

P.B.

# New Jersey

# Outdoors



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DIVISION OF FISH AND GAME

OCTOBER, 1961



# Green Acres AND HUNTING

## *A Look in the Future*

**S**UPPOSE the year is 1971, October ten years from now. You're planning to go hunting; what will you find? Are there public hunting grounds? How many others are hunting also? What game is there to hunt; is game more or less plentiful? Is there still public hunting of any kind?

No one can know the answers for certain. We can probably only be sure that a lot of us will still want to hunt. There will be at least one million more people in New Jersey by then, making the population over seven million. At present ratios, some 200,000 or more will have licenses to hunt. This will be four hunters for every three today.

It's even more speculative as to hunting conditions in 1971. Will the Division of Fish and Game have been able to add to public hunting grounds? Will a major factor—public approval of the Green Acres Bond Issue—have made this possible? Present public hunting areas won't disappear and additional acquisitions from license revenues would continue. But hunting pressures today are so great on public hunting grounds, and the harvest already so heavy, that future prospects are not promising.

More than hunting or fishing land needs are provided for under the Green Acres Bond Issue; and, most other areas will serve hunting and fishing interests as well. The Green Acres program has a broad mandate to acquire open space for "parks, forests, wildlife, natural areas, water reserves, camping, fishing, hunting, boating, reservoirs, and similar public outdoor recreation and conservation of natural resources."

The Green Acres goal has been projected as a doubling of the present state owned acreage for these purposes. This is now nearly 300,000 acres, inclusive of 90,000 acres of public hunting and fishing grounds. The target is to have the total of 600,000 acres of outdoor recreational area under state ownership or control within ten years. Hunting and fishing facilities will thus be extended by acquisition specifically for these needs, and by the addition of forest, water reserve, and park areas expandable through the Green Acres program.

This is timely. Rising prices of land continue to handicap extension of fish and game areas solely by purchase from dedicated license funds. The

*(Please see Inside Back Cover)*

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Cover—"ON THE MARSH"—*Harry Grosch*  
Marshes, too, could be Green Acres

Editor: **Bob Adams**

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*The Management of*

# **WOODLANDS**

*for Wildlife*

*By* GEORGE P. HOWARD, JR., Wildlife Manager,  
Bureau of Wildlife Management

*Photographs by Robert E. Mangold*



ONE OF THE most pressing problems for the game manager in New Jersey today is providing a place to hunt for the ever increasing legion of sportsmen. In a State where each year the amount of land available to the hunter is declining, we are forced to rely more on state-owned areas to provide outdoor recreation.

The bulk of the land area in state

ownership at the present time is woodland, most of it contained in the State Forests and Public Hunting Grounds. Approximately 300,000 acres are in state ownership, forest areas making up about  $\frac{3}{4}$  of the total. These areas are located for the most part in the Counties of Burlington, Ocean, Atlantic, Cumberland, and Cape May in South Jersey, and in Sussex and Warren in North Jersey. Although many of these wooded areas are producing ample supplies of certain game species at the present time, notably deer, grouse, and squirrels, they are in no way as productive of game as the farming areas of the state.

#### **Farm Lands**

The farming areas, due to better soil conditions, past and present land usage, and fertilization, are able to provide more game and consequently more recreation for the sportsmen. However, it is in these better game-producing areas that the greatest reduction in hunting opportunity is taking place. Each year large acreages of former farmland, which at one time supplied hunting recreation for a large segment of the sportsmen of our state, are being lost to industry, residential developments, and the needs of a rapidly increasing human population.

#### **Wooded Areas**

More sportsmen each year are forced to depend upon the wooded areas of the state for a greater share of their hunting enjoyment. It is very important therefore that



*White oak—good producer of acorns that are valuable fall and winter food for wildlife*

every effort be made to manage these forest areas, especially those located on State Forests and Public Hunting Grounds, so as to produce an abundance of game.

#### **North Jersey**

The forested areas of North Jersey are primarily hardwood forest types with the predominant hardwood species being oak, tulip poplar, maple, and hickory. The principal native evergreens are hemlock, white pine, and red cedar,

with many reforested areas of pine and spruce. Deer, grey squirrels, and grouse are the most important forest game species with their abundance depending upon the age, composition, and condition of the forest stands.

The quantity and quality of food, and the presence or absence of adequate year around cover are the primary factors regulating the game populations on these areas. Consequently the greatest population of grey squirrels is found in mature oak or hickory stands which are producing ample

supplies of acorns and hickory nuts. The presence of a few hollow trees for shelter increases the desirability of the area as far as squirrels are concerned.

### **Logging of Hardwood**

Oak and tulip poplar are the tree species most in demand by the logger, and in most cases the method of cutting is to select trees for harvest and cut individual trees rather than clearcut groups of trees. The selection of trees to be harvested, with some thought being given to the affect of the cutting on the game species present, can mean the difference between ample and sparse game supplies. In areas of mature timber to be harvested, the sparing of five or more well formed, acorn-producing oak trees per acre,

the leaving of any occupied den trees, and taking care to see that valuable wildlife food and cover plants present are disturbed as little as possible pays big dividends in an increased game supply following harvest.

### **Evergreen Cuttings**

The regulation of the cutting of hemlock and other evergreens in sections known to be deer wintering areas may also be very important as far as overall deer populations are concerned. The opening up of the forest following a harvest cutting of mature trees can be very beneficial to game populations providing the above practices are observed. While the axe is recognized as the most important tool in the management of woodland for wildlife, its effects on game populations can be either beneficial or detrimental depending upon the type of cutting carried out.

### **Pole-sized Stands**

A greater problem than the management of mature forest stands in North Jersey is that posed by large acreages of pole-sized timber too small to be of interest to the logger, but badly in need of management from both a forestry and wildlife standpoint. These areas contain very little ground cover and in most cases are lacking in food for wildlife. Frequently the species of trees making up the stand are undesirable from the viewpoint of both the forester and wildlife manager.

A judicious thinning of these areas by taking out undesirable specimens and creating openings



*Pole-sized stand—needs management*

## . . . Woodlands for Wildlife

in the forest canopy can be very beneficial to both wildlife and forestry. While it may not be economically feasible, strictly from a forestry standpoint, to carry out these thinnings, the added benefit resulting to the game populations in the area may be enough to carry the operation.

### **Evergreen Plantings**

The planting of evergreens in abandoned fields located within

trees, will allow the area to support more game in the future. These unplanted strips may also serve as logging and access roads, or areas to be plowed and planted to wildlife food plants.

### **South Jersey**

The upland forests of South Jersey are made up primarily of pine and oak. Southern white cedar is the principal swamp species and is probably the most valuable timber tree in the South Jersey forests. It is also an important winter food



*Scrub oak—one of the most important wildlife foods in South Jersey*

some of the forested areas of North Jersey is another forest management practice directly benefitting wildlife populations. The planting of strips of trees approximately 200 feet in width leaving 50 feet or so between strips unplanted, rather than planting the entire area to

for deer. Gum, maple, white oak, and tulip poplar are also to be found on some of the wetter sites.

