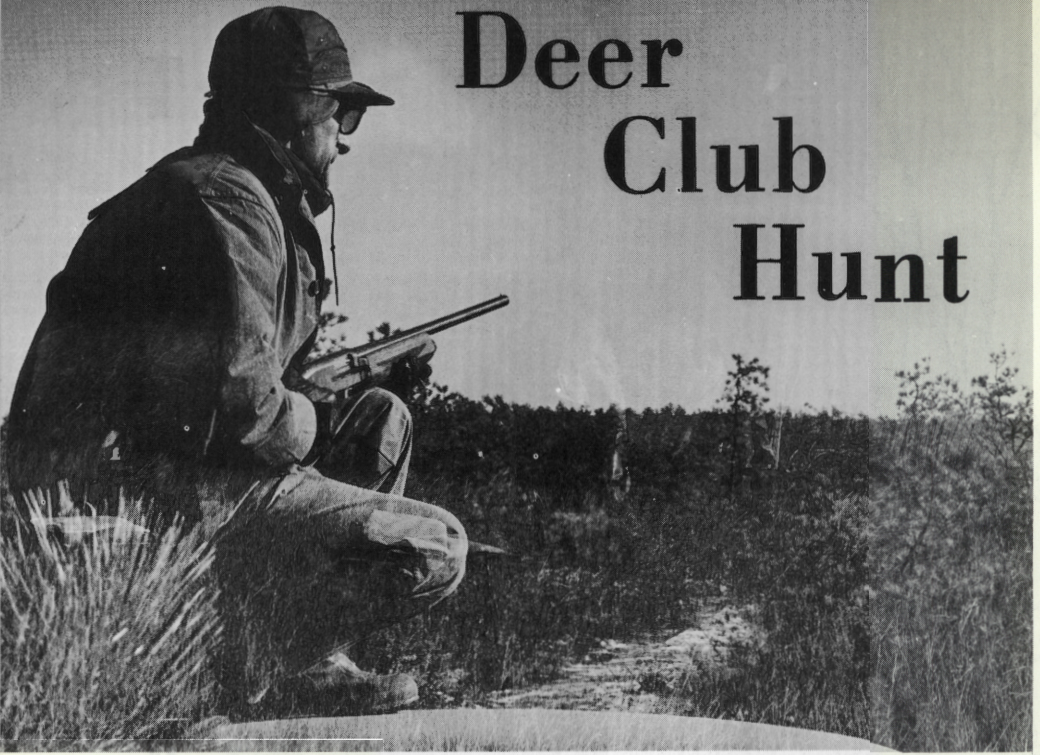
Tree stands, in which hunters wait for deer to come to them, are becoming increasingly popular in New Jersey. Bow hunters, have long used the tree stands and more and more firearm hunters find them useful. One of the problems hunters encounter when using tree stands is that of how to get the gun up in the tree safely. One method is to haul the *empty* gun up with a *stout* line.

Photographs by Harry Grosch

December, 1963



Deer Club Hunt



Much of the spirit of joy, comradeship, and feeling of well-being experienced by participants in deer club hunts is captured in these photographs by Harry Grosch of the 1962 hunt of the Three Foot Branch Club, Warren Grove. The lone stander above portrays the solitude and expectancy of the hunter on stand. The truck caravan below rings with the organization and logistics of group endeavor as the hunters head out to start the drive





The huddle of hunters, above, cold and done in after the day's pounding drives and numbing stands, affords mutual warmth and cushion

As each gunner returns to the clubhouse for the night he checks his weapon, and presents it for a double check, to make sure it is empty and safe





. . . Deer Club

Breaking bread together
is one of the highlights
of the hunt

gatherings. And, at the
Three Foot Branch Club
Grace at mealtime
is a must.

