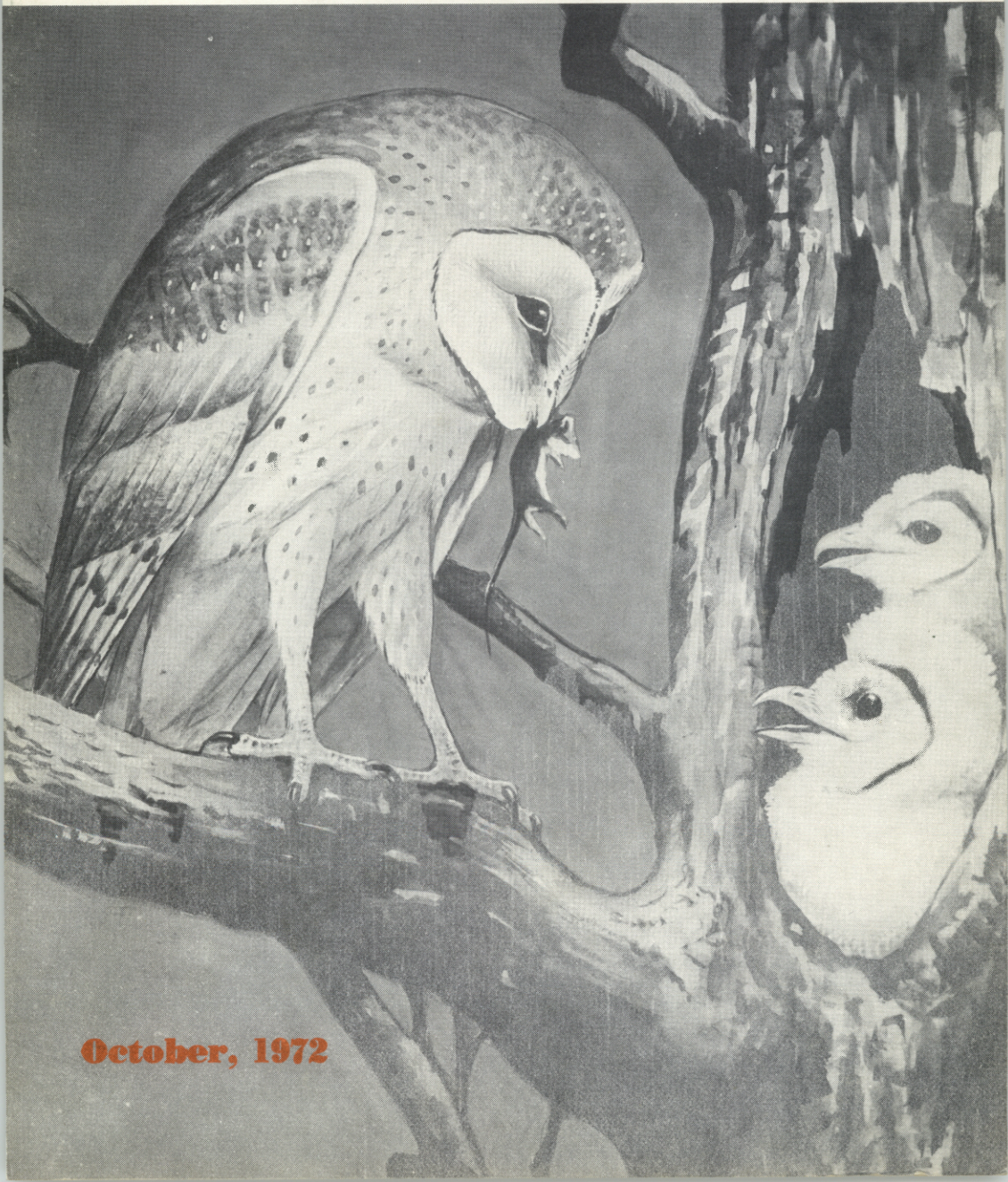


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# New Jersey *Outdoors*

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**October, 1972**

# Blaze Orange Is for Hunters

The National Shooting Sports Foundation has again come out in strong support of blaze orange, that man-made fluorescent color which stands out against any and all of nature's background.

According to NSSF, a hunter who wears blaze orange in the field is a safe hunter. As testimony to this claim, NSSF points out that Massachusetts deer hunters are required by law (signed in 1962) to wear at least 200 inches of this eye-catching cloth and, as a result, the state has been compiling an unparalleled hunting safety record.

Wearing a bright, easily spotted color that contrasts vividly with natural surroundings is not only an important safety factor but courtesy to other hunters.

Advises NSSF: "A flash of blaze orange will let other hunters know you are working in a particular area, and they will be able to detour away and avoid flushing game. It also simplifies communication with members of your hunting party without whistling or calling out to each other."

According to NSSF, the blaze orange sends a glowing signal to other hunters but does not frighten off game or hamper a hunter stalking a deer. Leading game biologists say the skittish white-tailed deer is color blind and will only be warned of a hunter's presence when it distinguishes motion, sound or scent. Thus, a hunter's chance of bagging a deer are just as good in blaze orange clothing as with any other color or combination thereof.

The safety factor in wearing a daylight fluorescent cap or vest is not limited to woodland hunters. Safety experts agree that blaze orange clothing can also decrease accidents among upland game hunters where the action is often fast and flurried.

The eye-catching qualities of blaze orange were well-established as early as 1959 during a color study conducted at Fort Devens, Massachusetts, by the Massachusetts Division of Fisheries and Game, the American Optical Company, and the U. S. Army. #



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*Cover—"Barn Owl"—National Wildlife Federation*

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# Deer Biology and Habitat Relationships

By R. C. Lund,  
Senior Wildlife Biologist  
*Bureau of Wildlife Management*

The white-tailed deer, like all forms of wildlife, is a product of the land. The quality of the soil and the plants produced by it directly influence the quality and productivity of deer populations. It is the quantity and quality of the available food and cover plants which determine the number of deer a given area can support. This is termed the area's carrying capacity.

A knowledge of the factors affecting carrying capacity is essential to the understanding of deer-habitat relationships. Maximum carrying capacity refers to the number of deer that the habitat will support at a strictly maintenance level. However, game managers attempt to hold deer numbers below this level at what is termed the optimum carrying capacity: the number of deer the range can support in good condition, on an annual sustained-yield basis, without depleting or damaging the habitat. This helps to insure a relatively stable population, year after year, rather than a population which fluctuates markedly with little control.

Food and cover are usually the most important of the several factors that influence carrying capacity. If a deer does not have enough to eat, it cannot survive. On the average an adult deer requires 5 to 7 pounds (green weight) of forage per 100 pounds of body weight a day. But it is not just the total amount of forage or browse consumed that must be considered. The quality or nutritional value of the food is of equal or even greater importance. Just as "all that glitters is not gold", "all that is green is not deer food". For example, a deer will starve on a five-pound diet of rhododendron, but will do quite well on the same amount of Atlantic-white cedar.

Productive deer populations are typical of habitats producing adequate supplies of high quality foods. Compared with populations forced to subsist on food sources limited in quantity, quality, or both, the does on good range produce more fawns, fawn survival is higher, weights are heavier, losses to disease and other sources of mortality are less, and antler growth is greater.

## . . . Deer Biology

Antler development is one of the more obvious indicators of range quality. This is of interest to the deer hunter, since the taking of a buck with a well developed set of antlers is a primary goal of the hunt. Bucks on poor range often produce little or no antler growth, thus the total number of legal bucks available to the hunter is reduced. Consequently a reduced buck kill does not necessarily imply a reduced total population, but may instead indicate a reduction in the number of yearling and adult bucks which are able to produce antlers of three inches or greater. Antlers are produced on what food resources remain after basic body needs for growth and maintenance are satisfied. It is not surprising, therefore, that on poor range, where deer have difficulty in finding enough food to stay alive, antler growth is minimal, if not entirely lacking.