### **Scrub Oak**

Scrub oak, *Quercus ilicifolia*, is one of the most important wildlife food producing plants in the area. This oak is a small shrub-like tree

which grows approximately fifteen feet high and is a prolific acorn producer. Its acorns are small and are

Jersey—are the deer, squirrel, grouse, and quail. While the bobwhite quail is generally not regard-



*Wildfire—main problem of both the forester and wildlife manager*

eaten by deer, squirrels, grouse, and quail. It is very hardy and has taken over many of the tracts which have been swept by wildfires in the past. Other oak species found in the area which are especially beneficial to game populations are the chestnut, dwarf chestnut, and blackjack oaks.

#### **In General**

Generally speaking the timber stands, particularly on the upland, are of poorer quality than those found in North Jersey. The soil is poorer, the trees smaller, and the yield of timber per acre less.

The principal game species to be found in the wooded areas of South

Jersey as a forest game species, it has been found that through intensive management practices shootable populations of quail can be produced in the forested areas of this region.

Wildfire is the main problem of both the forester and wildlife manager in this area. Both the pine and oak are highly flammable. Because of this, plus the fact that there are large areas to which there is poor access, many acres are consumed by wildfires annually.

#### **Cuttings**

While there is a market for piling and pine and oak sawlogs, the bulk of the cutting carried out on

### . . . Woodlands for Wildlife

the upland is for pulp. These areas are generally clearcut with a few pine trees left standing to seed in

desirable to break up large forest tracts into smaller areas of approximately 100 acres. This is accomplished through the construction of roads or strips through the



*Excellent wildlife food and cover following a pulpwood cutting*

the site after cutting. Cedar is also clearcut in either blocks or strips.

The South Jersey forests lend themselves very well to game management practices due to the ease of clearing and working the sandy soils, and the feasibility of cutting small, low grade trees for pulp. Examples of this can be seen on the Wharton Tract and on most of the area Public Hunting Grounds.

Since wildfire is one of the principal problems, it has been found

area. These strips are cleared by using a bulldozer fitted with a rake blade, and they serve the purpose of limiting the size of potential fires.

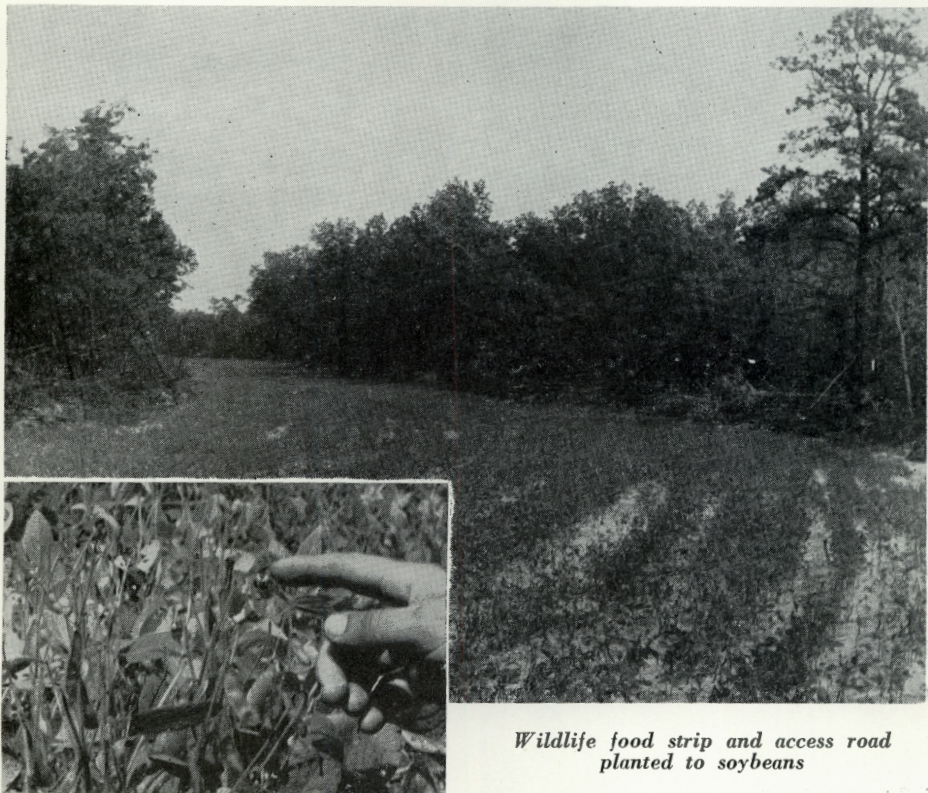
The strips are planted to soybeans, rye, lespedeza, and other wildlife food plants, and result in a substantial increase in the amount of quail, deer, and rabbits populating the area. The strips, which may be from fifteen to one hundred feet in width, serve as fire

breaks and access roads for fire fighting personnel, and also as access roads for timber operations.

### **Game Management**

A more intensive game management program has been carried out on some of the Public Hunting Grounds of South Jersey through the establishment of five-acre

more acorn producing oak trees standing per acre following a harvest, and the management of the cutting rotation so as to spread the annual cut over many scattered small size areas, also serves to produce greater populations of game species. Prescribed burning as practiced by the Forest Manage-



*Wildlife food strip and access road planted to soybeans*

fields within the forested area. These fields are located adjacent to a swamp or other area of good wildlife cover. They are cleared with a bulldozer and planted annually, and have been responsible for producing large populations of deer, quail, and rabbits.

The practice of leaving five or

ment Section and some private landowners is also less detrimental to game if it is conducted on small scattered blocks rather than on large acreages.

### **Forest Management Projects**

In order that the proper emphasis might be given to the needs of game populations in the manage-

## *. . . Woodlands for Wildlife*



*Woodlands can be managed for both timber and game*

ment of forest lands under its control the Division of Fish and Game established in 1958 a Forest Management Project. The forester-wildlife manager assigned to this Project has as his responsibility not only the harvesting of merchantable timber but also the management of the timber lands so as to increase game supplies wherever possible.

### **Management Plans**

Attention was also given to the management of the state owned Wharton Tract in South Jersey. Together with the Forest Management Section of the Department of Conservation and Economic Development a forest management plan for the Wharton Tract is being prepared which tends to benefit game populations as well as to increase forest yields. This is being accomplished through the modification of cutting and prescribed burning procedures and through the installation of wildlife food strips and game food plots on the area.

This type of management if carried out on all State and privately owned forested areas throughout the State would greatly increase the populations of game birds and animals available to the sportsmen. As the opportunity for hunting in the farming areas of the State decreases, it becomes increasingly important that every effort be made to recognize game as a product of the forest and modify management procedures so as to insure an ample supply of game species for the future. #

# HUNTER'S REVIEW

## *An Estimate of the Wildlife Harvest in New Jersey in 1960*

By CHARLES W. WRIGHT, *Biometric Analyst*

**I**T IS NOW the season of the year when we find it interesting to review our success last fall and to compare it with our hopes for the coming hunting season of 1961.

### **The Survey**

Since 1951, the Division of Fish and Game has conducted an annual questionnaire survey at the close of the hunting season to obtain an estimate of the harvest of certain popular game species in New Jersey. The survey last year included rabbits, squirrels, pheasants, quail, grouse, ducks, and brant.

### **Sampling and Treatment**

The annual information is derived from the response to questionnaires mailed by the Division to a "systematic random" sample of individuals licensed to hunt with firearms in New Jersey. The survey design meets the required statistical standards to ensure validity and permits proper analysis and interpretation. By statistical treatment of the data obtained, reliable estimates are made of the total numbers of each of the seven game species taken in the state last season, the average seasonal bag of the

hunters of those species, and the number of hunters by the kind of game hunted.

