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The Witchcraft of Autumn

By Ernest Swift

AUTUMN IS NATURE'S silent announcement to man and beast that winter is coming. In some regions it touches only lightly, while in others it is a stern warning to gather the harvest in preparation for the cold months to come. Although the weight of its mantle varies from North to South, from mountain to marsh, this seasonal change creeps relentlessly over the land.

The squirrels heed this admonition, the birds fly south, and where there are oaks the deer fatten on acorns; the skunks and woodchucks dig secluded burrows. Man with his technologies has lost some of these primitive instincts.

Old timers say that they can smell fall in the air; and this is true.

One of the first signs in the North country is fog rising of an early morning from swale and marsh; and a myriad of cobwebs, sparkling with dew, which festoon pastures and lawns. Then the sun comes out strong and clear and it is summer again; but nature has given her first obscure warning.

Then comes the realization that the days are getting shorter. Each day the evening sun sinks a little earlier beyond the horizon, and as if to compensate, sends forth a blaze of color. Then comes a night with a full moon, and the first frost spreads a sheen of crystals. The northern lights begin to flare and dance across the sky.

Stubble fields take on a yellow tinge, pastures lose their green lustre, the corn leaves bleach white and make a dry rustling sound with the passing of a vagrant breeze. The farmer looks over his fecund fields and sees a good harvest and fat cattle. He hears the raucous bedlam of blackbirds circling his windbreak of trees. There may be dull, dreary clouds and splashes of rain which prophesy more than a warm summer shower. But the farmer smiles and is content.

But it is the woods that bring forth the real harbinger of fall. No adjectives can describe the kaleidoscope of colors: the pale orange of the birch and ash, the vermilion of the soft maple and sumac, and interspersed with the green of pine and hemlock. To see the woods in full raiment is more than just a pretty picture or a pleasant view, it is something that seeps into the bloodstream and becomes part and parcel of human experience.

The fisherman pauses in his cast to admire the deep red of an oak, and people take to the back country roads on a Sunday afternoon to do homage

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Cover—"Blacks Over the Marshes"—Burt Schuman

The black duck is one of the most common ducks observed over our marshes. It is also the most important single species bagged by New Jersey gunners, comprising over two-thirds of the annual harvest. The black duck is easily identified by the dark body in contrast to the white under-wing feathers. For more information about the "bread and butter duck" see p. 6.

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No other game bird can instill in the veteran hunter more desire to head for the upland coverts than the American woodcock, our friend the timberdoodle

The Great Zigzagger

Some notes on that erratic flyer— the American woodcock

By Russel A. Spinks

Bureau of Wildlife Management

Up! Down! Zig to the right—Zag to the left! This is the erratic flight of that buff and black, whistling game bird known as the woodcock. No other game bird can instill in the veteran hunter more desire to head for the upland coverts than our friend the timberdoodle.

Description

American woodcock (*Philohela minor*) have a plump body, a long, slim bill, and a short tail. Since father woodcock does not have the bright coloration that distinguishes the male from the female pheasant, the lack of contrast makes it very difficult to distinguish between the male and female woodcock. The only positive way is to check the sex organs. Unlike most other species of birds, the female woodcock usually outweighs the male.

Migratory

Woodcock are migratory birds and in spring large numbers travel as far north as Canada. During the

migration a good cover can be vacant one day. Yet that same night a large flight could drop in and spend several days. Some of the birds stop off to nest in many areas of New Jersey. These birds which nest within the state are called "local" birds by the hunter, while those which migrate through New Jersey in the fall are referred to as "flight" birds.

Habitat

Woodcock are generally found in low, damp, alder thickets, hawthorne stands, open grassy areas, and in brushy, second growth stands. Earthworms are the principal woodcock food and must be present in the soil in large numbers if the area is to support a woodcock population. When the habitat approaches the climax stage, woodcock will no longer frequent the environment. The grazing of selected areas by livestock, and the use of controlled fire are man-

. . . The Zigzagger

agement procedures which are used to improve woodcock habitat in many areas.

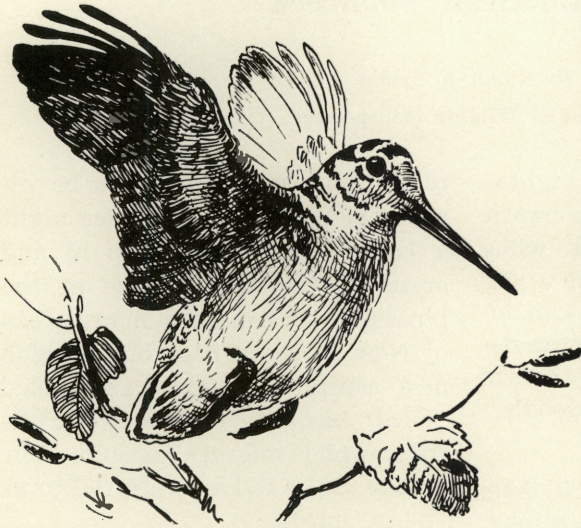
Courtship

In New Jersey the woodcock mating ritual starts approximately during the middle of March. Old

eggs. The eggs are actually quite large considering the size of the bird. The incubation period lasts 21 days. The hen does all of the work.

The Chicks

The chicks mature rapidly and, after about two weeks, start feeding themselves and learning the fundamentals of flying. In about



The courtship of the woodcock is interesting because of the unusual mating ritual flight

pastures, opening in second growth timber, or open areas adjacent to alder thickets are areas where this phenomenon may be observed. The mating ritual usually takes place in the early evening. The male spirals high in the air, twitters, then dives to an open spot and struts about for the benefit of his mate.

Nesting

The nest is located on the ground, usually in a brushy area. The small leafy depression usually contains four light brown, speckled

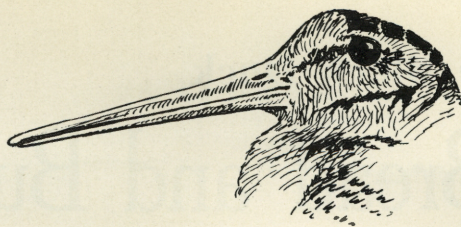
one month they are on their own and in six months reach maturity.

Woodcock Dogs

Ideal woodcock hunting calls for an experienced bird dog. A dog is necessary not only to find birds but also to locate dead or crippled birds. Nature has endowed the woodcock with almost perfect camouflage and, unless a dog is used, many birds may be lost.

Woodcock hunting offers an excellent opportunity to train young dogs. The birds sit close in open cover where dog handling is easi-

Woodcock have a long, slim bill well-suited for probing for earthworms



est. After being flushed the birds seldom fly far and often can be located two or more times. Some dog handlers claim they can "break" a young dog in just one good woodcock flight.

Hunting Areas

The seasoned woodcock hunter is very secretive regarding his "spots." The unwritten code is that, when someone takes you to his spot, you cannot go back unless accompanied by him. This is sound philosophy as it takes many years of experience to locate these desirable locations.

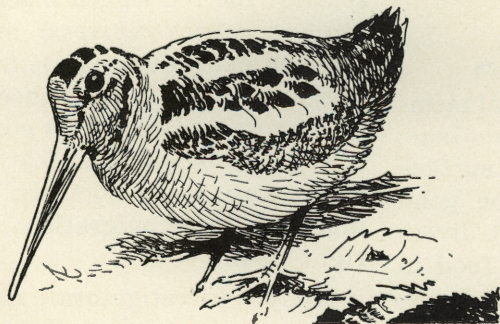
The Gun

In hunting woodcock an open, light, small bore gun is desirable,

not only because of ease of handling but also to keep the bird in one piece. Number eight shot and low velocity loads are sufficient.

Woodcock Hunting

Woodcock hunting is a combination of many enjoyable experiences—the thrill of a dog on point, the excitement of trying to sight on a bird that has no definite flight pattern, the satisfaction of observing nature at her finest in her beautiful fall coloration, and the opportunity of taking a friend or member of your family into the great outdoors. Yes, these joys and many more all add up to one of the greatest of fall sports—woodcock hunting. #



Timberdoodles are usually found in low, damp alder thickets, open grassy areas, and brushy second growth

The Black Duck

Bread and Butter Duck

of the Northeast

By Fred Ferrigno
Bureau of Wildlife Management

WITH THE POPULARITY, abundance, dominance over other species harvested, sagaciousness, wariness, and adaption to coastal marshes, the black duck is truly deserving of the labels "bread and butter duck of the northeast", and "pride of the salt marsh."