This relationship between food quality and availability, and antler development is most obvious in the yearling or 1½-year old bucks. This is because their bodies are still developing and their energy demands are much greater than for a mature animal. Data collected during past deer seasons helps to illustrate this. Table 1 compares the number of antler points and beam diameters of bucks harvested in Burlington and Salem Counties during the 1971 Firearms Buck

Season. Salem County contains some of the best deer habitat in New Jersey. Burlington has some of the poorest. Both the number of

Table 1 — Summary of Antler Point and Antler Beam Diameter Data Collected in Burlington and Salem Counties (Firearm Buck Season - 1971).

Age	Average No. of Points	
	Burlington	Salem
1½	3.6	5.5
2½	5.0	7.2

Age	Average Beam Diameter (mm)	
	Burlington	Salem
1½	15.2	21.2
2½	18.2	25.6

points and beam diameter were much greater on bucks from Salem County.

Table 2 compares the number of spike bucks (one point, each side) represented in the total

Table 2 — Percentage of Bucks with Spike Antlers Harvested in Burlington and Salem Counties (Firearm Buck Season - 1971).

Age	Burlington	Salem
1½	51.9	5.3
2½	12.0	0.0
3½	9.1	0.0

number of bucks examined for the same season. The number of spike yearlings was much greater in Burlington County, with even 2½- and 3½-year-old bucks exhibiting only two points. In contrast, few



*Ready to net fawn for tagging*

bucks with only two points were recorded from Salem County.

Much of this information helps to reinforce that old proverb, "you are what you eat". This was never more true than for the white-tailed deer.

Though the importance of food in determining the carrying capacity of deer range cannot be over-emphasized, it is not the only element that must be considered. The need for cover, and most especially winter cover, cannot be ignored.

### . . . Deer Biology

Cover provides protection from both weather and enemies and, as recent studies have shown, it may have the psychological value of fostering a sense of security in deer which may be important in helping maintain an animal in good physical condition. However, protection from the extremes of temperature, wind, and, to a lesser extent, deep snow during the critical winter period appears to be the primary function of cover.

The importance of cover becomes more apparent when one realizes that the winter range may be as little as 10 percent of the total deer range. Yet if it is damaged or lost, through urban development, indiscriminate timber harvest, or through over-browsing by the deer population that it supports, the ability of the surrounding habitat to support deer is greatly reduced.

During severe winters, deer may enter these wintering areas in December or early January and remain there for three months. Survival during this critical or "pinch period" of the year, depends on the ability of the wintering area to provide the deer with at least the minimum necessities for survival. There must be protection from the elements to minimize the loss of heat and energy reserves of fat within the deer's body. There must be food in close proximity to quality cover. The Atlantic white-cedar swamps of New Jersey's

southern deer regions are excellent winter areas capable of providing both quality cover and food. Unfortunately, many of these areas have been damaged, not only through indiscriminate logging, fire, or urban development, but by the activities of the deer themselves. Wintering areas carrying deer populations that exceed the maximum carrying capacity are all too common. The result is that many areas are now traps instead of refuges. Heavy browsing has damaged and killed many food plants. Continued browsing pressure can destroy the range to the point where it may take from 10 to 30 years to recover and be able to support a significant deer population again. In these areas, deer live-trapped and tagged during the winter as part of the Bureau of Wildlife Management's deer research program show marked weight loss through the winter. It is true that many deer lose weight during winter, even on good deer range, but not to the extent that has been recorded on many of the over-browsed winter areas. Fawns weighing as little as 26 pounds at ten months of age have been recorded in March, in some areas. It is significant to note that tagging studies in New Jersey have shown that fawns which weighed 35 pounds or less at the time of capture in February or March were never recorded in the tag returns in subsequent years, although fawns of heavier weights were.

Obviously, the mortality of these animals is high. Dead deer searches, conducted by the Division in April, have recovered as many as

is the reduced productivity of those deer that remain. Bucks which produce sub-legal antlers, does that produce fewer fawns, and fawns



*Fawn that has  
been tagged*

twenty starved deer per square mile with the majority of the loss being fawns. This winter loss is probably much more extensive than these figures indicate since many deaths go unnoticed in the Pine Barrens, where deer deaths occur over an extensive area.

Starvation losses are the most obvious result of permitting a deer population to exceed the carrying capacity of its range. Less obvious

which never see their first winter are real but seldom realized drains on deer populations.

It is a basic fact of deer biology that deer can and do destroy their own range. This is why deer managers are so concerned with keeping deer in balance with the available habitat. They know that an over-abundant deer herd can "eat-out" an area to the point where it may take years for the range to

## . . . Deer Biology

return to its former productivity, if indeed it ever can. Without an annual harvest of bucks, does and fawns, it is only a matter of time before the range will be damaged beyond practical repair.

One can argue that by habitat improvement programs such as planting, cutting, or certain methods of burning, the range can be improved and thus support more deer. This is quite true. However, habitat improvement must go hand in hand with control of deer numbers if the gains made are not to be lost immediately to hungry mouths. Increasing food supplies without control only leads to bigger problems and more drastic remedial measures.

Supplemental or winter feeding is not the answer either. Dumping corn, hay, or turnips to feed hungry deer treats a symptom and not the cause. The symptom is hungry

and starving deer. The cause is too many deer. Winter feeding can never be recommended to support a deer population that has exceeded the carrying capacity of its range. At best it does no good; at worst it leads to an increased concentration of deer which not only eat what is put out, but everything else within reach. Losses in areas where winter feeding is practiced can be much greater than those on similar sites where the animals are dependent on natural food sources alone.

It is no longer the public's choice whether does and fawns live or die. It is nature's choice. If the hunter does not take the surplus, disease, malnutrition, predation, road kill, and other sources of non-hunting mortality will. Should we refrain from shooting does and fawns in December, only to drag their rotting carcasses from the wintering areas come spring?

That choice is yours. #



# Today's Threat to Our Nation's Wildlife

The U. S. Fish and Wildlife Service receives several thousands of letters a year expressing a deepening concern for the future of wildlife. These letters hold two widely divergent views: the hunting of animals versus complete protectionism. The vast majority of letters ask about endangered species of wildlife and very strongly favor more animal protection. However, much of the sentiment against hunting is based on misinformation.

Whether you hunt wild animals or wear their pelts is a matter of personal choice. Legal hunting is not a threat to any species in this country. Indeed, the hunters and fishermen of the U.S., through money from license sales, special taxes on sporting goods, and individual contributions, provide most of the funds spent on wildlife and its habitat.

The danger today is that these two groups will get so emotional arguing for or against hunting that they'll not unite against the real threats to wildlife—pollution and habitat destruction.

Over 40 species of birds are threatened by shell thinning caused by DDE, a DDT metabolite. Their eggs are so thin-shelled the parent birds break them by sitting or stepping on them or even in the act of laying them. Last year hundreds of pelicans on Anacapa Is-

land laid almost shellless eggs—yellow splotches on rocks and sticks. They successfully raised only one chick. The bald eagle and osprey, 13 species of hawks, and many other of our most interesting birds are declining because of shell thinning; since they can't successfully reproduce, their future is bleak.

Even mallard ducks in laboratory tests were seriously affected. Duckling production per hen was off by as much as 75 percent.

Twenty States have closed rivers and lakes to fishing because of mercury levels in the fish. We've found mercury in waterfowl. It is impossible to find an organic sample anywhere in the U.S. unpolluted by DDT or dieldrin.

The crushing press of more people upon our wild places threatens the bounty of wildlife and climate that drew people there.

Our estuaries, cradles of the sea, disappear as the dredge and bulldozer advance. Chemical wastes, detergents, heavy metals, oil, sewage, exhaust fallout, and heat pour into the air and waters harboring all wildlife—and humans.

But the great surge of public interest in wildlife gives hope, as people realize that if animals are in trouble, so are they.

It's a concern that goes beyond economic value. People are asking

## . . . Nation's Wildlife

a revolutionary question—Is man really meant to be dominant over all earth's creatures?

An eloquent answer to that question is given by biologist and author Victor Scheffer: "If you believe that human life has meaning or purpose or direction or destiny, you will know in your heart that our life is bound all around and together and forever with the lives of the animals who were present at our creation. If we survive, we will care for whales and the other wild creatures, and if we perish through our own cleverness, the end of the wild things will have been an early warning of our folly."

