

NS Periodical

New Jersey

FREE PUBLIC LIBRARY
TRENTON, NEW JERSEY

OCT 1 1969

REFERENCE
DEPARTMENT

Outdoors

September 1969



SHOFFSTALL

New terms to describe

Bird Hunting **and birddog men**

Eddie Finlay, noted Brittany trainer, feels that outdoor writers need new terms to describe bird hunting and birddog men. Eddie suggests that we learn from the news commentators. For instance:

Missile malfunction—didn't cut a feather.

Missile lag—didn't lead him enough.

Diplomatic immunity—he's not your dog so don't whip him.

Diplomatic concession—admitting you didn't shoot at the only bird that fell.

Diplomatic deadlock—refusal to admit you didn't.

Peaceful coexistence—you don't talk about my dog and I won't talk about yours.

Situation unclear—dogs pointing all over the place.

Review of strategy—which side of the ditchbank will they fly down?

Clarification needed—where in heck did those singles go?

Exploratory discussions—argument over where in heck they went.

Fait accompli—they went in the honeysuckle.

Gold drain—boarding your dogs.

Dangerous potential—taking along that unbroken puppy.

Domestic crisis—one of your wife's nieces getting married on Saturday afternoon in the bird season.

Cold war parley—explaining why you won't be able to attend the wedding.

Mutual trust—"Since you're my friend, you can have him for \$300."

Meeting the challenge—"I'll give you old Joe for him."

Wide diplomatic experience—has bought and sold many bird dogs.

Alien ideology—hunting quail with anything but a pointer or setter.

Liberal—hunts on anybody's land.

Conservative—won't let anybody hunt on his land.

Momentous decision—can the jeep get across the ditch?

Fiasco—it couldn't. Where's the closest tractor?

Price differential—what you paid for the dog and what you told your wife you paid.

#



State of New Jersey

Richard J. Hughes
Governor

Department of Conservation and Economic Development

Robert A. Roe
Commissioner

Division of Fish and Game

L. G. MacNamara
Director

Fish and Game Council

Joseph L. Alampi,
Franklinville ('71)

Ralph Allocca,
Colts Neck ('71)

Raymond Baker,
Deans ('73)

Randle N. Faunce,
Delanco ('70)

G. Albert Reid,
Linwood ('70)

Raymond T. Richardson,
Pt. Monmouth ('72)

Joseph Schollenberger,
Holmdel ('72)

Fred Space,
Sussex ('71)

James V. Stabile,
Mendham ('73)

Al Toth,
North Brunswick ('72)

Charles E. Webber,
Westwood ('73)

Public Relations

William E. Peterman,
Supervisor

Law Enforcement

Newman Mathis,
Chief—Coastal Patrol

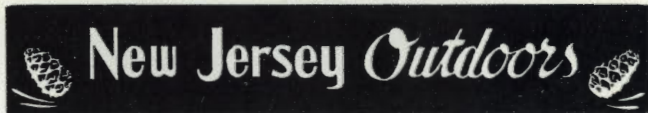
Wildlife Management

George N. Alpaugh,
Chief of the Bureau

Oscar Sussman, D.V.M.,
Veterinary Consultant

Fisheries Management

Robert A. Hayford,
Chief of the Bureau



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

In This Issue

Bird Hunting	Inside Front Cover
Woodchuck Bow Hunting	3
For Better Fishing	7
Record Deer Awards	12
For the Good	13
Don't Join the Club	14
The State Fair	15
Trap-Skeet and Rifle Ranges	18
To Avoid Fishing Hazards	19
Clapper Rail	20
1969 Hunting Regulations	22
River Birch	28
Council Highlights	30
Berrytown Tract	32
Fur, Fin and Campfire	Inside Back Cover

Cover—"Rail Bird"—Shoffstall

The rail bird, in this case the clapper rail, is one of our more unusual game birds. It is a marsh bird that is hunted starting in September. For more on rail birds see page 20 and the inside back cover.

Vol. 20, No. 3

September, 1969

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

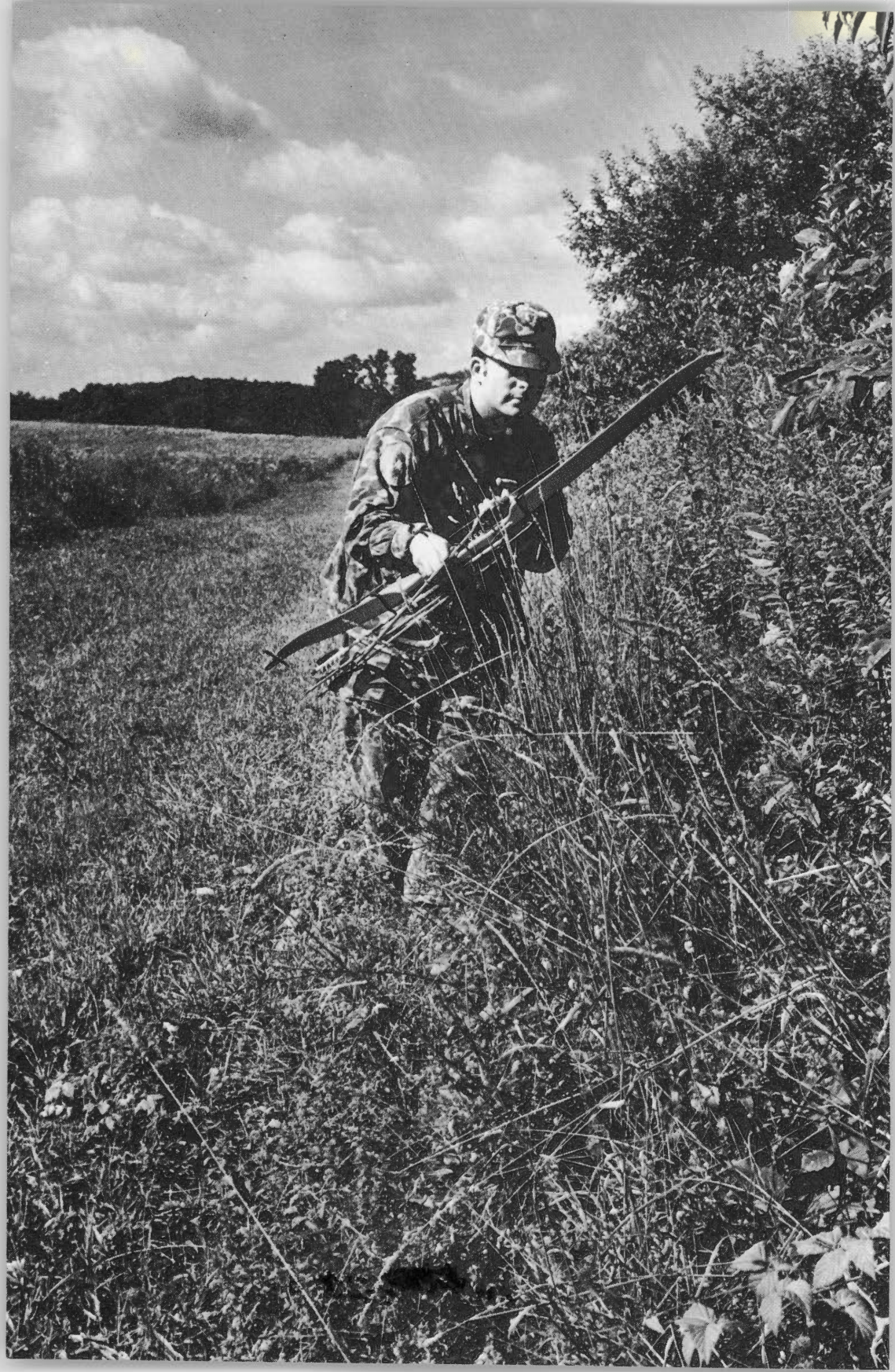
Editor: R. Adams

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

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

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

All unsolicited material is sent to the magazine at the risk of the sender. Permission granted to reprint with credit to *New Jersey Outdoors*.



Woodchuck Bow Hunting

By Robert McDowell, Public Relations

IT HAS TAKEN you half an hour of crawling and hiding behind a rock wall to get this close. A slow cautious look over the wall and you are finally within shooting range. Your quarry is unaware of the pending danger as your fingers tighten on the bow string and you slowly come to full draw, rising up at the same time. Your aim is quick, the arrow is released . . .

This scene could have been a fall deer hunt or a woodchuck hunt. September is a good time to begin the process of preparing for archery deer season, and an excellent way to sharpen the eye, tune the bow aim, and test your equipment by chuck hunting.

The woodchuck, or *Marmota monax*, is a tough customer to hunt with a bow. Getting close is the first problem and hitting him is the second. The woodchuck is well known for his sharp eyes, but his ears and nose serve him well also. The hunter must take great pain to avoid being seen and must pay attention to wind direction and how much noise he is creating. The one advantage the hunter has is there are lots of woodchucks and if you fail on one attempt there is always another chuck over in the next field.