The estimated total amount of the seven game species bagged by licensed hunters in the state on lands open to public hunting during the 1960-61 seasons, and the estimated average seasonal bags per hunter are presented in Tables 1 and 2, respectively. Estimates of the previous season of 1959-60 are included in both tables.

The estimated harvest of these seven small game species based on this sample survey totaled 1,049,160 units. In 1959-60, the total bag of these same seven species was estimated to have been 1,074,550 units. Rabbits constituted about 48 percent of the total bag, as compared with 49 percent the previous year.

The harvest of three species, namely, pheasant, squirrel, and brant, showed increases over those of the previous year, ranging from 1.2 percent (squirrel) to 13.5 percent (brant). The total bag of pheasants increased 12.4 percent.

Four species, rabbit, quail, grouse, and duck declined in the

## . . . Hunter's Review

harvest of 1960-61. The bag of rabbit and quail decreased about 4.5 percent and 12 percent, respectively. The seasonal take of grouse and duck dropped 8 percent and 20 percent, respectively.

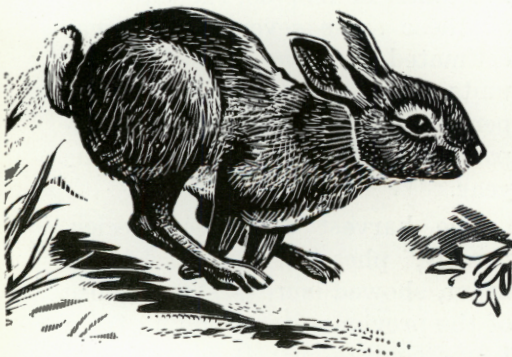
### **Harvest by Species**

#### *Rabbit*

The rabbit harvest of 1960-61 is estimated to have totaled 505,940 rabbits, or 24,100 less than in 1959-60. This take was made by an estimated 112,070 rabbit hunters, an increase of 5,970 (5.6 percent) over the previous year.

The average seasonal bag per hunter was 4.51 as compared with 4.99 in 1959-60. Ninety percent of the total bag was taken by 50 percent of the rabbit hunters. Seventy-two percent of the total number of all licensed firearm hunters in the state who used their licenses hunted this popular game species.

It is estimated that 112 rabbit hunters in the state were success-



Over one-half million rabbits were taken in bagging 36 to 78 rabbits each. In 1959-60, approximately 288 hunters were estimated to

have been successful in bagging 36 to 120 rabbits each.

The possible small reduction in the total seasonal bag of this species in 1960-61 may be attributed



More than 200,000 squirrels were bagged to reduced hunting pressure because of the heavy snow condition that prevailed during the latter part of the open season.

#### *Squirrel*

There was an estimated total of approximately 201,630 squirrels bagged, or about 2,400 (1.2 percent) more than in the previous year of 1959-60. This bag was taken by an estimated 62,770 squirrel hunters, or about 3,330 (5.6 percent) more than the previous year.

The average seasonal take per hunter was 3.21 squirrels, as compared with 3.35 squirrels in 1959-60. This is accounted for by the increase in number of smaller individual bags. Ninety percent of the total bag was taken by 65 percent of the squirrel hunters. Nearly 41 percent of all licensed fire-



*The pheasant bag of 167,220 birds was an increase of 12.4 percent over 1959-60*

arm hunters in New Jersey who used their licenses hunted gray squirrels.

It is estimated that about 115 hunters in the state bagged 26 to 50 squirrels each, accounting for 1.7 percent of the total bag. This may be compared with an estimated 341 hunters and 5.3 percent of the total bag in 1959-60. Fifty squirrels appeared from the survey to have been about the largest bag taken in 1960-61.

#### *Pheasant*

The estimated bag of 167,220 male pheasants in New Jersey is about 18,440 birds more than 1959-60, and exceeds the high record of

approximately 152,540 birds in 1958-59. This estimate does not include birds other than those taken on lands open to public hunting.

This estimated total bag was taken by approximately 89,300 pheasant hunters, or about 10,190 (12.9 percent) more than in the previous year. This increase in hunting pressure may be attributed to the increase of license purchases, and recovery from the fear of the possible presence of encephalitis that existed in the 1959-60 season. The population of pheasants also is believed to have been larger than in the previous year.

The average seasonal bag per

## . . . Hunter's Review

hunter was 1.87 pheasants as compared with 1.88 birds in 1959-60. Ninety percent of the total bag was taken by about 47 percent of those who hunted this species, as com-



*Almost 68,000 quail were reported*

pared with 53 percent in 1959-60. Approximately 58 percent of all firearm hunters in the state who used their licenses hunted pheasants.

A legal harvest of 10 male birds each is estimated to have been made by about 438 hunters, as compared with 347 hunters during the previous season. Hunters successful in bagging 5 to 9 birds each totaled approximately 9,840 as compared with about 7,180 in 1959-60. One to four birds each were taken by about 47,705 pheasant hunters, as compared with about 48,335 in the previous season. Those hunters who were unsuccessful in bagging any pheas-

ants totaled about 30,910 (about 35 percent), as compared with about 27,970 hunters (about 35 percent) in 1959-60.

### Quail

The quail harvest is estimated to have been approximately 67,810 birds, or about 9,300 (12 percent) less birds than in 1959-60. This bag was taken by an estimated total of 32,010 hunters, or about 6 percent fewer than in the previous year. The apparent declines in the harvest and in the number of hunt-



*More than 25,000 grouse were harvested*

ers may be attributed chiefly to the extended heavy snowfall during more than one-half the open season.

The average seasonal bag per hunter was 2.12 birds, as compared with 2.28 in 1959-60. Ninety percent of the total bag was taken by

about 36 percent of the quail hunters. The sample data indicate that about 21 percent of all firearm hunters who used their licenses hunted quail.

The survey indicates that only about 45 hunters in the state ob-

19,400 licensed hunters in the state. This suggests a decrease of 2,296 birds in the harvest of 1960-61 from that of the previous year, but this difference is not statistically significant. The number of grouse hunters apparently declined about

**TABLE 1. WILDLIFE HARVEST BY LICENSED HUNTERS ON LANDS IN NEW JERSEY OPEN TO PUBLIC HUNTING.**

Species	Estimated Harvest		Increase	Decrease	Percent
	1960-61	1959-60			
Rabbit .....	505,940	530,040		24,100	4.5
Squirrel .....	201,630	199,230	2,400		1.2
Pheasant .....	167,220	148,780	18,440		12.4
Quail .....	67,810	77,110		9,300	12.1
Duck .....	54,840	68,480		13,640	19.9
Brant .....	26,030	22,930	3,100		13.5
Grouse .....	25,690	27,980		2,290	8.2

tained 20 or more birds each during the open season, as compared with an estimated 191 in 1959-60.

1,485, or approximately 7 percent. This possible reduction in the number of hunters may be attributed

**TABLE 2. ESTIMATED AVERAGE SEASONAL BAG PER LICENSED HUNTER IN NEW JERSEY ON LANDS OPEN TO PUBLIC HUNTING**

Species	1960-61	1959-60	1958-59
Rabbit .....	4.51	4.99	3.66
Squirrel .....	3.21	3.35	3.08
Brant .....	3.09	3.12	—
Duck .....	2.92	3.31	3.33
Quail .....	2.12	2.28	1.98
Pheasant .....	1.87	1.88	1.64
Grouse .....	1.32	1.34	0.99

Nearly 41 percent (13,696) succeeded in taking from one to five quail each. About 46 percent failed to obtain any birds in the 1960-61 season, as compared with nearly 48 percent in the previous year.

