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Nebraska's Game Resources and Their Conservation

Robert H. Wolcott
University of Nebraska-Lincoln

Frank H. Shoemaker
University of Nebraska-Lincoln

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THE UNIVERSITY OF NEBRASKA

SAMUEL AVERY, Chancellor

**The Nebraska Conservation and Soil
Survey**

G. E. CONDRA, Director

BULLETIN 12

**NEBRASKA'S GAME RESOURCES
AND THEIR CONSERVATION**

BY

ROBERT H. WOLCOTT

Head of Department of Zoology, The University of Nebraska

AND

FRANK H. SHOEMAKER

Of the Nebraska Conservation and Soil Survey,
The University of Nebraska

LINCOLN, NEBRASKA

1919

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NEBRASKA'S GAME RESOURCES AND THEIR CONSERVATION

To the red men who roamed these plains and prairies before the advent of the whites the territory which is now Nebraska formed part of a veritable happy hunting ground. To them the numerous herds of buffalo, deer, elk and antelope which dotted the open country in all directions or which sought the protection of the fringes of timber along the streams, together with the vast numbers of water fowl which frequented both the streams and prairie lakes and sloughs, formed very nearly an all-sufficient resource. The flesh of this game provided them with meat, the hides both clothed them and furnished them with shelter, and many articles were made from fur, feathers, horns, or other parts, which meant to them luxury in personal adornment, in the pomp of tribal ceremonials, and even in the performance of religious worship.

The presence of these same animals was the attraction which brought the first white settlers to this region, these being the trappers, who came to themselves collect furs, and the traders, whose object was to barter various manufactured articles for the skins and furs of the Indians. These were followed by the gold-seekers whose wagon-trains wound wearily across the plains toward the Eldorado in the west, oblivious to the potential agricultural wealth of the country they traversed, but keenly appreciative of the opportunities which the abundance of game presented. Gradually permanent settlements were established, and many a pioneer of the great army that was to follow, once the fertility of the soil had become generally known, found in the game a means of maintenance in time of hunger and destitution.

The abundance of game and ease of procuring it led to thoughtless waste. The commercial value of buffalo hides tempted the cupidity of men who engaged in the slaughter of these animals by thousands, stripping the carcass of its hide and leaving it to rot on the ground; the skins were so numerous in the east a half-century ago that the buffalo robe became an indispensable adjunct of a sleigh-ride. The herds of wild animals were rapidly exterminated and immense numbers of cattle took their place on "the range"; more recently the open range has in its turn disappeared and the barbed wire fences of farms and ranches today extend clear across this state.

But long after the larger game mammals had been destroyed, countless numbers of game birds traversed our territory twice a year in their migrations and many made their homes here and reared their young. Nebraska became the Mecca for the sportsmen of the middle west, and even attracted many from the far east. Market hunting became a profitable employment and a considerable number of men engaged in it not only in Nebraska but in neighboring states. The supply of feathered game seemed limitless and no voice was effectively raised against the slaughter, which went on ceaselessly from British America to the Gulf with hardly an intermission even in the breeding season. Game laws were placed among the statutes of Nebraska as far back as

1860, but for a long time thereafter were rarely enforced. In 1900, Congress passed the Lacey Act, which was aimed to check the traffic in game, and began a nation-wide campaign in favor of game conservation. The Nebraska Legislature of 1901 enacted admirable laws, including provisions for the appointment of a force of wardens, and since that time a strong public opinion has been developed in this state in favor of their strict enforcement.

In many parts of the country, however, particularly in the South, public sentiment was not aroused and the wasteful slaughter continued. Song-birds, not in any sense game, and of too great value as enemies of insect pests to be killed for food, were being destroyed in these states, often in large numbers. The "pump-gun" and the automatic added greatly to the effectiveness of the individual hunter and with the increase of the number of hunters due to increasing population, the efforts of the states in which an enlightened public sentiment did exist and in which well-devised game laws were being successfully enforced, were insufficient to check the rapid diminution in the numbers of our migratory game birds, which threatened their complete extinction in a future not far distant. At this juncture the national government again interposed and the passage of the migratory bird law, the provisions of which have been more recently incorporated into a treaty with Great Britain, has laid the foundation for nation-wide and uniform restriction of the shooting of game with a view of conserving this resource that future generations may share in its utilization.

No argument is needed to show that the continued presence of the vast herds of large game mammals was incompatible with the settlement of our state and the development of its agricultural resources. But the existence of an abundant game bird population is not inconsistent with the highest degree of cultivation of the soil and the maximum utilization of all our natural resources. No sane man would place the welfare of wild animals before the interests of human society, but on the other hand no wise man would neglect to utilize to its fullest extent the natural wealth of the region in which he lived or subscribe to a spendthrift policy which would result in the waste by his generation of resources which might be both enjoyed in moderation by himself and transmitted unimpaired to his children and to his children's children.

WHAT IS MEANT BY GAME

Any discussion of the conservation of our wild game will be made clearer by a definition of the word "game." Some authors have used this word in the sense of "all wild animals" and it is usual for game laws to contain provisions referring to fur-bearing mammals and to song and insectivorous birds. But since usage justifies a restricted application of the word, since the management of our game resources must be discussed on a somewhat different plane than that of other animal resources, and since the fact that our game is in imminent danger of extermination

makes it advisable to focus present attention on this subject, the word is used here in a narrower sense. We would define game animals as those which are of value as food and the securing of which involves the chase and offers opportunity for the exercise of a certain amount of knowledge and skill. This would by implication exclude all animals which are more valuable for some other purpose than for food, as song and insectivorous birds, and fur-bearing mammals, and include others which are most valuable as furnishing the means of developing this knowledge and skill, as, for example, the fox. It follows that what would be considered game in one locality might not be in another and suggests that it is desirable that each collection of game laws define exactly what is meant by "game."

NEBRASKA'S GAME

In order to approach intelligently the subject of game protection in Nebraska it is necessary to review the past and present status of the various game animals in the state, and that is done in the following pages in a manner as brief as possible. Since it is planned to treat game fish in a separate bulletin, this treatment concerns only the mammals and birds.

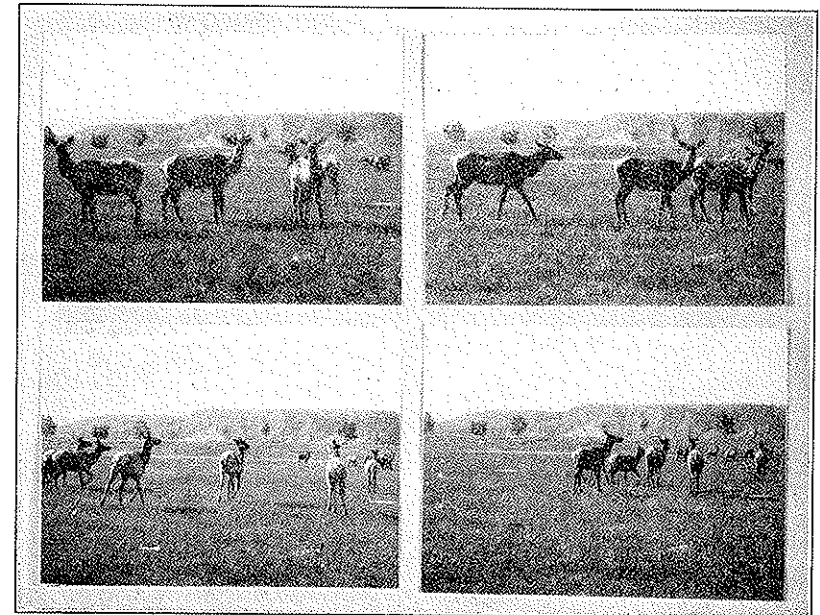


Fig. 1. Elk on game preserve near Valentine. Photograph by University Department of Geography and Conservation.

MAMMALS*

Former Nebraska game mammals, now extinct, impounded, or protected throughout the year.

The Elk was formerly found abundantly in all parts of the state, but disappeared in the early 'eighties. A fine herd is now maintained on the game reservation east of Valentine, and there are a few more in captivity in the parks of Omaha and Lincoln.

The Plains White-tailed Deer was formerly common in all the wooded valleys of the state, but settlement of the country has caused its gradual extermination, until at the present time it is found only in the northwest corner, in the wildest canyons of the Pine Ridge country, and in very limited numbers. Though protected by the game laws throughout the year, this animal is marked for total extinction within our borders, as has been the case with the white-tailed deer in many sections east of Nebraska.

The Black-tailed Deer was the common deer of early Nebraska, found alike in woodland, plains, prairie and sandhill regions, but it has

*Many of the statements here given are taken from "A Preliminary Review of the Mammals of Nebraska," by Prof. M. H. Swenk, published conjointly by the University and the Nebraska Academy of Sciences, September, 1908.