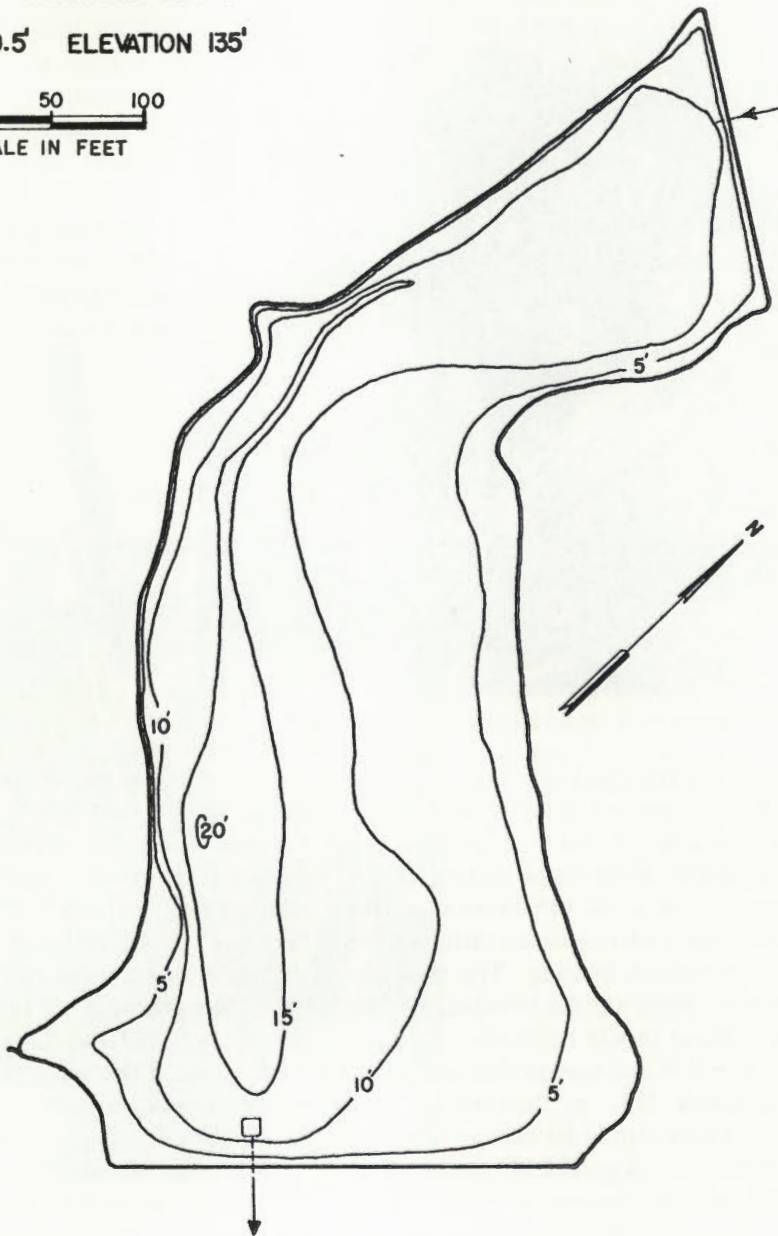
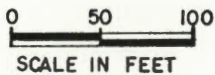
Just as in deer hunting, the best time of day to hunt chucks is early

morning and evening. There are two basic ways to hunt, the sneak or still hunt method and the blind or stand method. To stalk a chuck you must first locate him and after you have spotted him, the next step is to determine how you will make your approach without being seen, scented, or heard. Hunting along hedge rows is ideal for this as you may catch the chuck away from his hole and can use the hedge row to hide your movements.

Because of the limited accurate range of a bow, you must get close, 30 yards or less. The closer the better, for a chuck is a small target and in order to make a clean kill a head shot, chest shot, or a spine hit is necessary. These vital areas constitute a 4-inch x 4-inch target at the most, so closeness and being a good shot is essential.

Many times a smaller piece of cover such as a single tree or bush can be used to cover your approach. Just line the tree up between you and the chuck and approach carefully. A chuck in an open field with no cover is tough to hunt, but not impossible. A good tactic is to walk straight at him and many times you'll be able to approach close enough for a shot. When they do dive into the hole, walk around and behind, to position your-

HOLMDEL PARK POND
NAVESINK RIVER DRAINAGE
MONMOUTH CO.
2.8 ACRES CONTOUR INT. 5'
AV. DEPTH 9.5' ELEVATION 135'



For Better Fishing

Aspects of Trout Management Employing Reclamation and Restocking With Fingerling Rainbow Trout in a Marginal Trout Pond

By Robert Soldwedel and A. Bruce Pyle
Bureau of Fisheries Management

Part II

Holmdel Park Pond, a marginal trout pond located near Holmdel, New Jersey on Monmouth County Park Commission Property was used to evaluate the management procedure involving annual plantings of fingerling rainbow trout with reclamation as determined necessary. Results showed that this procedure can produce an excellent fishery, extending through the summer and fall, under the conditions tested. An average monthly growth increment of about 0.49" and survival of up to an estimated 90% made this possible. Competition from other species was considered the most serious factor influencing survival and growth, and measures effectively preventing the establishment of other species are considered essential to the success of this management procedure. Estimated poundage of fish produced in Holmdel Park Pond compares favorably with results elsewhere. Considerations related to the application of this management procedure are also discussed.

Benefits

The desirable fisheries produced during some of the years of this investigation indicate the potential of this management procedure. These fisheries were popular with anglers prima-

rily because of the high catch rate as exemplified by the 0.97 trout per-man-hour in 1968; this nearly equals the rate of 1.0 established as desirable for New Hampshire by Seamans (1959) and considered similarly for New Jersey. Personal interviews with anglers and park personnel regarding the initial stocking in 1963 suggested a similarly high harvest rate. The excellent condition of the fish, i.e. deep body, "pink" flesh, minimal evidence of handling etc. such as scars and deformities, added to the attractiveness of the fishery. During the first years of the experiment there was little publicity and the result was that a relatively few anglers were reaping the harvest. Word of the fishing spread and this together with publicity given the program in 1968 as well as the action afforded by the fishery resulted in considerable angler usage during the last year. The availability of the trout to anglers during the summer as shown by the 1968 creel census results make this management procedure particularly attractive for waters where summer use predominates. It also appears that through application of this procedure productive angling could be produced for almost any desired portion of the year merely by regulating the time of

. . . For Better Fishing

the fingerling plantings and the period of harvest.

The indicated high return to the anglers of the stocked fish, approximately 89 percent in 1968, suggests that this management procedure can result in efficient utilization of hatchery fish and thereby could provide economic benefits to parties concerned with providing trout angling in similar waters. In comparison, such high returns are seldom achieved by "put and take" trout stocking programs (i.e. where catchable sized trout are stocked) in similar waters; Smith (1960) in a summary of "put and take" evaluations in New Jersey park ponds claimed that "harvests of up to 75 percent of the original stocking can be realized if recommendations are followed". Although the need for periodic reclamations to remove undesirable fish (these may purposefully or inadvertently include trout of a size capable of predation upon introduced fingerlings) represents a cost not called for in "put and take" trout management, the efficient harvest of trout in the management procedure tested tends to preclude the need to reclaim for trout control purposes. Thus, with adequate controls to minimize unwanted introductions of competing species it is conceivable that to annually obtain the maximum benefits would merely require the annual replanting of fingerling trout.

Influencing Factors

It seems apparent that various factors were influencing results over the period of the study. Some of the

more apparent factors were: (1) the suitability of the pond for supporting trout throughout the year, (2) the characteristically high initial productivity of impoundments when they are first flooded (no growth rates exceeded that of the first planting of trout), and (3) the abundance and size of other species present (growth and ultimately survival of trout appears to have been impaired substantially after the unwanted species became established). Factors that are also believed to have influenced results, but not as apparently as those above, are: (1) the favorability of climatic conditions for growth over the periods the fish were at large (spring and fall conditions generally favor maximum growth while rates during summer and winter are somewhat less), (2) the size of the trout when stocked (length customarily increases at a greater rate in small fish of the sizes used than with large fish), and (3) the numbers of trout stocked (numbers stocked ranged from 1,000 to 3,025; crowding of fish characteristically reduces growth and survival).

The principal factor limiting the successful application of this management procedure is, of course, the ability of the water to permit the survival and well-being of the trout over the period of time they are to be present. This usually includes summer but does not necessarily have to. Soldwedel (1967) reported the results of a study wherein rainbow trout (New Jersey Hatchery strain) of the same strain utilized in this study survived temperatures as high as 84.5 °F. when no competing species were present. However, with competition they failed to survive less critical conditions of

temperature and dissolved oxygen. Earlier, Smith (1958) made a similar conclusion with regard to competition. In this study, therefore, it is concluded that the seemingly critical temperature-dissolved oxygen conditions recorded for August 17, 1965, were not considered a detriment to the trout-holding ability of the pond when competing species were not present.