So now we have a new, valid wildlife constituency. Hunters, fishermen, and citizen wildlife organizations have been on the battleline a long time, and most of the species they love and use are not in trouble—yet. Now many millions more of our people are concerned, but through lack of information wrongly blame hunting interests for wildlife's plight. This is not the time for those who love wild things to be attacking each other, but to join together in putting forward bold new programs.

The seventies will see the Fish and Wildlife Service concentrating on the following fields:

### **Endangered Species**

In 1970 the Department of the Interior placed all eight of the world's great whales on the list of foreign endangered wildlife, thus

cutting off one-fourth of the world market for whale products. We are moving to cut off commercial trade in this country for all endangered species, and stepping up our cooperative efforts with the countries where these animals originate.

But most endangered species are non-game animals with no commercial value. The desert pupfish or the Houston toad find few champions. We must create understanding of even the lowliest creature. As we developed refuges for international waterfowl, so we may have to create areas of habitat for "unknown" animals. For it is hard to know when we've eliminated one too many species or fouled one too many rivers.

### **Wildlife Research**

This agency is responsible for studying immediate and long-range effects of pesticides on wildlife and helping develop methods that will assure pest control with the greatest safety to the environment. We must learn how pesticides become distributed in the environment, how long they remain, how they are acquired by animals, and how they affect them.

Each year uncovers new pollutants—and new facts concerning old ones. Our work must rapidly identify these problems and we must recommend solutions to improve the survival of wild animals and their environment.

### **Wildlife and Environment**

**Through our River Basin Studies Division, we review all proposed**

water-use projects for effect on wildlife and recommend measures for their conservation. This type of work is expanding. Also, we are responsible for recommending wildlife protective measures during the construction and operation of the Alaska pipeline project. We are involved in trying to limit the heat increase allowed into U.S. waters from power plants and factories.

### Education Programs

These will meet two objectives: helping the public find short-term

tools to prevent continued environmental degradation; and raising a new generation that has learned to live with earth's other creatures. We are expanding the public use of our refuge system to further these objectives.

The times demand new priorities, and wildlife needs help from everyone—trophy hunter or protectionist. This agency must represent the Nation's wild species for anyone who cares, from bird watcher to hunter, photographer to fisherman, school kid to scientist. #



*Governor William T. Cabill recently signed a proclamation designating September 23 as National Hunting and Fishing Day in New Jersey. Looking on are Division of Fish, Game, and Shellfisheries Director Russell A. Cookingham (left) and Fish and Game Council Chairman Alex Toth; standing are, left, Herman Treptow and New Jersey State Federation of Sportsmen's Clubs President Robert Smalley*



*Largely responsible for the night-lighting technique and the success of the program is Joe Rieffenberger, Wildlife Biologist from West Virginia*

# Woodcock Banding

## Cape May Peninsula

By Fred Ferrigno—*Senior Wildlife Biologist*

*Bureau of Wildlife Management*

*Photographs by Tom Kinnemand, Jr.*

A cooperative woodcock banding program has been underway in New Jersey during the past four years. Biologists and administrators interested in the proper management of the American woodcock have contributed men and equipment to this cooperative endeavor. The project usually takes place the last two weeks of November in the counties of Cape May and Cumberland. In the past four years, biologists from Maine, New Brunswick, Rhode Island, Pennsylvania, New Jersey, Connecticut, West Virginia, and the Fish and Wildlife Service annually met at the Tuckahoe Wildlife Management area for two weeks of night lighting and banding woodcock. During the eight weeks of banding over a four-year period 1,931 woodcock (644 in 1968, 342 in 1969, 528 in 1970, and 417 in 1971) were captured, banded, and released. Cooperation by farmers and other landowners was exceptionally good and was partially responsible for the success of the operation.

Biologists from West Virginia, Maine, and the Fish and Wildlife Service have developed a night-lighting method for capturing

woodcock which is effective. A driving technique is used in fields where there are firm soil conditions, good woodcock populations, and permission granted by the landowner. Pickups systematically cover a field, with observers perched on the fenders or in back of the truck with powerful lights spotting woodcock. When a bird was spotted, the driver stopped the truck and an attempt made to put a net over the blinded bird. Not all birds were captured and approximately 50 percent of the birds spotted would flush before they could be netted.

A considerable amount of information has been gathered in regard to woodcock populations, migration, and behavior as a result of this program. On the Cape May Peninsula, birds are usually abundant the last half of November and during December. Populations build up at Cape May during south or south-west winds. Each year a large influx of woodcock move into southern New Jersey when states to the north are blanketed by the first snow storm.

From the 1968 and 1969 bandings the direct recovery rates

### . . . Woodcock Banding

(those reported during the same hunting season when banded) were .0245 (16 recoveries) and .0263 (9 recoveries), respectively. The distribution of these 25 recoveries was 20-New Jersey, 4-Virginia, and 1-North Carolina.

Indirect recoveries after the first hunting season amounted to 16 birds. The distribution of these recoveries was as follows: Ontario-

1, New Brunswick-1, Massachusetts-1, New York-1, Connecticut-3, New Jersey-4, Pennsylvania-3, Delaware-1, and North Carolina-1.

Information gathered from this cooperative endeavor will provide an important contribution to the proper management of the woodcock throughout the flyway. Most important it will provide much needed information as to the migratory pattern of this important game bird. #



*Biologist, Gary Donovan, Maine Department of Inland Fisheries and Game, examines the bill of a woodcock which is so adaptive for probing and capture of earthworms and grubs*



*This particular bird was netted, banded, and released by Fred Ferrigno of the New Jersey Division of Fish, Game, and Shellfisheries*



*Spotters Bob Kletzly, West Virginia Department Natural Resources; Jim Myers, Rhode Island Department of Natural Resources; and driver and netter Bill Krohn U.S. Fish and Wildlife Service*

# Duck Identification Guide For Hunters



After making the first choice offered at the top of the page follow the black lines to secondary choices until the correct identification has been made.



Bill broad, typically ducklike

STAY  
DOES YOU

Wing patch gray, nonmetallic or wing uniform in color



Wing patch iridescent blue, purple, green, brown or black or white



Bill without two rings



Bill with two bluish-white rings, one at the base and one near the tip



RING-NECKED DUCK

Head flattish, sloping with straight line appearance from forehead to bill



CANVASBACK

Head rounded with angle at forehead and bill



White or whitish cheek patch



RUDDY DUCK

Head uniformly reddish or yellowish brown



REDHEAD

White face patch behind eye



BUFFLEHEAD

No white face patch, or if present, in front of eye



White wing patch with black or dark feathers in center



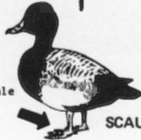
GADWALL

White wing patch without black or dark feathers in center



GOLDENEYE

Feet yellow



SCAUP

Feet gray

Wing patch white



Wing patch brown



PINTAIL

Wing patch green, br



Wing patch blue



Wing patch bordered on both sides with white



Male



Female

MALLARD

Head crested



WOOD DUCK

RE

K HAVE

Bill slender, pointed, and toothed



Feet yellow or yellowish-gray

Feet pink or reddish



HOODED MERGANSER



COMMON MERGANSER



RED-BREASTED MERGANSER

This pictorial aid is designed to assist in recognizing ducks in the hand after they have been bagged.

The shape of the bill, wing markings, color of feet or head crest are some of the typical characteristics used to identify ducks in the hand. This is quite different from identification of ducks in flight or sitting on water. When flying or on water other identifying features are used such as silhouettes, mannerisms of flight, wing beat, speed of flight or color patterns on body and wings. Every effort should be made to learn to recognize ducks before they are shot. By doing this the hunter is able to take much greater advantage of his sport.

Although occasionally seen inland, sea ducks are next included in this key. They are most frequently found in open salt water areas.

ic blue, purple, black

ng patch blue, purple, green or black



le

Wing patch green or black



Wing patch without white border or white only at feather tips



Blue patch on shoulder of wing



Patch on shoulder of wing not blue



low Head not crested, feet orange-red or coral red



BLACK DUCK

Bill very large and broad, feet orange or coral-red



SHOVELER

Bill normal, feet yellow



BLUE-WINGED TEAL

Shoulder of wing gray or brownish



GREEN-WINGED TEAL

Shoulder of wing with white patch



AMERICAN WIDGEON

Cinnamon teal is similar to blue-wing teal except that male cinnamon teal is reddish on head and underparts. The female is virtually identical to the female blue-wing teal.

