LAW ENFORCEMENT SESSION

COMMENTS ON THE HISTORY OF MIGRATORY GAME BIRD REGULATIONS AND THE 1962 STATUS OF WATERFOWL

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Several years ago my older brother came into my bedroom one night as I lay there reading. He glanced at several books lying on the night stand and then remarked, "You have quite a diverse selection here: Spengler's *Decline* of the West, Schellenberg's The Labyrinth, Jaun Belmonte's Killer of Bulls and T. S. Palmer's American Game Protection. Your taste in reading matter is such I can only say you seem to be acquiring the finest store of useless knowledge of any person I know." I had to admit that most of my reading was for my own amazement, but I was hopeful that some day, someone might ask me to dredge up some of my so-called useless knowledge for a good cause. When Bill Davis wrote me and kindly invited me to prepare a paper touching on the history of game laws, particularly those applicable to migratory birds, I felt my reading habits had been vindicated.

It is oftentimes said that there is nothing new under the sun. The truth of that old adage becomes very evident when one studies the evolution of game management and game laws down through the ages.

The practice of game management dates back to the beginnings of human history. There is evidence that laws for the regulation of hunting have their origin in the tribal taboos which grew up in the early stages of social evolution. It was not long before early men became aware that tribes which preserved their wild food supplies survived and prospered; those that did not, didn't last long. Game laws grew out of these stern object lessons.

This year's Federal waterfowl hunting regulations were specifically designed to provide hunting opportunity and at the same time assure the survival of adequate breeding stock. You will say the preservation of brood stock is fundamental. It certainly is. It dates back to the teachings of Moses, and in all probability it appears as the first written restriction in the history of mankind governing the taking of game. In Mosaic Law, in Deuteronomy 22:6, Moses decreed: "If you come upon a bird nest and the hen is sitting upon the young, or upon the eggs, you shall not take the dam with the young, but will let the dam go and take only the young or the eggs." The plainly implied intent was to preserve brood stock.

In 1916 the treaty with Great Britain stipulated that the closed season for migratory birds should be between March 10 and September 1. A new and rather startling approach? Not so. Kublai, "The Great Khan" (A.D. 1216-1294), when he was not busy bashing heads and subjugating nations, took great interest in hunting and game management. He determined that the breeding season was no time to kill wildlife and so issued a decree prohibiting every person throughout all the countries subject to him from daring to kill game between the months of March and October. This is so that they may increase and multiply, and, as the breach of this order was attended with punishment, game of every description increased prodigiously, so said Marco Polo.

Kublai Khan, a thousand years ago, created game preserves, engaged in habitat improvement and employed management techniques this country's most progressive game agencies would be hard pressed to excel even today. Henry IV of England is believed to be the first to establish game laws

Henry IV of England is believed to be the first to establish game laws governing the means and the type of equipment which could legally be employed to take game. Later Henry VIII, who is best remembered for his quaint habit of silencing his wives by way of the headsman's ax, or, as portrayed by Charles Loughton, tossing a shredded ham hock over his shoulder to his slavering hunting dogs, decreed protection for waterfowl and their eggs from May 31 to August 31; created a wildlife refuge in 1536 and set up severe penalties for the possession wild bird eggs. James I was also the first to establish a buffer strip around sanctuaries and decreed that shotguns were not to be discharged within 600 paces of a refuge.

The artificial propagation of mallards, regarded as a modern means of replenishing our dwindling duck supply, dates back to 1631.

The preceding, I believe, tends to prove the point that there is nothing new under the sun. As you have heard, many tools of game management used in this country today were forged centuries ago in England on the continent of Europe and in Asia.

In this country when we think of the development of the migratory game bird hunting regulation, we are prone to think of August 16, 1916 as the begin-Britain for the protection of migratory birds was signed. That is a fallacy. In fact virtually every regulation promulgated by the Bureau of Sport

Fisheries and Wildlife and its predecessor Bureaus, pursuant to the provisions of the Migratory Bird Treaty Act, has its roots in regulations which originated in some particular State at some time during the past 250 years.