In view of this conclusion it seems an explanation as to the cause of the trout die-off of September 1968 is in order. Unfortunately information regarding conditions associated with that die-off was not obtained and, consequently, no firm conclusions as to its cause can be drawn. However, considering the abundance of other species found in the October, 1968, population check it is highly probable that they were present at the time of the die-off, and in view of the above-reported findings regarding the intolerance of trout to competition by other species, especially under conditions of environmental stress, it is speculated that competition played a part in the die-off. Further, the following evidence tends to support the contention that competition was probably the principal factor in limiting trout survival: (1) the data verifies that this pond supported trout through a minimum of three of the five summers of the study, (2) during the two summers wherein trout survival was questionable trout die-off was reported only for one, (3) and that competing species including young-of-the-year and older age classes were abundant during both of the years of questionable trout survival.

It is incumbent, therefore, that in

order for this management procedure to be effective without unnecessary and possibly debilitating expense all steps necessary to protect the pond from the establishment of competing species must be taken. These steps should include education of the public, legislation governing unauthorized stocking and the use of baits, and enforcement of such legislation as required.

Application of Factors

By referring to growth data and considering the plants and other happenings in chronological order the effects of some of the more apparent factors can readily be detected. The outstanding overall growth rate (0.58 inch per month for 18 months) of the first trout planted in the newly flooded impoundment is readily apparent. These highly productive conditions appear to have been carried into the second year when they also appear to have had a beneficial effect upon the second (February, 1965) planting of trout, at least during the early part of their occupancy. It is possible but doubtful that trout of the 1967 planting, which also was made immediately following reclamation, might have grown at a similarly high rate if a similar number of trout had been stocked; doubt is expressed because it is felt that the period of initial high productivity was over by the time these fish were stocked and the general trend in growth rates with each subsequent stocking, regardless of numbers stocked, was to decrease.

The overall growth rate (0.48 inch per month for 14 months) of the second planting of trout made in February, 1965, was probably suppressed during the early part of their occupan-

. . . For Better Fishing

cy by competition from larger trout from the previous planting, which ranged in average length from about 11.2 to 12.6 inches over the time, and from the few fish of undesirable species that were present during the latter portion of their occupancy. Nevertheless, the overall growth rate of this planting ranked second of all the plantings made.

With regard to the December, 1965, stocking, the effects of increased competition is readily apparent. Competition was present during the early part of this planting's occupancy in the form of trout from the previous planting, which ranged in average length from about 9.0 to 10.7 inches over the time, and the few fish of undesirable species that were present. With reproduction of the undesirables the resultant young are expected to have substantially increased competition for the trout over that experienced by trout of previous plantings, and the resultant minimum overall growth rate (0.41 inch per month for 15 months) and poor survival is considered a reflection of this.

Although trout of the December, 1965, stocking apparently suffered a severe reduction in numbers due to the competition created by the abundant young-of-the-year of the undesirable species some did survive up to 15 months. However, trout of the subsequent, December, 1966, planting apparently were not able to survive the competition afforded by the older undesirables through the critical summer months. Relative sizes of trout and competitors was likely a factor in these developments.

Following reclamation in 1967, survival (estimated at approximately 90 percent) of the stocked trout was apparently excellent as indicated by the creel census results. However, the growth rate (0.47 inch per month for 6 months), is believed to have been suppressed somewhat as the result of the high number of fish stocked and the fact that half of the fishes' six months (growth data only covered six months) in the pond were the poor growth months of December, January, and February. During the later part of their occupancy they were subject to increasing competition from introduced undesirable species.

Stocking Time and Size

Of major importance to the success of this management practice are the timing of the plant and the size of the trout when stocked. At Holmdel Park Pond where the average monthly growth increment was about 0.49 inch per month, regardless of competition, etc., it would be necessary to allow about nine months for a stocking of trout of three-inch average length to reach an eight-inch average, which seems to be about the minimum length New Jersey anglers will accept. However, because park use does not subside so as to permit pond draining, considered necessary to efficient and hazard "free" reclamations that would likely be necessary on occasion, until after Labor Day in September and it is not advisable to restock until cooler temperatures of late September or early October prevail, there are only about eight months for trout growth until the next period of heavy park usage begins in June. Therefore, it would be necessary to stock trout with

an average length of about 3.7 inches, considering the plant is made about October 1, to provide the desired size fish for angling by June of the next year. To provide the same size fish by April would necessitate that trout with an average length of about 4.1 inches be stocked, etc. It is recognized that the previously described factors might influence this growth pattern and a measure of judgment is necessary to obtain the desired results.

It is altogether probable that supplemental feeding with dry prepared trout foods could appreciably increase the growth rate.

Stocking Rate

Although the stocking rate is of importance in obtaining the desired results, there is not sufficient information to provide for making a firm recommendation. It could not be established that the stocking rates employed, 357 to 1,080 per acre, had any definite effect upon results. It was anticipated that such variations would cause variation in growth rates. However, there is obviously no correlation, possibly because it is "masked" by other factors such as competition and the initial high productivity of the pond. As a result, and to provide for maximum production, it seems that the maximum rate applied in this study is acceptable without sacrificing growth. Only through experimentation can a more definite rate be established.

Standing Crop

By extrapolating from the growth curve it was determined that the average length of trout taken over the period of the creel census during 1968 was approximately 7.2 inches. Fish of

this size, based upon information supplied by the State Fish Hatchery, weigh about 0.21 lb. Therefore, the estimated catch of 2,693 trout over the period of the census was 565.5 pounds or about 202 pounds per acre seven to nine months after stocking. The standing crop of trout just prior to the start of angling on June 1 is expected to have been about 192 pounds per acre. For a six to seven month period after stocking with 3.1 inch average length trout it is considered that the production in Holmdel Park Pond would have exceeded the 240 pounds per acre average standing crop for New York farm ponds reported by Eipper (1964) in referring to waters a year after stocking at a rate of 750 fall fingerlings per acre. #

References

- Eipper, Alfred W. 1964 Growth, Mortality Rates, and Standing Crops of Trout in New York Farm Ponds, Memoir 388, Cornell University Agricultural Experiment Station, Ithaca, N.Y.
- Seamans, Richard G., Jr. 1959 Trout Stream Management Investigations of the Saco River Watershed. New Hampshire Fish & Game Department.
- Smith, Roland F. — "Warmwater Trout Studies", Annual Report of the Research and Development Section, Bureau of Fisheries, New Jersey Division of Fish and Game.
- Smith, Roland F. — "Salmonid Studies", Annual Report of the Research and Development Section, Bureau of Fisheries, New Jersey Division of Fish & Game.
- Soldwedel, Robert. 1967 The Survival and Growth of Three Strains of Rainbow Trout (*Salmo gairdneri*) Under Conditions of High Natural Temperatures With and Without Other Fishes, mimeo, Misc. Report No. 29 of the New Jersey Bureau of Fisheries, Research and Development Section.
- Tedrow, J. C. F. 1963 New Jersey Soils, Circular 601, College of Agriculture, Rutgers—The State University, New Brunswick, N.J.
- Wolfe, P. D. 1948 Agricultural Mineral Resources of New Jersey, Rutgers University Press, New Brunswick, N.J.

Record Deer Awards

Winners in the antler division of New Jersey's 1968 trophy deer program include the top racks submitted by firearm hunter Wilburt Zarin of Salem and archer Frank Clark of Wayne. Mr. Zarin's deer, shot in Alloway Township, Salem County, scored 145 $\frac{5}{8}$ points under the Boone and Crockett measuring system. Mr. Clark's, taken in Wayne Township, Passaic County, scored 103 $\frac{3}{8}$ points.

Trophies were awarded at the Convention of the New Jersey State Federation of Sportsmen's Clubs on May 17, to the three highest scoring heads taken with each weapon during the 1968 seasons as well as the best bon-typical rack.

Special permission was received by the state Division of Fish and Game to use the patented Boone and Crockett system. Scoring was done by state



Charles Wright, left, Robert Lund, center, and Robert McDowell, right, during the scoring of the entries in the record deer antler program

Wildlife Biologist Robert Lund and Public Relations Assistant Robert McDowell, with Charles Wright of the Federation of Sportsmen's Clubs observing. Biologist Lund noted that in most cases the hunters' preliminary estimates were very close to the actual score.

Second place in the firearm category went to Thomas Hope of Woodbury, who scored 140 points for a deer bagged in Monroe Township, Gloucester

County. In third place, with 137³/₈ points, was a deer taken by James Allen of Mullica Hill, submitted on behalf of his club, the Thorofare Antlers of Thorofare, Gloucester County.

The second place archer was James Kelly of Burlington, with 100⁶/₈ points for a deer bagged just inside Burlington City limits. Archer Kelly is also one of two recipients of 200-pound club awards, as the deer weighed 212 pounds dressed. Joseph Trolli, Jr. of West Cape May took third place with a 98¹/₄ point rack shot in Burlington County.

The top non-typical head was submitted by firearms hunter Michael Wositowsky of Somerville. It scored 140 points and was bagged in Belle Mead, Somerset County. There were no non-typical bow and arrow entries.

The other 200-pound club member, besides Kelly, is Ivan Smick of Woodstown. He bagged a 226-pounder with shotgun in Salem County.

Following presentation of 1968 awards, rules will be announced for submission of older heads for scoring. These will be judged, along with Mr. Zarin's deer in an effort to establish an all-time Garden State record deer. #

For the Good

Following is a letter received by Conservation Officer George N. Aber, Sr. in reference to his article in the December, 1968, issue of *New Jersey Outdoors*, entitled "The Good and the Bad."