Female American widgeon has brown breast and flank. Female green-wing teal has gray speckled breast and flank.

**ENTAL PROTECTION      DIVISION OF FISH, GAME AND SHELLFISHERIES**



*Director Russell A. Cookingham, center, at the Division's exhibit at the State Fair this fall with Council members, left to right, E. Anthony Delgado, Neal Munch, Steven Tczap, John B. Cavagnaro, Charles Webber, Al Toth (Chairman), Randle N. Faunce, and Raymond Baker*

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# The Point System

an experiment in species management

By Paul D. McLain,

*Federal Aid Coordinator*

The New Jersey waterfowl hunting season opens in October and extends until early January. The marshlands and open waters of our state offer some of the best and most diversified waterfowl hunting to be found along the east coast. Unlike some of the other Atlantic Flyway states, New Jersey has vast acreages of public hunting both on state and privately owned lands.

In 1970, the U.S. Department of Interior, through the Bureau of Sport Fisheries and Wildlife, selected New Jersey and Florida in the Atlantic Flyway as two experimental states to test out the "Point Regulation" method of waterfowl harvest. Throughout the United States, a total of 13 states were given the option of selecting the point system.

When the point system was first explained and proposed the average waterfowl hunter thought it to be somewhat complicated and difficult to understand. Essentially the various species of duck were assigned a point value ranging from 10 points for the species and sex of the ducks available in large

numbers to 90 points to those present in the smallest numbers. The basic idea was to allow the sportsmen to harvest larger numbers of the species which were maintaining high populations and to discourage the hunter from taking ducks which require protection to insure an adequate breeding population.

By allowing the hunters a total of 100 points a day and saying that "the daily bag limit was reached when the point value of the last duck taken added to the sum of the point value of the ducks already taken reached or exceeded 100 points", the new point system allowed hunters to harvest a minimum of two or a maximum of ten ducks a day depending on how they selected their shooting.

Here is where some hunters found the point system difficult. They simply could not identify the ducks well enough to differentiate between the high and low point ducks. When the duck was in the hand, they could usually come close in their identification, but in the air they shot ducks which may have been 90 pointers when they might have shot 10- point ducks.

### . . . Point System

However, for the hunters who studied their waterfowl identification, the point system opened a new field of hunting opportunity. With black ducks in low supply and a limit of only two, the scaup or bufflehead shooters could take ten ducks a day. Surprisingly enough, during the second and third year of the study, the hunters began to show an increase in knowledge of waterfowl species identification and they actually began to hunt the low point ducks. Some of the early skeptics of the point system found it to their liking. A survey conducted indicated that the average New Jersey waterfowl hunter preferred the point system to the previous fixed-bag limit regulation.

It should be clearly understood by all New Jersey waterfowl hunters that the present point system is experimental and is being studied and critically evaluated by both the federal and state governments. The point system is not a right or even an accepted method of regulating waterfowl harvest. It is strictly experimental.

To evaluate the point system in Florida and New Jersey in the Atlantic Flyway and the 11 states in the other flyways, a series of "observation blinds" were conducted. These observations are made during the waterfowl hunting season on hunters who do not know they are being observed. The purposes are as follows: To determine

to what extent the hunters selectively shoot at the low-point ducks in comparison to the high-point ducks; to find the extent of unretrieved kill and the pattern of retrieving of the kill associated with the point system; and the incidence of law violation relating to the point system.

The observation blind figures from this study show that 1,274 hunts were observed. The hunters fired at fewer 90-point ducks than 10- or 20-point ducks, but they did not discriminate between the 10- and 20-point ducks. However, the 90-point ducks were left unretrieved at a higher rate than the 10- and 20-point ducks. In about 25 percent of the hunts, enough ducks were shot to make game bag violations a possibility and game bag violations occurred in only four percent of the hunts.

Flights of mallards predominated over other species in all the states except New Jersey and Florida. Here in New Jersey the black ducks (41.1 percent) and the bufflehead (30.7 percent) were the most frequently observed. New Jersey hunters bagged a higher percentage of 90-point ducks, primarily black ducks, than the hunters in any of the other 12 states studied due to the black duck being the "bread and butter duck" in the Garden State. Yet the species bagged most frequently in New Jersey was the little bufflehead.

Are there problems with the point system? As with any new

type of wildlife management there exist misunderstanding, confusion, and the opportunist who looks for the legal loop holes. One of the most common criticisms of the point system has been that hunters fail to retrieve the high-point ducks in favor of the low-point ones. The data collected shows that the percent of unretrieved ducks ranged from 10.5 percent in the 10-point class to 24.2 percent in the 90-point class in New Jersey.

This problem is strictly sportsmanship. An individual who shoots any game and allows it to be wasted is not worthy of the privilege to hunt and be called a sportsman. It is probable that this individual will violate the law under any type of regulation and only strict enforcement will make him toe the mark.

The opportunity for over-the-bag-limit shooting did not appear to be high in the survey. In the observation blinds, 75 percent of the hunts failed to obtain a legal limit. The bag limit was exceeded in only 2.6 percent of the hunts and 1.8 percent attempted to exceed the bag limit. Again, the opportunist and consistent violator would probably have exceeded the bag limit with or without the point system.

During the present 1972-73 waterfowl hunting season the New Jersey waterfowl hunter will again have the privilege of participating in the point system. It is radically different compared with the established fixed bag limit regulation. Again this year, the federal and state biologists are going to be in

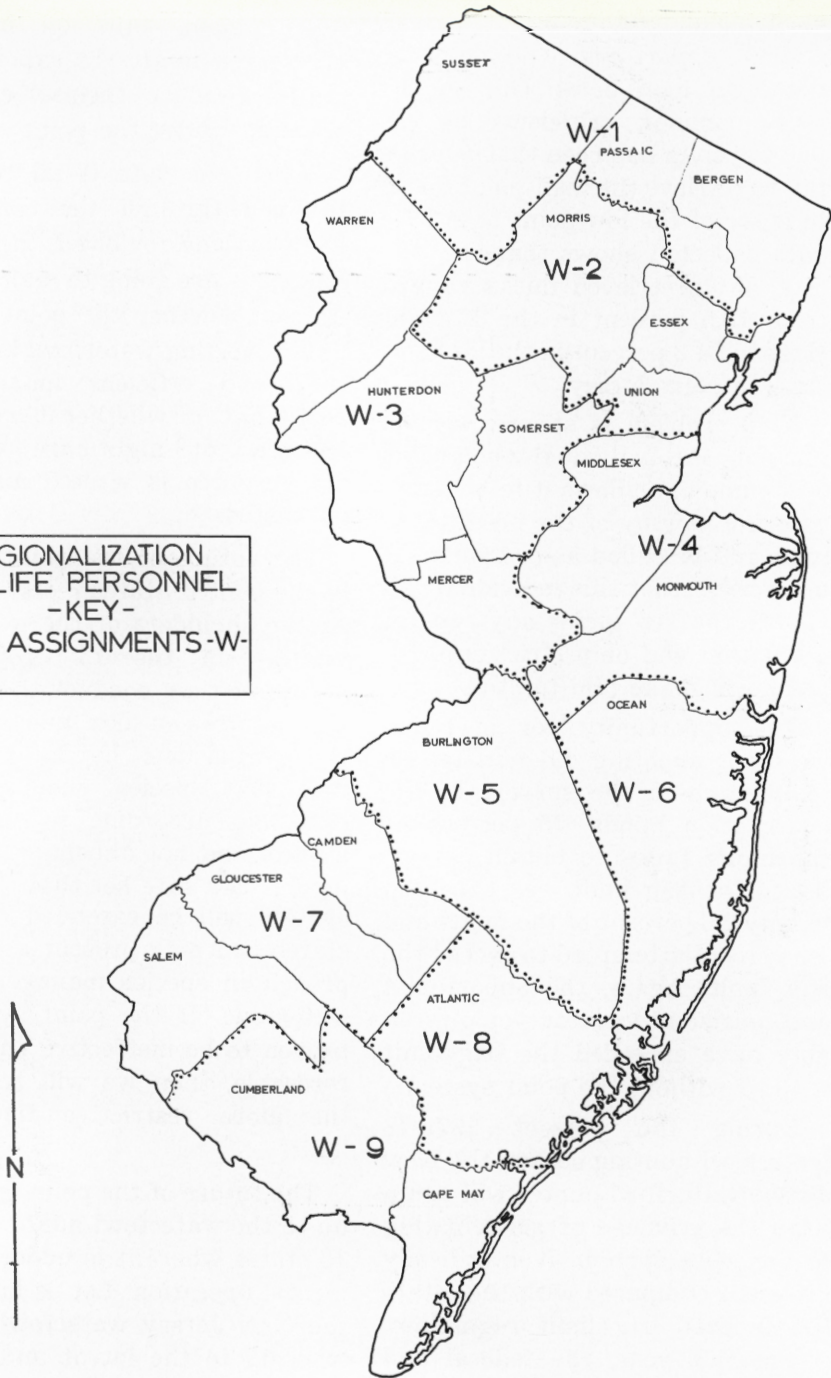
their observation blinds watching and keeping tabs on how the sportsmen in the 13 experimental states conduct themselves when shooting under the point system.