*Grouse*

An estimated harvest of approximately 25,690 grouse was made by

to the effect of the extended heavy snowfalls after December 15.

The average seasonal bag per hunter was 1.32 birds as compared with 1.34 in 1959-60. Ninety percent of the total bag was taken by about 39 percent of the grouse hunters which is not significantly different from the previous season.

### . . . Hunter's Review

It is estimated that nearly 13 percent of all hunters in the state who used their licenses hunted grouse.

Seasonal kills of 11 to 15 birds each were made by an estimated 37 hunters in the state. From one to five birds each were taken by an estimated 9,370 hunters, as compared with approximately 10,050 hunters in 1959-60.

#### *Duck*

The duck harvest in New Jersey declined an estimated 20 percent,

reaching an estimated total bag of 54,845 birds, as compared with about 68,480 birds in 1959-60. There was an estimated decline of about 9 percent (1,890) in the number of duck hunters (18,810), as compared with that of the previous year. These declines in harvest and hunting pressure may be attributed chiefly to the reduced legal daily bag limit (3) in 1960-61.

The average seasonal bag per hunter was 2.92 ducks, as compared with 3.31 ducks in the pre-

*The duck take declined probably because of the decreased bag limit*



vious season. More than 12 percent of all licensed firearm hunters in the state went duck hunting.

**Brant**

The survey indicates that approximately 26,030 brant were taken by an estimated 8,430 hunters. This suggests an increase of 3,100 birds in the harvest, or more than 13 percent, over the previous year, and may be attributed to an increase of the available brant

ers in the state (43 percent of the brant hunters) were successful in bagging one to five birds each, and that about 6.3 percent bagged more than 10 birds each.

About 5.6 percent of the total number (149,459) of the licensed firearm hunters in the state who used their licenses, hunted brant.

**Number of Hunters**

The estimated total number of hunters of each of the seven species

**TABLE 3. ESTIMATED TOTAL NUMBER OF LICENSED HUNTERS IN NEW JERSEY, BY GAME SPECIES**

Species	1960-61	1959-60	1958-59
Rabbit .....	112,070	106,100	111,330
Pheasant .....	89,300	79,110	92,990
Squirrel .....	62,770	59,440	62,350
Quail .....	32,010	34,110	37,070
Grouse .....	19,400	20,880	21,260
Duck .....	18,810	20,700	28,620
Brant .....	8,430	7,340	—

population and to more hunters for this species. There was an increase of approximately 1,090 hunters (14.8 percent) over 1959-60.

The average seasonal bag per hunter is estimated to have been 3.09 brant, as compared with 3.12 brant in the previous year. Ninety percent of the total bag was taken by an estimated 42 percent of the brant hunters.

It is estimated that 3,630 hunt-

ers is presented in Table 3. Comparison also is made with the two previous seasons.

Four listed species show increases in the number of hunters.

Three listed species show decreases in the number of hunters.

Sale of resident and non-resident firearm licenses totaled 160,438, or about 2.6 percent more than in 1959-60. Approximately 5,510 of these licenses were not used. #

*This article is based on the technical report of the survey of the 1960-61 wildlife harvest of seven important game species in New Jersey by Charles W. Wright, Biometric Analyst. Similar surveys have been conducted by the Division of Fish and Game since 1951. The sampling procedures and statistical treatment of the response data are treated fully in the technical report of which copies may be obtained from the Division. These surveys are made possible only through the excellent cooperation extended by the licensed hunters of the state in responding to the questionnaires. The results help the Division of Fish and Game to evaluate game management practices, to estimate the relative abundance of game, to guide management plans, and to formulate hunting regulations.*

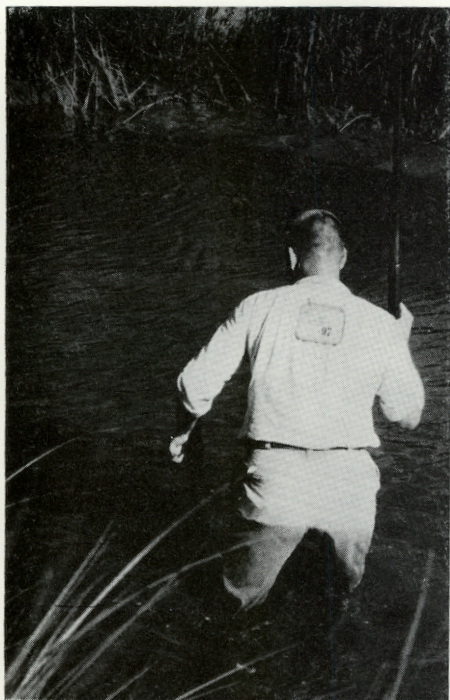
*Chasin'*

# MUD HENS

DOWN ON THE salt marshes this year we have a bumper crop of clapper rails, or as they are more prosaically called locally, mud hens. The shooting has been outstanding this fall and from all indications should continue to be very good all during the rest of the season.

*Photographs by Harry Grosch*





The mud hen hunter could be just about any ordinary gunner found in New Jersey with one important characteristic—he must not be water-shy. In fact, the rail bird hunter must have a love of the salty waters to really make the best of the gunning—especially if he does not have a dog and must retrieve his own birds. Even the dog-owner has to wade and swim across the many tidal creeks on the marshes.





## *... Mud Hens*

Clapper rail hunting depends more on the state of the tide than the time of the day. Therefore, the best shooting is just as apt to be during the middle of the day as during the very early or late hours. The hunting is ordinarily a warm weather sport; thus, light clothing and wet wading are usually in order. Since heavy hunting coats are seldom necessary, many mud hen gunners carry their birds by tucking the birds' heads under their belts.



Shoes for rail birding are ankle-high canvas tennis shoes, sneakers, jungle boots, or wading shoes over heavy wool socks. Several mud hens and a couple of hours later the shoes may no longer look very new.





Mud hens offer just about the best opportunity in this day and age for a New Jersey hunter to get plenty of shooting in during a day. The daily bag limit is 15; the possession limit 30. The season is open to November 9.



**Do not trespass**

## **BEFORE YOU HUNT ASK**

The New Jersey Division of Fish and Game will continue to acquire and develop public hunting and fishing grounds; it will continue policies and practices designed to keep maximum acreages of private land open to the public. But the final answer of a place to hunt rests with you, the sportsmen of New Jersey. Now, before the seasons open, forego a few outings or trap shoots, miss one or two days of training that dog, get out in the area where you want to hunt, meet the landowners and line-up your season's sport.

## 10 LITTLE HUNTERS

10 little hunters, feeling fit and fine . . .  
One forgot his safety catch, and then there were 9.  
9 little hunters, flirting with their fate . . .  
One started clowning, and then there were 8.  
8 little hunters, in a shooters' heaven . . .  
One was "triggered" by a fence, and then there were 7.  
7 little hunters, wise to feathered tricks . . .  
One used a faulty gun, and then there were 6.  
6 little hunters, glad to be alive . . .  
One looked down a gun barrel, and then there were 5.  
5 little hunters, skilled in woodland lore . . .  
One took to drinking, and then there were 4.  
4 little hunters, feeling mighty free . . .  
One had an "empty" gun, and then there were 3.  
3 little hunters, tramping through the dew . . .  
One shot a shadow, and then there were 2.  
2 little hunters, shooting on the run . . .  
One tripped upon a rock, and then there was 1.  
But 1 little hunter is still alive to tell  
That following sound safety rules guards a hunter well.