Fig. 2. Bison on game preserve near Valentine. Photograph by University Department of Geography and Conservation.

now almost wholly disappeared. One small band of about twenty-five animals still existed in the sandhills of the Dismal River region about ten years ago, and at that time was being given all the protection possible by the ranchers of the vicinity; the recent history of this herd is not known.

The Pronghorn Antelope was originally found over the entire area of the state, but is now heard from only as small bands are reported from time to time in the extreme western part of Nebraska, most of them perhaps having crossed our boundary from Wyoming or Colorado. There are, however, stationary bands in Sioux county, nearly due west of Alliance, and in Garden county, near Crescent lake. A young one was observed near Sidney last summer.

The Bad Lands Mountain Sheep was found in small numbers on Court House Rock, in Scotts Bluff county, until the late 'seventies, and one animal of this species was noted as far east as Birdwood creek, near North Platte.

The American Bison, or Buffalo, was formerly present in enormous numbers in all parts of Nebraska. The last of the wild animals were killed in the early 'eighties. A small herd is impounded in the game reservation near Valentine and is in a thriving condition. This animal affords the most prominent example of the waste of a natural game resource. It existed previous to the middle of the last century to the number of many millions, scattered over the whole of the plains region. Killed in gradually increasing numbers up to the 'sixties, it was systematically exterminated in the 'seventies and early 'eighties. Only the hides were utilized, and of these on the average only one-half were saved; most of the meat was wasted. Though the animals were of an inoffensive disposition and the calves were easily domesticated no attempts seem to have been made to bring the species under domestication till after its destruction was practically complete.

The Black Bear was formerly found in Nebraska, principally in the northern part, but never commonly, as it is a forest animal.

The Plains Grizzly Bear is said to have occurred in the extreme northwest corner of the state in early days, but no definite records exist.

PRESENT NEBRASKA GAME MAMMALS

The Opossum is found in Nebraska only on the wooded eastern border, and for short distances along the courses of the Platte and other tributaries of the Missouri. It was formerly found only in the southeastern corner of the state, and rarely; but in latter years it has evidently both increased in numbers and extended its range, being one of the few wild animals of which this can be stated. Probably the reason for this increase and extension alike lies in the fact that its natural enemies have been reduced in numbers or driven out by the settlement of

the country. It has been found as far west as Norfolk. In some localities it has become sufficiently common that "possum" hunts are indulged in with fair chance of reward, the sport lying wholly in the chase, for there is nothing game about the animal when at the point of capture. The flesh is held in high esteem in the South.

The **Western Fox Squirrel**, usually called "Red Squirrel" in this state, is common in woodland east and along wooded streams as far west as Norfolk and Niobrara. The **Southern Gray Squirrel** is found sparingly in the southeast corner of the state. Squirrels are considered "fair game" wherever found by the hunter in the open season, but are frequently most unfairly hunted, some hunters shooting through the exposed nests on the presumption that if there is a squirrel there he will jump out, even if killed by the shot, which is not true. Many persons have a sentimental feeling for squirrels, by reason of their attractive appearance and grace of movement, and almost every town in the eastern end of the state has semi-domesticated squirrels in its parks and even in residence sections. But squirrels have the bad habit of destroying birds' eggs and young and this is a very serious charge against them. In rare cases injury has been reported to young chickens.

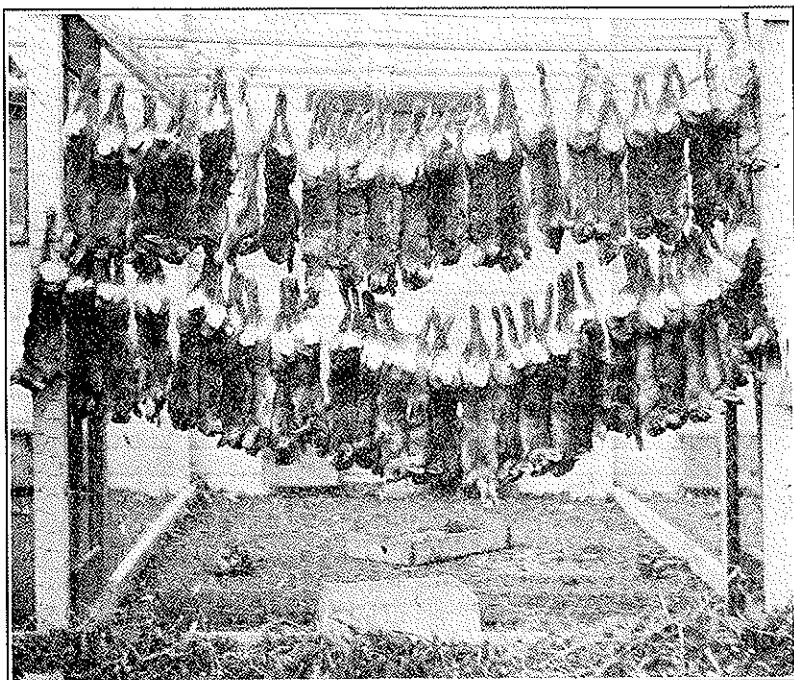


Fig. 3. Cottontails.

Two species of Jackrabbits are found in Nebraska, the **White-tailed** and the **Black-tailed**, the former found over the entire state, but rare in the southern portion, and the latter only in the southern half. Each is numerous in its territory and both are much hunted. The tail of the first is entirely white, that of the second white below and black above.

The **Prairie Cottontail**, abundant in eastern Nebraska, the **Plains Cottontail**, common in the western part of the state, and the **Nebraska Cottontail**, probably the common cottontail in northern Nebraska, are the three species of common rabbit found within our territory. The prairie cottontail is larger and darker colored than the Nebraska cottontail, while the plains cottontail both is paler in color and has longer ears. All vary in abundance with the season, but each is plentiful in its locality, and generally hunted. They are regularly offered for sale in our markets.

The **Raccoon** is found pretty generally over the state. It seems to be maintaining its numbers in spite of the settlement of the country, probably for the reasons mentioned in the paragraph relating to the opossum. Coon hunting with dogs is becoming a popular sport in some localities in southeastern Nebraska. The flesh is good eating, but in preparing the

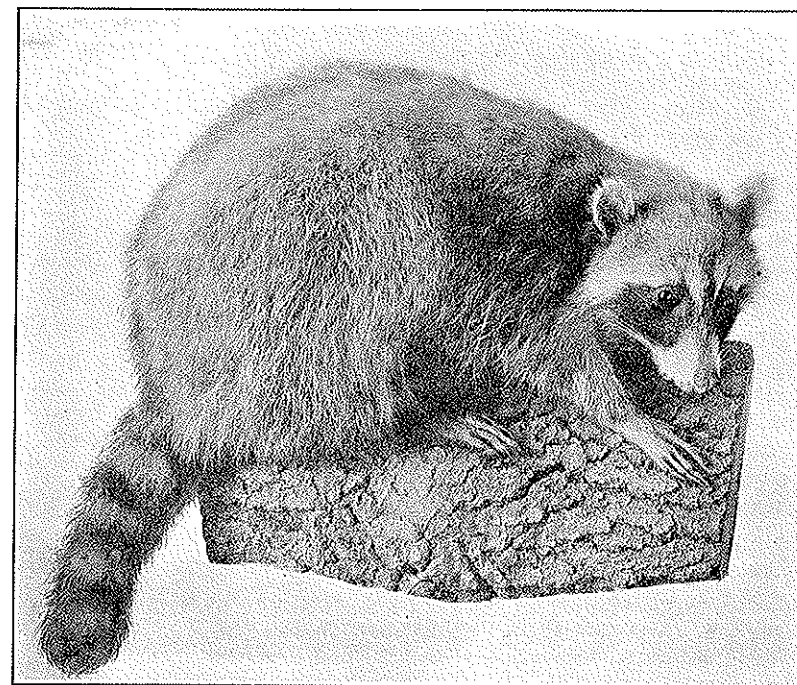


Fig. 4. Raccoon. In collection of August Eiche, Lincoln.

animal care should be taken to remove the glands in the "armpits," the groin, and behind the "knee." Many of our mammals not ordinarily eaten would be good if this precaution were taken with them.

BIRDS

Game Birds extinct, too rare to be seriously considered, or protected at all times.

Ducks—The European widgeon, old-squaw and harlequin duck are included in the list of birds of Nebraska only on the basis of the taking of a few individuals. The scoters are winter visitors most often seen on the larger rivers.

Brant—The snow geese are usually called "brant" in this state; the true brant has only been taken a few times on the Missouri river.

Swans—The whistling swan was formerly found in considerable numbers, but is now very rare, as is also the trumpeter swan, which, however, has always been rare.

Cranes—The large white whooping crane was formerly a fairly common migrant in this state, but is now very rare. The brown sandhill crane, once a very abundant migrant, and a common breeder in Nebraska, is now rarely seen and seldom breeds even in the sandhills. The little brown crane has always been very rare.

Woodcock—Rare, found only along the bottomlands of the Missouri, and not permitted to be shot.