Over the years, a considerable amount of research and management has been accomplished on the black duck by both state and federal agencies. As to be expected, oftentimes there are differences of opinion among biologists, administrators, and various organizations based upon their experiences, viewpoints, or studies. It is therefore, the objectives of this article to present some of these differences of opinion that exist, the findings of various studies, and general information pertaining to the black duck.

General Characteristics

The black duck is a typical member of the subfamily *Anatinae*, which are commonly called surface feeding, dabblers, river, or pond ducks. It differs from most divers by usually tipping up for food in shallow water, is more palatable,

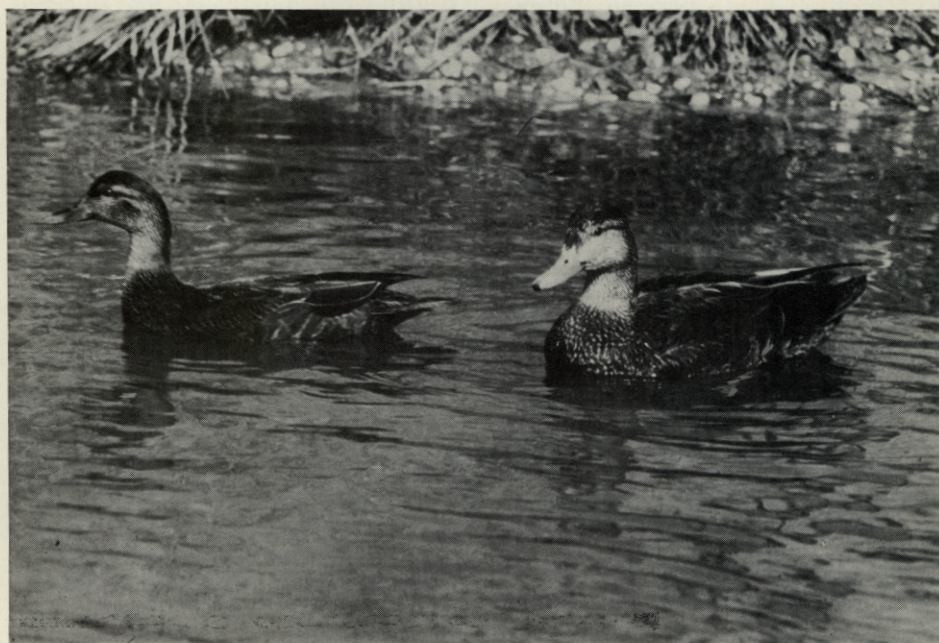
lacks the hind toe lobe, has a highly purplish-blue iridescent hind wing patch, and springs virtually upward on take off. Black ducks in flight are easily recognized by their dark bodies in contrast to their white under-wing surfaces. Although the sex appears similar to many sportsmen, they are easily distinguished by wildlife workers. Sex and aging methods used on black ducks include cloaca examination, gonad inspection, leg and bill color or markings, windpipe structure, voice, weight, wing characteristics, and neck feather etchings.

On the classification of the black duck, there are two general consensuses of opinion. Most sportsmen and many naturalists favor the theory that there are two subspecies: the red legged black duck (*Anas rubripes rubripes*) and the common black duck (*A. r. tristis*). The red leg is distinguished from the common black by its coral-red feet, yellow bill, heavier feathering, larger size, more northern breeding, and later migration (Kortright, 1943).

Many investigators disagree

with the division of the black duck into two subspecies. They claim that most of the differences in species can be explained by age, sex, and moult. During hunter bag checks usually the ducks that hunters call Canadian red legs are adult males in full winter plumage. Those that are termed natives and common blacks are usually females or immature males. Although our banding recoveries showed that

eastern Minnesota, east to New Jersey, and down the coast to North Carolina. Stewart (1958) made a comprehensive study of the distribution of the black duck and found that 99 percent of the wintering population was situated east of the Mississippi. The highest population densities were found in the tidewater areas of New Jersey, Delaware, Maryland, and Virginia, which together furnish two-fifths



The black duck is truly the bread and butter duck of New Jersey, as well as the northeast, amounting to over 60 percent of the total harvest

many of our bagged Canadian red legs were raised in Canada, others were born in the northeastern states, including New Jersey.

Distribution

The black duck breeds primarily from Newfoundland and Labrador west to the southeast corner of the Northwest Territories, south to

of the total wintering population. His average figure for the 1952-56 period showed New Jersey second to Maryland throughout the black duck wintering range. Data from the January inventories for the 5-year average of the top seven states are as follows: Maryland—129,000, New Jersey—85,000, Virginia—

. . . Black Duck

52,000, Ohio—37,000, Delaware—36,000 New York—31,000, and North Carolina—28,000. Recent inventories showed that distribution changes are affected by weather. The 1963 winter inventory, which is indicative of cold, freezing weather, showed a substantial increase in South Carolina. The 75,100 birds recorded in this state represented a 145 percent increase over the 1962 tally of 30,600. At the same time, most of the states north of South Carolina, with the exception of New Jersey, exhibited downward trends in their winter population indexes.

Investigations on banding recoveries in New Jersey (McLain and Ferrigno, 1963) are indicative of the fact that the bulk of wintering black ducks in New Jersey breed in northeastern United States and Canada. Quebec appears to be an important contributor, amounting to 45.2 percent of our out-of-state recoveries. From a total of 592 band recoveries from 6,848 black ducks, only one was reported from a prairie province of Canada. As we proceed south of New Jersey, the trend is to pull more birds from Ontario and the Mississippi Flyway.

In relation to the distribution of the black duck throughout New Jersey, all of the geographic regions of the state have been surveyed and it was determined that the Delaware and Atlantic coastal marshes are of major importance (Atwood, 1949). Since these areas

significantly affect waterfowl population trends, aerial transects were established over these coastal marshes omitting the bulk of our inland wetlands. These surveys showed that at times, there are close to half a million waterfowl, with over 100,000 black ducks, on our coastal marshes. Although the biggest concentration of blacks, varying between 3,000 to 70,000 birds, occurs on the Brigantine Refuge, the coastal saltmarsh cordgrass (*Spartina alterniflora*) and wildrice (*Zizania aquatica*) marshes from Little Egg Harbor Bay to Cape May support the bulk of our wintering population and are largely responsible for the Brigantine concentration. The tremendous production of the salt marsh snail (*Melampus sp.*) on our *S. alterniflora* marshes is of considerable importance in supporting and attracting black ducks during the critical winter period. Stomach analyses taken at this time showed a dominance of this snail over other vegetative and animal matter. Other areas of considerable importance to the black duck include the tidal marshes adjacent to Salem, Alloways, Cohansey, Madhorse, Back, Cedar, Nantuxent, Oranoaken, Dividing, Maurice, and Dennis Creeks.

Population Trends

Based on winter inventory figures for the Atlantic Flyway, the population trends of the black duck have been downward. From totals of approximately 500,000 to 600,000 birds in the 1953-55 period,

blacks have decreased consistently to approximately 300,000 in the 1963 winter inventory. This 1963 winter inventory for the Atlantic Flyway does not indicate any improvement in the population of the important black duck. Compared to the averages of the past ten years and last year—the black duck in 1963, showed a decrease of 20 percent and 2 percent, respectively (Addy, 1963).

Here in New Jersey, populations of black ducks on tidal marshes ap-

and diking for salt hay farming is preventing good tidal flow so necessary to the production of numerous food chains.

Production

The duck flight forecast, as a result of this summer's production surveys, for 1963 in the Atlantic Flyway is a small increase (Crissey, 1963). Of encouragement is the fact that water conditions have improved in the prairie provinces of Canada and this area has reported



Scouts from Troop 51 of Haddonfield listen attentively as the author lectures on the value of tidal marshes to black ducks and other wildlife

pear to be excellent and on a utilization per acre basis, as high as ever. Our only noticeable decreases are taking place on areas of extensive habitat loss. Here housing developments are eliminating marsh

an increase in production along with Alaska and some of the northeast states. The Northwest Territories report no change and decreases were evident in Ontario and Maine.