Dear Officer Aber:

Many many years ago I subscribed to *New Jersey Outdoors* for my husband and since his death nearly fifteen years ago I have continued to receive it—so you know I do enjoy it. I was born and raised in the country and have naturally always had a sympathetic feeling for the wildlife trying to survive. I think all of you gentlemen of the Division of Fish and Game are doing a magnificent job and I want to particularly compliment you on your letter "The Good and the Bad" in the December issue of *New Jersey Outdoors*. I was raised to believe the laws of the land were meant to be obeyed and I have been unable to understand why they are so frequently broken by so many people, particularly so-called sportsmen. When I look over the Violator's Roundup I am amazed and heart-sick over the number of violators and the nature of the violations. So this letter to you, is to thank you and compliment you on the thoughts expressed in your letter and to suggest that the penalties for the violations be increased to be commensurate with the enormity of the violation. If the penalties were all doubled they would still be too small but might make some impression on the law breakers and conserve a little more of our wildlife. After all everything else has almost doubled in cost.

Sincerely,
Mildred Hornbruch,
Oceanport

Boaters! Don't Join the Club

A total of 1,342 people died in recreational boating accidents last year, making 1968 the fourth straight year the toll hovered above the 1,300 mark. The steadfastness of the figure—and its sinister connotation—has prompted one of the nation's largest insurers of small craft to enlist boat owners to join in a campaign to reduce fatalities on the water. State Farm Fire and Casualty Company's campaign centers around an "Unlucky 1300 Club," which it is urging boaters *not* to join.

The campaign stresses these ten basic rules for safe boating:

1. *Don't overload your boat.* Capsizing causes more fatalities than any other kind of boating accident. Overloading usually is the contributing factor.
2. *Handle gasoline with care.* Fire is the number one cause of property damage to boats.
3. *Learn and observe the Rules of the Road.* Collision is responsible for half of all boating injuries.
4. *Keep an eye on children.* Make them wear life jackets on board at all times.
5. *Make sure your boat has adequate lifesaving and fire fighting equipment.* Keep it in good condition.
6. *Keep an eye on the weather.* Learn to read small craft warnings. Carry a transistor with you if your boat is not radio-equipped.
7. *Keep your boat in good shape.* Don't take a chance if you have even the smallest doubt about the seaworthiness of the hull or the dependability of the engine.
8. *Know the common distress signals.* Fly a flag or ensign upside down; blow a whistle; wave a white flag; ring a bell rapidly; fire a Very pistol. If you have none of these, stretch your arms straight out from the side, then slowly raise and lower them repeatedly.
9. *Be extra careful around swimming areas.* People in the water often are hard to see.
10. *Use caution towing water skiers.* Keep clear of boats, bathers and obstructions. Don't tow unless there are at least two people aboard—one operating the boat and the other watching the skier.

Anthropomorphism Misunderstood

Anthropomorphism—attributing human characteristics to animals, plants, and objects—is a common, modern-day practice. This practice has, unfortunately, given rise to many misconceptions, especially in the predator-prey relationships of animals. Wildlife does not experience hate, murder, or vengeance traits which are common to humans. Whenever an owl catches a rat or a bobcat catches a squirrel, it is not murder, but simply a matter of complex forces of nature at work, the instinct to survive.

The 1968 State Fair

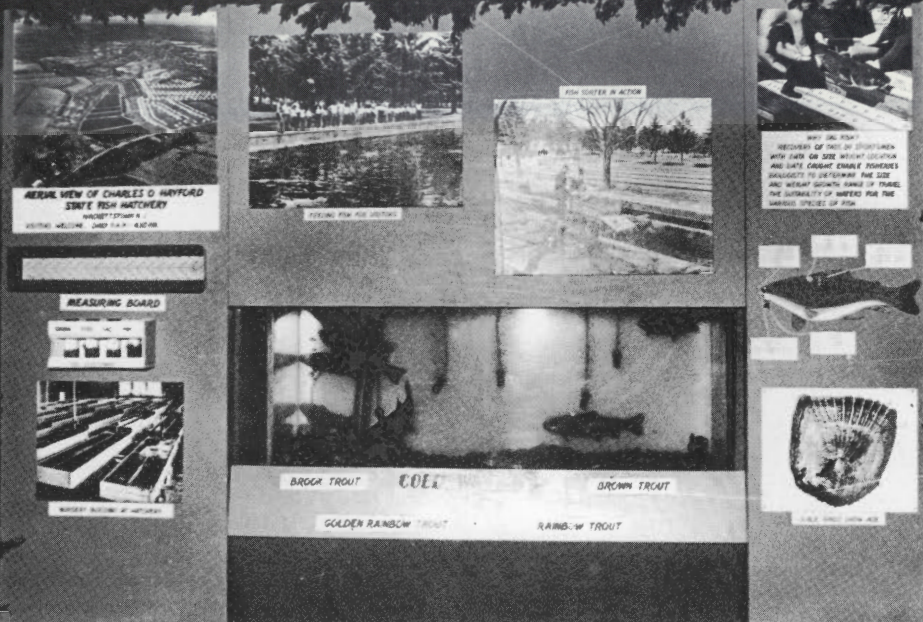
For those of you who missed the Division's exhibit at the State Fair last season, we will take you on a pictorial tour herewith.



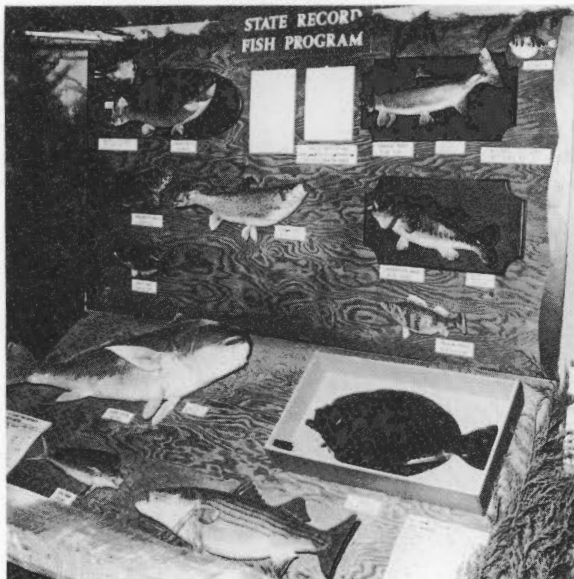
The New Jersey Outdoors exhibit, above, displays some of the topics the magazine carries through the years



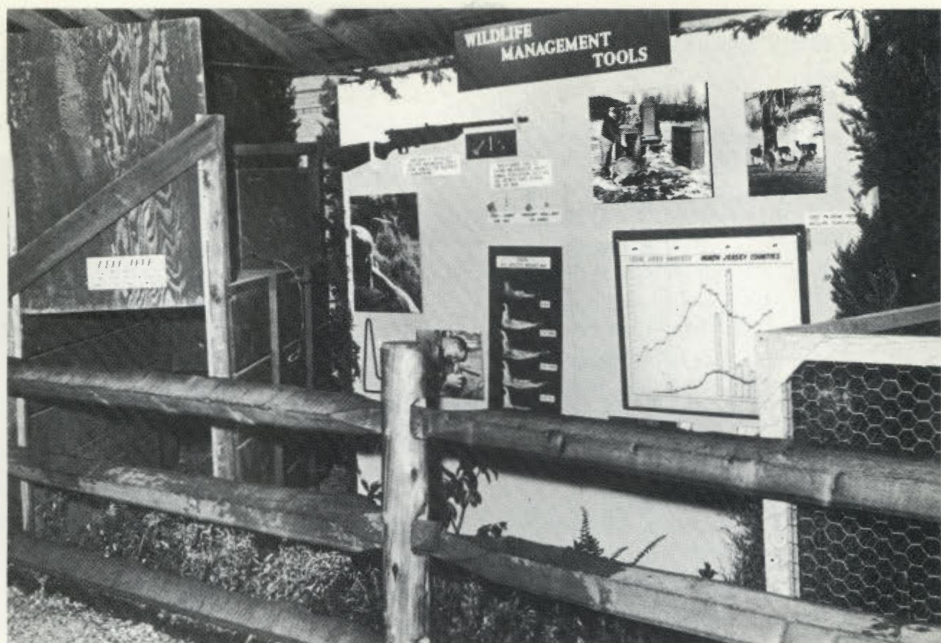
At the desks, left, Fish and Game personnel are on hand to answer questions and sell licenses and subscriptions to New Jersey Outdoors. Conservation Officer Joe Gallo, left and Everett MacKinnon of Public Relations



Next we see the live fish display with rainbow, brook, brown, and golden trout from the hatcheries. Around the tanks are various types of fisheries research



Moving on we view a group of mounted fish which are representative of the state record fish



Wildlife management tools, including a tranquilizer gun, feature the above display



Finally, we come to a spread of mounted deer antlers that explains the new trophy deer program