Upland Plover or Bartramian Sandpiper—The "plover" was formerly abundant everywhere in Nebraska, but diminished in numbers till a few years ago they became rather scarce. A closed season then established has resulted in an increase in their numbers and they promise to again become common.

Curlews—The long-billed curlew was formerly abundant throughout the state, but it is now rarely seen in eastern Nebraska. Even in the sandhills, where it used to breed in abundance, it is now not common and a few only breed here and there. The Hudsonian curlew, formerly numerous, is now very rare, and the Eskimo curlew, in former times to be found in flocks of thousands and killed by wagon loads under the name "prairie pigeon," is now practically exterminated.

Quail or Bob-white—Originally confined to southern and eastern Nebraska which represented the westward limit of its range, this bird has spread over the state with its settlement and the increase of trees and shrubbery which furnish it necessary "cover." But this cover is insufficient in severe winters and though the quail may multiply during years of mild winter weather and of spring conditions favorable for nesting, cold and snowy winters are inevitable, during which it is all but exterminated, though it will, if not hunted, have no difficulty to maintain itself

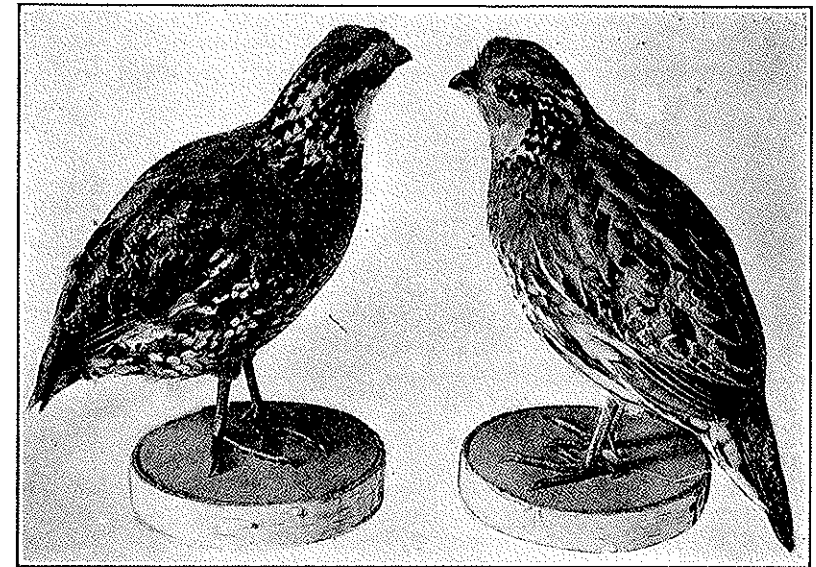


Fig. 5. Quail or Bob White. In collection of August Eiche, Lincoln.

in the Republican valley and farther north in the state where local conditions give it the necessary protection from the rigors of the climate. It has of late years been especially numerous along the upper Elkhorn and the streams emptying into the Missouri river west of Yankton, S. Dak. It is resident wherever found and one of the few birds absolutely non-migratory. The quail readily adjusts itself to the proximity of man, and if protected for a number of years may become really semi-domesticated, in which case it becomes liable to the depredation of cats, which destroy both parents and young. It is perhaps the most valuable of all birds to the farmer.

Ruffed Grouse or Partridge—Confined to the wooded ravines along the Missouri river and the adjacent portion of its tributaries, very rare, and protected at all times.

Lesser Prairie Hen—Formerly found in Nebraska but not seen for nearly half a century.

Sage Grouse—Only in Sioux county where it is rarely seen.

Ptarmigan—In our game laws it is stated that there is no open season on "ptarmigan." It is not clear what is meant as no ptarmigan has ever been known to occur in Nebraska.

Wild Turkey—Formerly abundant along the wooded streams of this state, the wild turkey has for many years been extinct in our territory.

Passenger Pigeon—Once found along the eastern edge of our state, this bird, now extinct everywhere, has not been seen for a long time.

Mourning Dove—An abundant bird over the greater part of the state, breeding everywhere. This bird is now protected throughout the year by our state law, though there is an open season on it in about half the states, and the national law recognizes these open seasons. The law with reference to the dove illustrates the tendency to go from one extreme to another; for from an open season which permitted the bird to be shot only during its breeding season we went to a law which does not permit it to be shot at all. Personally, we believe neither extreme justified. The dove owes its protection largely to the efforts of sentimentalists to whom the word "dove" has a peculiar significance, though it is applied to a great number and variety of birds in various parts of the world. However, the dove is properly a game bird because (1) it is of sufficient size and its flesh is of fine quality, (2) it exists in sufficient numbers to repay the hunting, (3) it flies with such speed that to secure it on the wing taxes to the highest degree the skill of the hunter, and (4) if hunted it very quickly becomes so wary that the utilization of every resource is necessary to get within range of it. The establishment of an open season is justified by (1) its abundance, (2) the remote danger of its extermination, (3) its probable quick recovery of numbers if they should be depleted by hunting, and (4) the fact that while it should be considered a beneficial bird, it does not perform a service of such value as to outweigh its value as a game bird. It owes its numbers and its probable immunity from extermination, in spite of the fact that it lays only two eggs in a setting, to the fact that it often makes its home in close proximity to human habitations, thereby gaining immunity from its natural enemies, while owing to its nesting in trees it is not so often destroyed by cats as are ground nesters. It has two or three broods in a year. Practically all our other game birds nest on the ground and thus the sitting bird, eggs, and young are more exposed to the attacks of enemies as well as in danger from the effects of cold and dampness. The argument for an open season on the dove is far stronger than that for one on the quail, and even better than that for one on the prairie chicken in most parts of the state, as both of these are of greater value to the farmer and far more liable to be exterminated. The opening of a season on the dove would compensate sportsmen in a way for the closing of seasons on so many other game birds.

GAME BIRDS ON WHICH THERE IS NOW AN OPEN SEASON

Ducks—Of the ducks the most abundant species have always been the mallard, blue-winged and green-winged teal, shoveller, pintail, red-head, blue-bill, and ruddy ducks; less common are the gadwall, widgeon, canvas-back, ring-necked duck, golden-eyes, and buff-head. The black duck, cinnamon teal and greater blue-bill are rare, and the wood duck, formerly common, has now also become rare. Several of the ducks named

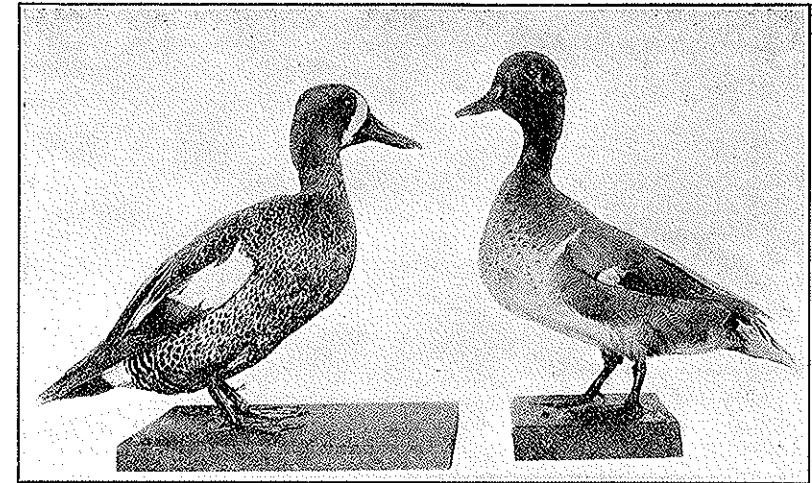


Fig. 6. Blue-winged Teal (left) and Green-winged Teal (right). In collection of August Eiche, Lincoln.

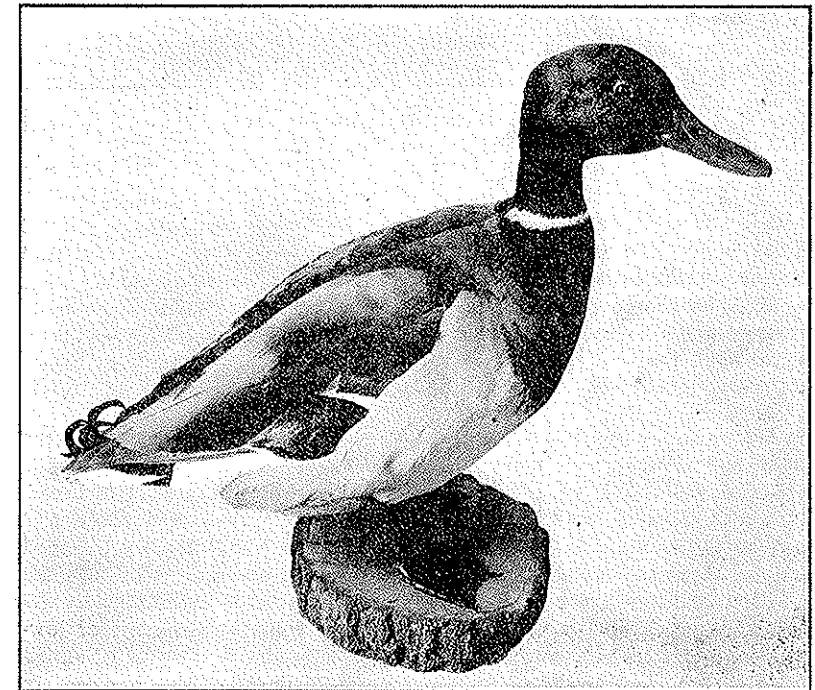


Fig. 7. Mallard. In collection of August Eiche, Lincoln.