On the basis of the black duck

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alone, it is felt that climatic and water conditions in the prairies have little effect on their numbers. It is unfortunate that brood counts from the northeastern states were discontinued. It is felt that these counts served as a more valid index of black duck production in the Atlantic Flyway than that of the prairie provinces. The U.S. Bureau of Sport Fisheries and Wildlife is aware of the lack of data in the important Quebec-Labrador area and has been forced to depend to a large extent on the results of the annual winter inventories rather than breeding ground surveys for forecasting black duck flights. However, for adequate waterfowl management, both wintering population figures and good annual production indexes are a necessity. In order to alleviate this condition, the federal government is presently conducting studies in the Quebec-Labrador areas in order to provide us with a more reliable index for determining population trends.

In New Jersey in order to determine adequately production trends of waterfowl, indexes are needed for each of the important ecological types: (1) tidal saltmarsh cordgrass marshes, (2) tidal salt-meadow cordgrass (*S. patens*) marshes, (3) diked salt hay marshes, and (4) impoundments and inland ponds. Our surveys in these environments showed that a greater degree of nesting success on tidal marshes and haying meadows oc-

curs during years of limited rainfall and lack of storm or lunar tides (Ferrigno, 1962). Excessive rainfall or high tides could virtually eliminate initial or renesting attempts. In early May of 1961 and 1962, easterly winds caused inundation of tidal marshes and forced water through damaged dikes which flooded haying marshes with up to two feet of water. As a result, all nests under observation were destroyed. During both years high tides were negligible the remainder of the season. In addition, the limited rainfall which followed was properly spaced so that the water level remained below the level of the marsh. This resulted in excellent production with 77.9 percent of the waterfowl nests under observation hatching successfully. Thanks to drought conditions, this year's production was even more successful than 1962. The total young black ducks produced on sampled tidal areas showed a 18.3 percent increase over 1962. Production indexes from impoundments exhibited a 78.8 percent increase in total young produced and a 50 percent increase in broods. Overall, our indexes do not only show substantial production increases in black ducks, but gadwall and wood ducks as well.

Losses

In recent years, losses and diseases occurring in black ducks included starvation, botulism, lead poisoning, sarcosporidiosis, intestinal tapeworms, intestinal flukes, blood flukes, stomach roundworms,

bird malaria or malarial-like organisms, and other diseases.

Winter Mortality. One of the heaviest black duck mortalities recorded in New Jersey occurred during March, 1960. A very mild winter followed by one of the coldest Marches on record, large populations, no movement, diseased birds, snow covered marshes, and frozen creeks resulted in a die-off of thousands of black ducks in the Little Egg Harbor Bay to Cape May area (MacNamara, 1960). Since that mortality, limited starvation has occurred in 1961, 1962, and 1963.

Bird Malaria. An extensive study of blood parasites was made in Southern New Jersey in 1961. Blood smears were taken from 525 ducks and delivered to Poultry Pathology Laboratory at Rutgers University. Of the 438 waterfowl sampled from banding stations in Cape May County, there were 407 black ducks, 26 mallards, and 5 baldpates. According to the findings of Tudor and Hudson all of the baldpates were negative. Sixty-six (16.22 percent) of the 407 black ducks were infected with the causative agent *Haemoproteus sp.* alone. *Plasmodium sp.* was present in 4 (.98 percent) of the black ducks. Three blacks (.74 percent) had both *Haemoproteus sp.* and the *Plasmodium sp.* organisms in their blood. Overall, 73 (17.93 percent) black ducks were infected with malarial or closely related organisms. *Microfilaria* was found in one black

duck. Three (11.54 percent) of the 26 mallards were infected with *Haemoproteus sp.* and 3 (11.54 percent) with *Plasmodium sp.* Eighty-seven ducks banded in areas other than Cape May County made up the remainder of the birds sampled. Of this number, 20 (22.99 percent) were positive for *Haemoproteus sp.* *Plasmodium sp.* is transmitted by various species of mosquitoes and the vector of *Haemoproteus sp.* is believed to be a Hippoboscid fly.

Leucocytozoan is a blood sporozoan disease and according to O'Roke (1934) is transmitted by certain species of blackflies of the genus *Simulium*. In Jefferson County, New York, 39 black ducks were examined and blood smears taken. The incidence of this disease showed 24 (61.5 percent) were infected with the parasite.

Microfilaria, which was found in New Jersey, is widespread in waterfowl. Nelson and Gashwiler (1941) found no evidence of pathological importance due to microfilarial worms. Microfilariae are also transmitted by mosquitoes.

Aspergillosis is caused by inhalation of the fungus (*Aspergillus*). Mold colonies develop in the lungs of ducks and wasting occurs which resembles tuberculosis.

Botulism is an important disease of black ducks as well as many other organisms. It is caused by spore-forming bacteria, *Clostridium botulinum*. Recent outbreaks on

. . . Black Duck

coastal marshes have been in areas where dikes have impeded tidal flow. Minor outbreaks of this disease in a few ducks and gulls have occurred in the Brigantine Refuge during October of the past few years. It has also been found in the diked-in haying marshes along the Delaware, affecting ducks and willet. In both situations, there was shallow, stagnant water with decomposing organic material. The decomposition and little water movement can result in extensive loss of dissolved oxygen. The bacterium is able to thrive and reproduce only in the absence of oxygen. The toxin liberated by this bacterium into the infected organism is very lethal.

Sarcosporidiosis is attributed to an elongated parasite of the muscle fibers of black and other ducks. This parasite often appears as white dash-like spores in the breast and leg muscles. Quortrup and Schillinger (1941) examined 3,000 birds and found a .7 percent infection. In recent years, this disease appears to be on the increase in certain locations. At Atlantic City, 13 black ducks were examined in December, 1962. Three (23 percent) exhibited one or more spores in the muscle fibers of the breast.

Lead Poisoning. Lead poisoning is not known to be an important mortality factor in the Atlantic Flyway. However, Bellrose (1959) claimed that in portions of the

Mississippi Flyway, lead poisoning takes the greatest toll of adult ducks. In connection with lead poisoning, many states have fluoroscoped ducks and made bottom surveys in the vicinity of duck blinds. Soil samples from Illinois, California, Indiana, Manitoba, Minnesota, and Wisconsin revealed from 0 to 118,000 pellets per acre or from 0 to 2.71 per square foot. In New York, 1,063 blacks were fluoroscoped and only .1 percent had ingested shot; whereas in the Mississippi Flyway, lead shot was recovered from 21 percent of 157 blacks examined. Most investigators agree that lead poisoning is not as yet serious. If it would ever become a serious problem, it has been suggested that shot be changed from lead to a non-toxic alloy (Green and Dowdell, 1937).

Trapping Losses. Muskrat trapping losses have been heavy in portions of the Atlantic Flyway. Gashwiler (1940), from his investigations in Maine, estimated that 4,165 ducks were caught in one spring muskrat season. The heaviest losses occurred during freeze-up periods when ducks frequented muskrat runs in search of food. With the use of the new conibear trap, trappers have reported some surprisingly large black duck losses in New Jersey. Some reports received where one trapper, on various days, recovered from ten to fifteen dead blacks. This mortality represents an unfortunate situation. Although the new conibear

trap is very lethal to ducks, it is also a very useful tool to the marsh owner for adequately harvesting his fur crop.

Other Diseases. Beaudette (1939) found a fluke (*Epomidiotomum uncinatum*) in the upper part of the trachea of wild ducks. The larvae of the flukes develops in common snails. Intestinal tapeworms infested the 19.6 percent of 1,420 blacks examined in Maryland. A chigger (*Womersia strandtmani*) causes lesions in blacks (Clark and Scotts, 1960). Ducks

are many other diseases of both wild and domesticated black ducks.