—Isaac Walton League

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### *Do You Want To Hunt This Fall?*

If you are between the ages of 14-21 and do not have a previous HUNTING LICENSE you cannot obtain a current license unless you present a signed certificate showing you have successfully completed a course in GUN SAFETY. Do not wait until hunting season is here to get your certificate. Contact a Conservation Officer, the Division of Fish and Game Office, or any license issuing agent IMMEDIATELY and get the name and address of the HUNTER SAFETY INSTRUCTOR nearest you and take your course NOW.

# Why Clean Waters?

By BRIAN MORGAN  
Woodbridge High School

Setting: Two communists on a ship entering a large port.

"Yes comrade, that is what the Americans kept asking themselves—Why Clean Waters? The fools thought that a little pollution here and there would not hurt anyone. They were too money minded, and they did not want to pay high taxes for clean waters. They did not know that in our country the State makes the decisions. We have no voice in our government.

"The Americans sat back relying on their fat pocketbooks to carry them through. They were not concerned about the first few cases of typhoid fever. They did not care that their fishermen were catching less and less fish. They did not even notice these signs of physical and economic decay of a nation.

"They thought that to throw raw or partially untreated sewage into a river or stream was nothing. In only fifty or sixty miles this water would be pure. Little did they realize, or care, that the next town was only five miles down the stream. They wondered why their streams were getting dirtier. They never thought that the little bit of sewage or small amount of silt could kill so much aquatic life.

"Then it hit them just like a bomb, epidemics of typhoid erupting in heavily populated areas of the country. Typhoid was hospitalizing people who thought they were safe because they had been vaccinated when they were young. They did not realize that to be safe from the disease, they had to be vaccinated every three years. The general physical condition of their citizens started to decline. More and more babies were born dead or abnormal, and of the ones that were normal, there were few you could really call healthy.

"Now, people were afraid to use water without boiling it. Now, they wanted to clear up their rivers and streams. Now, it was too late. Money could not buy clean water quickly.

"There were a few who saw, comrade, but these few could do nothing. They could not convince the masses of the danger facing them. If these few could have been more, the story might have been different. The nation might have had a chance.

"Their industries, all but shut down, their military strategically weakened, the United States was a prime target. We did not intend to pass the opportunity up to defeat the largest nation standing in the way of world communism.

"If only they had been able to answer the question, 'Why Clean Waters?' If only they had realized it meant their lives.

"Look, Comrade! The fog is lifting. You can see the Empire State Building. Our commissar says that it is the tallest building in our new satellite."  
#

# COUNCIL HIGHLIGHTS

## AUGUST MEETING

The open session of the regular monthly meeting of the Fish and Game Council was held on August 8. Those present in addition to the Council, Director and Staff included: William Backus, Nelson Benedict, Mrs. Lillian Godown, Roy Williams, Edward Jackson, John Russack, and Amos Horrocks (Tape recorder operator).

### Pollution

Councilman Kelly called attention to quite a number of serious pollution cases. He feels that each of the Council members is a committee-of-one on pollution and "unless we are tired of living on this earth, we should watch what people are doing to the water in which we fish and the air we breath or we won't have a place to stay and live."

He cited serious pollution in the Elizabeth area which was brought to his attention at the time a fire had ocured to a plant in that area. Mr. Kelly called in Walter Robinson to make an investigation.

The Director stated that a Public Health meeting is to be held in New York on August 23 and 24. There is considerable concern in the State Department of Health regarding this. To his knowledge, this in effect, is the first instance here in New Jersey wherein the U.S. Public Health Service has exercised authority under the Blatnik Bill to step in on matters of pollution when they feel that they are not being adequately handled by the local authorities.

The Public Hearing in New York is to investigate the Raritan Bay situation. The Department of Health feels that the situation is under control.

The Director stated it will be interesting to see a situation wherein the standby authority of the Public Health Service is put in operation on a pollution matter.

The Director stated that a meeting is to be held on Thursday to present evidence on the Raritan River and particularly the American Cyanamid pollution at Bound Brook.

The Chairman asked if anyone was to testify in the Division's behalf at the New York meeting. The Director stated that the Commissioner is presenting a statement from this Department. The Director will be unable to attend, but Bruce Pyle will be the observer for the Division. Unless we are called upon to testify, our only testimony will be what is included in Commissioner Adams' statement as far as the American Cyanamid information is concerned. The Director does not know what information Dr. Kandle intends to present.

Councilman Kelly stated that our Fisheries Biologists at the Laboratory are pursuing the matter of pollution in the Raritan River, with

## *. . . Council Highlights*

particular emphasis on industrial pollution in certain areas and they have prepared a set of graphs and charts showing the effect over the last six or seven years. Mr. Kelly stated that the condition in the Raritan River has considerably worsened in a year's time. Last year small fish were able to survive, this year the fish are gone.

Chairman McCormick stated that under certain conditions we are permitted to file complaints and prosecute, and he suggested that we proceed with prosecutions.

Director Underhill stated that in certain areas, the state has, in effect, partially relinquished jurisdiction to the Interstate Sanitation Commission, whereby New Jersey and New York have delegated a certain portion of their authority. This does not mean that we cannot push vigorously to correct the situation, but it does present legal complications in terms of our trying to prosecute. The situation is further complicated by the fact that there are no longer any fish to be disturbed which makes the Fish and Game law ineffective.

The Interstate Sanitation Commission has recently completed a survey of the area and they indicate that they are planning to take some action against the offending companies. This is in the heavy industrial area of New York and New Jersey and any action taken will, no doubt, embody some compromise so that many of these companies will not have to close down. If enough public support is developed, a cleanup can be effected. The Public Health law can be used in doing this.

The Director feels that the only way that the Division of Fish and Game can operate in terms of prosecution is to do what Mr. Spencer has been doing slowly on the Hackensack River and that is to start up on the tributaries and headwaters and work down. This is a tremendous task and cannot be done under present funds. Progress has been made in the Delaware River. This year there has been a fine shad run and enough shad were in the Upper Delaware for a fine sport fishery.

Mr. Kelly brought up the matter of the Furnace Brook pollution. Councilman Frome stated that a meeting was held by Senator Dumont with surrounding property owners and the Board of Health. A program was set up for the dye works. They have until sometime in August to establish a catch basin, and if the creek is not cleaned up by sometime in October, they must immediately take further steps. A time table for action has been established.

Passage of the Department of Health bill which requires provision for proper waste treatment by new industries locating in the state, will not solve the problem but will be a step in the right direction. To date this bill has passed in the Assembly but has not moved in the Senate.

Mr. McNeel felt that public awareness is the only way the problem will be solved. If these companies find that the improper disposal of their waste will adversely affect the sale of their products, they will take steps to correct it.

Mr. Kelly stated that it is the civic duty of all citizens to report cases of pollution to local authorities and do whatever they can to see that pollution ceases.

The Chairman stated that the country, from the national administration on down, is becoming more aware of pollution. Federal anti-pollution bills are making funds available to communities and states to help stamp out pollution, and with public attention focused on the possibility of clams in polluted waters causing disease, this is a good time to move full speed ahead.