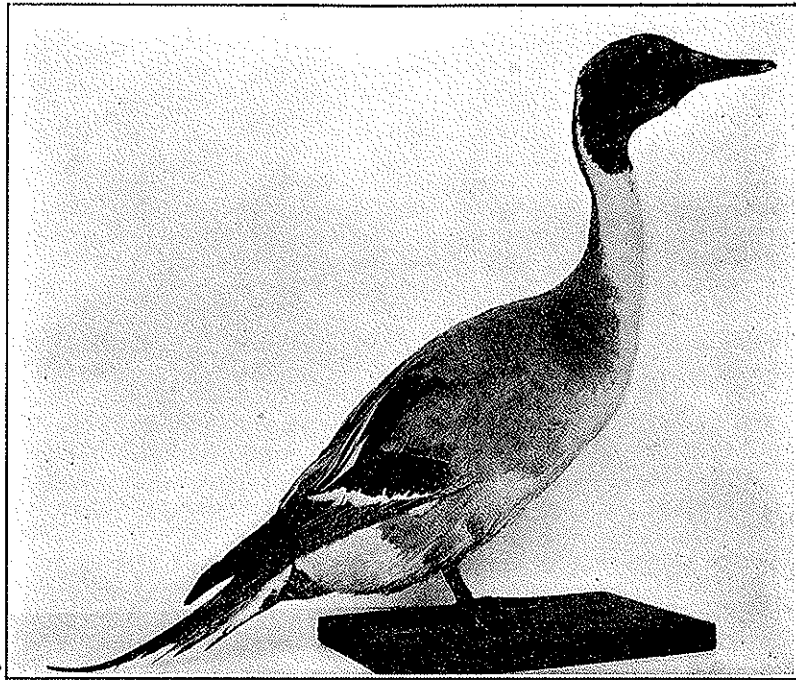


Fig. 8. Pintail. In collection of State Museum, University of Nebraska.

above, especially the mallard and green-winged teal, may be found about open water during mild winters. The words "abundant" and "common" as used above are only relative terms, and the former could not be applied to any one of the species today if comparison were made with the vast number which formerly migrated through this state, there having been hundreds where now there is one. Of the number, the mallard, gadwall, green-winged teal (once), blue-winged teal, shoveller, pintail, wood duck, canvas-back (several times), and ruddy duck have been known to breed, and the widgeon, red-head, blue-bill, and ring-necked duck probably do so.

Ducks have undoubtedly always nested on the prairies, about the ponds and sloughs, and near the streams, and also about lakes in the sandhill region. But when the state became settled the number of breeding ducks became reduced and their range also restricted more and more to the sandhill lakes, where a considerable but gradually lessened number of pairs reared their young. Recently, however, with the destruction of large areas of their breeding grounds in the states to the northward of us and in British America owing to the drainage of low-lying land and its cultivation, and with the diminished amount of shooting in spring, the number of breeding ducks in our sandhills has clearly increased. Indeed, it is not improbable, if spring shooting could be abso-

lutely prevented, that in a few years the vicinity of the sandhill lakes would become the summer home of a very large duck population. Since late in summer and early in the fall these ducks would wander more or less this would ensure not only good early fall hunting in the sandhills, but some such hunting over a considerable portion of the eastern part of the state. With a constantly larger number of irrigation ditches and artificial ponds in western Nebraska a steadily increasing number of ducks should also be found in that region.

Geese—The Canada goose and the lesser snow goose are the most abundant species of geese frequenting Nebraska, while the white-fronted

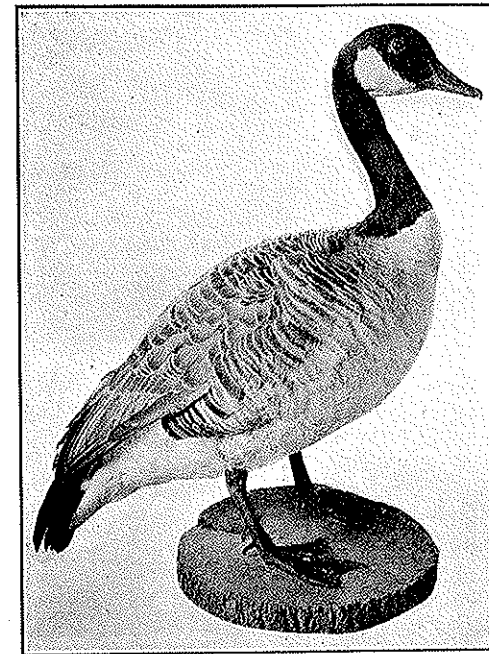


Fig. 9. Canada Goose. In collection of August Eiche, Lincoln

goose, or "speckled-belly," and the Hutchins goose are also common. The greater snow goose, blue goose, and cackling goose are rare. The Canada goose is the earliest one to migrate in the spring and may linger on the Platte and Missouri rivers during the winter; this is the only one which has been known to breed. The geese have diminished in numbers even more than the ducks and it is almost beyond one's power of imagination to picture the tremendous flocks that formerly passed through this state and rested on the sandbars of the Platte and Missouri.

Rails—The larger species, the king rail, is not common, but is found in eastern Nebraska; of the two smaller which sometimes are abundant, the Carolina rail or sora is the more common along the eastern border, the Virginia rail the more common in the sandhills. None are hunted to any extent, the flesh being inferior to that of other smaller game birds, so they are maintaining their numbers.

Mudhens—The coot, usually called "mudhen," is an abundant bird in migrations and breeds commonly in the sandhill lakes and about reedy ponds and sloughs generally. When young, fed on wild rice, and properly cooked the flavor can hardly be told from that of ducks, even by an

expert. The Florida gallinule, which resembles the preceding but has a reddish bill, and is sometimes called the "red-billed mudhen," is found in southeastern Nebraska, but is much less common.

Avocet—This beautiful shore bird is among our largest species. It

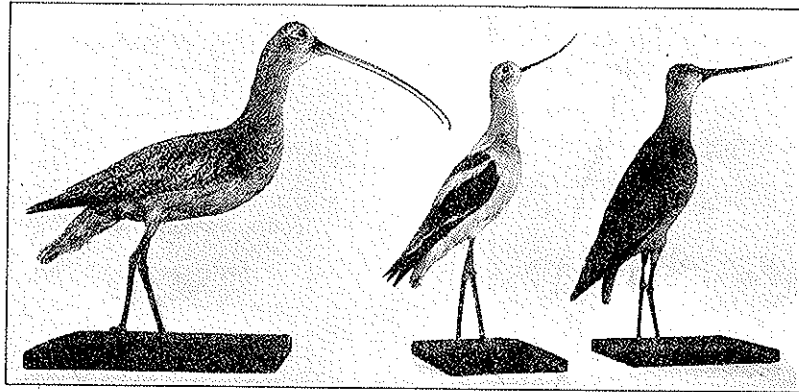


Fig. 10. Long-billed Curlew (left), Avocet (center), and Hudsonian Godwit (right). In collection of State Museum, University of Nebraska.

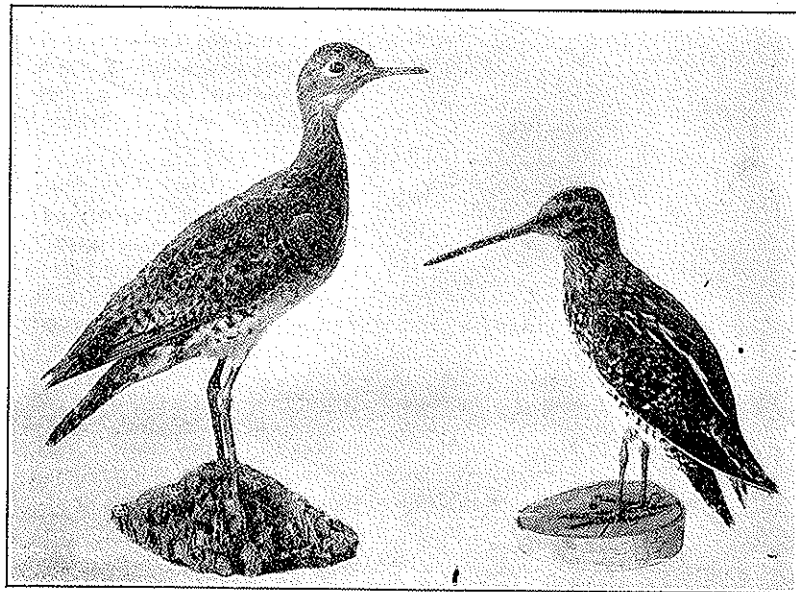


Fig. 11. Upland Plover (left) and Jack Snipe (right). In collection of State Museum, University of Nebraska.

breeds about the more alkaline sandhill lakes; its partiality for such bodies of water leads to its being often called the "alkali bird," or "alkali snipe," and to a disinclination on the part of many to eat it, the claim being made that the flesh has an unpleasant taste.