Commercial Trap-Skeet and Rifle Ranges

County

Atlantic	Atlantic City Trap Shooting Club Rt. 30, White Horse Pike, Atlantic City	Trap Open daily
Burlington	Master Shooters, Inc. Stokes Road, Rt. 541, Indian Mills Pine Belt Sportsman, Inc. Stokes Road, Rt. 541, Indian Mills Jac-Pine Interstate Range, Inc. Sody Road, RD 1, Vincentown	Rifle Open all year Trap-Rifle Open by arrangements Trap-Skeet-Rifle-Pistol Open 7 days a week
Essex	Greeley's Rifle & Pistol Range 448 Pompton Ave., Cedar Grove	Rifle-Pistol Weekdays—11 a.m.-10 p.m. Sat.—9 a.m.-5 p.m. 7 p.m.-10 p.m. Sun.—1 p.m.-5 p.m. 7 p.m.-10 p.m.
Hunterdon	West Amwell Sportsman Club Mt. Airy-Harbourton Road W. Amwell Twp., Lambertville Grouse Ridge Skeet & Trap Range Rt. 22, Union Twp., Clinton Flemington-Raritan Rod & Gun Club off Rt. 31, Flemington	Trap Wed.—7 p.m. Sun.—1 p.m. Trap-Skeet Sat. & Sun.—10 a.m.-6 p.m. Wed.-Thurs.-Fri.— 1 p.m.-10 p.m. Trap Open Saturdays
Middlesex	Winchester Public Shooting Center 115-10 Old Bridge Road, Englishtown (Telephone: 201-446-7792)	Trap-Skeet-Rifle-Pistol Daily except. Mon.
Monmouth	Weemaconk Rod and Gun Club off Rt. 527, Englishtown Farmingdale Rod & Gun Club off Rt. 547, Cranbury Road, Farmingdale Wayside Rod and Gun Club Green Grove Road, Wayside Oak Hill Sports Club 439 Peskin Drive, Farmingdale	Trap Sunday—1 p.m. Trap Tues.—6 p.m., Sun.—1 p.m. Skeet Sat. & Sun.—1 p.m. Trap-Rifle Wed.—6 p.m., Sun.—1 p.m.
Morris	Chester Game Association Rt. 206, Chester Township	Trap Open Thurs. nights
Ocean	Ocean County Fish & Game Protective Association Hickory Street, Dover Township Valahalla Rifle & Pistol Range Patterson Rd., RD 3, Jackson (Telephone: 201-928-0135)	Trap Open Sundays—12:30 p.m. Rifle-Pistol Wed. through Sun.
Passaic	Winchester Shooting Club Ringwood State Park, Ringwood	Trap-Skeet Tues.-Thurs.—6-10 p.m. Wed.-Fri.—1-10 p.m. Sat.-Sun.—10-6 p.m.
Somerset	Somerset County Protective Association Milltown Rd., between Rt. 202 and Rt. 22 Bridgewater Township Climax Gun Club Milltown Rd., Somerville	Trap Open Saturday Trap Sat.—11 a.m.-4 p.m.

County	Santucci's Range Valley Road, Watchung	Rifle Tues.-Sat.—daylight hours starting at 1 p.m.
Sussex	Fox Ridge Range RD 1, Sussex (Telephone: 201-875-5791)	Trap-Skeet-Rifle Tues.-Fri.—1 p.m.-10 p.m. Sat.—10 a.m.-10 p.m. Sun.—1 p.m.-7 p.m. Rifle Range Sat. Only—8 a.m.-10 a.m.
Union	Union County Park Range Springfield Ave., Kenilworth Ray's Sport Shop Rt. 22, Scotch Plains	Skeet-Trap-Rifle-Pistol Sat.-Sun.—1 p.m.-6 p.m. Rifle-Pistol Weekly—9 a.m.-9 p.m.
Warren	Hope Trap Range Hope-Mt. Herman Road, Hope	Trap—Open Sundays May-November

How To Avoid Possible Fishing Hazards

Outdoors is usually a safe, friendly place that treats its frequent visitors in a kind manner.

The hazards encountered are comparatively few, especially when compared with those commonly associated with crossing the street or walking down a flight of stairs.

Fishing, for example, ranks way down the list from hunting in the insurance industry's list of dangerous activities.

Fishing pitfalls, aside from carelessness, can be grouped into four general areas: insect, foliage, poisonous snakes, and excessive sun. All are potentially dangerous. All can be avoided.

Undoubtedly, insects cause the most discomfort in the field. Mosquitoes are the most universal culprits, with ticks, no-see-ums, and biting flies equally notorious in certain areas of the state.

Precautions include the liberal and religious use of repellents and clothing that covers all the body, fitting tightly at boot tops and sleeve cuffs—plus head nets when necessary. In tick country, frequent inspection of the body at noon and in the evening is a must.

Poison oak and ivy are potential problems for everyone who steps ashore or hikes down a trail. Even without direct contact, it's possible to contract these skin afflictions from the smoke of a fire containing the twigs or by petting a dog or touching any object that has brushed through a noxious patch. Best antidote: daily scrubbing with strong soap and washing clothes.

Poisonous snakes such as rattlers and copperheads are the most feared but least significant hazards in the out-of-doors of New Jersey, from the number of incidents reported each year. Step cautiously and reach warily, and you'll be safe. To be doubly sure, carry a snake bite kit.

Finally, we come to sunshine and its sneaky ways. Lotions, adequate clothing and awareness prevent problems. #

Clapper Rail

(*Rallus longirostris crepitans*)

By Fred Ferrigno
Bureau of Wildlife Management

General Characteristics:

Commonly called "mud hen," the clapper rail weighs from 12 to 15 ounces and is well adapted for its salt marsh habitat. It is an odd looking bird with long legs (which enable it to run exceptionally well), an olive-gray color (which blends with its marsh habitat), and a long bill capable of dissecting crabs. The clapper swims exceptionally well, submerging with only its head or bill showing. The mud hen flies for a greater distance than most rails. Its long toes, legs, and slender body permit it to dart among the weeds and hide with ease. It seldom takes wing unless driven to it.

Distribution:

The clapper rail breeds and inhabits the tidal salt marshes from Connecticut to Florida. In New Jersey, it frequents Atlantic coastal marshes and the Delaware Bay tidal marshes up into Salem County.

Migration:

Although very little banding has been done on the clapper rail and a few clappers are seen in New Jersey throughout the winter, some writers contend that first arrivals appear in March. March and April then August, September, and October are the months of greatest movement. A bird that was banded at Ocean City, New Jersey, in July was shot in Georgia in October.

Life History:

The clapper rail begins nesting in May in New Jersey. Most nests are elevated as high as 16 inches above the ground with the necessary access ramp. It prefers salt marsh cordgrass as nesting cover. After a 20-day (range 18 to 22) incubation period, the bulk of eggs hatch the third week in June. Average clutch size is about 9 eggs. The rate of egg laying is approximately one egg a day. The delay of 24 to 48 hours in the hatching of these eggs might be considered an indication that incubation starts just prior to the laying of the last egg. Both parents are together during incubation. It is believed that the female will raise just one brood. The young, when first born, are a mass of black down and require approximately a 9-week interval to reach the flight stage. Survival of young is affected by the density of cover, storms, pesticides, hunting, predation, and other factors.

Food:

The food of the clapper consists predominantly of fiddler and marsh crabs. Its diet also may include blue claw crabs, snails, worms, insects, and plant material.

Population:

Fluctuation in clapper rail populations are brought about by adverse flooding, possibly poor cover during drought years, territorial conflicts, and other factors. Greatest threat to the overall clapper rail population is loss of tidal marshes due to dredging, pumping, or diking. Disrupting the tidal flow on a marsh by raising its elevation or diking will eliminate the clapper rail population from that particular marsh.

Management:

Management should be primarily directed to the preservation of tidal marshes by federal, state, and private conservation agencies. Proper mosquito ditching can be a useful habitat improvement tool

The clapper rail is normally found in the salt marshes. It is a relatively large olive-gray bird with long, strong legs, and a long bill



by providing better tidal flow on a marsh. Annual nest censuses supply the Division of Fish and Game with the necessary information on population fluctuations. Bag limits should be recommended according to the annual population status of the clapper rail. #

1969 HUNTING REGULATIONS

Adopted June 10, 1969 —Effective September 1, 1969

Following public hearing held at the State Agriculture Building on June 10, 1969, the Fish and Game Council, of the New Jersey Department of Conservation and Economic Development, adopted the following regulations for 1969-70 hunting. As provided by R.S. 13:1B-34, these regulations are known as the Fish and Game Code and supersede the statute laws insofar as these items are concerned and all previous code regulations respecting hunting are hereby rescinded. Code regulations are effective until amended or repealed.

The hours listed are EST or EDT, at Trenton, whichever is in effect on the given date.

Male English or Ringneck Pheasant

- Duration:* November 8—December 6, inclusive.
December 15-31, except on December 20 in the following counties: Hunterdon, Mercer, Middlesex, Monmouth, Morris, Passaic, Somerset, Sussex, and Warren.
- Daily bag limit:* 2 male pheasants, except as herein outlined.
- Hunting hours:* On November 8, 9:00 a.m. to ½ hour after sunset. Other days, sunrise to ½ hour after sunset.
- Hen pheasants:* In the area described as Warren County north of Route 46, Morris County north of Route 46, and in Sussex, Passaic, Bergen, Hudson, Ocean, Camden, Atlantic, and Cape May Counties, and on all State Fish and Wildlife Management Areas, the daily bag limit shall be 2 pheasants of either sex.
- Unlawful to take or attempt to take female pheasants elsewhere.