### **Delaware River Fishing**

Richard Gross mentioned the large population of shad in the Delaware River, and the sports fishery which has been reestablished for shad there. Also, both wall-eyed pike and smallmouth bass are present. The fish of the 1959 year class, are small at present, but by next year there should be very good pike and bass fishing in the River.

### **Flat Brook Trout**

Mr. Gross also reported on the Flat Brook investigation made following complaint of poor fishing in the state-owned area. Investigation revealed that the fish were not there and he states that this is primarily caused by lack of trout habitat or poor habitat. The section was stocked heavily but the fish have moved to areas where there is better habitat. Where the habitat was better, trout composed 35% to 40% of the weight of fish. In the section with poor habitat, the trout composition was less than 20% by weight. Mr. Gross feels the Division should concentrate on stream improvement, particularly in sections of streams that are state controlled.

### **Manahawkin Project**

The Director stated that Chief MacNamara deserves a tremendous amount of credit for the Manahawkin project. The results may be a major break-through in effecting mosquito control without adversely affecting wildlife values in our coastal marshes. By using the principal of diking in this salt marsh, using brackish water pumped in from the bay, and maintaining a relatively constant level inside the dikes, we have not only completely changed the vegetative pattern, but created ideal wildlife habitat. To date we have eliminated, to all intents and purposes, mosquito production from this area which has, in the past, been a tremendous mosquito producer.

If this project continues to bear fruit, there are many hundred of

## . . . Council Highlights

thousands of acres of marshland which might well be treated in this fashion, to preserve and tremendously increase wildlife habitat.

### **Game Management**

Chief MacNamara reported a good population of rabbits in the south, spotty in the north in areas which previously carried a good population. The severe winter did not retard the quail too much. Grouse are approaching their peak. Raccoon and squirrel are in good numbers. Red foxes have increased and gray foxes have decreased.

Plans for Greenwood Forest are complete and development work will be started there in a matter of days. The Game Farms are coming along nicely. There is a good supply of high quality birds.

### **Striped Bass**

Mr. Benedict asked if the Council had approved a reduction in the minimum length of striped bass from 18 inches. The Chairman stated that the Council did recommend a change and that a 12-inch uniform law was recommended. Dr. Underhill supplied the following background information which led to this decision.

There has been considerable discrepancy in legal size for striped bass along the coast. From New Jersey north, most of the states have an 18-inch minimum length. From New Jersey south the minimum length is 10 inches or 12 inches. In Delaware Bay the minimum length is 10 inches. At the recent joint New York—New Jersey—Pennsylvania meeting on the Delaware River, the feeling was expressed that a sound policy would be to try to get a uniform size. There has been a tremendous surge of small, two-year old striped bass last year and again this year. There is considerable biological data to indicate that the old 18-inch concept does not have biological justification.

Councilman Kelly, who represented New Jersey at the meeting, recommended to the Council that we seek legislation to the same effect. The legislation was not introduced at the last session of the Legislature although it has been in the hopper for two months. The Council approved such legislation. Mr. Kelly stated that Pennsylvania has already passed their 12-inch law. The state agreed to this and went ahead and implemented their agreement by passing the law. #

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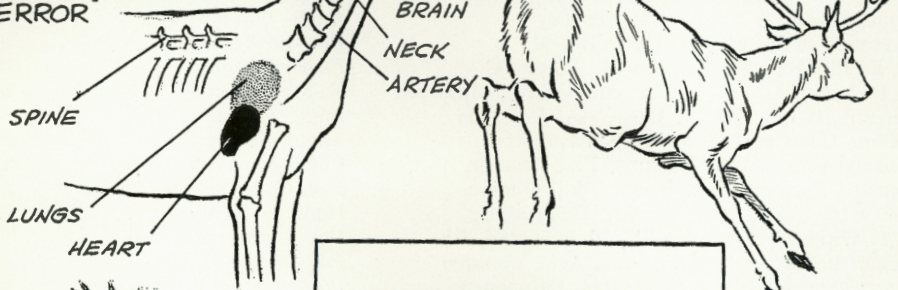
# Fur, Fin <sup>and</sup> Campfire

By JACK SORDS

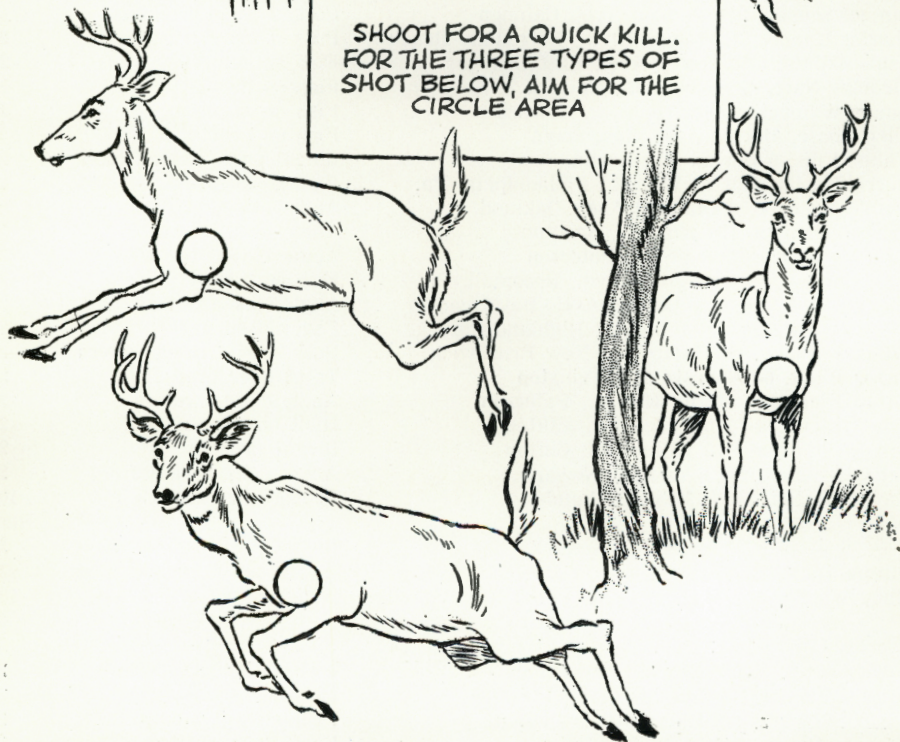
## Placing the Arrow

THE VITAL SPOTS ON A DEER ALL LIE UP FORWARD. A SHOT AIMED AT THE SHOULDER RIGHT ABOVE THE FRONT LEG ALLOWS FOR A GOOD MARGIN OF ERROR