Jack Snipe or Wilson Snipe—A common migrant in Nebraska, and staying all winter about spring-fed bogs and pools.

Godwits—The marbled godwit is a common migrant, but the Hudsonian godwit rare.

Yellow-legs—The greater yellow-legs is fairly common, and the smaller species abundant in this state.

Willet—Rather common.

Other Sandpipers—The dowitcher, sometimes common, and the pectoral sandpiper, often called "grass snipe" because found in fields and pastures, which is usually common, are also hunted and may be called game birds.

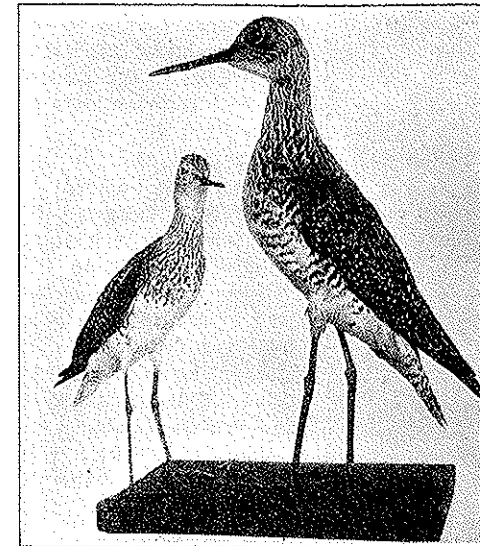


Fig. 12. Lesser (left) and Greater Yellow-legs (right). In collection of State Museum, University of Nebraska.

Plover—The killdeer is an abundant bird in this state and is often

shot, though it should not be, for in addition to having too small a body to be worth killing, much smaller than one would think from the apparent size of the living bird, it eats many insects and is distinctly beneficial. Black-bellied and golden plovers used to be common and the latter even abundant, and were fine game birds, but neither is often seen now. The mountain plover is found in extreme western Nebraska.

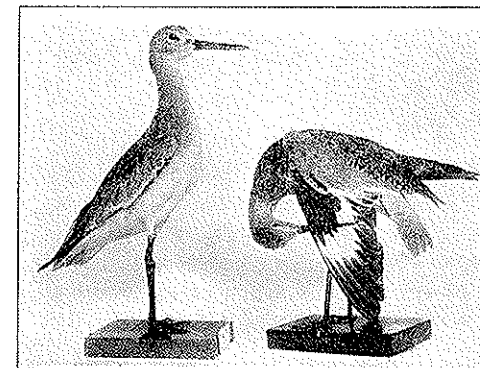


Fig. 13. Willets. In collection of State Museum, University of Nebraska.

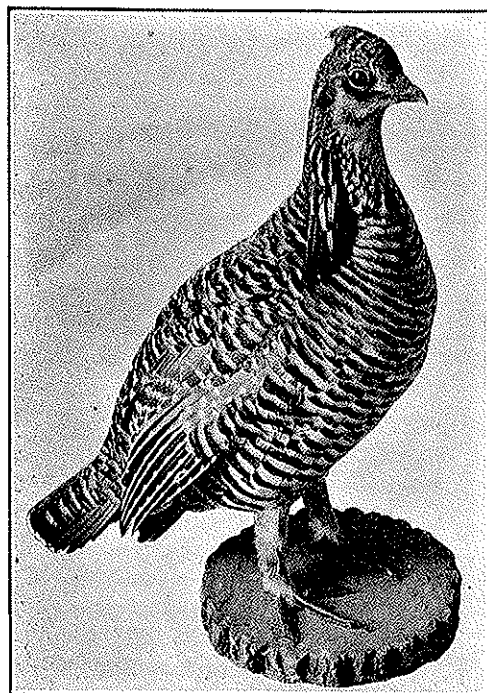


Fig. 14. Prairie Chicken. In collection of August Eiche, Lincoln.

WHAT ARE NOT GAME ANIMALS

A considerable number of other animals are killed by hunters which should not be considered game and should not be molested. Among the mammals such a one is the red or pine squirrel, which is found in the Pine Ridge and is too small to be worth taking. The "red" and "timber" squirrels in our game law undoubtedly both refer to the fox squirrel. The porcupine is another; it is now also confined to the Pine Ridge, in Sioux county. A discussion of the fur-bearing mammals is not within the scope of this bulletin.

Most hunters when they have guns in their hands, find it difficult to restrain the impulse to shoot any bird of any considerable size that comes within range, and many others wish for a gun or get one under similar conditions. This leads to the wanton destruction of many large, interesting, beautiful and sometimes beneficial birds, a few of which are preserved by some taxidermist, but the greater number of which are wasted and do no good to anyone. Such are the grebes, loons, gulls, terns, pelicans, cormorants, bitterns, herons, and the eagles, hawks and

Prairie Hen--Formerly abundant over the whole of eastern and central Nebraska, the "prairie chicken" is now absent from the eastern portion of the state, gradually appearing as we pass to the central part and common only in the valleys in the sand-hill region and in the prairie region adjacent to it. It is a resident the year round, though some winters it moves to the southeastward within the state to secure more food and cover, returning to its summer home again in spring. This bird's diet in summer consists almost exclusively of insects and it is also a very valuable bird from the standpoint of the farmer.

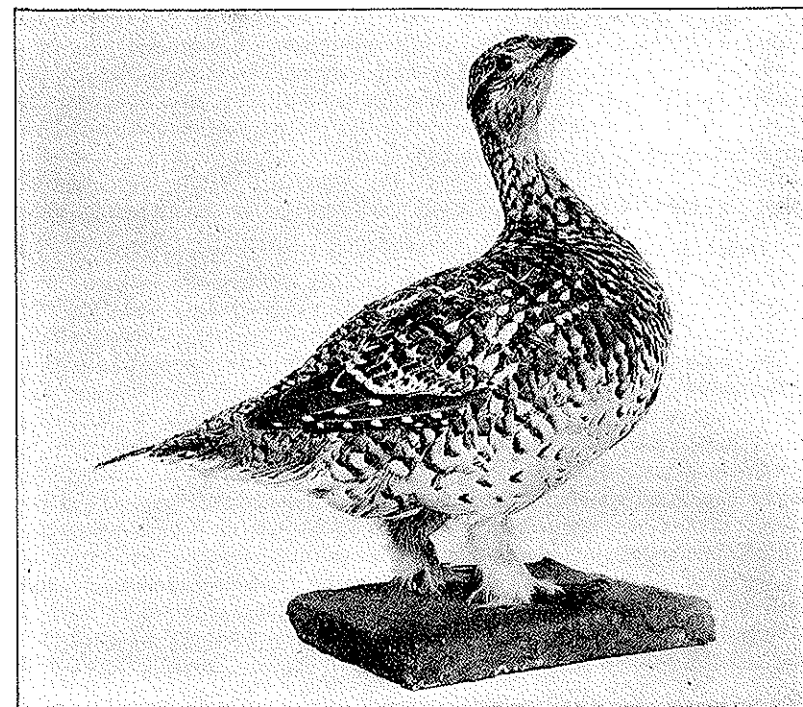


Fig. 15. Sharp-tailed Grouse. In collection of State Museum, University of Nebraska.

owls. The crow is another but all the crows which are killed by hunters never will be missed. Grebes and loons do little or no injury, nor do pelicans, cormorants, bitterns and herons, and their presence about our ponds, lakes, and streams is a source of pleasure to many people; gulls and terns are highly beneficial; and most hawks and all owls are to be classed as beneficial in varying degree. Indeed two of the latter which frequent marshes and therefore most often fall victims of the hunter, the marsh hawk and the short-eared owl, are among those most beneficial, both destroying many meadow mice and other injurious rodents. The marsh hawk may be recognized on the wing by a white patch on the back at the base of the tail. The rough-leg hawk which nests in the sandhills and in the western part of the state is the most efficient natural enemy of the prairie dog and deserves the most careful protection.

It seems a pity to shoot the smaller sandpipers and no true sportsman will do so. Nor will he shoot such birds as flickers, blackbirds, meadowlarks, thrashers, catbirds, and robins. But many of these and smaller song-birds are being destroyed in the vicinity of our larger towns

and where grading and other crews are at work by foreigners and American citizens of foreign birth who are following a practice regularly indulged in in their native lands and who have not been taught our point of view regarding the value of these birds. In such localities the officers of the law should be urged to exercise great vigilance and an enlightened public sentiment should be behind them.