The fare offered by the
professional chef would
satisfy the gourmet
in quality and the
logger in quantity





In the quiet of evening
with the wind-stroked and
sun-tanned faces,
search-tired eyes,
tramp-sore legs, and
comfortably thawed feet—
the luxury of easy chairs
and bunks is more than
a man can stand. All
are reduced to the common
denominator of snoozing
dreamers, each dreaming
dreams of that big buck



Pesticides, Insecticides, and Detergents – *A Blessing or Curse?*

By Dorothy Ann Stimelski, St. Joseph High School, Camden

Pesticides, insecticides, and detergents are a curse. They are contaminating the soil, water, birds, animals and soon even human beings.

When pesticides build up in soil, plants become starved for want of nitrogen and living bacteria in the ground and cannot grow in a normal way.

Pesticides, insecticides, and detergents have helped to decrease our water supply by contaminating the water and killing fish and other forms of sea life which are beneficial to men.

Birds and animals who get their food from seeds and plants which have been sprayed with insecticides will become sterile and after a period of time extinct.

Man himself will become prey to cancer, hepatitis, and brain damage.

It is true that we have had many benefits from pesticides and insecticides such as the decrease of malaria and typhoid, but do these benefits out number the damage that they have caused? In my opinion, "no".

The situation must improve. In a recent issue of "Newsweek", Rachel Carson, the biologist and author of "The Sea Around Us" and "The Silent Spring", said about the use of pesticides that the last living things on earth may be the target of the insecticides—cockroaches, house flies, mosquitos, having developed resistance to poisons.

If pesticides and insecticides could be discovered that would kill insects but would have no after effects on plants, animals, birds, or humans, it would be a wonderful accomplishment of man.

The United States Government should set aside money for further research in this field. The Department of Agriculture should set up standards and regulations that pesticide manufacturers would have to follow under penalty of the law.

I think that pesticides, insecticides, and detergents should be used only when it is absolutely necessary and a special Board should be set up to regulate the use of these pest killers.

Farmers should be advised on the different types of pesticides and insecticides and just what damage they can cause. This way they will choose the type of bug killer that will have the best effects.

Farmers should use other methods that would eliminate harmful bugs instead of using these deadly insecticides.

In the northern states, plowing in winter helps to protect the coming summer's corn by destroying many larvae of the corn borer. In the South, corn is sometimes planted as a trap to divert the bollworm from the cotton. Winter wheat is planted late in the season to avoid the Hessian Fly. Fertilizers help to protect many crops, for healthy plants have relatively high resistance to some pests. Considerable success has attended efforts to develop plant varieties with inherently high resistance to pests; for example, in California, grape vineyards, rootstocks, are now used which resist attack by aphids of the genus *Phylloxera*.

Parasites and predators have often proved allies against injurious insects.

With all the other precautions that can be taken to protect plants, insecticides should not be used. There are too many dangerous after effects. #

Council Highlights

September Meeting

The regular monthly meeting of the Fish and Game Council was held in Trenton on September 10. In addition to the Council members and Division staff present at the open session the following persons attended: John Russack and Robert Vreeland.

Trout Unlimited Conference

Councilman McCloskey reported on his attendance at the recent Trout Unlimited Convention, which was held in Carlisle, Pennsylvania. He stated that the meetings were attended by many prominent biologists and the principal panelists were all men highly qualified in the field of biology. The organization stresses fishing for fun, i.e., a no-kill-and-no-take concept. The philosophy of most of the biologists seemed to be that, while biology was needed, the important thing is that the people must be considered and the sociological and political aspect is of utmost importance in selling the program to the people. Mr. McCloskey said he was pleased to learn at the conference, from a statement by Dr. Paul Butler of California who conducted a survey on trout, that brown trout from New Jersey were very catchable and they received a 95% return from these fish. Mr. McCloskey will mail each Councilman a complete report on his attendance at the conference.

Conservation Officers

William P. Coffin, Chief Conservation Officer, reported that August is a light month as far as prosecutions are concerned and that he and many of his men were on vacation. The officers on duty were particularly busy investigating numerous complaints of fish kills. They also liberated birds from the game farms and 4-H cooperators.