When the data is all collected, rammed through the computers, analyzed and reviewed, the federal biologists are going to make a decision on whether the point system for harvesting waterfowl is a practical and efficient management regulation, or whether it creates an enforcement nightmare whereby the resource is wasted and over-harvested.

The future of the point system in the United States rests squarely on the shoulders of the waterfowl hunters in the 13 cooperating states. If they conduct themselves in a sportsmen-like manner, obey the regulations by knowing the waterfowl species, shooting their bag limit according to the point system and not abusing the privilege, it is a safe bet that the point system will be extended to other states and may present a new approach in species management of waterfowl. If the point system is proven to be ineffective and unenforceable, then we will return to the more restrictive fixed bag limit.

The future of the point system is up to the waterfowl hunters in the 13 states where it is under experimental operation. Let us hope that the New Jersey waterfowl hunter lives up to the intent and law of the point system. #

REGIONALIZATION  
 WILDLIFE PERSONNEL  
 -KEY-  
 AREA ASSIGNMENTS-W-



# Regionalization Introduction

Personnel from the three Bureaus of **Fisheries, Wildlife and Law Enforcement** have now been incorporated into a regionalization plan to assist resource oriented groups.

This plan has been designed as an aid to public and civic groups concerned about fish and wildlife resources and desiring to include management practices into lands and waters they administer.

Technical assistance would be provided for wildlife habitat development, stream improvement work, fish management in park ponds and setting up programs and regulations for utilization of this recreational resource where compatible with other land use practices.

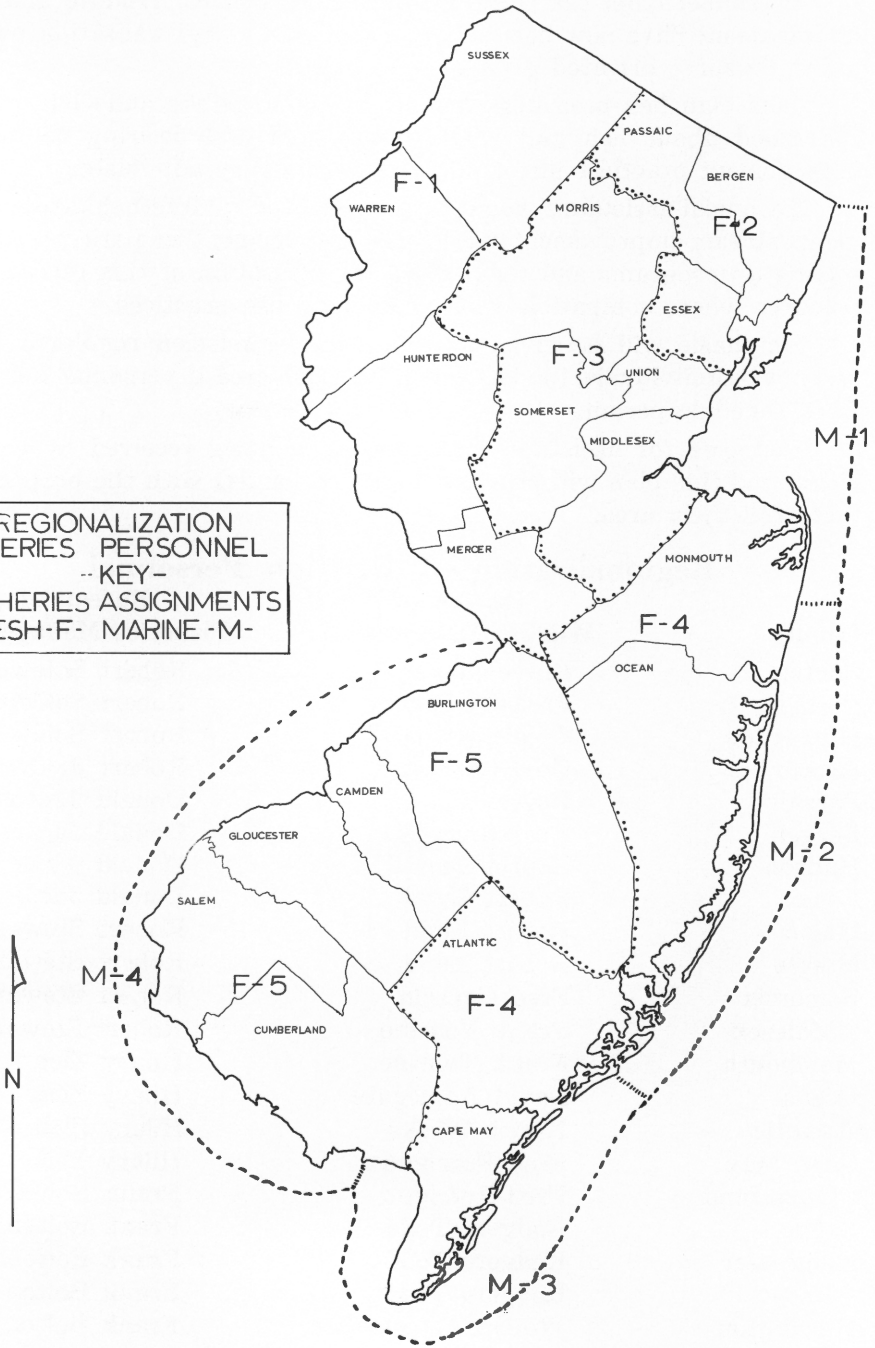
Emphasis will be given to group or commission regulated areas and not to individuals, the latter will be considered if personnel's normal work schedule permit.

Requests for assistance are constantly being received by the Division and this plan will provide interested parties with the proper contacts for their area.