THE VALUE OF GAME AND THE THEORY OF GAME PROTECTION

Game animals are valuable to the people of the state in the following ways: 1. As a food supply. 2. As an inducement to many who love the woods and fields to spend vacations in needed and healthful recreation. 3. As a means of attracting the tourist, whose coming brings a certain amount of money into the state and whose presence is a source of profit to many citizens. 4. As a means of education and enjoyment to many people who can only see such animals in public parks and zoological gardens. 5. As agents in the destruction of injurious insects or other animals. Different kinds of game animals differ in the degree to which they are valuable in these several ways, and the values of any one animal may vary considerably under different conditions. In determining whether a given animal shall be protected at all times or whether an open season may be permitted, and in settling upon the length of the season and the limit on the number which may be killed all the values which are attached to it must be weighed and the action taken be such as to redound to the greatest good of all of the people of the whole state.

Of the game mammals those which are extinct or nearly so cannot be reckoned as a food resource, nor will they repay hunting; the hoofed species are not beneficial in that they destroy injurious animals; while those that are carnivorous destroy also our domestic animals; they can only interest the tourist, the nature lover who is not a hunter, and the ordinary citizen. Since most of these can never see them at large, specimens of buffalo, elk, deer, antelope and bears should be preserved in our city parks, in which the zoological garden is always one of the most popular objects of attraction. For the benefit of those who can enjoy and profit by them, herds of such animals as buffalo, elk, deer; and antelope should be practically at large in state parks, where the bears may also be kept in confinement, and that the greatest number may take advantage of such opportunities, these state parks should be several and scattered over the state. For the same reason and also since they would be an attraction for tourists, the few deer and antelope which do exist in a state of nature should be very carefully protected and allowed to increase. The opossum and raccoon are of value only to hunters and as exhibits in parks, they being little eaten and not seen by most lovers of the outdoors. The rabbits are of great value as food, large numbers being sold in our markets each winter, and this offsets the injury they do to crops and orchards; they are the most generally hunted of all our game mammals; being very prolific they may be shot

freely, but the season should not begin before cold weather in the fall nor be extended into the breeding season in early spring, and the numbers should be maintained by a proper bag limit when necessary. Squirrels present a case similar to that of rabbits but are more seen and enjoyed by the nature lover; they are also less numerous and their numbers are more quickly reduced by hunting; thus the open season must be much shorter than that allowed for rabbits and the bag limit must be reduced. Both rabbits and squirrels should be protected and fed in our parks.

Of the birds which are shot by the hunter, the grebes, loons, gulls, terns, cormorants, pelicans, mergansers, bitterns, and herons are only of value to bird students and those generally who love the woods and fields; none are injurious to the extent that they should be destroyed, and the gulls and terns are of great economic value as scavengers. These birds should be protected at all times and if the nature-lovers to whom they are of interest and who are also interested in the game birds are willing to allow hunters to shoot the latter, under reasonable restrictions, it is only fair that the hunter should refrain from killing these birds which are of no value to him. The presence of such conspicuous and interesting birds is also an attraction to the tourist and for that reason they should be preserved and protected at all times.

Ducks, geese, swans, cranes, mudhens, and shore birds generally are of value as food, as game, and as objects of interest to the lover of nature and the tourist. But since swans and cranes, the wood duck, the woodcock, the upland plover, and a few other shore birds have become very scarce it is to the interest of the hunters themselves to maintain a closed season on them for a term of years in the expectation of such an increase as will again justify shooting them. If they do not so increase then a permanent closed season is the only reasonable course. The supply of ducks, geese, mudhens, and the game shore birds should be maintained by proper limitation of season and bag. Rails are of interest only to the hunter because rarely seen by others and it is a question only of proper restrictions to prevent extermination. The avocet is a conspicuous shore bird which is less desirable than others as food, is of decided interest to the tourist and to those who enjoy all wild life, and being very liable to extermination, should be shot sparingly, if at all. The killdeer should be protected at all times, because of its slight value for food and as game, and its value as an insectivorous bird.

The quail, grouse, prairie hen, and dove are all of value as food and as game. They are of interest to students and lovers of nature, but of comparatively slight interest to the tourist, the three first because rarely seen, the last because of its abundance everywhere. The three first are of value as destroyers of injurious insects, a service which far outweighs, especially in the case of the quail, any injury ordinarily done to crops, though if grouse and chickens were to become very abundant in any one locality it is possible this injury might be a serious matter.

The dove is more exclusively a grain-eater and though probably more beneficial than injurious, the margin is not great. Of the four, the most valuable, the quail, is in this state most liable to extermination, the dove, the least valuable, the least so. For these reasons the quail should be generally protected and only in certain localities and to a very limited extent permitted to be killed; the numbers of the grouse and chicken should be maintained where they are now numerous by rigid limitation of season and bag, and in eastern Nebraska they should not be hunted at all in the hope that a period of immunity may bring them back to this territory. An open season on doves is abundantly justified and both wise and fair in view of the number of other game birds which in this state and at the present time the hunter is asked to spare.

No prohibition of the hunting of the crow is desirable because of the large amount of injury done by the bird, but were it beneficial, protection would be unnecessary, since the crow can take care of himself. As the hawks and owls which ordinarily are shot are species which are distinctly beneficial, hunters should be instructed as to the value of these birds and the law should protect them.

An aspect of this subject worthy of consideration is the financial value of game to a community adjacent to hunting territory. Every visiting hunter, from the time of his arrival to the time of his departure, is under constant expense. Hotel and restaurant keepers, merchants, liverymen, ranchmen, owners of hunting lodges, and others participate in the business created by his need; and the amount of money left in the community per bird carried away is sufficient to make that bird worth much more to the people living there for this purpose than as food for themselves. It is therefore evident that community interest, and in most instances self interest as well, demands that those local residents who hunt be moderate in their killing, and careful to avoid waste of game. A "side-hunt"—that is a competitive hunt between sides, chosen by two leaders for a prize of some kind,—always accompanied as it is by excessive and illegal killing and the throwing away of a surplus of birds, is a crime against the community in which it takes place. It is known that in some hunts of this character the game is wilfully wasted, only the heads being retained to score so many "points" in the day's total. Public opinion should demand the substitution of trap-shooting—a fine sport, with more possibilities in the way of pleasant association and keen and sustained rivalry, and depending more upon skill and less on luck. Public sentiment also should be against the infraction of game laws by persons engaging in a wolf-drive.

METHODS OF INCREASING THE AMOUNT AND VARIETY OF GAME

In years gone by Nebraska has been, from the point of view of the sportsman, one of the most favored states in the Union. That time has passed, never to return; but we still have sufficient game everywhere to provide hunting of some kind, if only of rabbits and squirrels, for all who may desire it. Those who can go to the Platte or to the sand-hills can find excellent hunting of ducks, geese and chickens, and often there is good duck shooting in many localities in eastern and southern Nebraska. The problem today is how to so manage what we have left as to maintain at least the present number of game animals, and, if possible, to increase both their numbers and the area of their distribution in the state in order that the greatest number, especially of our citizens in moderate financial circumstances, may enjoy this form of recreation to the utmost. The fact should be emphasized that game laws are really framed in the interest of the common people, who must find their game near to their homes; the wealthy have no strong interest in the conservation of game locally, for, if that close at hand is destroyed, they have both the means and the leisure to go where it still exists, even if it involve travelling half way across the continent.

The most evident method of safeguarding the supply of game is to limit the season and the number of animals which may be secured by any one person or within a certain length of time, as well as the number which may be in possession and transported. A second is to prevent its sale and shipment, thus saving it for those alone who hunt. A third means is the preservation of breeding and feeding grounds and this may be accomplished by the setting aside of public parks and game reserves in which the animals may not be molested. Fourth, the game may be safeguarded from the effects of inclement weather by providing the mammals and birds with food and shelter, as for instance, the government is doing with the elk in the Jackson Hole country, and Massachusetts and other states are doing with quail and other game birds. Fifth, the restricting of the number of cats is an important factor in settled communities. Cats range over considerable areas about farms and destroy enormous numbers of useful birds including game birds. They also destroy some injurious mammals but this can be done more effectively by means of traps and poisoning. Cats are undesirable pets as they often carry disease, and it is only a question of time when an enlightened public sentiment will demand the licensing of both cats and dogs and also that the owner be required to restrain them in such a manner as to prevent annoyance and injury to his neighbors. Many sportsmen's magazines and gun clubs are urging the destruction of what they call "vermin," which includes all native animals that in any manner prey upon game, but they overlook the most pernicious type of vermin we have when they neglect to call attention to the domestic cat. Sixth, game may be reared and the progeny liberated. So far our efforts in this direction have not met with flattering success, but it has been proved that when proper precautions are adopted the partridge,

quail, prairie hen, and wild turkey can be successfully reared, as well as wild ducks and geese, and deer and elk. So the problem is solved and only the details of the practical application of the solution remain to be worked out. Last, may be suggested the introduction of exotic game animals. This has been tried in Nebraska and a considerable



Fig. 16. Nest of Mallard. Trout Lake, Cherry County. Photograph by Frank H. Shoemaker.

largely on the degree to which the community in which the birds are liberated can be induced to share in the enterprise by furnishing the protection which such liberated birds and their offspring must receive for a considerable term of years before their increase will make shooting permissible.