The opening of the season on semi-wild preserves shall coincide with the above listed state-wide openings.

Cottontail Rabbit, Jackrabbit, and Hare, Ruffed Grouse, Squirrel, Chukar Partridge, and Quail

- Duration:* November 8—December 6, inclusive.
December 15—February 7, except December 20 in the following counties: Hunterdon, Mercer, Middlesex, Monmouth, Morris, Passaic, Somerset, Sussex, and Warren.
- Daily bag limit:* 1 jackrabbit or hare, 4 rabbits, 3 grouse, 5 squirrel, 7 quail, 3 chukar partridge. No season limits.
- Hunting hours:* November 8, 9:00 a.m. to ½ hour after sunset. Other days, sunrise to ½ hour after sunset.

Wild Turkey and Otter

It shall be illegal to possess, take, kill, or attempt to take or kill a wild turkey or otter at any time.

Mink, Muskrat (trapping only)

- Duration:* North and west of U.S. Route 1: 6:00 a.m. on November 15—March 15, inclusive, except on State Fish and Wildlife Management Areas.
South and east of U.S. Route 1: 6:00 a.m. on December 1—March 15, inclusive, except on State Fish and Wildlife Management Areas.
On State Fish and Wildlife Management Areas: 6:00 a.m. on January 1—March 15, inclusive (except raccoon).
No stakes or traps shall be set before that time.

Beaver Trapping

- Duration:* February 1—February 28—100 permits.
Season Limit: 5 beaver—Special \$5.00 permit required; limit 100 permits. All beaver trapped must be tagged by Conservation Officer by March 15, 1970.

For the purpose of conservation the Division shall designate and suitably post certain beaver colonies and prohibit all trapping within their dams or within 200 feet thereof during the open season for beaver.

Raccoon and Fox Trapping

- Method:* The trapping of raccoon and fox shall be permitted as fur-bearing animals under regular firearm hunting license.
Duration: North and west of U.S. Route 1: 6:00 a.m. on November 15—March 15, inclusive, except on State Fish and Wildlife Management Areas.
South and east of U.S. Route 1: 6:00 a.m. on December 1—March 15, inclusive, except on State Fish and Wildlife Management Areas.
Trapping of raccoon will be permitted on tidal meadows and tidal impoundments on State Fish and Wildlife Management Areas after 6:00 a.m. on January 1—March 15, inclusive.
Raccoon may be trapped at any time of year under special permit when causing damage.
Bag limit: No daily bag limit. No season limit.

Trapping

No trap of any kind shall be set anywhere unless it bears a metal tag inscribed with the name and address of the owner of the trap, except for traps set on posted private property by the owner or lessee thereof. No trap of any kind shall be permitted to remain set on any property at the close of the trapping season. No body-gripping trap with jaw spread larger than 5 inches shall be used anywhere, except for beaver below the surface of the water by the special permit holders herein provided for February 1 to February 28, 1970.

No cage trap, metal box trap, or diving trap shall be permitted on any of the State Fish and Wildlife Management Areas.

Regular firearm hunting license is required to trap fur-bearing animals.

All traps must be tended at least once in every 24 hours.

Raccoon Hunting

- Duration:* 1 hour after sunset on September 20 to 1 hour before sunrise on March 8, 1970, except state-wide on the nights of firearm deer season and the nights of December 19 and 20, 1969, in the following counties: Hunterdon, Mercer, Middlesex, Monmouth, Morris, Passaic, Somerset, Sussex, and Warren.
Hunting hours: 1 hour after sunset to 1 hour before sunrise.
Dog training: There will be no raccoon dog training season prior to the opening of the raccoon hunting season.
Bag limit: No daily bag limit. No season limit.

Woodchuck Hunting

- Duration:* April 4—September 26, 1970, inclusive. (Properly licensed hunters may also take woodchuck during upland season with shotgun or bow and arrow.)
Hunting hours: Sunrise to ½ hour after sunset.
Bag limit: No limit.
No rifle hunting on State Fish and Wildlife Management Areas.

. . . Hunting Regulations

Fox Hunting

- Duration:** North and west of U.S. Route 1: November 8—April 30, inclusive.
South and east of U.S. Route 1: November 8—March 31, inclusive.
Closed December 20 in the following counties: Hunterdon, Mercer, Middlesex, Monmouth, Morris, Passaic, Somerset, Sussex, and Warren.
- Hunting hours:** November 8, 9:00 a.m. to ½ hour after sunset. Other days: sunrise to ½ hour after sunset. Firearm deer season: 7:00 a.m. to 5:00 p.m.

May be trapped at any time of year when destroying poultry crops or property by farmers.

May not hunt with dogs during regular firearm deer season or on December 20 in special deer counties.

Dogs

No exercising or training of dogs on State Fish and Wildlife Management Areas May 1—August 31, inclusive, and on the following Sundays: November 9, 16, 23, 30, December 7, 14, 21, 28, and on November 7.

Squirrel and Raccoon Damage

Property owners, or their designated agents, and occupants of dwellings that are suffering damage from squirrel or raccoon, may control these animals by any method and at any time, subject to legal firearm ordinances in the following counties: Bergen, Essex, Hudson, and Union; also in cities and towns with a population of 2,000 and over; and elsewhere, by permit from the Division.

Firearms and Missiles, etc.

Illegal for any hunter to have in his possession in woods, fields, marshlands, or on the water, any shell or cartridge with missiles of any kind larger than No. 4 fine shot except during the firearm deer season, and except that waterfowl hunters in tidewaters and tidewater marshes may possess and use shells loaded with No. 2 or smaller fine shot.

At all times it shall be illegal to have in possession any shotgun shell which has been cut or the loaded pellets therein strung, held together with wax, or joined in any manner with any substance or material.

Illegal to use in hunting fowl or animals of any kind, any shotgun capable of holding more than three shells at any time, or that may be fired more than thrice without reloading.

From December 8-13, inclusive state-wide; and in the counties of Hunterdon, Mercer, Middlesex, Monmouth, Morris, Passaic, Somerset, Sussex, and Warren on December 20, it shall be illegal to use any rifle or firearm of any kind of a smaller caliber than 12 gauge or to have in possession any firearm missile except buckshot, or to hunt between 5:00 p.m. and 7:00 a.m., or to hunt deer with a dog. (This does not preclude a person legally engaged in hunting on semi-wild or commercial preserves for the species under license, nor a person engaged in hunting waterfowl only, from being possessed solely of shotgun and nothing larger than No. 4 fine shot, or No. 2 fine shot in tidewaters and tidewater marshes.)

This section is amended to include liberated game animals, as well as game birds, and native species, under field trial provisions; dogs shall include hounds, bird dogs, and retrievers.

Illegal to hunt, hunt for, or attempt to capture, kill, injure, or destroy game birds or animals except at the time and in the manner provided by fish and game regulations.

The prohibition against shooting waterfowl or placing a boat or other structure at a greater distance than one hundred feet from shore shall not apply in Raritan and Sandy Hook Bays, or in the Atlantic Ocean. (Sinkbox prohibited by U.S. regulations).

Wild waterfowl, migratory game birds, rabbits, hares, jackrabbits, squirrels, grouse, chukar partridge, pheasants, and quail shall not be hunted for or taken on Sunday. How-

ever, pheasants, quail, chukar partridge, and turkey may be hunted for or taken on Sunday on semi-wild and commercial shooting preserve lands that are properly licensed for the taking thereof.

Deer shall not be hunted for or taken on Sunday except on wholly enclosed preserves that are properly licensed for the propagation thereof.

It shall be unlawful for any person to have in his possession or under his control any gun or firearm at any time while hunting any wild bird or animal with a longbow and arrow.

No person shall, for the purpose of hunting for, pursuing, taking, or killing, or attempting to hunt, pursue, take, or kill any bird or animal, have, in an automobile or vehicle of any kind, any firearm loaded with missiles of any kind, under a penalty of \$20.00 for each offense.

The Division may issue special permits, without fee, to shoot or hunt from a standing vehicle, to licensed hunters who, after investigation, are found to be paraplegics, or otherwise physically unable to walk, with or without crutches, braces, or other mechanical support, in the fields or woods. Permittees are subject to all Fish and Game Laws and regulations.

Bow and Arrow

Bow and arrow means longbow only. All crossbows or variations thereof are prohibited.

It shall be illegal to use a longbow and arrow for hunting on December 21, or between ½ hour after sunset and ½ hour before sunrise during the Longbow and Arrow Deer Season, or between 5:00 p.m. and 7:00 a.m. during the Firearm Deer Season, or between ½ hour after sunset and sunrise during other seasons.

During the Longbow and Arrow Seasons for taking deer and bear, October 4 to November 6 and December 8 to December 13, all arrows carried in the woods and fields must be fitted with an edged head of the following specifications:

- Minimum width shall be ¾ inch—maximum, 1½ inches.
- Minimum length shall be 1½ inches on main cutting edge.
- Cutting edges shall be of well-sharpened metal only.