Harvest

Based on the findings from the Bureau of Sport Fisheries and Wildlife's mail questionnaire survey of duck hunters and their duck wing collections, some interesting information has been gathered on waterfowl harvest. In the 1960, 1961, and 1962 waterfowl seasons, approximately 809,000, 676,000, and 612,000 ducks were bagged in the Atlantic Flyway. During the same three years an estimated



For proper black duck management the carrying capacity of our wetlands, as well as the population status of the specific populations, should receive consideration

also harbor viral encephalitis. Antibodies of these maladies have been detected in blacks, mallards, crows, sparrows, quail, swans, blackbirds, and other birds. There

250,500, 183,100, and 177,100 black ducks were harvested. As a result of restrictive regulations, the number of black ducks harvested in 1962 decreased 27 percent when

. . . Black Duck

compared with the previous year. In 1963, the bag of black ducks showed little change (-3 percent) though the number of active hunters exhibited a marked increase. Total active hunters for New Jersey in 1961, 1962, and 1963 were 11,710, 10,350, and 14,750, respectively.

The importance of the black duck to New Jersey hunters is clearly emphasized by the results from the Bureau's wing collection survey. The black duck comprised from 63 to 65 percent of the ducks harvested in New Jersey. Other species of importance and their approximate composition are presented as follows: mallard (11 to 14 percent), green-winged teal (7 to 8 percent), scaup (4 to 7 percent), widgeon (2 percent), and bufflehead (.5 to 2 percent).

Overall statistic evaluations made of bird populations by the Bureau have emphasized the importance of the kill by hunters on waterfowl population levels. Some of these surveys indicate that hunters take a sizable toll of black ducks and that during periods of low production, a large kill could have no other result than to reduce the breeding population the following year.

The results from biological investigations on specific tidal marshes in New Jersey do not indicate the heavy harvest so noticeable on a flyway basis. Undoubtedly there are areas in the flyway

where certain black duck populations are overharvested by hunters; whereas other concentrations may be underharvested and subjected to heavy natural mortality.

On our surveyed marshes, the restrictive regulations have resulted in reduction of hunter use as well as the waterfowl harvest. As an example, the examined harvest of black ducks on the Dennisville marshes amounted to only 1.8 percent of the mean number of blacks utilizing the area during the hunting season. Even the overall total lost to hunting, 136 waterfowl, made up a small percentage (3.0 percent) of the 4,713 mean taken from counts conducted during the hunting season (Ferrigno, 1963). Winter banding recoveries from birds banded on some Delaware Bay marshes illustrate that over 60 percent of the wintering black ducks are shot within a 10 mile radius of the banding site. Taking this into consideration, even the doubling of our estimated harvest would still appear to indicate a low percentage take.

Role of the Refuge

The numerous inland bays, sounds, Delaware Bay, Atlantic Ocean, and other large bodies of water serve as natural refuges for black ducks during the hunting season. It is doubtful if additional sanctuaries are necessary. The wary blacks, after the initial bombardment on opening day, are quick to seek sanctuary on these large bodies of water.

Data collected from our aerial

waterfowl inventories appear to indicate that the Brigantine Refuge has a marked effect on the distribution and habitat of black duck populations in Ocean, Burlington, Atlantic, and Cape May Counties. The Refuge appears to act as a concentration point for these birds. When molested on the marshes, blacks in portions of the above mentioned areas congregate on the Brigantine Refuge. At times, there are over 60,000 black ducks in the two impoundments of this Refuge. At night, feeding flights can be observed as these birds move out of the Refuge in all directions. With the onset of freezing weather, these blacks can no longer obtain sufficient food during the night and are forced to utilize the marshes during the daylight hours. In addition, concentrations on natural refuges adjacent to these feeding marshes

are again evident and returning flights to the Refuge are less prominent.

The greatest contribution that the Brigantine Refuge has made to the black duck is the preservation of some of our finest *S. alterniflora* marshes in the state. However, the effects of concentrating large bird populations in impounded areas needs to be investigated. From a pathological point of view, the constant crowding, feeding and resting of large populations in areas where there is no tidal movement to disperse their droppings could result in increased transmission of parasitic and other diseases.

Management

Major Objective. Regardless of what line of endeavor we pursue in our investigations, the accumu-

With modern track equipment even some of our softest marshes can be disced, limed, and planted with Japanese millet



. . . Black Duck

lated data continues to stress the importance of preserving our coastal salt marshes. Research has shown that although many individuals continue to bicker about the harmful effects of overshooting, overfishing and insecticides, the real threat to our coastal finfish, shellfish, marsh birds, and other wildlife is marsh habitat loss. There is no doubt that the future numbers of wintering black ducks in New Jersey will depend to a considerable extent on how well we preserve our coastal *S. alterniflora* and wildrice tidal marshes. The abundance of animal matter and food plants produced on these wetlands has been instrumental in supporting large populations of black ducks during the critical winter period.

Habitat Losses. Insofar as abating the constant loss of our wetlands, the only successful method has been acquisition by interested citizens, sportsmen, commercial fishermen, state, and federal conservation agencies. Therefore, at the present time, acquisition of the most valuable tidal marshes should be paramount over other management. Once we have secured large enough parcels of wetlands in key areas so that we can keep out developments, filling, and agricultural practices, then we can proceed to further develop our holdings. It doesn't seem right to tie up large funds in developing, planting, and controlling vegetation year after

year in some inland area to attract a few hundred birds when at the same time we are losing valuable tidal marshes that are supporting thousands of birds. These marshes naturally produced such an enormous and constantly inter-acting network of food chains that it is doubtful if this production can be duplicated by man.

Atlantic Marshes. The greatest amount of tidal marsh destruction along the Atlantic coast has been attributed to housing developments and channel dredging. With the rapid expansion of our resort communities, it is expected that many marshes adjacent to these areas will be developed in the near future. However, the constant filling of valuable tidal marshes, oftentimes in key areas, as a result of channel dredging is unwarranted. Such practices have converted some of our most valuable *S. alterniflora* to worthless reed (*Phragmites communis*) areas. River Basin Studies, a branch of the U.S. Fish and Wildlife Service, has been working closely with Army Engineers, New Jersey Division of Fish and Game, and other agencies in the hope of alleviating this problem. There is no reason why, through cooperation, this fill couldn't be used to create more, instead of destroy valuable *S. alterniflora* marshes.

Delaware Bay Marshes. The greatest loss of the preferred tidal marsh habitat along the lower Delaware Bay has resulted from salt hay farming. Damage here is



Through cooperation aerial application of insecticides for mosquito control can be confined to heavy mosquito breeding areas, thus protecting our valuable marshes

inflicted by small dikes which prevent daily tidal inundation. As a result of these dikes, many food chains are broken and those species of wildlife that subsist on these food chains are practically eliminated. Black duck use of this type of marsh is by far the lowest of all coastal wetlands. From Division Creek, Cumberland County, to Sluice Creek, Cape May County, there are over 13,000 acres of marshes diked off from tidal flow and managed for salt hay. In 1963, there has been over 500 acres of additional tidal *S. alterniflora* marsh that has been diked for future salt hay purposes. There is no doubt that if by some unforeseen miracle, we can again revert portions of these marshes to tidal flow, black duck utilization will be increased by thousands of birds, and production and utilization of countless other species will be restored.

Mosquito Control. Generally speaking if there is close cooperation between mosquito control and wildlife conservation workers, many

control programs can be altered so that they benefit both interests. Through the cooperation of the Agricultural Experiment Station, Cumberland County Mosquito Commission, and the New Jersey Division of Fish and Game, we have studied and established control procedures based on the recommendations of our findings. As a result, most of the aerial insecticide applications are made on diked marshes of little value to wildlife; thus avoiding chemical contamination of our valuable tidal marshes. Physical control such as ditching and potholing are confined to tidal breeding areas. A biologist working closely with these ditching operations can see to it that certain ponds are not drained and that there is adequate tidal flow into breeding areas. Such a tidal flow not only eliminates mosquito production and increases the amount of food organisms, but also makes this food available to fish and other organisms in our creeks, rivers, and bays. For the most part, portions of marshes

. . . Black Duck

that are permanently flooded or are inundated daily by tides, never produce mosquitoes. Such areas as our low tidal *S. alterniflora* and wildrice marshes fall into this category and receive the greatest use by black ducks, clapper rail, and other wildlife. They should be maintained under a natural state.