One item of interest Mr. Coffin reported was that Conservation Officer William Hutchison, Camden County, had assisted in the rescue of a paralyzed veteran. Mr. Hutchison had remembered seeing the man fishing at the Wharton Tract. The next day, when someone fitting the man's description was reported in the news as missing, Conservation Officer Hutchison returned to the scene and thereby aided in the recovery of the man who had spent the night in his car after it became stuck in the sand. The man had crawled two miles in search of help and was exhausted and hungry when found.

Public Relations

Jules Marron, Supervisor of Public Relations, reported that the activities of his unit for the month consisted primarily of setting up and maintaining the exhibits at county fairs. Councilman Totten thought

. . . Council Highlights

the Division should have a larger and more elaborate exhibit at the larger fairs. But, Mr. Marron stated that our displays are limited by the size of the space allotted to us.

Fisheries Management

Robert Hayford, Chief of Fisheries Management, reported that he was pleased to learn something from his attendance at the recent convention of Trout Unlimited. Contrary to the thinking of many persons, who sometimes feel New Jersey is "old fashioned" in its fisheries management, the opposite is true. We are right up on a par with the more progressive states and even ahead of some of them.

Activities during the month consisted mainly of starting the fall clean up and brushing out and clearing in preparation for the erection of a fence separating the Hatchery grounds from homes in the adjoining development. Work is continuing at the Pequest Hatchery and trout should be placed in the pools during October. Alfred Horner will vacate the house at Pequest during October and one of the fisheries employees will be transferred to take charge of operations there.

Hunter Harvest Report

Councilman Alampi commended Charles Wright for the excellent Hunter Harvest Statistical Report which Mr. Wright recently prepared.

Coastal Patrol

Newman Mathis was congratulated by Chairman Hart on his recent promotion to Chief of the Coastal Patrol. Mr. Mathis assured the Chairman and the Council that he was very pleased to receive the promotion and would make every effort to perform his duties in the best manner possible.

Captain Mathis reported that large schools of porgies are still present along our coast. Recent reports indicate that the Mullica River contains a large run of four to six-inch weakfish. He reported that all boats are in A-1 condition with the exception of *Kathleen F.* and the *Weakfish*.

Wildlife Management

In the absence of Chief George N. Alpaugh, who was attending the conference of the International Association of Game, Fish, and Conservation Commissioners in Minneapolis, Minnesota, Paul McLain, Senior Wildlife Manager, reported on the activities of the Bureau of Wildlife Management during August. He stated that the fall planting program had started and approximately 20 acres on the Public Shooting Grounds and 50 acres of open land in the Farm Game Program have been plowed, limed, fertilized, and planted for the benefit of rabbits and other game.

Work was completed on restoring a 5-acre lake on the Whiting Grounds, which should add considerably to the tract. Assistance was given to the Conservation Officers in picking up and liberating 4-H birds.

4-H Quail

Councilman Alampi stated that he had received reports of several instances where quail being raised by 4-H cooperators were left without feed and water. It was his opinion that our representatives should have more authority in the program and should be able to deny birds to any cooperator who has failed to maintain adequate facilities for his birds. Mr. Alampi also thought that the price paid for quail reared under the 4-H program should be reduced to \$1.00 per bird instead of the \$1.25 which is now being paid. Cooperators who do not display enough interest in the program to be on hand when their birds are picked up for liberation should not receive consideration in future years.

Live-trapping of Rabbits

Councilman Alampi suggested that consideration be given to a rabbit trapping program wherein the organized sportsmen could trap rabbits in areas closed to hunting and liberate them on open grounds. He felt that the cost of the traps was negligible compared to the good public relations which would result. Councilman McCloskey stated that while the traps were inexpensive, a project of this type required a considerable amount of labor, which was expensive, Mr. McCloskey added that the plan had been tried in Morris County and was not successful.

Director MacNamara will investigate the matter and make a report at a future meeting.