Take, for example, the controversial baiting regulation. Where and when was the practice of baiting first prohibited? Nationwide in 1935 under the direction of "Ding Darling" and the Biological Survey? No! The baiting of upland game birds, wild turkeys to be exact, was prohibited for the barry interest-ing, but what about migratory game birds such as doves?" The answer to that one is the State of Georgia, the year, 1898. Ducks, the State of Illinois in 1909. What about the Federal regulations prohibiting the shooting of waterfowl:

From a sailboat under sail? Massachusetts beat us to the gun on that one way back in 1710;

From motor boats under power? New Jersey prohibited that practice in 1879:

The use of big bore guns? Virginia said "No" in 1832; Sink boxes? They were first prohibited by New York in 1839; Live decoys, Massachusetts—1996;

The use of animals as blinds? California—1909; Shooting from an automobile? North Dakota—1911; Night hunting of waterfowl? Virginia—1832; Market hunting? Missouri—1877;

The use of rifles to kill waterfowl? North Dakota-1911.

Wanton waste of game? Wyoming—1871; Spring shooting? West Virginia—1875.

The current requirement that packages of game be marked originated with Colorado in 1899. The tagging of game was first required by New York in 1911.

After digesting some of the statistics I have provided, I believe you will agree that most of the basic Federal hunting regulations applicable to the 1962-63 season were originally conceived in some form in the minds of men who went to their own happy hunting ground long before August 16, 1916.

Now that I have given some insight into the past, let us take a look at the present. Each year when the new Federal migratory game bird hunting regulations, with respect to season length and bag limits are announced, the event is the signal for a more or less concerted wailing and for gnashing of teeth. Some contend that the regulations are too stringent and are written to make it as difficult as possible for the hunter to bag any game, while others, especially this year, proclaim that the ducks and geese are in imminent danger of extinction unless completely protected.

The criticisms that come to the Bureau in connection with the establishment of the hunting regulations bothered me a great deal in my first experience with it. However, I have about reconciled myself to believe that any regulatory program that restricts human activity—and particularly hunting activity—is bound to evoke criticism. For my part, I derive considerable satisfaction from knowing that the Machiavelian influences that some accuse us of have never existed. No one likes to be unpopular, much less disliked or mistrusted. Our jobs could be much more pleasant and I daresay our popularity (at least in some quarters) enhanced if we could say "yes" to the many requests for liberalizations that cross our desks. Obviously, this popularity would endure only until we ran out of ducks. Since we cannot create ducks, we try to do the next best thing by aiding the Lord who can. The aid is a composite of many things and is contributed to by governments, organizations and individuals. The aid involves numerous things such as the acquisition, improvement and good management of waterfowl habitat, the creation of refuge areas, the reduction of natural mortality and last but not least the regulation of use. In order to arrive at conclusions with respect to the latter, our Bureau, with 77 years of experience in studying the migration of birds, determines waterfowl population trends in each of the four flyways. The population trend data that influences the Bureau's decisions are obtained from a tremendous expanse of waterfowl production habitat, two million three hundred seventy-five thousand square miles of it. The results of the breeding population and the production surveys are combined to form the basis for forecasting changes in the relative size of the fall flight of ducks and coot. The surveys are conducted and the data obtained are analyzed by personnel, who individually have an average of the years experience in this work.

It has always been a matter of some amazement to me that people should be so ready to disbelieve the carefully prepared waterfowl population forecasts announced by the Bureau. What possible motive could there be for the Bureau consciously to underestimate the duck population? Government officials in the United States and in Canada are charged with the responsibility of insuring that this valuable resource is perpetuated and that it is used wisely. There is no opportunity for an individual or an agency to benefit from misrepresentation. One could imagine that a government agency might be tempted to conceal the gravity of the present waterfowl situation in order to cast a better light on the efficiency of its stewardship, but that it should be suspected of doing the reverse seems incomprehensible.