Development. Tidal marshes, like the upland, undergo certain plant succession that can be altered by man to produce and support more wildlife. When the time is ripe for management, those marshes that have succeeded from *S. alterniflora* and wildrice to salt hay, cat-tail, reed, and other perennials, should be selected for development. Impoundments, water level management, or open-marsh development are generally used depending on existing conditions and the interests involved. After impoundments are constructed, water levels are managed for either submergent aquatics (wigeongrass, pondweed, etc.), emergent vegetation (millet, nutgrass, etc.), or control of undesirable vegetation. With some of the modern track equipment even some of our wettest marshes can be disced and planted. Good production of the desired food plants will result in increased use by blacks and other ducks. In fact, waterfowl utilization of an impoundment is usually proportional to the amount of food produced in that particular impoundment.

Cooperation Necessary. The future

of our wetlands will also depend to a considerable extent on how well the various agencies work out specific problems to the benefit of most interests. Since wetlands are so important to water policy, commercial and sport fisheries, shell fisheries, wildlife management, mosquito control, boating, and nature groups, various marsh development programs by specific organizations should no longer function independently. What is needed is some type of wetlands committee whereby any proposed man-made changes in the marsh ecology could be altered so that they benefit a multiple of interests. In addition, such a committee could form a strong pressure group so necessary for preservation of tidal marshes.

Cooperation between the states and the federal government is also important in the formulation of sound waterfowl regulations. At present, there is still disagreement among conservation agencies as to the usefulness of present regulations. Some investigators feel that with the constant loss of wetlands, the waterfowl population status on a per acre basis on remaining marshes should receive consideration. Most biologists agree that better species and area management is needed. It will be difficult to accomplish this with the bird identification, law enforcement, and other problems involved. It is this writer's personal opinion that there appears to be too much emphasis placed on the overall statistics obtained for a flyway. In so

doing, many of the basic management concepts are lost in the shuffle. While the flyway population figures of a species may be low, there are areas where certain populations fluctuate, reach peaks, and suffer heavy natural mortality. One of the basic concepts of worthwhile game management is to harvest what would ordinarily be lost to the extravagant laws of nature. In order to accomplish this we need flexibility. To get flexibility, not only do we need the overall flyway statistics, but also information from sound, cooperative, ecological, field studies. These studies will lead to greater knowledge of the population status, natural loss, and effects of hunting on specific waterfowl populations.

As far as the black duck is concerned, there is still a considerable amount of knowledge needed for adequate management. However, most conservation workers are in accord that the habitat is of major importance. Therefore, whether you are a duck hunter or naturalist and want to do the utmost for the black duck, remember to back all programs that are designed to preserve our coastal marshes. If we succeed in saving a sizable portion of these marshes, Mr. Black Duck, the pride of the salt marsh, will be with us for a number of years to come. #

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**To cross a fence safely you should observe these three basic rules:
1. Empty your gun. 2. Keep the action open. 3. Watch the muzzle.**

Don't Cross Your Fences Till You Unload

By Hiram C. Mount

Of all the types of firearm accidents suffered by hunters, those involved in crossing a fence seem to be the saddest—and most unnecessary. The victim of a fence-crossing mishap with a firearm is usually the gunner himself or his own hunting partner. And, in this type of accident, especially with a shotgun, the wound is frequently very serious or even fatal since the range is commonly point blank.

To cross a fence safely while hunting all you need to do is follow three basic rules and practice good, common sense gun handling. The basic rules are (1) empty your gun, (2) keep the action open, and (3) watch the muzzle. The general practices are as follows:

1. When you come to the fence, if you are alone, unload your gun and keep the action open. Pass the *empty and open* gun, muzzle away from you, through the fence. Place it carefully on the ground without getting any earth or other material in the barrel. Then go through the fence yourself. Without getting in front of the muzzle, pick the gun up and reload. *Never pull a gun through a fence by the muzzle.*

2. If a companion is with you when you come to the fence, unload both of your guns and keep the actions open. One hunter should go through the fence and receive both of the guns *unloaded and open* from his partner. (A third member could assist the others through the fence.) *Never pass a gun to another muzzle first.* Point the muzzle skyward. When both are through the fence, reload your own weapons in a safe manner with the muzzles directed away from each other.

Now, if you are reluctant to unload your gun at a fence because you think game may flush at the time, do this. As you approach the fence, make some sudden, sharp noise, kick the brush, and pause at least a minute or two. Then repeat the commotion and wait a while again. If game is nearby it will most likely break cover. Then, unload and follow the safe fence-crossing procedure.

If a fellow gunner is with you, one of you could "stand guard" with loaded gun while the other crosses the fence as a lone hunter should. After the first man safely crosses the fence, he could reload and stand ready while the second shooter crosses through with due safety practice as described above.

But, remember, "All the pheasants bred can not make up for one man dead."

Also, taking care not to damage fences, as well as other property, while hunting goes hand in hand with the requesting of permission to hunt before entering private land. #

Hiram C. Mount, who was Secretary of the Mercer County Hunter Safety Instructors Association, passed away this past summer and was buried with military honors August 4. He was a Deputy Conservation Officer and a squadron commander of the New Jersey Marine Police. His fellow officers, friends, and former gun safety students will miss him.

Fur, Fin ^{and} Campfire

By JACK SHERIDAN



NOW IS THE TIME TO GIVE YOUR HUNTING DOG A REFRESHER COURSE, AS THE HUNTING SEASON NEARS OPENING IN MANY STATES.

TEACH HIM THE FUNDAMENTALS. TRAIN HIM IN THE YARD TO HEEL, SIT, STOP, STAY AND COME TO YOU. DON'T OVERDO IT. A DOG TIRES, TOO, AND HIS INTEREST WILL DISAPPEAR. REWARD HIM AFTER A FEW HOURS OF WORK.



TEACH HIM TO RETRIEVE, USING DUMMY BIRDS.



TAKE ALONG YOUR SON. HE CAN HELP BY PLACING THE BIRDS OR DUCKS WHILE YOU CONCENTRATE ON THE DOG.

Remember that there is still good fishing for trout, bass, pickerel, walleyes, and pan fish

. . . The Witchcraft of Autumn

Continued from Inside Front Cover

to the Almighty's handiwork. Even the city commuter walking to the bus stop feels the impact of nature. The trees on the boulevard have taken on a suppressed holiday tinge, and a touch of frost cuts the gas fumes.

And there is the hunter, taking his dogs afield to run off summer fat and sharpen obedience. From the quail country of the southern counties to the pheasant regions of central Jersey, to the "partridge" country of Sussex, thousands of hunters will migrate to blow holes in the air, to swap hallucinations, raise blisters and enjoy the autumn scenery. Some will shiver in a blind to call in an old greenhead. What greater heritage could man want? Why the admonition of laws to preserve it? Breathes there a soul so dead that would not fight, tooth and nail, to perpetuate it?

But to me the nostalgic traditions of youth mingle with the present. Nature must be savored during the process of growing up to absorb the full flavor of its enchantment, and nothing can compare with the witchcraft of autumn on a backwoods stump farm.

Fall in the woods country impregnates the spirit with a restlessness that is difficult to explain. There are days of sunshine when the haze of Indian summer lends a new fascination to the distant hills. Then woodcock feed and partridge pink clover and dust themselves in the old sand trails. A buck whistles his mating challenge from the edge of a clover patch when darkness has fallen. The woods are a riot of brilliant hues and shades. The loon voices its weary lament, and there is feverish activity among the muskrats and beaver. All these and the ever-present smell of woods smoke stir a vagrant unrest in even the dullest souls. Even cattle are prone to start off with no objective other than an ancient and deep-seated instinct to roam.