The bow must have a minimum draw pull weight of 35 pounds and cast a legal hunting arrow 125 yards to a point of similar elevation.

It is illegal at all times to discharge an arrow from or across a state, county, or municipal highway or roadway, or within 300 feet of any occupied dwelling, except with permission of the owner or lessee, or within 400 feet of a school playground. It is illegal to use a bow and arrow from any vehicle, moving or stationary.

Deer (either sex) and Bear—Longbow and Arrow exclusively

- Duration:** October 4—November 6, inclusive.
- Bag limit:** One deer of either sex or one bear. Only one bear a year permitted whether taken during firearm or bow. Kill must be reported to Division within 24 hours.
- Hunting hours:** ½ hour before sunrise to ½ hour after sunset.

Bear—Firearm or Longbow and Arrow

- Duration:** December 8—December 13, inclusive.
- Bag limit:** One bear a year whether taken during bow or firearm season. Kill must be reported to Division within 24 hours.
- Hunting hours:** 7:00 a.m. to 5:00 p.m.

Deer—Firearm or Longbow and Arrow

(Antlered only, except in area designated as Hunter's Choice, described below).

- Duration:** December 8—December 13, inclusive.
- Bag limit:** One deer for the season, with antler at least three inches in length, or one bear, whether taken by gun or longbow.

. . . Hunting Regulations

Hunter's Choice area is described as follows: East of Route 202 from New York line to Pompton Lakes, east of the Pompton River to its junction with the Passaic River, east of the Passaic River to Somerset County line, north and east of that line to Middlesex-Union County line, east of that line to the Raritan River, and north and east of the Raritan River to Raritan Bay. In this area, consisting of portions of Bergen, Union, Passaic, Essex, and Middlesex Counties, a properly licensed person will be permitted to take a deer of either sex and any age.

A person who has legally taken a deer during the special longbow and arrow season can legally take an antlered deer with a shotgun during the interval of December 8-13, if he possesses his valid firearm license, but he may not take another deer with a bow. Only one deer may be taken during this season, whether by gun or bow.

Hunting hours: December 8-13, inclusive, 7:00 a.m. to 5:00 p.m. with gun or longbow.

Deer—Special Permit, firearms only (either sex)

Duration: Saturday, December 20.

Bag limit: One deer of either sex, any age.

Hunting hours: 7:00 a.m. to 5:00 p.m.

Method: The taking of one deer of either sex with a firearm under a Special Deer Permit or a Farmer Deer Permit, in addition to the legal antlered deer allowed under State-wide buck season and buck-doe allowed under the State-wide longbow and arrow season, will be permitted in designated counties by holders of a Special Deer Permit and on their own property by holders of a Farmer Deer Permit. Special Deer Permits will be issued on an individual basis to holders of valid 1969 firearm licenses.

Farmer Deer Permits will be issued on an individual basis to occupants of farms who reside thereon, or the immediate members of their families over 14 years of age who also reside thereon, upon receipt of a notarized application form. Permits consist of a back tag and a transportation tag. The back tag portion of the permit will be conspicuously displayed on the outer clothing in addition to the valid firearm license in the case of the Special Deer Permit, and without the firearm license in the case of the Farmer Deer Permit. Any deer killed must be tagged immediately with the transportation tag. This transportation tag allows legal transportation of the deer of either sex to a State deer checking station only. State personnel at the checking station will issue a possession tag. Any permit holder killing a deer of either sex on December 20, 1969, *must* transport this deer to a State-operated checking station by 7:00 p.m. on December 20 to secure the legal possession tag. The possession of a deer of either sex after 7:00 p.m. on December 20 without a legal possession tag shall be deemed illegal possession.

The procedure for permit application and issue shall be as follows:

Applying for a Special Deer Permit

1. Only holders of valid 1969 Firearm Hunting Licenses may apply on forms provided for a Special Deer Permit. No archery or juvenile license holders are eligible.
2. Application forms may be obtained from:
 - a. Division of Fish and Game, P.O. Box 1809, Trenton, N. J. 08625
 - b. License issuing agents
 - c. Conservation Officers.
3. Only one application may be submitted by any individual.

4. Fill in the application form to include: name, address, 1969 firearm hunting license number, county applied for, name of license issuing agent where 1969 hunting license was purchased, and any other information requested. Application forms will be accepted in the Trenton Office only during the period of September 10 to September 19, 1969, inclusive. **DO NOT SEND FEE WITH THE APPLICATION.** Selection of permittees will be made on the basis of a random selection of IBM cards.
5. Unsuccessful applicants will not be notified. Any permit obtained by fraud will be void.
6. Successful applicants will be notified by mail. The IBM card and the permit fee of \$2.00 in the form of a money order made payable to the "Division of Fish and Game" must then be returned by mail before October 17, 1969. The Special Deer Permit will then be issued. Permits not claimed by October 17 will be immediately reallocated in the same random manner as the original selection and be returnable within two weeks thereafter.

Applying for the Special Farmer Deer Permit

1. Only the occupant of a farm, who resides thereon, or the immediate members of his family over 14 years of age who also reside thereon, may apply on forms provided for a Special Farmer Deer Permit. (N.J.S. Chapter 48, Laws of 1964, Section 54:4-23, defines a farm as an area of five acres or more and producing a gross income in excess of \$500.) Special Farmer Permits will be issued only in those counties where a Special Deer Season is prescribed.
2. Application forms may be obtained from the Division of Fish and Game, P.O. Box 1809, Trenton, N. J. 08625, or the Conservation Officer.
3. Fill in the application form to include: Name, age, size of farm, address, and any other information requested thereon. **THIS APPLICATION MUST BE NOTARIZED.** Application forms will be accepted in the Trenton Office only during the period of September 1 to 5, 1969. There is no fee attached, and all qualified applicants will receive a Special Farmer Deer Permit, delivered by mail.

Use of Special Deer Permit and Special Farmer Deer Permit

The Special Deer Permit is valid only in the county designated and is not transferable. The Special Farmer Deer Permit is valid only on the farm occupied and designated in the application and is not transferable.

Special Deer Permit Areas and Number of Permits to be Issued:

County	Permit Quota
Hunterdon	2,350
Mercer	500
Middlesex	220
Monmouth	330
Morris	975
Passaic	350
Somerset	780
Sussex	1,480
Warren	2,230
Total	9,215

Special Deer Permits in accordance with the above regulations may be granted at state or federal installations in all counties as may be determined by the Director. #

These 1969 Hunting Regulations are presented merely for your convenience in planning vacations and hunting trips.

**Consult Compendium and Game Laws
for Details and Laws in Full**

River Birch

(*Betula nigra*)

River birch, red birch, or water birch are names for the same tree. Generally, it is found at low elevations, such as stream banks, lakes, and swamps. Its occurrence along river banks gave this tree its most common name. River birch thrives in moist conditions, and its New Jersey neighbors are elm, soft maple, willow, pin oak, and redgum.

Range:

South from New Hampshire to Florida and west to Texas, Kansas, and Minnesota. It is the most southerly of the birches.

Leaves:

Alternate, simple with a doubly serrate margin, and 3 to 4 inches long with a wedge-shaped base. (See figure A.) They are dark green on top and a lighter green on the bottom.

Twigs:

Slender, usually hairy, green to reddish brown, and covered by horizontal lenticels. (See figure C.) There is no terminal bud. Bark on older branches



River Birch

A. Leaf

B. Fruit

C. Twig, with buds

and trunks of younger trees will help identify this tree. It is reddish brown and peels off in large flakes. Bark on older trees is dark, rough, and fissured.

Flowers:

Male and female flowers are borne separately on the same tree. Male flowers are formed in the fall and mature in the spring to fertilize female catkins.

Fruit:

A small, hairy, winged nutlet borne in a slender cylindrical strobile. (See figure B.) Fruit ripens in early summer, whereas fruit of many other birches ripens in late summer and early autumn. Therefore, a good seedbed of fresh silt is usually available for river birch where overflowing has occurred.

Uses:

It is of slight commercial importance because of its small size and soft wood. River birch normally attains a height of 50 feet and a diameter of 1 foot. It usually has a short, crooked trunk. Occasionally the tree is used as an ornamental. #

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

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

Now is a good time to subscribe to *New Jersey Outdoors* or renew your current subscription to the magazine

New Jersey Outdoors, P. O. Box 1809, Trenton, N. J. 08625

Please enter my subscription (at \$2.00 per year) for 1 year 2 years
 3 Years For \$5.00 new renewal

To:

Name

Street

Post Office State..... Zip Code.....

Council Highlights

June Meeting

The open session of the regular monthly meeting of the Fish and Game Council was held in Trenton on June 10. In addition to Division personnel present, the following Council members attended: Alampi, Allocca, Reid, Richardson, Schollenberger, Stabile, Space, Toth, and Webber. Councilman-elect Faunce was also in attendance.