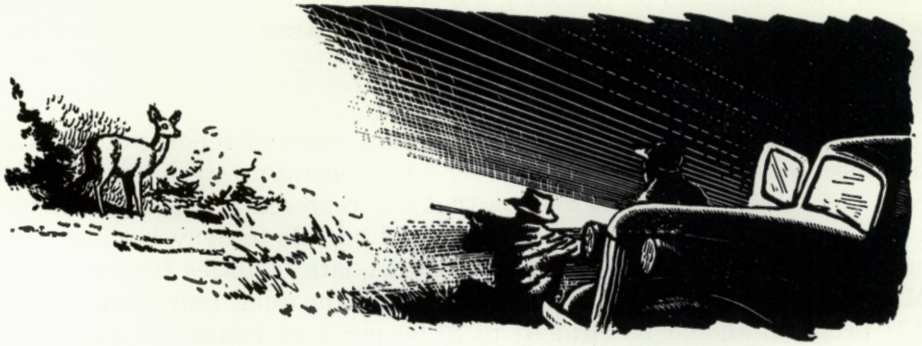
No-hunting Ordinances

Robert Vreeland inquired what action had been taken on the ordinances prohibiting hunting which municipalities have recently been passing. Director MacNamara advised that this matter was referred to the Attorney General and we are waiting word from him. In the meantime, pending an opinion from the Attorney General, we plan to have a representative present at township meetings. #

Special Christmas Gifts

What could be a better Christmas gift than unlimited hours of outdoor enjoyment in the new year? That is what you can give that special person with a New Jersey Hunting or Fishing License. If he or she has about everything else, a 1964 License will surely be welcome. He needs one every year. Licenses are available from authorized agents, including Municipal Clerks, about a week before Christmas.

Licenses are tailored to individual preferences for fishing, firearm hunting, or bow hunting. You can give them with a special embellishment like a trout stamp. Another good idea is to top it off with a subscription to *New Jersey Outdoors*—still priced at only one dollar a year until December 31.



Violators Roundup

August 1963

Defendant	Offense	Penalty
Howard L. Hamilton, 268 R.D. 5 Lake Owassa, Branchville	Fish no license	\$20
Hans Breu, Chappagua Road, Briar Cliff Manor, N. Y.	Fish no license	20
Alvin E. Walker, Box 328, Branchville	Fish no license	20
Wescleslar Auiles, 609 N. Perth Pl., Phila., Pa.	Fish no license	20
William Lee, 135 W. 116 St., New York 26, N. Y.	Procuring license wrongfully	100
Harry A. Meyers, 14223 Friar St., Van Nuys, Calif.	Procuring license wrongfully	100
Beverly L. Walter, 65 Claremont Rd., Bernardsville	Fish no license	20
Charles V. Connolly, 115 Vandenberg Ave., Rutherford	Fish no license	20
James F. Moglia, 614 - 14th St., Union City	Fish no license	20
Eugene Karolewski, 612 - 14th St., Union City	Fish no license	20
Charles J. Quinn, 411 Union Ave., Rutherford	Fish no license	20
James Di Pasquale, 74 Boyland St., Newark	Fish no license	20
Wm. Stombash, 1559 Gregory Ave., Union	Illegal firearm	20
Wm. Stombash, 1559 Gregory Ave., Union	Hunt no license	20
Edward Malanda, 2811 Wickersham Ave., Linden	Illegal firearm	20
Edward Malanda, 2811 Wickersham Ave., Linden	Hunt no license	20
Donald Kukan, 1268 Barber Ave., Union	Illegal firearm	20
Donald Kukan, 1268 Barber Ave., Union	Hunt no license	20
Milton Renshaw, Columbia Ave., Newfield	Illegal poss. pheasant	20
Norman Knox, Jr., 180 Belmont Rear, Long Branch	Fish no license	20
Mack Jenkins, 530 Haddon Ave., Camden	Fish no license	20
Patrick Capaccio, 1200 Palmer Ave., Mays Landing	Fish no license	20
Domingo Razo, 816 E. Elm St., Camden	Fish no license	20
John T. Eden, 1000 E. Cheltenham Ave., Phila., Pa.	Fish no license	20
Thomas Kozar, 4935 Shepherd St., Chester, Pa.	Fish no license	20
Sylvester Dove, 1818 W. Venango St., Phila., Pa.	Fish no license	20
Clinton Beaver, Jr., 575 Herrick Dr., Dover	Fish no license	20
Clarence L. Taylor, 1551 S. Commerce St., Paulsboro	Fish no license	20
Stefan Tlalkor, 2602 Madison St., Phila., Pa.	Hunt no license	20
Lester L. Cobb, Bartley	Fish closed waters	20
John Loren, R.D., Chester	Fish closed waters	20
Thomas Slack, 569 Walnut St., Phillipsburg	Fish closed waters	20
Alfred Petchonka, 1 Memorial Pky., Phillipsburg	Fish closed waters	20
Harold Bevelheimer, 327 Orenda Cir., Westfield	Fish closed waters	20
Dennis J. Smith, Belvidere Ave., Oxford	Illegal poss. deer	100
Alfredo Quintana, 191 Malcolm Ave., Garfield	Fish no license	20
Ronald Liptak, 469 Valley Rd., Clifton	Angle closed waters	20