UNLESS YOU ARE AN EXPERT SHOT, SPARE THE DEER THAT IS RUNNING AWAY. CHANCES OF MERELY WOUNDING AND LOSING HIM ARE GREAT



SHOOT FOR A QUICK KILL. FOR THE THREE TYPES OF SHOT BELOW, AIM FOR THE CIRCLE AREA



# VIOLATORS ROUNDUP

JUNE 1961

<i>Defendant</i>	<i>Offense</i>	<i>Penalty</i>
Wm. Fox, 117 2nd Ave., Pitman	Hunt no license	20
Wm. Fox, 117 2nd Ave., Pitman	Hunt aid of lights	20
Wm. Fox, 117 2nd Ave., Pitman	Hunt deer closed season	Prob. Lic. Rev. 100
Wm. Fox, 117 2nd Ave., Pitman	Illegal missile	Prob. Lic. Rev. 100
Wm. Fox, 117 2nd Ave., Pitman	Uncased firearm	Prob. Lic. Rev. 100
Karl Woehner, 2091 High St., Union	Illegal poss. trout	20
Frank Souza, 19 Radley St., Kearney	Angle closed season	20
Raymond Richards, Reidy Pl., Hewitt	Fish no license	20
W. E. Flitcroft, 468 Latham St., Maywood	Fish no license	20
E. P. Lepori, 156 E. Spring Valley Ave., Maywood	Fish no license	20
Howard Harvey, 146 W. Broadway, Paterson	Angle closed waters	20
Thelma Cureton, 11 River St., Passaic	Angle closed waters	20
Leonard Formolo, 3215 Bruns. Pk., Trenton	Fish no license	20
Leonard Formolo, 3215 Bruns. Pk., Trenton	Fish closed waters	20
Henry Loeb sack, 409 Firth St., Phillipsburg	Hunt no license	20
L. T. Witham, 2703 Mose St., Philadelphia, Pa.	Poss. undersized bass	20
Joshua Robinson, 1240 Magnolia Ave., Camden	Poss. 2 undersized bass	40
Samuel Seeney, 848 Haddon Ave., Camden	Poss. 2 undersized bass	40
Charles Kupper, 333 Ocean Blvd., Normandy Beach	Poss. 1 undersized bass	20
Robt. Williams, 53 Marcy Ave., East Orange	Fish no license	20
Nicholas Natz, 47 Hobson St., Newark	Fish no license	20
James Willoughby, 447 High St., Newark	Fish no license	20
Allen Boose, Morton Ave., Rosenhayn	Fish no license	20
Walter Ellis, 9 Bulew Pl., Parlin	Illegal poss. striped bass	20
Morris Karlin, 1491 E. Wilt St., Philadelphia, Pa.	Fish no license	20
Donald Spencer, 8 Oakland Ave., Oakland	Angle closed waters	20
Joseph Frohlich, 109 Wm. St., Boonton	Angle closed waters	20
Juan Vega, 429 Straight St., Paterson	Angle closed waters	20
John Caffney, 33 Evergreen Ave., Broomall, Pa.	Fish no license	20
Charles Van Note, 130 Osborn Ave., Bay Head	Angle closed waters	20
Steve Redler, 138 Columbia St., Highland Park	Fish closed waters	20
Frank Putnoky, 85 Martin St., New Brunswick	Poss. trout closed waters	20
Victor Bladt, 64 Augusta St., Irvington	Trout over limit	20
Alfred Klemans, 472 E. 34th St., Paterson	Angle closed waters	20
Wm. Williamson, 175 Valley Rd., Clifton	Hunt no license	20
Wm. Williamson, 175 Valley Rd., Clifton	Illegal firearm	20
Patsy Cenaffra, 234 Broad St., Newark	Angle closed waters	20
Wayne Norton, 34 N. 35th St., Camden	Procure lic. wrongfully	100
R. A. Spatola, 61 Norfolk St., Newark		Lic. Rev.
Joseph Tomchik, 39 N. Y. Ave., Carteret	Illegal poss. striped bass	20
Stacy Warfle, Jr., R.D. 2, Cumberland Rd., Millville	Illegal poss. striped bass	20
	Hunt deer closed season	100
Charles Campbell, 202 Parrish St., Wilmington, Del.		Prob.
Lloyd Coates, Rt. 2, Box 85, Burkeville, Va.	Fish no license	20
Ralph Didonna, 132 Rossiter Ave., Paterson	Fish no license	20
Roger Schwarz, 173 Ellis Ave., Irvington	Fish no license	20
Thomas Natly, 1211 Robt. St., Union	Fish closed waters	20
	Fish closed waters	20

<i>Defendant</i>	<i>Offense</i>	<i>Penalty</i>
Robt. Fisler, 232 Elm Ave., Mantua	Uncased firearm	100 Prob. Lic. Rev.
Robt. Fisler, 232 Elm Ave., Mantua	Illegal missile	100 Prob.
Robt. Fisler, 232 Elm Ave., Mantua	Hunt deer closed season	100 Prob.
Robt. Fisler, 232 Elm Ave., Mantua	Hunt aid of lights	20 Prob.
Robt. Fisler, 232 Elm Ave., Mantua	Hunt no license	20 Prob.
Henry Martin, 2134 N. 32nd St., Philadelphia, Pa.	Fish no license	20
James McCarty, R.D. 1, Box 21, Woodland Ave., Blenheim	Fish no license	20
Fortunato Bonino, N. Delsea Dr., Franklinville	Trout over limit	20
George Zanetti, 20 Graham Pl., Clifton	Hunt no license	20
George Zanetti, 20 Graham Pl., Clifton	Hunt closed season	20
Albert Picola, Hesstown Rd., Cumberland	Illegal firearm	20
Paul Verderosa, 231 Merchants Ave., South Plainfield	Angle closed waters	20
Russell McGee, Range Rd., Pemberton Twp.	Angle no license	20
Robt. Budden, Wash. St., Hainesport	Illegal firearm	20
Robt. Budden, Wash. St., Hainesport	Hunt on Sunday	20
John Nickerson, 115 Hanover St., Pemberton	Fish no license	20
Willie Green, 79 Strafford Pl., Newark	Fish no license	Jail
James Black, 5 Hunter St., Newark	Angle closed waters	20
Willie Lott, 66 2nd St., Newark	Angle closed waters	20
Maris Larmanis, 4732 N. Mascher St., Philadelphia, Pa.	Fish no license	20
Wm. T. Kilbridge, 3627 Berkley Rd., Cornwall Hgts, Pa.	Fish no license	20
John Lamm, 363 Myrtle Ave., Irvington	Angle closed waters	20
Michael Shard, Liberty Ave., R.D. 2, Yardville	Illegal poss. striped bass	20
John Danks, 6441 State Rd., Philadelphia, Pa.	Illegal poss. striped bass	20
John Angelini, 115 Steamboat St., Trenton	Illegal poss. striped bass	20
Walter Watson, 191 Spring St., Newton	Hunt on Sunday	20
Walter Watson, 191 Spring St., Newton	Illegal firearm	20
James Kermit Schoppe, 3450 Valley Green Dr., Drexel Hill, Pa.	Fish no license	20
A. Yates Schilling, Jr., 8010 Arlington Ave., Upper Darby	Fish no license	20
Barbara Black, 25 Schafer Ave., Cedarville	Fish no license	20
Gerhard Adamson, 371 Ocean Ave., Lakewood	Fish no license	20
Philip Bowcock, 35 Lafayette, Toms River	Rifle no permit	20
George S. Hayeck, 5 Garden Pl., Cranford	Fish no license	20
Harold Butler, 1 Highland Ave., Sussex	No chuck permit	20
Harold Butler, 1 Highland Ave., Sussex	Loaded gun in auto	20
Roger Forss, Belleplain	Hunt aid of lights	20
Wm. H. Holt, 717 Linden St., Allentown, Pa.	Fish no license	20
Jos. Chinn, 69 Pennington Ave., Passaic	Fish with bait in fly fishing waters	20
Philip Craig, 72 Railroad Ave., Jamesburg	Tag not displayed	5
Marvin Harrison, 223 S. Orange Ave., Newark	Angle closed waters	20
Patrick Keller, 2923 Hale St., Philadelphia, Pa.	Fish no license	20
Michael Gornick, 2260 LaRue St., Philadelphia, Pa.	Fish no license	20
James Hoff, 7 First Ave., Runnemede	Fish no license	20
Edward Clark, Jr., 3039 Tulip St., Philadelphia, Pa.	Fish no license	20
Frederick Carlson, Jr., 3368 Livingston Ave., Philadelphia, Pa.	Fish no license	20
John Bartleson, Helpern Ave., Woodbine	Hunt aid of lights	20