Then there were no super highways, no jets overhead, few trespass signs. All nature was mine to drink deep at its springs of freedom, and to roam at will with an old double-barreled hammer gun. And when I see the maple and birch begin to turn with the coming of fall, that is what I remember. #

If You Are Changing Your Address

Please fill out this form and send it to NEW JERSEY OUTDOORS, P. O. Box 1809, Trenton, New Jersey 08625, so that you will continue to receive your copies of the magazine without interruption. (NEW JERSEY OUTDOORS cannot be forwarded by the post office; therefore, we need your new address in advance. Allow six weeks for processing.)

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1964 Migratory Bird Regulations

Species of Birds	Open Seasons Both Dates Incl.	Daily Bag Limits Possession Limits
Geese; Brant	Oct. 24 — Jan. 1	Geese 3 daily; possession 6. Brant 6 daily; possession 6.
Ducks	Split Season: Oct. 24 — Nov. 14 Dec. 11 — Jan. 2	3 daily; possession 6.
Mergansers—American redbreasted, hooded		5 daily; possession 10 of which not more than 1 daily and 2 possession may be hooded.
Scoter, eider, and old squaw		7 singly or in aggregate; possession 14.
Coot (crow duck)		10 daily; possession 20.
Wilson snipe or jacksnipe	Oct. 24 - Dec. 12	8 daily; possession 16.
All rails and gallinules	Sep. 1 - Nov. 9	15 daily; possession 30 of which not more than 10 daily and 20 possession may be clapper.
Woodcock	Oct. 10 - Nov. 28 Except closed Nov. 6 Reopen 9:00 a.m. Nov. 7	5 daily; possession 10.

Time of hunting migratory birds and waterfowl is sunrise to sunset (E.S.T.)

Federal stamp required for ducks and geese for anyone over 16 years of age.

No open season on swan, snow goose, doves.

The daily bag limit on ducks other than mergansers may not include more of the following species than: (a) 2 wood ducks; (b) 2 mallards; and (c) 2 canvasbacks or redheads, or 1 of each. The possession limit may not include more of the following species than: (a) 2 wood ducks; (b) 4 mallards; and (c) 2 canvasbacks or redheads, or 1 of each.

Waterfowl hunting on the Delaware River is governed by state boundaries and restricted to respective seasons.

Special State License on woodcock required through November 5. Shooting hours sunrise to sunset.

**Refer to Compendium and Migratory Bird Regulations
for further details and laws in full.**

Buy your hunting license early!

**and when you do remember to request
a copy of the Compendium of
New Jersey Game Laws for 1964**

Council Highlights

July Meeting

The regular monthly meeting of the Fish and Game Council was held in Trenton on July 7. In addition to the members of the Council and staff, the following persons were present: John Russack, Roy Williams, Edward Jackson, Edmund Schuler and Robert Vreeland.

Green Acres Applications

The following Green Acres applications were reviewed:

1. Pequest Revision (This will protect our hatchery and give us one-half mile of fishing on the Pequest.)
2. Ken Lockwood Gorge (This is an exception in the Gorge and will give ownership to center of river.)
3. Columbia Lake (Forests & Parks)
4. Twin Lights (Forests & Parks)
5. Hewitt (Addition to Ringwood)
6. Washington Rock (Forests & Parks)
7. Hammonton Lake (Forests & Parks, is an access point)
8. Cheesquake Additions (Forests & Parks)
9. Assunpink Addition
10. Stokes Addition (Forests & Parks)
11. Stokes Addition (Forests & Parks)
12. Allaire Addition (Forests & Parks)
13. Wharton Additions (Forests & Parks)
14. Lebanon Addition (Forests & Parks; also adds to our Pasadena Tract.)
15. Swartswood Addition (Forests & Parks)
16. Great Bay
17. Colliers Mills Additions (Exception in Colliers Mills Tract)

On motion of Councilman Alampi, seconded by Councilman Charlesworth and passed, the Council approved these applications.

Councilman Godown referred to Mountain Lakes and suggested that if at all possible, a request be made to obtain access there through Green Acres. Director MacNamara is to check into the matter.

Law Enforcement

Chief Coffin reported that the reassignment of Conservation Officers discussed at the last meeting of the Council has been completed in the northern end of the state and, while we are operating with two less Conservation Officers, the territories have been changed and we should receive the same efficiency as we have in the past. He reported that

. . . Council Highlights

Conservation Officers Schneider and DeSimone were still on sick leave and that Harold Chitwood has transferred from the Game Management Bureau to Enforcement and has started to work temporarily in Middlesex County. He will later be transferred to Morris.

Coastal Patrol

Newman Mathis, Chief of the Coastal Patrol, reported that two patrol boats are working in Raritan Bay. Porgies had not arrived in the bay but they had been taken on the beaches. Many blue fish but few fluke have been reported. Trawler activity is light at this time.

The patrol boats *Anne E II*, *Harriet H*, and *Elizabeth C* have all been overhauled and are ready for the season. The *Flounder* is in the process of being overhauled. He is allowing the *Flounder* to dry out thoroughly to lighten it in preparation for catching violators who operate in speed boats.

Tuna Fishing

Chairman Hart reported that sport fishermen have been disturbed by an increase in commercial fishing for tuna off the Jersey Coast. He said this is a perfectly legitimate fishery and has been conducted outside of 20 miles. He said that a tremendous body of tuna has been reported in the Atlantic.

Public Relations

Jules Marron, Supervisor of Public Relations, reported that activities in this unit have been light with the closing of schools and the Conservation School. It was necessary to turn down many summer camp programs because of inadequate personnel to handle them.

Wildlife Management

George Alpaugh, Chief of the Bureau of Wildlife Management, reported that normal planting operations for the spring have been completed and are badly in need of rain to make them effective for wildlife populations. The next main operation will be mowing at the public hunting grounds and fishery sites, which improves the aesthetic value of the grounds, prevents the spreading of obnoxious weeds, and provides succulent growth for wildlife. He reported that 24 deer complaints were received during the month. Due to the dry weather, deer are prone to invade gardens for more succulent growth.

Mr. Alpaugh stated that the Wildlife Control Representatives have been busy and raccoon damage to sweet corn has been increasing. The Wildlife Control force is short two men who retired. As far as wildlife

populations are concerned, Mr. Alpaugh advised many species seem to be higher than last year. However, personnel in the field report that the rail population is down.

He said that personnel in South Jersey are cooperating with the Mosquito Commission in evaluating some of the pesticides being used throughout the state, and indications this year seem to be that Endrin is extremely dangerous.

He reported that getting the APW projects into operation has been difficult. The project at Tuckahoe is expected to start soon, and the engineer drawing plans for the Prospertown Lake has finally agreed to present final plans this week. Difficulty has been encountered in hiring masons and carpenters to work on the Millville project at the hourly wage which the state pays. The APW project at Dennis Creek is delayed because we found that the land was not owned by us. Steps are being taken to acquire title to the area in question.

Junior Wildlife Managers

Mr. Alpaugh advised that Civil Service has scheduled an examination for Junior Wildlife Management, which is the beginning grade in the professional level. Applications for participating in the examination must have been filed with Civil Service by the end of July. One of the qualifications for taking the examination is that the applicant must have a B.S. degree in one of the sciences. Councilman Godown raised the question of whether credits received by taking correspondence courses would be acceptable to Civil Service and Director MacNamara is to check this matter. Councilman Alampi said he considered it unfair that long-time, efficient, and dedicated personnel could not take the examination because they did not have a degree. He believed that years of experience and ability to perform the tasks required should be given consideration in qualifying for the examination. He stated that some time ago the Council had passed a resolution recommending that employees who had no college education but who were good workers with long experience should be eligible to take examinations that are open only to college graduates. Director MacNamara advised that this resolution had been submitted to Commissioner Roe.

Raccoon Season

Chairman Hart asked Chief Alpaugh what the recommendations of the Wildlife Management Bureau were in response to the request of the Farm Bureau for a September 1 opening of the raccoon season. Mr. Alpaugh read a statement of his bureau dated December 21, 1963 which was in answer to a similar request from the State Grange. The Bureau of Wildlife Management recommended that the raccoon season not be changed since the raccoon, being a game animal, needs protection

. . . Council Highlights

during the breeding season, the pelts would not be in prime condition if taken too early, and the raccoon hunters in New Jersey were enjoying the sport furnished by the presently available good population of raccoon which only a few years ago were reported to be difficult to find. Also, Mr. Alpaugh said that farmers can now shoot raccoon at any time when they are doing damage, if they obtain a permit. He suggested that this fact be publicized so that more property owners will be aware of the regulations and take advantage of it. Councilman Alampi suggested the information be sent to the Farm Bureau so they can publish it in their weekly news bulletin, if they so desire.