## Regionalization of Division Personnel

County	Bureau of	
	Wildlife Management	Fisheries Management
Sussex	Russell A. Spinks	Robert Soldwedel
Warren	Fred Carlson	Robert Soldwedel
Hunterdon	Fred Carlson	Robert Soldwedel
Mercer	Fred Carlson	Robert Soldwedel
Passaic	Russell Spinks	Donald Jacangelo
Bergen	Russell Spinks	Donald Jacangelo
Hudson	Robert Lund	Donald Jacangelo
Essex	Robert Lund	Donald Jacangelo
Union	Robert Lund	Robert Stewart
Morris	Robert Lund	Robert Stewart
Somerset	Fred Carlson	Robert Stewart
Middlesex	Frank Tourine	Robert Stewart
Monmouth	Frank Tourine	Hilary Zich
Ocean	David Applegate	Hilary Zich
Atlantic	Norris Weeks	Hilary Zich
Cape May	Fred Ferrigno	Hilary Zich
Cumberland	Fred Ferrigno	Frank Bolton
Salem	Rodgers Todd	Frank Bolton
Gloucester	Rodgers Todd	Frank Bolton
Camden	Rodgers Todd	Frank Bolton
Burlington	William Shoemaker	Frank Bolton

REGIONALIZATION  
 FISHERIES PERSONNEL  
 --KEY--  
 FISHERIES ASSIGNMENTS  
 FRESH-F- MARINE -M-



## . . . Regionalization

### ADDRESSES

#### Bureau of Wildlife Management

- Russell A. Spinks  
Star Route,  
Layton, N. J.  
(201) 948-3860
- Fred Carlson  
Clinton Wildlife Management Area  
Clinton, N. J. (201) 638-6980
- Robert Lund  
P. O. Box 9, Chester, N. J.  
(201) 879-7330
- Frank Tourine,  
RD #1, Box 392A,  
Robbinsville, N. J.  
(609) 250-7954
- David Applegate, P. O. Box 156  
Collier's Mills Wildlife  
Management Area, New Egypt, N. J.  
(609) 758-2455
- Norris Weeks  
RD #2, Weekstown, N. J.  
(609) 965-3649
- Fred Ferrigno  
Tuckahoe Wildlife Management Area  
(609) 628-2103
- Rodgers Todd  
N. Maple Ave., New Gretna, N. J.  
(609) 641-0889
- William Shoemaker  
59 Parker Street, Manahawkin, N. J.  
(609) 597-7985

#### Bureau of Fisheries Management

- Robert Soldwedel  
Fisheries Laboratory  
Lebanon, N. J.  
(201) 236-2313
- Donald Jacangelo  
Fisheries Laboratory  
Lebanon, N. J.
- Robert Stewart  
Fisheries Laboratory  
Lebanon, N. J.
- Hilary Zich  
Fisheries Laboratory  
Lebanon, N. J.
- Frank Bolton  
Fisheries Laboratory  
Lebanon, N. J.

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#### Tidal Waters \*

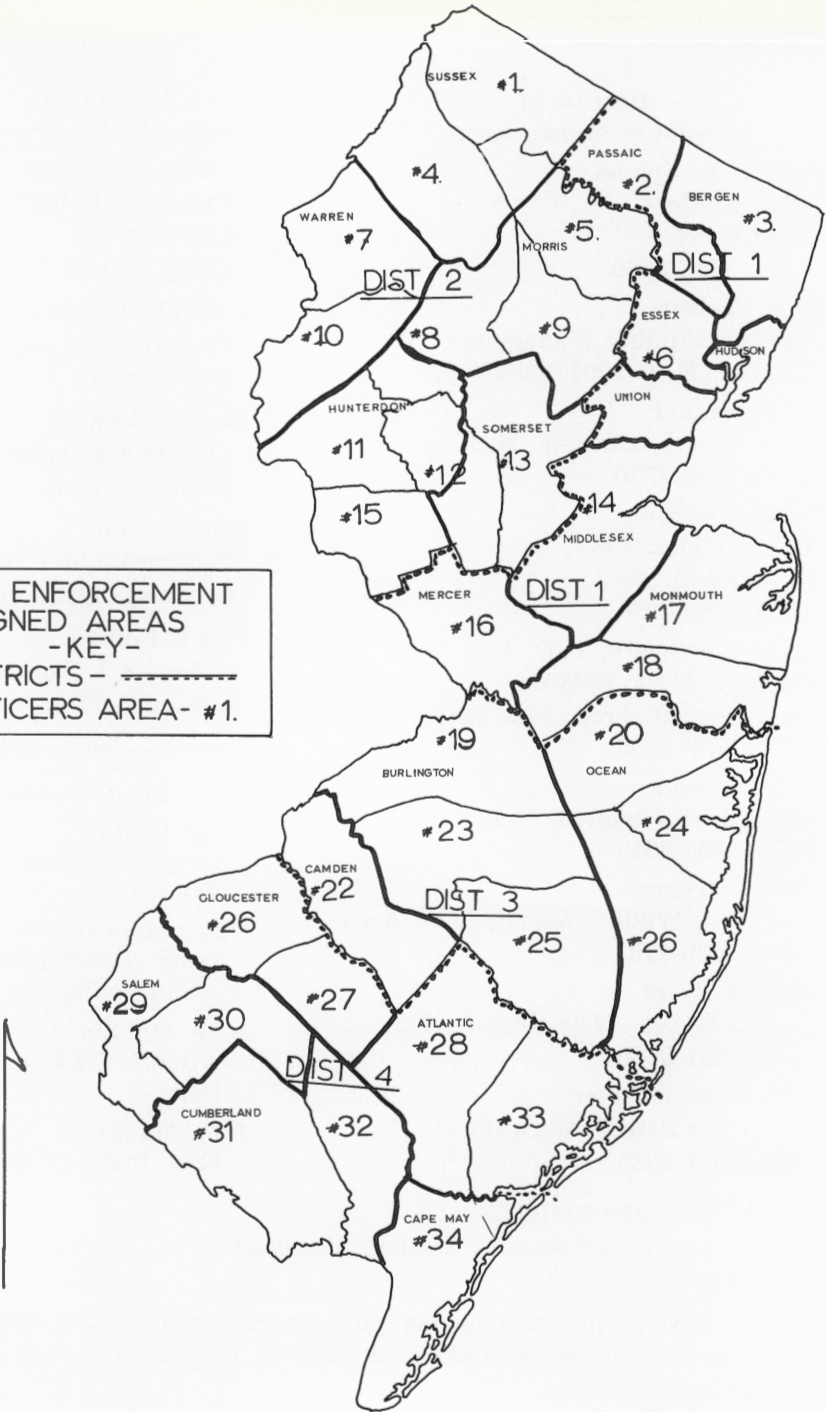
- Greg Vennell  
Bergen County to Long  
Branch
- Vince McDermott  
Long Branch south to  
Atlantic City
- John McLain  
Atlantic City to East  
Point
- John Makai  
East Point to Trenton

\* For tidal waters contact:

Nacote Creek Research Station, Star Route,  
Absecon, N.J. (609) 641-0889.

As shown on the accompanying maps, regions are defined by county lines, however, conservation officers may be assigned sections of counties.

LAW ENFORCEMENT  
 ASSIGNED AREAS  
 -KEY-  
 DISTRICTS - - - - -  
 OFFICERS AREA- #1.



# Law Enforcement—Assigned Areas

## Chief Conservation Officer

Officer	Address	Telephone
John C. O'Dowd	State Labor Building, Trenton 08625 57 Hillcrest Ave., Washington 07882	609-292-2965 201-689-2158

## Northern Districts 1 and 2—District Conservation Officer

Donald B. Patterson	83 Mountain Heights Ave., Lincoln Park 07035	201-694-0246
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## District 1—Assistant District Conservation Officer

Counties of Passaic, Bergen, Essex, Union, Hudson, Middlesex, Monmouth, Mercer		
Matthew F. Ferrigno	89 Hope Rd., Eatontown 07724	201-741-7354

## District 2—Assistant District Conservation Officer

Counties of Sussex, Warren, Morris, Hunterdon, and Somerset		
William L. Jeschke	Box 157, R. D. 2, Ringoes 08551	201-782-7245

## Southern Districts 3 and 4—District Conservation Officer

John Russack	460 White Horse Pike, Box 636, Hammonton 08037	609-561-9035
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## District 3—Assistant District Conservation Officer

Counties of Camden, Ocean, and Burlington		
Hudson G. Amory	1207 Ariel St., P.O. Box 362, Forked River 08731	609-693-5777

## District 4—Assistant District Conservation Officer

Counties of Atlantic, Cape May, Cumberland, Gloucester, and Salem		
Francis L. Jones	10524 Second Ave., P.O. Box. 128, Stone Harbor 08247	609-368-7151