Hatchery Plans

In regard to the Hackettstown hatchery, Director MacNamara advised that the water supply was approximately 900 gallons a minute and it would be necessary to drill five test wells to determine the supply potential. Some of the ponds receive only one change of water every two hours whereas three changes in one hour are necessary to operate efficiently. The Director asked for the Council's approval of the test wells, and by motion of Councilman Toth, seconded by Councilman Allocca, and passed, the Council approved the drilling of the test wells. The consensus was that, following this initial step of drilling test wells to determine the water supply potential, definite plans should be prepared to show what must be done to renovate the hatchery. As far as a bond issued is concerned, the Director stated that the Attorney General's Office is looking into this matter, but it is apparent that any such plan would necessarily have to be underwritten by the State.

Gun Safety Funds

The Director made reference to bills H.R. 1048 and S. 670 pending before Congress. Under these bills, tax money from handguns would be distributed to the states for gun safety and this would allow the Division to have a supervisor in the north and south working with the instructors. Indications are that there is little opposition to the bill but that, if the sportsmen do not express their support of the bill to their Congressmen, it will not pass. The Director urged the Council to bring this to the attention of their constituents.

Conservation Officer Course

The Council was advised that an educational program for the conservation officers, sponsored by the Division of Fish and Game and the U.S. Fish and Wildlife Service, had been conducted on the grounds of the Italian-American Sportsmen's Club in Trenton. The four-day workshop was carried out in two segments with instructors being supplied by the Federal Government and other states.

Fish Introduction Bills

Two bills, drawn by the Division, to regulate the stocking of fish and fish eggs in the waters of the state were reviewed by the Council. By motion of

Councilman Stable, seconded by Councilman Toth, and passed, the Council gave approval to the introduction of these bills and directed that copies be given to Councilman Allocca.

Liberations of Geese

George Alpaugh, Chief of the Bureau of Wildlife Management, advised that 200 Canada goose goslings were to be received from the Brigantine National Wildlife Refuge and liberated on the Tuckahoe, Heislerville, and Mad Horse Creek tracts with the hope that resident flocks of this species will become established.

Stocking of Game

Chief Alpaugh requested a reaffirmation of policy in regard to not stocking game on lands that are posted in any manner against hunting. It was the consensus that the law is very specific and clearly states that the Division may stock only those lands that are open to all the licensed public for hunting.

Pollution Law Test

A question was raised concerning why the case to test the new pollution law had not been initiated. Bruce Pyle advised that the delay was due to the loss of personnel at the time the Division had planned to proceed. A replacement was expected to be hired, and as a result of recent pollution cases, Mr. Pyle believed that sufficient information should be at hand for setting up a test case.

Conservation Leaflet

William Peterman, Supervisor of Public Relations, reported that a leaflet of interesting conservation facts, prepared for distribution in connection with outdoor education programs, was enthusiastically received by teachers and students and was to be reprinted for distribution at junior sportsmen's shows.

Smithville Lake Dam

Councilman-elect Faunce advised that repairs to the dam at Smithville Lake had been completed, the dam was in excellent shape, and the water level was up to normal and ready for stocking. Director MacNamara was to have a fisheries biologist check the water to evaluate it and determine whether stocking were needed. #

Do You Want To Hunt This Fall?

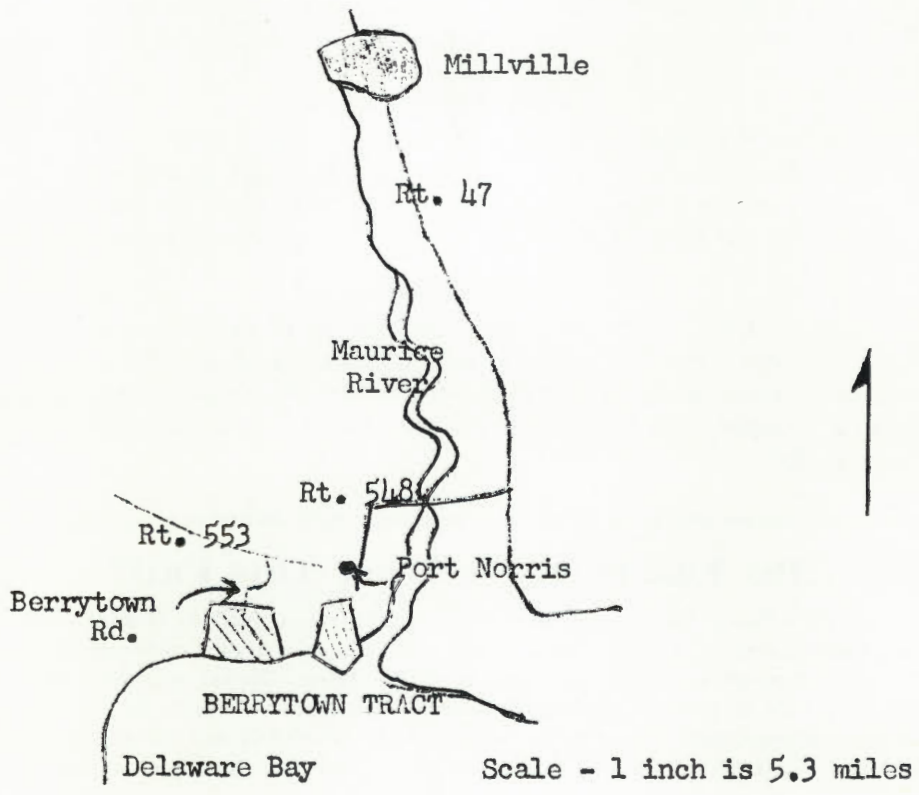
If you are between the ages of 14-21 and do not have a previous Hunting License you cannot obtain a current license unless you present a signed certificate showing you have successfully completed a course in Gun Safety. Do not wait until hunting season is here to get your certificate. Contact a Conservation 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.

Berrytown Tract

The Berrytown Fish and Wildlife Management Area is located in Cumberland County and comprises approximately 1,610 acres of salt marsh and salt hay marsh. The tract is bounded on the east by the Berry Farm line, on the north by Indian and Ware Creek, on the south by Delaware Bay, and on the west by Dividing Creek.

This tract is managed for both waterfowl and upland hunting. Pheasants are stocked, on the haying marsh, throughout the hunting season. Waterfowl hunting is good to excellent on the undiked salt marsh and along the bay.

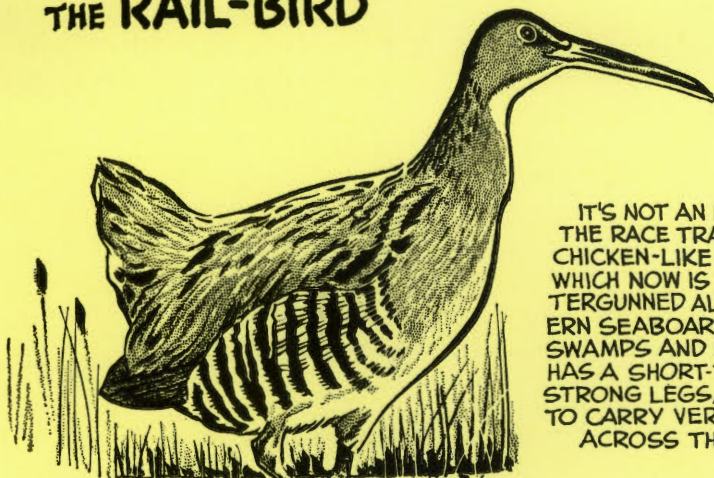
To reach the Berrytown Tract from Millville, take Route 47 south out of Millville to the junction of Route 548. Turn right on 548 and proceed to Port Norris, take Route 553 west out of Port Norris for 1.5 miles to the Berrytown Road. Turn left, or south, on the Berrytown Road and proceed to the marsh upland edge. The Berrytown Tract is located on both sides of the road. #



Fur, Fin ^{and} Campfire

By JACK SHERIDAN

THE RAIL-BIRD



IT'S NOT AN HABITUE OF THE RACE TRACKS BUT A CHICKEN-LIKE GAME BIRD WHICH NOW IS BEING SCATTERGUNNED ALONG THE EASTERN SEABOARD. FOUND IN SWAMPS AND MUDFLATS. IT HAS A SHORT-TAILED BODY, STRONG LEGS, LARGE TOES TO CARRY VERY QUICKLY ACROSS THE MARSH.

THE **KING RAIL** IS CONFINED TO FRESH WATERS. IT'S BANTAM-HEN SIZE AND HAS A ROBIN-SIZED DUPLICATE IN THE **VIRGINIA RAIL**



THE **SORA** IS A COMMON FRESH WATER RAIL WITH A SHORT, THICK AND YELLOW BILL.



MOST HUNTERS WILL WADE THRU SWAMPS TRYING TO ROUSE THE HARD TO FLUSH RAILS, WHICH GENERALLY WANT TO SNEAK AWAY AND HIDE. THEIR FLIGHT IS A SHORT ONE.

New Jersey Outdoors
P. O. Box 1809
Trenton, N. J. 08625

*Second class postage
paid at Trenton, N. J.
and additional office.*

I Give My Pledge
AS AN AMERICAN
*To Save and Faithfully
Defend From Waste
The Natural Resources
Of My Country—
Its Soil and Minerals,
Its Forests, Waters,
And Wildlife.*