Menhaden Vessels

Councilman Charlesworth reported that the Conservation Officers had patrolled Delaware Bay and apprehended one menhaden vessel for having an illegal catch of food fish. Chairman Hart said the skipper of this vessel was at fault and will have to pay the fine. He pointed to the good record that menhaden vessels have maintained in operating legally, the last similar violation having taken place more than twenty years ago. He further stated that he is endeavoring to have the menhaden industry recommend to the legislature that the fines be increased and that the captain of the vessel be accountable for any violation rather than the owner of the vessel.

Glassboro Squirrels

Councilman Alampi called attention to the fact that in the tentative code for the 1964 hunting seasons the Borough of Glassboro had been listed in the open squirrel season, and since over half of our Glassboro Public Hunting and Fishing Grounds lie within Glassboro, he thought this should be stricken out of the code. This will be done following the public hearing.

Amwell Lake

Councilman Totten reported that on visiting the Amwell Lake recently he discovered that someone had removed the bronze plaque that had been erected there. He reported the matter to the State Police who are investigating the loss.

Councilman Totten suggested that signs be erected at Amwell Lake to discourage littering. He also recommended that signs be erected calling attention to the fact that swimming is done at a person's own risk.

Councilman McCloskey

For the benefit of the public and press present, Councilman McCloskey advised them that a procedure for handling pollution was

now available and would be sent to the State Federation. He also advised that Director MacNamara plans to make an aerial survey of the waterfowl breeding grounds in the Canadian prairies. He reported, too, that a report prepared by Charles Wright, Biometric Analyst, was available and was the basis for the recommendations made by the Fisheries Committee of the Council for the 1965 fishing seasons.

Councilman Godown

Councilman Godown reported that she and Councilman McCloskey and Totten had attended the recent fisheries seminar and enjoyed it tremendously. Councilman Godown requested that she receive a copy of a paper Bruce Pyle had read which dealt with future pollution plans. Director MacNamara stated that final plans on pollution have not been promulgated and that Chief Hayford, Commissioner Roe, the Department of Health, and Shell Fisheries are all working on it at the present time.

Pompton Lakes Access

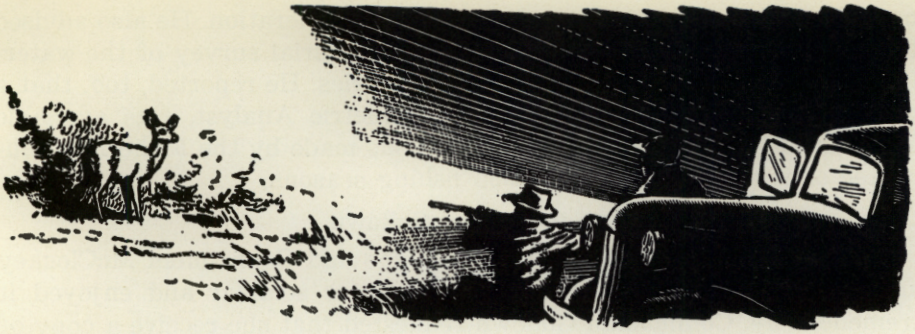
Edward Jackson advised the Council that he has been informed that the Town Council of Pompton Lakes and the Board of Education are in disagreement over the site for building a new school and it is entirely possible that the site we are interested in for an access point to Pompton Lake might be available. He urged that the Council take steps to again contact the Board of Education. Councilman McCloskey stated that Chief Hayford was absent on vacation but that he would endeavor to contact the Board of Education.

Other Lake Access

The Council was cognizant of the need for maintaining access points on many of the lakes in New Jersey and Chairman Hart stated that the Council would do everything possible to acquire areas in order to keep lakes such as Pompton Lakes open to the public. As far as Mountain Lakes is concerned, Councilman McCloskey said he believed we had an access site there but that it is a steep bank and perhaps we could make this into a ramp without too much expense or effort. Director MacNamara plans to inspect the area soon. #

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.



Violators Roundup

<i>Defendant</i>	<i>Offense</i>	<i>Penalty</i>
Ray N. Nedahon, Keynon Ave. R.D. #1, Millville	Take fish other than angling	20
Alger Harland, 72 Mill Rd., Pedricktown	Loaded gun in auto	20
Pee Dee Williams, 1236 N. 25th St., Philadelphia, Pa.	Angle—no non-resident license	20
Willie Williams, 2731 N. Gratz St., Philadelphia, Pa.	Angle—no non-resident license	20
John E. Wilson, Jr., 132 Rossell Ave., Trenton	Fish no license	20
Oscar C. Davis, 2410 N. Broad St., Philadelphia, Pa.	Angle—no non-resident license	20
Mary L. Tabor, R.D. #5 Seeley Rd., Bridgeton	Fish no license	20
Oruz Nieves Perzes, R.D. #2, Bridgeton	Fish no license	20
Jacinto Velazques, R.D. #2, Bridgeton	Fish no license	20
Lunava Eugen, 125 S. 13th Ave., Mt. Vernon	Fish no license	20
Joseph Frechette, 234 5th Ave., Brooklyn, N.Y.	Fish no license	20
Robert Munson, Wilomay Trailer Park, Lake Hopatcong	Fishing closed hours (Friday)	20
Robert A. Mason, 527-29th St., Newport, Mass.	Poss. 10 lobsters illegal size	200
Helen Morrison, 1820 Ridge Ave., Phila., Pa.	Fish no license	20
Thomas G. Shrader, 301 Nature Drive, Haddonville	Fish no license	20
Scott A. Mehaffey, 45 Church St., Pennsville	Fish excess bag limit possession	20
Clayton C. Crawford, 133½ E. Washington Ave., Washington	Fish excess bag limit possession	40
Joseph Holovack, 504 Washington Ave., Manville	Fish illegally in fly stretch	20
Danny Conklin, Buttao Hollow Rd., Glen Gardner	Fish no license	20
Gabriel Nagy, River Drive, Frenchtown	Fish no license	20
George Kefpinger, 15 E. 19th St., Paterson	Fish closed waters	20
Robert J. Drummond, 200 Lakeside Dr., Nutley	Gun on Sunday	20
Peter Z. Bruce, 231 Orchard St., E. Paterson	Gun on Sunday	20
William J. Tansky, R.D. #1 Morton Ave., Millville	Take fish other than angling	20
Francis R. Alcavace, 3224 Braxton Wlk., Camden	Take fish other than angling	20
Sidney Simon, 207 N. Gladstone Ave., Margate City	Fish no license	20
Edward Loatman, 132 Mill St., Bridgeton	Fish no license	20
Thomas T. Burrus, Deerfield St., Deerfield	Fish no license	20
Russel A. Frowler, 274 Stephenson Ave., Bridgeton	Fish no license	20
Robert L. Turner, 22 Park View Hgts., Bridgeton	Fish no license	20
Edward S. Hoffman, 224 Port Ave., Elizabeth	Fish no license	20
Charles Zelickowski, 934 Meredith Ave., Elizabeth	Fish no license	20
Frank Salagas, 65 Manor Dr., Newark	Fish closed waters	20
William McIntyre, 1132 St. Louis Ave., Hillside	Fish closed waters	20
William Pawluk, 779 Layton Dr., Union	Fish closed waters	20