Area #	Officer	Address	Telephone	County
1.	Harry J. Morrison	14 Bank St., Sussex 07461	201-875-5858	Sussex
2.	Arthur E. Wendelken	R. F. D. 3, Newfoundland 07435	201-728-8864	Passaic
3.	Robert C. Klaus	65 W. 2nd St., Clifton	201-478-7136	Bergen-Hudson
4.	Albert L. Wilbert	100 Signal Hill Trail, Sparta 07871	201-729-6286	Sussex
5.	James R. Parrish	10 Jennings Rd., Hamburg 07419	201-827-6427	Sussex-Morris
6.	Frank Glotta	548 Hunter Ave., Scotch Plains 07076	201-322-6372	Essex-Union
7.	Robert J. Burns	Ext. Locust Lake Rd., Box 89A R. D. 1, Blairstown 07825	201-459-4039	Warren
8.	Harold P. Chitwood	Box 37, North Rd., Chester 07930	201-879-5123	Morris
9.	Steve Schuster	83 Overbrook Ave., Edison	201-985-2872	Morris
10.	Edward J. Davis	Box 70, R. D. 4, Washington 07882	201-689-4923	Warren
11.	Earl Henderson III	Madison Arms, Apt. #35 155 Broad St., Flemington 08822		Hunterdon
12.	Norman S. Gebhart	Hollow Road, Skillman 08558	609-466-3645	Hunterdon-Somerset
13.	Robert T. Troisi	Nimitz St., Box 669, Somerville 08876	201-722-3581	Somerset
14.	Gary Sawhill	45 Kenlen Drive, Edison 08817	201-287-1562	Middlesex
15.	Open			
16.	Lentho Burns	Princeton Arms, North 1, Apt. 2 Cranbury 08512	609-587-4411	Mercer
17.	Karl Kristiansen	41 Sunnycrest Ct., Little Silver 07739	201-747-4327	Monmouth
18.	Carlton Smith	2565 Algonquin Trail Manasquan 08736	201-223-6924	Monmouth
19.	Open			
20.	Charles Torluccio	614 Willow St., Lakehurst 08733	201-657-4301	Ocean

## **... Law Enforcement**

<b>Area#</b>	<b>Officer</b>	<b>Address</b>	<b>Telephone</b>	<b>County</b>
21.	Thomas J. Mulvey	401 Tudor Ave., Pine Beach 08741	201-349-3705	Ocean
22.	William R. Hutchison	White Horse Pike R. D. 1, Box 88 Berlin 08009	609-767-1902	Camden
23.	Raymond Fennimore	Ridge Rd., Vincentown 08088	609-463-2448	Burlington
24.	Bruce D. Young	6 Chestnut St., R. D. Parkertown 08087	609-296-5591	Ocean
25.	Open			
26.	Walter Mabey, Jr.	3 Cherry Lane, Greenfield Village Woodbury 08096	609-848-6573	Gloucester
27.	Open			
28.	Joseph F. Gallo	Weymouth Rd., Box 196 Mays Landing 08330	609-625-4391	Atlantic
29.	Winfield Jess, Jr.	29B W. Grant St., Woodstown 08098	609-769-3641	Salem
30.	Marco S. Busnardo	Willow Grove-Deerfield Rd. Olivet R. D. 1, Elmer 08318	609-358-8504	Salem
31.	Kenneth Arnold	P. O. Box 2051, South Vineland 08360	609-691-7752	Cumberland
32.	Hershel Beebe	Eldora Rd., Woodbine 08270	609-785-0973	Cumberland
33.	Austin Perrone	412 Florence Ave. Williamstown 08094	609-629-3892	Gloucester
34.	Open			

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## **Law Enforcement Notes**

### **Turkey Hit by Truck**

Harry Morrison, Sussex County Conservation Officer, reports a wild turkey hit by a truck on Route 94 between Newton and Blairstown. The turkey, which measured 3 feet and 9 inches, had a 4½ foot wing span and weighed 13 pounds, did considerable damage to the hood and windshield of the truck.

### **Deer Damage**

Complaints of deer damage to gardens surrounding the Great Swamp National Wildlife Refuge is a common problem faced by both Morris County Conservation Officer Harold Chitwood and Refuge Manager George Gavutis. "It seems," says Chitwood, "that everyone in the Great Swamp area that has a deer problem doesn't want anything but a permit to shoot."

### **Address Known**

An envelope found among trash dumped into the Pequest Hatchery led Warren County Conservation Officer Edward Davis to the owner of the garbage. Admitting that the garbage was his, the owner agreed to pick it up, but maintained that he had no knowledge of how it came to be at the hatchery.

#

# Quaking Aspen

(*Populus tremuloides*)

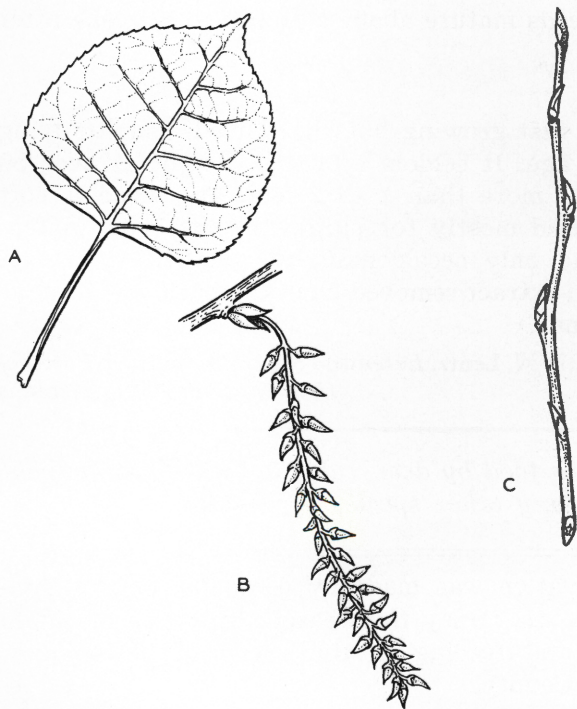
The name of this tree is derived from its trembling, or quivering leaves. It is known by other names, such as trembling aspen, mountain aspen, poplar, and popple. This tree grows abundantly in abandoned fields and recent cutover and burned-over areas. It can be found growing on most sites except swampland. It requires full sunlight and dies when shaded by other species.

## Range:

Very widespread from Labrador and Newfoundland through Northern Canada to Northwest Alaska, south to Mexico through the mountains, north to Colorado, and then north of a line running east through southern Pennsylvania and New Jersey. It is very common in the Lake States.

## Leaves:

Alternate, simple, and ovate to nearly round, coming to a point at the tip. They have a finely serrated margin and are 1½ to 2½



*Quaking aspen*

A. Leaf

B. Catkin

C. Twig, with buds

## . . . Quaking Aspen

inches in length and breadth. Leaves are shiny green on top and pale green on the bottom. The petiole is flattened and usually  $1\frac{1}{2}$  to 2 inches long. (See figure A.) Leaves flutter in the slightest breeze.

### **Twigs:**

Slender, glossy reddish brown, and smooth. Buds are sharp pointed, glossy, conical, and curve inward lying close to the twig. (See figure C.) Bark on young trees is white to yellowish green to black on old trees. Dark blotches occur below axils of branches. On young trees the bark is smooth, but as it matures it becomes rough and furrowed.

### **Flowers:**

Male and female flowers are borne on separate trees early in the spring. Male catkins are  $1\frac{1}{2}$  to  $2\frac{1}{2}$  inches long and bear many individual flowers. Female catkins, when mature, reach 4 inches in length and develop into a fruiting branch. (See figure B.)

### **Fruit:**

A one-celled capsule bearing many small brown seeds that are surrounded by a mat of white hairs. The seeds are readily spread by wind and water. Seeds mature about 1 month to 6 weeks after flowering occurs.

### **Uses:**

The quaking aspen is fast growing but short lived, usually dying at about 60 years of age. It seldom attains a height of over 50 feet and a diameter of more than 1 to 2 feet. The wood is soft and light, and it is used mostly for pulpwood, excelsior, matchwood, box boards, and only occasionally for lumber. It is said that in pioneer days an extract removed from the bark was used as a substitute for quinine.