Theoretically, a perfect game law would be such as to maintain a sufficient supply and variety of game from year to year, being elastic to such a degree that as game became more abundant shooting would be more freely permitted, while as it became scarce the privilege would be correspondingly restricted, and providing means by which the opportunities might be made as nearly uniform as possible throughout the area covered by the law and every citizen have a chance equal to that of every other citizen to the exercise of the hunting privilege.

number of pheasants of various kinds have been set free, but there is yet no evidence that any of them have become successfully established. We cannot but feel that the money expended in this way would be better spent in the propagation and dissemination of our native game birds and in safeguarding the flocks thus established. It would seem to be a more difficult and a more expensive procedure to buy, import, propagate, and liberate exotic game birds, with the loss that must attend their effort to become acclimated, than to trap, transport, and liberate native game birds already adapted to this climate, or even if we add to this their propagation. The success of either effort will depend

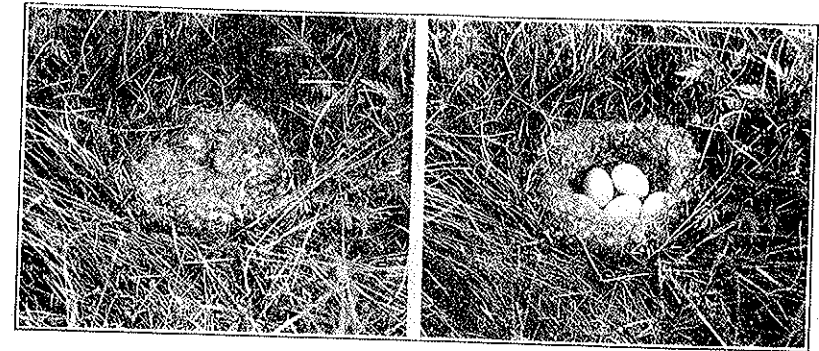


Fig. 17. Nest of Blue-winged Teal. Trout Lake, Cherry County. Photograph by Frank H. Shoemaker.

The first picture shows nest as left by the mother bird, with the fluffy down drawn over and concealing the eggs. The second picture shows the nest with this concealing layer pressed back.

OUR PRESENT GAME LAWS

We are at present subject to three sets of game laws: The state game law, enacted in 1901 and amended by succeeding legislatures; the Lacey law, a federal law first enacted in 1900 and since amended, which placed the preservation, distribution, introduction, and restoration of game birds under the Department of Agriculture and prohibited interstate traffic in birds and game killed in violation of state laws; and the regulations of the treaty between the United States and Great Britain for the protection of migratory birds in the United States and Canada. Wherever these do not agree the individual must remember his responsibility to them all. For instance, if the state law extends the open season beyond the limits of that established by the federal law, a person shooting during the days in question would render himself liable to prosecution by the federal agents, though he would be doing that which from the point of view of the state game law was legal. On the contrary, if the federal law established the wider limits, the individual would not thereby be released from responsibility to the state law.

Much uncertainty has recently arisen from this conflict of authority and to understand what the rights in the case are and its present status we must briefly review the history of game legislation. From the earliest times the right to possession of wild animals has been arrogated to the law-giving power, that is, to the state. In former times kings asserted that authority, which in a democracy is lodged in the body politic as represented by their constituted authorities. The earliest of our game laws were those passed by the colonies before the United States became a nation. After the adoption of the federal constitution,

the right of the states to the ownership and control of their game seems not to have been questioned and up to 1900 most American game legislation was enacted by the state legislatures, the federal government doing little and its acts relating entirely to the District of Columbia, the Indian country, the national parks, and to Alaska. A celebrated decision in a case in Connecticut in 1896 holding that game was the property of the state seems to have settled any lingering doubts in this regard and gave a new impulse to state game legislation. Our own state law enacts that "all fish or game, song, insectivorous or other birds now or hereafter within this state not held by private ownership, legally acquired, and which includes all the quadrupeds, birds and fish mentioned in this act, are hereby declared to be the property of the state, and no right, title, interest or property therein can be acquired or transferred or possession thereof had or maintained except as herein expressly provided."

The protection of game by the individual states was, however, ineffective, and speedy extermination was clearly indicated if some other agency was not invoked. It was true that many states had admirable game laws and that these were well enforced. But it availed us nothing to protect ducks and geese while they were with us on their migrations if the states bordering the Gulf allowed unrestricted slaughter during the winter. Moreover our own citizens felt imposed upon if asked to limit their shooting while at the same time others, taking advantage of unlimited license, were thereby increasing still more their unrighteous toll. Intelligent sportsmen and public-spirited citizens saw the necessity of prompt action and the hopelessness of any attempt to secure uniformity among the states on the basis of adequate laws. In many states public sentiment was not educated to the point which would make possible the enforcement of game laws if the legislatures could have been induced to enact them. The only way out seemed to lie through action by the general government and this was accordingly invoked.

In response to this demand, there was introduced in Congress by Senator McLean of Connecticut a joint resolution providing for the submission to the states of an amendment to the national constitution giving Congress the right to protect migratory birds, the protection of non-migratory species being still left to the individual states. Owing however, to the urgency of the case, Senator McLean soon introduced a bill providing that the federal government should assume immediate control in the matter, and similar bills were introduced in the House by Congressmen Weeks of Massachusetts and Anthony of Kansas. Many hearings were held by Senate and House committees and representatives from nearly all the states appeared in behalf of the bill. A large number of petitions favoring it were received, and eleven state legislatures passed resolutions in its favor. The demand was so strong that many men in Congress who were convinced of the need of such legislation but doubted the power of Congress in the matter were won

over and when Senator McLean's bill came before the Senate for passage it went through without a dissenting vote. Later it was attached to the regular appropriation bill for the Department of Agriculture and in this shape was also passed by the House, and approved May 4, 1913. This has been generally known as the McLean-Weeks Migratory Bird Law.

It was natural that this law, welcomed and supported by the better class of sportsmen, should meet with opposition by others. To the ignorant it was an unwarranted interference with personal liberty; wild game belonged to nobody, they has as much right to it as anybody else, and it was no one's business how many birds they killed or when they did it. To the thoughtless it was unnecessary; it was true they went hunting at times and found little to shoot, but that was only bad luck and they would do better next time; there always had been game and there always would be. To the selfish it was an effort on the part of some one else to get the better of them; the wealthy sportsman wanted all the game; those who couldn't or wouldn't hunt wanted to interfere, for selfish reasons, with their pleasure; they had as much right to the birds as anybody else; and the next generation was no concern of theirs—it could look out for itself. So it was not long before cases involving infractions of the law came into the courts; cases decided against the hunter were appealed to the state supreme court and in turn carried to the United States Supreme Court. The law was demanded by expediency; it was logical, since the migratory game birds, which are at one time in one state and at another time in another and which nest in the northern part of the country and winter in the south, are a matter of concern to the entire country and no state should have the right to legislate on that which affects the people of the nation as a whole. Precedent was, however, all the other way and there was a decided question as to the constitutionality of the law. Under these circumstances something else had to be done.

Now, while Congress is limited in the control which it can exercise over the states, it is unlimited in its right to frame treaties with other nations and the terms of such treaties must be respected by the states. It was also a logical view of game legislation to treat it as a matter of international concern and a suitable basis for a treaty between this nation and the government of Great Britain acting for the Dominion of Canada. Accordingly negotiations were opened which led to the ratification of a treaty, proclaimed December 8, 1916, into the terms of which were incorporated those of the migratory bird law. It being no longer necessary to argue the question of the constitutionality of the migratory bird law, the government dropped the case pending in the federal supreme court, which led to the erroneous belief on the part of many persons that the law had been declared unconstitutional. Whatever might have been the decision, the status of the migratory bird is now fixed by treaty, and in the language of the Constitution it is "the supreme law of the land; and the judges in every state shall be bound thereby, anything in the constitution or laws of any state to the contrary not-

withstanding." In order to give effect to this treaty, Congress passed what is known as the Migratory Bird Treaty Act, approved July 3, 1918, and the President promulgated a number of Migratory Bird Treaty Act Regulations, effective July 31, 1918.