Defendant

Offense

Penalty

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Party Permit Deer Season

The taking of one deer of either sex with a firearm under a Party Permit, in addition to the legal antlered deer allowed under the statewide buck deer season, will be permitted in designated areas by holders of a Party Permit.

A party shall consist of four licensees, who must have made application by mail not later than October 15 on forms provided by the Division of Fish and Game.

Use of Party Permit

The Division will have returned the party's firearm hunting licenses with the party permit tag. The license of each member of a party receiving a permit will have marked thereon the area to be hunted and the number of the party permit. A permit is valid only in the area designated on it and no party permit or part thereof is transferable. However, members of parties holding permits may hunt antlered deer anywhere in the state during the regular open season.

The party deer may be taken at any time during the regular open season for the area in which a permit is issued. The party does not need to hunt as a group but the party deer may only be taken in the area covered by the party permit and *only by the party member in possession of the party deer tag.*

Tagging, Reporting, Possession

Upon taking the party deer, it must be tagged immediately by filling in and affixing the special party deer tag.

Special party permit reporting card must be filled in and mailed to the Division within 24 hours.

Party Permit Areas

Area A—Quota 400 permits. Bounded on the west by the Delaware River from the Sussex-Warren County line north to the New York line, south of the New York-New Jersey line to Route 84, west of Route 84 to Sussex, west of Route 565 to Ross' Corner, west of Route 206 through Newton and Andover to Netcong, north of the Sussex-Morris County line westward to the Sussex-Warren County line and north of the Sussex-Warren County line to the Delaware River.

Area D—Quota 600 permits. All of Warren County.

Area E—Quota 700 permits. Starting at Whitehouse, east of the Hunterdon County boundary, north of Route 22, west of the western boundary of Union and Essex Counties, south of Route 10 to Netcong, south of the southern Sussex County line and east of the eastern boundary of Warren County to Stephensburg, east of the Hunterdon County line to Whitehouse. This area includes northwestern Somerset and southern Morris Counties.

Area F—1100 permits. Bounded on the west by the Delaware River, south and east of the southern boundary of Warren County (Musconetcong River) to the Hunterdon County line southwest of Stephensburg, south and west of the Hunterdon County line to Whitehouse, south of Route 22 to Route 206, and west of Route 206 to Trenton.

Area H—Quota 100 permits. All of Monmouth County.

Area J—Quota 200 permits. All of Ocean County.

Area K—Quota 300 permits. All of Burlington County.

Area M—Quota 200 permits. All of Atlantic County.

Area N—Quota 100 permits. All of Cape May County.

(No Party Permits in Areas B, G, or L, which are Bucks Only, regular license, and season areas, and no Party Permits in Area C which is Hunter's Choice, regular license, and season territory.)

Refer to New Jersey Game laws and regulations of 1963 Game Code for details and laws in full.

1963 Deer Hunting Areas



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9. Subscriptions will be accepted in lots of 25 or more.
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"Your club name—Venison Contest"
11. Please show correct Post Office address and zip-code number.
12. Entries must be postmarked not later than December 31, 1963.

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