Austin N. Lentz, *Extension Specialist in Farm Forestry*  
Drawings by Aline Hansens

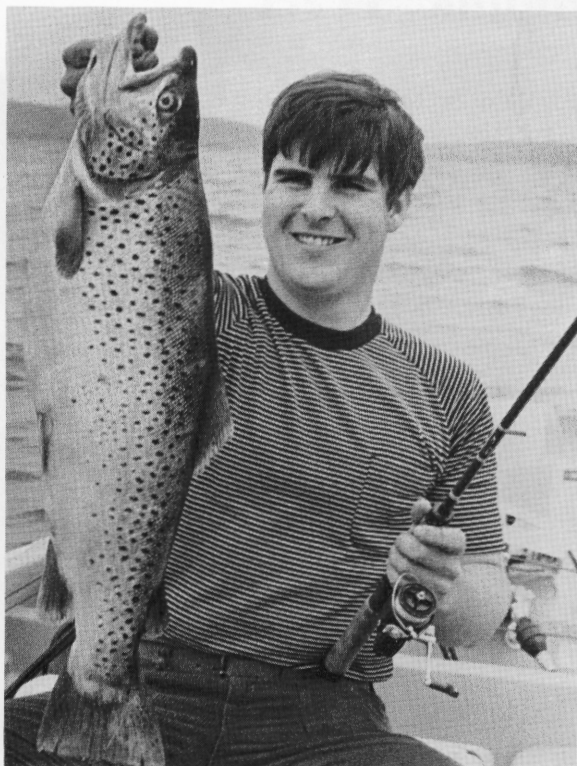
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*Quaking aspen is utilized for food by deer, rabbits, beaver, porcupines, grouse, and many other species of wildlife.*

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A most unusual observation was made by personnel of the Division's ecological study in south Jersey this season. Six pairs of eiders were observed swimming and feeding in the ocean off Loveladies, Long Beach Island, Ocean County. #

# Ten-pound Brown Trout



*Bob Sentz of Lebanon, displays his lunker brown trout taken recently in Round Valley Reservoir. Using an ultra-light rod and reel, Bob was fishing in 15 feet of water when the "brownie" bit his herring bait. The fish, which took 25 minutes to land, weighed ten pounds and measured 27 inches in length with a 17 inch girth*

I placed the age of the ten-pound brown trout taken by Bob Sentz from Round Valley Reservoir on May 21, 1972, at 5+ years. Back calculating the annuli on the scale sample provided me through the courtesy of Dan's Sport Shop, Clinton, I figured this fish to have been a two-year old hatchery trout stocked in Round Valley in 1969 probably during one of the later in-season releases. Its estimated size at the time of its release was 8.4 inches. It reached a length of about 12.5 inches at the end of its first year of liberty (1970) and then its growth really took off reaching 21.2 inches by 1971 and 27.0 inches in 1972. The rapid growth during the last two years is a reflection of its diet. Once the trout attained 12 inches in length it probably was much better suited to utilize the alewife as forage.

—Robert H. Soldwedel,  
Bureau of Fisheries Management

# Assunpink Tract

The Assunpink Fish and Wildlife Management Area is located in western Monmouth and eastern Mercer Counties. Access can be gained via Routes 524, 571, and 539.

This tract, acquired under the State Green Acres Program, presently comprises some 2,500 acres of fields, hedgerows, and woods. The area will total about 5,000 acres when acquisition is complete. The Assunpink Wildlife Management Area boasts one of the finest bird dog field trial areas in the northeast.

## Upland Game

Principal native species of upland game are pheasants, quail, and rabbits. Squirrels, woodcock, and grouse are also present. The Division's stocking program insures a supply of pheasants and quail during the hunting season. Management consists of food and cover plantings, mowing, and hedgerow cutting.

## Deer

The deer herd at present is small and offers limited bow and shotgun hunting.

## Waterfowl

Wood duck hunting along the small streams and swamps is excellent early in the season. Proposed construction of four major impoundments should improve future waterfowl hunting opportunities.

## Fishing

There is presently a limited amount of pickerel and catfish fishing in the upper reaches of the Assunpink Creek.

Upon completion of the impoundments, fishing prospects should be excellent.

## Office

The office is located on the Robbinsville-Clarksburg Road.

This area is being maintained for the licensed sportsmen of the state, although many citizens make use of it for other forms of outdoor recreation. Its program is financed by license money of the sportsmen. #

—William M. Smith,  
Bureau of Wildlife Management

**SYMBOLS**

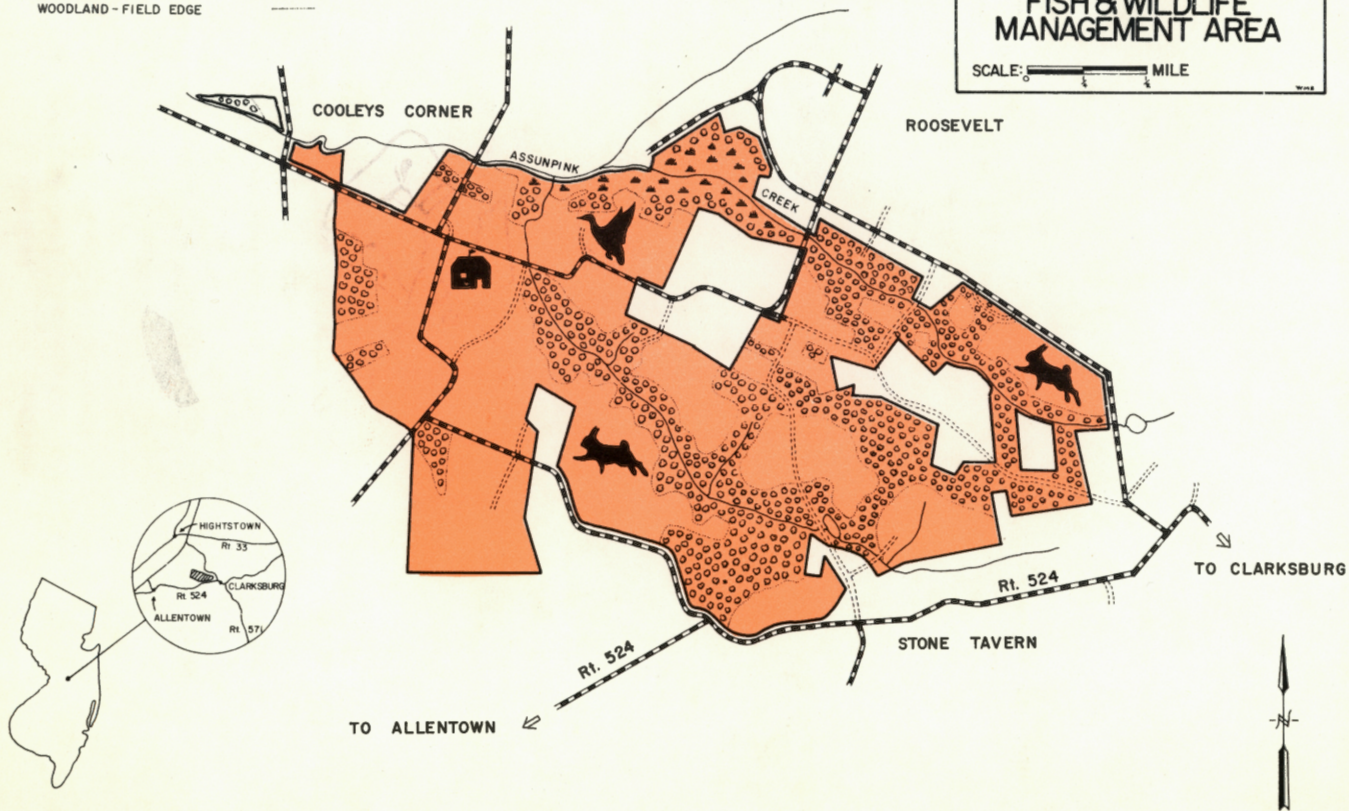
- ROAD (IMPROVED)
- ROAD (UNIMPROVED)
- TRACT BOUNDARY
- POND
- FRESH MARSH
- WOODLAND
- WOODLAND - FIELD EDGE



**Monmouth and  
Mercer Counties**

**ASSUNPINK  
FISH & WILDLIFE  
MANAGEMENT AREA**

SCALE: MILE



**SEE** and be seen



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