With respect to this year's decisions, the severe restrictions on the number of hunting days and limits for waterfowl in the Mississippi Flyway during the 1962-63 season were necessary because of the limited annual production in the important breeding areas of the northern States of the United States and the Prairie Provinces of Canada. Regulations affecting this flyway this year reflect the objective of restricting the harvest of all ducks to limits which will preserve a brood stock for 1963 at least equal to 1962.

The condition of the mallard brood stock is precarious. This year's breeding population was 30 percent below 1961, 38 percent below the average of the past 12 years, and 57 percent below the peak reached in 1958. It is imperative that the population of mallards be harvested only lightly this year to assure adequate future breeding stock.

The production of many of the important species of ducks which winter in all of the four flyways is directly affected by habitat conditions in the "pothole" region of the Canadian Prairie Provinces. The current drought cycle in this mid-continent duck producing area began to have a serious effect on production in 1959.

The number of "pothole" areas has steadily dropped from a peak of approximately 6 million in 1955 to approximately $1\frac{1}{2}$ million in 1962. This severe reduction in desirable nesting areas has been associated with a marked reduction in the breeding population and production of Mississippi Flyway ducks during the same period.

Reduced breeding populations mean that fewer birds are produced and a shorter supply is available during the fall migration and on the wintering grounds.

Last year the number of ducks expected to migrate through or be present in the States of the Mississippi Flyway was markedly reduced compared to 1960, and regulations were prescribed to hold the kill to limits which would assure that the number of birds returning to the nesting grounds this year would not be less than the breeding population in 1961. Last year's shortened season, designed to reduce the kill by 50 percent of the 1960-61 harvest, actually reduced the kill in the Mississippi Flyway by 44 percent, thus falling a little short of this objective.

The annual winter survey in the Mississippi Flyway, which was taken last January immediately following the hunting season, revealed a decrease of about 1,350,000 ducks in the winter index (-15 percent) as compared to 1961.

On the breeding grounds important to the Mississippi Flyway, surveys by the Bureau of Sport Fisheries and Wildlife in May and June also revealed that a decrease in the duck population occurred. In southern Alberta, southern Saskatchewan, and southern Manitoba, decreases of 23 percent, 47 percent, and 37 percent, respectively, were recorded. Breeding populations in northern Alberta and the Northwest Territories decreased 32 percent. The surveys in Alaska revealed a slight decrease as compared to 1961. On the favorable side of the ledger, an increase of 61 percent was recorded in the survey area composed of North Dakota, South Dakota, and western Minnesota. In northern Saskatchewan, northern Manitoba, and Ontario collectively, an increase of 26 percent was recorded.

We are aware of the discrepancies between reports of Ducks Unlimited, the National Wildlife Federation, and the results obtained from the breeding grounds surveys conducted by the Bureau of Sport Fisheries and Wildlife. Nevertheless, the Bureau's breeding grounds survey is the most intensive and extensive waterfowl survey conducted in the world. It has the distinction of being the only statistically reliable survey of waterfowl made in Canada, the Dakotas, western Minnestota, and Alaska. These surveys have been developed and refined over the years to such a degree that the data obtained therefrom are considered to be entirely reliable as a basis for establishing seasons and bag limits for migratory waterfowl. When all areas were combined, and data from all sources considered (breeding grounds, winter surveys, kill surveys, banding, and the duck wing survey), it was obvious that the Mississippi Flyway would have a moderate decrease in the fall flight of ducks as compared to 1961.

Serious consideration was given to closing the duck season in the Mississippi Flyway this year. This is in contrast to some opinions that duck hunting regulations are needlessly restrictive. It is possible these opinions are based on associations with resident game such as pheasants or grouse, which show the gun is not an important mortality factor. With upland game, long before the population is reduced by the gun to a precarious level, hunting becomes unrewarding and drops off sharply. Federal technicians have demonstrated these principles do not apply to waterfowl to the same degree. Both ducks and geese are migratory, gregarious, and utilize a specific and limited type of habitat.