Accordingly we are bound to obey this law and also the laws of Nebraska where those do not conflict with the provisions of the former. Taken together these impose on us the following restrictions, this statement being taken from Farmers' Bulletin 1010, of the U. S. Department of Agriculture:

Open Seasons:

Squirrel (gray, red, fox, timber).....	Oct. 1-Nov. 30
Prairie chicken, sage chicken, grouse.....	Sept. 15-Nov. 15
Duck, goose, brant, Wilson snipe or jacksnipe, coot, gallinules	Sept. 16-Dec. 31
Yellowlegs	Sept. 16-Dec. 15
Rails, other than coot and gallinules.....	Sept. 1-Dec. 30

No Open Season:

Deer, elk, antelope, quail, partridge, pheasant, ptarmigan, introduced game birds, dove, wild turkey, plovers, woodcock.

Hunting and Fishing Licenses:

Non-residents: General, \$10.00; fish, \$2.00. Resident, \$1.00. Issued by commissioner or county clerk. Owner or lessee may hunt and fish without license during open season on lands on which he resides. No license required by male under eighteen if accompanied by parent or guardian; male under eighteen and female may fish without license. Hunting on land of another without permission or from highways prohibited.

Bag Limits and Possession:

Ten each of squirrels, quail, prairie chickens, and grouse; twenty-five ducks a day; eight geese, eight brant a day, ten in all in possession; twenty-five Wilson snipe, fifteen in all of plovers and yellowlegs, twenty-five in all of rails, coots and gallinules a day; twenty squirrels, ten prairie chickens or grouse, ten wild geese or brant, or fifty in all of other game birds in possession. Possession permitted during first five days of close season.

Sale:

Sale of all protected game prohibited.

Export:

Export of all protected game prohibited, except non-resident may ship fifty birds out of state under hunting license, but must give

common carrier invoice of number and kind of birds, must have details of shipment marked on license, and must accompany the shipment, but more than two days' limit of migratory birds shall not be exported in any one calendar week; package to be labeled to show contents.

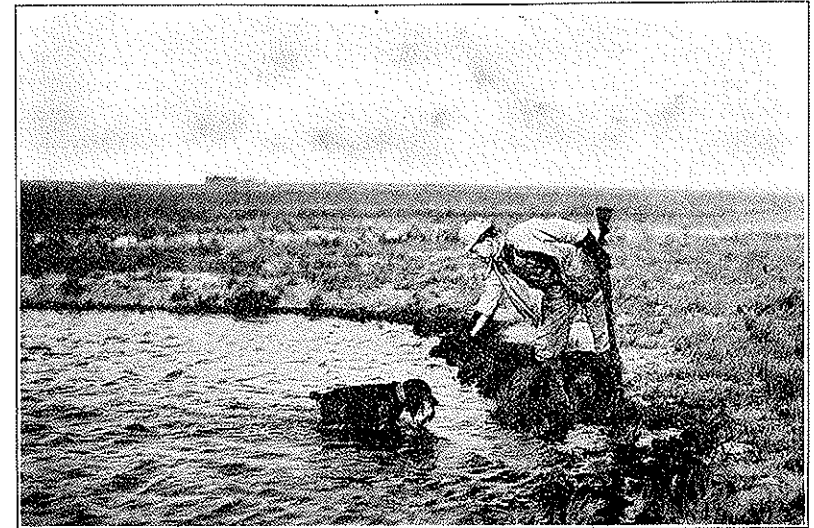


Fig. 18. Pond on prairie north of Lincoln. Photograph by Frank H. Shoemaker.

ENFORCEMENT OF GAME LAWS

The Governor of this state is by law the game and fish commissioner, and he appoints a chief deputy commissioner who has immediate charge of the enforcement of the game laws, a second deputy in charge of fish propagation and distribution, and other deputies who devote part of their time only to the service of the state. The chief deputy issues the licenses which are required of all non-residents and all residents over eighteen years of age, and the license fees paid in are turned over to the state treasurer for the use of the school fund of this state, the expenses of the commission being met by legislative appropriation from the general fund. The former sum is considerably in excess of the latter, so that the game is a source of revenue to the state. There are also in the state during the migration season several federal agents who are working independently in the apprehension of those who are guilty of violating the national law. Every sheriff and constable in the state is also required by the law to assist in its enforcement. And, it may be added, it is the moral duty of every self-respecting and law-abiding sportsman, as well as to his interest, to contribute in any way in his

power to the extension of knowledge concerning game laws, to the development of a sympathetic attitude on the part of the public toward them, and to their effective enforcement. We believe Mr. George G. Koster, the present chief deputy, would welcome any such co-operation.

SUGGESTIONS AS TO CHANGES IN THE LAW

It may not be out of place to close this discussion with some suggestions as to possible changes in the law and in the manner of its administration. It should be stated, to avoid any misleading inferences, that these suggestions are made without any consultation with the chief deputy and without any knowledge on his part whatsoever.

1. It is suggested that the office of chief deputy be not considered as it has too often been in the past, a political appointment. The duties of the office are such as to require technical training and considerable experience if they are to be most efficiently performed, and it is a very unwise policy to displace an incumbent of the office who, perhaps, is just becoming thoroughly experienced and capable of rendering most effective service, because of a change in state administration.

2. The chief deputy should be allowed such funds and such assistance as will enable him to carry on a campaign of education throughout the state, by means of publications and by any other means that may be deemed wise and proper. Many of the difficulties in the way of the enforcement of game laws are due to ignorance and thoughtlessness.

3. Experiments in the introduction of foreign game birds having not proven as successful as we had hoped, it is suggested that the plan of transplanting prairie chickens, and perhaps quail, be tried with the view of extending their range in the state. Experiments with other birds, such as the partridge, might be successful, if carefully prepared for and conducted with close attention to every detail.

4. Funds should be provided for the care and feeding of game during unusually severe weather.

5. As the office of chief deputy is one which should require training, skill, and experience, and as it imposes varied and frequently difficult responsibilities, it seems to us that the salary now attached to the office is insufficient. It must be a source of congratulation to every Nebraskan conversant with the administration of the game laws since the present organization was established, that the incumbents of the office have been men of high character. But more might have been accomplished had the tenure of office been longer and more advantage taken of experience gained, and still more if the salary were commensurate with the salaries of other state officers and more thorough and technical training demanded of the incumbent.

6. No open season should be permitted in the case of black-bellied

and golden plovers, or avocets. An open season on doves is suggested from September 1 to 30.

7. The shooting of prairie chickens should be stopped in eastern and southeastern Nebraska and efforts made to bring the birds back to these parts of the state. The question should also be carefully con-

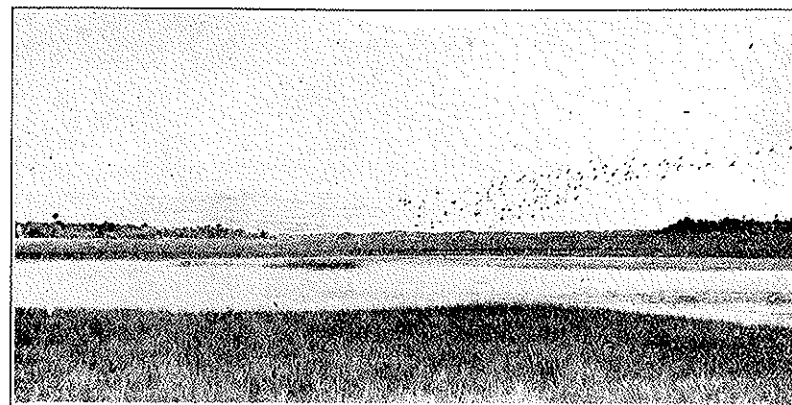


Fig. 19. Flight of ducks above a sandhill lake. Photograph by University Department of Geography and Conservation.

sidered as to whether the shooting of prairie chickens and grouse should be permitted at all in western Nebraska, beyond the sandhills.

8. The possibility is suggested in the case of such a bird as the quail of making a permanent closed season and permitting the chief deputy to declare an open season in certain years, limited to a few days, in those counties in which the birds become sufficiently numerous to make it advisable. This action should not be taken if the prevailing sentiment in the county is adverse to it. Only a trained and experienced official should be entrusted with this responsibility.

REFERENCES SUGGESTED

To those interested in this subject we would suggest the following:

As a means of identification, Reed's Bird Guide, Part II, Water and Game Birds, a pocket manual with colored pictures, \$1.25.

To supplement this and give the birds' status in Nebraska, a List of Nebraska Birds, published by a committee of the Nebraska Ornithologists' Union, and sold by the secretary, Professor M. H. Swenk, at the University Farm, 75 cents. This also has keys with which to identify the bird in hand.

An excellent manual on game protection is one on Game Protection and Propagation in America, by Henry Chase, published by J. B. Lippincott Co., Philadelphia, Pa., in 1913, and the price of which is \$1.25.

The Reports of the Nebraska Game and Fish Commission and copies of the Game Laws of Nebraska may be secured free on application to Chief Deputy George G. Koster, State Capitol, Lincoln, Nebraska.

A review of the game laws of all states, with the text of the federal laws, is given in Farmers' Bulletin 1010, of the U. S. Department of Agriculture, Washington, D. C. Send free on application.