## . . . Violators Roundup

<i>Defendant</i>	<i>Offense</i>	<i>Penalty</i>
Mandy Armstrong, Delmont and Belleplane Rd., Delmont	Hunt aid of lights	20
James McCarthy, 111 N. Broadway, Pitman	No trout stamp	20
John Mosley, 1146 Asbury Ave., Asbury Park	Angle closed waters	20
Bernard Johnson, 1259 Berkley Rd., Paulsboro	Hunt no license	20
Philip Craig, 72 Railroad Ave., Jamesburg	Hunt aid of lights	20
Philip Craig, 72 Railroad Ave., Jamesburg	Loaded gun in auto	20
Charles Thrasher, 902 Sofield Ave., Perth Amboy	Illegal poss. deer	100
Mark H. Curtis, 889 Sofield Ave., Perth Amboy	Illegal poss. deer	100
Peter Kolakowski, 421 S. 18th St., Newark	Fish no license	20
E. F. Drew & Co., Inc., 15 E. 26th St., N.Y.C., N.Y.	Pollution	500
Walter Young, 186 Lewis St., Bridgeton	Fish no license	20
Peter Pazder, 80 Smithfield Ave., Trenton	6 Trout over limit	120
Lee P. Humes, 3860 Poplar St., Philadelphia, Pa.	Fish no license	20
Tony Barbaro, Foul Rift Rd., Belvidere	Trout over limit	20
Albert Carsey, Brass Castle Rd., Washington	Fish closed waters	20
Alfredo Roeha, 151 Elm St., Newark	Fish before hours	20
Francis Romeo, Prospect Ave., Mt. Arlington	Fish before hours	20
Robert Post, Howard Blvd., Mt. Arlington	Fish before hours	20
Alexander Goldstein, 114 Harper St., Highland Park	Fish before hours	20
Dorothy Tanner, Mt. Arlington	Fish before hours	20
Raymond Curry, 97 Irving St., Midland Park	1 pickerel illegal size	20
David Ogburn, Chatsworth	Fish no license	20
Wm. Werner, 53 Mill St., Penns Grove	Fish no license	20
Jos. Wilkins, 356 Morris St., Woodbury	Fish no license	20
Charlie Coney, 32 Bergen St., Paterson	Angle closed waters	20
G. Lucas, Two Bridges Rd., Towaco	Angle closed waters	20
Wm. Williamson, 175 Valley Rd., Clifton	Hunt closed season	20
Frank Good, Jr., 326 Queen St., Woodbury	Fish no license	20
Stacy Warfle, Jr., R.D. 2, Cumberland Rd., Millville	Hunt no license	20
Theodore Allwood, 540 Norwood St., East Orange	Fish no license	20
Charles Wright, Jr., Bartley Rd., Long Valley	Fish closed waters	20
Laszlo Kocsa, 31 E. 7th St., Lakewood	Fish no license	20
Pat Temperio, 22 Rustic Dr., Lakewood	Fish no license	20
Richard Jones, 51 Western Dr., Lakewood	Fish closed waters	20
Richard Jones, 51 Western Dr., Lakewood	Fish no license	20
Joel Freed, 4751 N. Franklin St., Philadelphia, Pa.	Fish no license	20
Edward Buck, Jr., 2914 N. 5th St., Philadelphia, Pa.	Fish no license	20
Wm. Cole, 211 N. 52nd St., Philadelphia, Pa.	Fish no license	20
Firman Lawless, Tuckahoe Rd., Dorothy	Hunt deer closed season	100
Louis Schneider, 935 Emma St., Elizabeth	Fish no license	20
Donn Snyder, 727 Forest Ave., Westfield	Fish no license	20
Foster Swenney, 103 Moonachie Ave., Moonachie	Loaded gun in auto	20
Wm. Rudewicz, 901 Garden St., Hoboken	Firearm on Sunday	20
James B. Simmons, 1404 9th St., North Bergen	Firearm on Sunday	20
James Kayser, 503 N. Y. Ave., Union City	Firearm on Sunday	20
Patrick Ryan, 936 Garden St., Hoboken	Firearm on Sunday	20
Robt. Petrosino, 909 Park Ave., Hoboken	Firearm on Sunday	20
Michael Luciano, 34 Mary St., Paterson	Angle closed waters	20
Ignatius Difebbo, 624 Durfor St., Philadelphia, Pa.	Fish no license	20
Henry Metzler, 124 High St., Hackettstown	Fish closed waters	20
Ronald Wintjen, R.D. 1, Lackawanna Ave., W. Paterson	Fishing on hatchery property	50
Pedro Eduardo, 72 Orchard St., Newark	Fish no license	20
Frank Faretra, 2 Magnolia La., Newark	Angle closed waters	20
Walter Watson, 191 Spring St., Newton	Hunt no license	20

## . . . green acres AND HUNTING

*(Continued from Inside Front Cover)*

larger scale acquisition of public land, and combined use under the multiple use practice, will overcome this difficulty.

The success of the hunting trip proposed for October, 1971, will depend on the condition, as well as existence, of public hunting grounds. As hunters know, simply having open land is no assurance of good hunting. A great deal of open space will not support much game. Already many of the state's best hunting and fishing areas are privately owned or controlled and not available for public use. The trend is toward more restriction of hunting areas. Future public hunting requires that suitable tracts be acquired before they are lost.

Such a loss that could never be recovered is that of our marshlands essential to ducks, rail, and other migratory birds. Here the loss is not only to New Jersey hunters, but to the whole Atlantic flyway. Our 280,000 acres of natural marsh area in New Jersey is estimated as being lost to wildlife at the rate of 2% annually. Pressures for land development will probably accelerate this rate.

Preservation of these land conditions suited to wildlife immeasurably assists game management. It is a poor and costly practice to be forced to re-establish such conditions for hunting when only less suited land remains. Preservation of waterfowl, for example, offers a self-perpetuating prospect of future sport. Some other game under favorable conditions will do as well. For still others, only extensive production and stocking will serve hunter demand. Whatever the requirement, New Jersey still has unique opportunities to acquire, protect, and maintain public hunting areas; and to sustain its program of game production and management. But—these doors of opportunity are being rapidly closed.

So—when you go hunting in 1971, what are your prospects? Are there sufficient public hunting grounds, and can the sport still be enjoyed? Looking at October, ten years from now, how well have we preserved this part of outdoor life?

Hunting, and fishing, have certainly the deepest roots in our outdoor American heritage. They have served for our survival, and continue to meet our needs. They are a weathervane, perhaps, of the values that we intend to hold in modern life.

Support of the Green Acres Bond Issue is our best opportunity to preserve these values of all outdoor recreation in New Jersey—for 1971 and beyond.

#

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