Seasons, bag limits, and other considerations are based on the estimated annual waterfowl population which will be available during the hunting season throughout each respective flyway as a whole. It is not practicable to prescribe regulations for each separate State because the size of the fall flight of waterfowl for individual States cannot be accurately forecast; this flight will vary from year to year depending upon weather, the availability of natural and agricultural feed, and other factors. Furthermore, observations of local waterfowl concentrations or the number of waterfowl present in a single State at a given time cannot be construed as an accurate reflection of the status of the flyway population as a whole. This is especially true where local areas of isolated, attractive habitat develop because of abnormal weather phenomena.

A good example of how local concentrations of birds may lead to erroneous impressions concerning the overall status of waterfowl, and stimulate questions regarding the accuracy of Federal surveys and fall flight forecasts, is found in Louisiana.

During the period 1955-58, Louisiana wintered a remarkably consistent percentage of the total Mississippi Flyway duck population, varying within the narrow limits of 25-29 percent. In 1959, birds observed in Louisiana during the January inventory increased to 41 percent of the total flyway population, were 51 percent in 1960, 57 percent in 1961, and climbed to 70 percent in 1962. Only 30 percent of the entire population was observed in the other 13 states of the flyway during this last inventory.

This tremendous build-up of birds in Louisiana was by no means an indicator of the total flyway population. It represented a local concentration of birds in an area where food and other wintering requirements have become increasingly attractive during recent years. A similar situation in one of the important duck breeding States where nesting habitat was attractive to large numbers of birds in a given year likewise tends to impress local observers that production was much better than reported by Federal surveys. Isolated instances of abnormal concentrations of birds should not be construed as reflecting overall conditions. The Secretary's decision to restrict the season on ducks in the Mississippi Flyway was based on the best interest of the resource and the public as a whole, and not on any consideration of prospects for a decrease in the sale of "duck" stamps. Decisions on regulations are separate from all factors except the relationship between the number of ducks available for harvest and the preservation of a basic breeding supply of birds for the future. All other considerations are subordinate to this objective. As populations of migratory game birds increase, provisions for harvest are liberalized; conversely, as populations decline, hunting regulations must be more restrictive. There can be no deviation from this philosophy if waterfowl populations are to be maintained in numbers sufficient to permit hunting opportunity.

PHOTOGRAPHY IN GAME AND FISH LAW ENFORCEMENT

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Answers to a letter sent to the Law Enforcement Chiefs of each of the Southeastern states indicate that while photography can be extremely helpful in obtaining convictions for fish and game law violations, it is used to a very limited degree. It was agreed that an actual violation is extremely difficult to photograph and the greatest use is in photographing evidence, especially in water pollution violations. One Chief of Law Enforcement states that he would not consider going into court without photographs in water pollution cases. The majority of departments look to the Information and Education personnel who are trained in the handling of cameras to obtain this type of evidence. Some states, however, do have cameras available for use by field personnel when it is needed and one state has placed Polaroid cameras in the hands of some of its officers. The thought that was evident in most answers, although it was not so stated, was that photography was too complicated for most game wardens to cope with. This hurdle is not too great and could be overcome with some fundamental instructions and with the gaining of familiarity in handling the equipment.

The two benefits to be derived from the use of photography are the securing of physical evidence and the psychological effect that this activity may have upon a violator, thereby causing him to waive a contest or the psychological effect that such evidence may have upon a judge and jury. One of the major actual benefits from the use of photographs is that it estab-

One of the major actual benefits from the use of photographs is that it establishes a permanent record which may be used along with original field notes to refresh an officer's memory of events and places prior to appearing on the witness stand. When used in the presentation of a case, photographs can aid in establishing the place and nature of a violation and support other evidence which may have been collected such as bait, game, feathers, hides, gun shells, ammunition cartons, footprints, etc. It can show the arrangement or placement of such actual evidence at the time of violation. Photographs can also show the effects of alleged crimes such as dynamited or poisoned fish or carcasses of birds or animals where it is neither convenient nor possible to bring such actual evidence into court. It can further accurately identify equipment which may be used in violations such as automobiles, boats, guns, etc., including license or registration numbers. Where it is not practical to take the court to the actual scene of the crime, photographs when taken with a normal length lens, approximating the angle as seen by the human eye, can be used to illustrate to the court, distances from the observer to the violator and the condition of