<i>Defendant</i>	<i>Offense</i>	<i>Penalty</i>
Raymond F. Zarzecki, 1525 Cooper St., Deptford	Trout over limit	20
Raymond F. Zarzecki, 1525 Cooper St., Deptford	Trout over limit	20
Edward H. Hartley, 2235 N. Park Ave., Phila, Pa.	Fish no license—tidal waters Bail forfeit	25
James J. Kreuzsch, 403 Ocean Ave., Jersey City	Firearm on Sunday	20
Andrew Burek, 231 Orchard St., East Paterson	Firearm on Sunday	20
Mitchell A. Sams, 34 Orchard Rd., Deepwater	Fish over limit	60
Charles W. Roy, 6088 Beechwood Ave., Philadelphia, Pa.	Non-resident—fishing tidal waters without license	20
James B. Hartley, 144 W. Price St., Philadelphia, Pa.	Non-resident fishing tidal waters without license	25
Alden Wright, 10 Ash Terr., Bellmawr	Fish over limit	20
Alden Wright, 10 Ash Terr., Bellmawr	Fish over limit	20
Matthew Friars, 401 DuPont Ave., Paulsboro	Fish no license	20
Albert Mitchell, 840 York St., Camden	Fish no license	20
Alvin Ostendorf, Mountain Ave., Cedar Knolls	Trout over limit	40
Julius Nemeth, 15 S. Belair Ave., Cedar Knolls	Trout over limit	40
Dominick Marcantonio, 54 Barnida Dr., Hanover	Trout over limit	40
Imco Container Co., 5th & Knowlton St., Belvidere	Allow water to become destructive	500
Raymond Brown, Rose St., Cliffwood	Fish no license	20
Henry L. Edmondson, 848 E. Hazelwood Ave., Rahway	Fish no license	20
Thomas J. Karamus, 2350 Colonial Dr., Clark	Trap no license	20
John Walton, 95 Stevens Ave., Jersey City	Fish no license	20
John Bellett, 143 Fountain Ave., Trenton	Fish closed waters	20
Roselee Halloway, 65 Pine St., Bridgeton	Fish no license	20
Walter G. Logan, 141 Grace St., Jersey City	Firearm on Sunday	20
Stanley Green, 50 Summer St., Passaic	Angle with bait—trout streams	20
David J. Rossetti, 201 High St., Alpha	Fire gun across road	20
Michael Lagenstra, 162 Pine Ave., West Berlin	Trout over limit	20
Norton L. Brown, 2319 Atlantic Ave., Atlantic City	Fail to report deer kill	100
Lester L. Bright, 506 Bem St., Riverside	Hunt no license	20
Frederick Carty, Chews Landing Rd., Laurel Springs	Failure exhibit fishing license	20
Allan J. Wood, Mariticong Ave. Box 5, Hopatcong	Fish no license	20
Paul Coulter, Jr., 609 Elms St., Camden	Fish other than angling	20
Rudolph J. Buchar, 407 Lexington Ave., Clifton	Gun on Sunday	20
Jerry Ferrence, 69 Wonham St., Clifton	Gun on Sunday	20
C. R. Bepler, 181 Paxon Hollow Rd., Media, Pa.	Fish no license	20
Thomas L. Wiebeld, R.D. #1 Box 278A, Wrightstown	Poss. illegal size bass	20
Edward E. Pennington, 1 Main St., New Egypt	Poss. illegal size bass	20
Raymond A. Fontaine, Heather St., Browns Mills	Fish no license	20
Ronald J. Fitch, 461-18th St., W. Babylon, N.Y.	Fish no license	20
Wayne T. Shores, 2046 O'Hare Dr., Glenview, Ill.	Fish no license	20
Louis J. Ferandez, 15 Colony Dr., Terryville, N.Y.	Fish no license	20
Norris Jacobs, 16 Farm Center, Seabrook	Poss. short large mouth bass	20
Jerry Lee Meadows, Box 82 Morton Ave., Rosenhaym	Fish no license	20
Harry Fiester, Jr., Black Horse Pike Cecil, RFD, Williamstown	Fish no license	20
Jay L. Berman, 420 N. Broadway, Pitman	Fish no license	20
William Cuddiky, R.D. 3, Farmingdale	Angle closed waters	20
James P. Morrison, Jr., 124 Whittlesey Ave., W. Orange	Angle closed waters	20
Leonard Tutalo, Jr., 483 Linden Pl., Orange	Angle closed waters	20
Arthur B. Miller, 134 Mountain Ave., Hackettstown	Fish closed waters	20

. . . Violators Roundup

<i>Defendant</i>	<i>Offense</i>	<i>Penalty</i>
Raymond Saunders, 134 Mountain Ave., Hackettstown	Fish closed waters	20
Robert J. Lee, R.D. #2, Branchville	Fish closed waters	20
James C. Hollingshead, 126 West Maint St., Millville	Hunt on Sunday	20
Norman Houser, Gibbsboro & Kresson Rd., Gibbsboro	Fail report deer kill	100
Lawrence F. Young, Cropwell Rd., Cherry Hill	Game animal in capt. w/o license	50
Sylvia Tomaini, 172 Cedar Ave., Long Branch	Fish no license	20
Stanton M. Shapiro, 4602 Old York Rd., Phila., Pa.	Fish no license	25
James E. Cernek, Box 37, Manahawkin	Fish no license	20
Jack A. Bitler, 252 S. Rhode Island Ave., Atlantic City	Fish no license	20
Paul Jotzat, Linden St. R.D. 3, Mays Landing	Poss. illegal size bass	20
Clarence E. Williams, Jr., 2219 Green St., Chester, Pa.	Fish no non-resident license	20
John H. Johnson, 15 Houston Rd., Yardley, Pa.	Fish no non-resident license	20
Joseph J. Franko, 106 E. Hillside Dr., Bloomingdale	Angle before hours	20
Alan Card, 43 Manning Ave., Butler	Angle before hours	20
Roland Sparling, 50 Klein Ave., Trenton	Angle closed waters	20
Harlod Ham, Jr., 34 Mason St., Newton	Fish no license	20
John A. Coyte, 23 Andover Rd., Old Bridge	Fish no license	20
Clauds Archambault, Box 340 R.D. 1, Wharton	Fish no license	20
Dominick Compano, Rt. 206, Stanhope	Fish no license	20
William F. Carr, 607 Penna. Ave., Palmyra	Fish no license	20
John R. Eck, 499A Center St., Phillipsburg	Firearm in woods closed season	20
David J. Eck, 499A Center St., Phillipsburg	Fish closed waters	20
Roger J. Solari, 65 Highland Ave., Passaic	Fish no license	20
Homer L. Robinson, Woodstown Daretown Rd., Elmer	Fish no license	20

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ABC's

of good sportsmanship

- A**lways practice safe gun handling.
- B**e considerate of the landowner. You are his guest.
- C**onduct yourself as a SPORTSMAN should.
- D**on't be a game hog.
- E**ducate youth in the principles of sportsmanship.
- F**avor the fellow who is hunting with you.
- G**ive wildlife a break. Work for its conservation.
- H**ave the location of your hunting partner always in mind.
- I**nfluence others to hunt safely.
- J**oin a sportsman's organization.
- K**ee a clean camp.
- L**eave young wildlife alone.
- M**ake sure of your target before you shoot.
- N**ever leave a cripple to go to waste.
- O**bey the game laws to the letter.
- P**ut yourself in the other fellows place. Treat him accordingly.
- Q**uit harping about good sportsmanship; do something about it.
- R**etrieve every piece of game you knock down.
- S**hare your game bag with the farmer.
- T**ake a boy, other than your own, hunting or fishing.
- U**nite your fellow sportsmen to provide better sport.
- V**alue, and protect, your privilege to own and bear firearms.

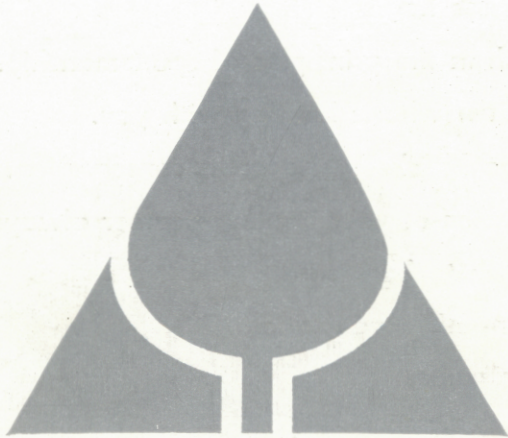
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