WILDLIFE RESTORATION IN WISCONSIN

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The restoration of wildlife falls under the following headings: 1) Stocking of species of animals still found in our state in areas where they have been extirpated; 2) Introduction of species that have become extinct in the state; 3) Planting of exotic species. Long experience has shown that it is preferable to concentrate on animals native to the state rather than to import foreign species with the hope that they will fill a void. Foreign introductions are seldom successful and leave a memory only of costly failures. Many plantings are made against the advice of game biologists but carried out under the guise of “good public relations.” Present land utilization prohibits attempts to restore any of the large extinct mammals such as the cougar, bison, elk, caribou, and moose.

Three members of the deer family are extinct. The woodland caribou occurred in extreme northern Wisconsin in very small numbers and was soon exterminated. Twenty Newfoundland caribou were liberated on the Pierce estate, on the Brule River, Douglas County in 1906. All are supposed to have died on the estate. The moose was uncommon except in five of the extreme northwestern counties.\(^1\) The native population became extinct about 1900. Since this date an occasional moose has wandered into the state from Minnesota, and from the Upper Peninsula of Michigan where moose from Isle Royale had been liberated. An individual immigrant may be seen in the future but there is no chance for the moose to become established with us. The elk was once common in the open terrain of southern and western Wisconsin.\(^2\) The last certain date of its occurrence is 1866. The state in 1913, 1917, and 1932 released three shipments of elk from Yellowstone Park and Jackson Hole in Vilas County. None remains due to poaching and other causes. The white-tailed deer, on the other hand is remarkably adaptable.\(^3\) After receiving adequate protection it moved southward so that today it is doubtful if there is a county in the state where deer are not present. The problem with this deer is the harvesting of the surplus population. In many areas in the northern part of the state the herds are


too large to be sustained properly by the local vegetation. This results in stunted growth of the deer and death from starvation in severe winters. A long-range economic problem is the great reduction in tree reproduction as a result of overbrowsing.

At the turn of the century it was inconceivable that the timber wolf was worthy of protection. Today there is a generally held belief that no member of our fauna should be allowed to become extinct if it is practical to save it. The timber wolf once roamed the entire state. Thompson studied the habits of a pack of four wolves in Oneida County and found that it ranged over a territory of 150 square miles. One trapper had pursued this pack over a period of 15 years for the sake of the bounty. The bounty on both wolves and coyotes was withdrawn from July, 1943, to March, 1945, then restored in deference to local public protest. The timber wolf received protection again in 1957 by a closed season but as long as a bounty on coyotes exists it will be impossible to avoid trapping wolves. The present status of the wolf is unknown, but a few are believed to still exist in the state. The range occupied by wolves is virtually void of livestock so that economic damage would be almost nil. A study of the food habits showed deer remains in 97 percent of the scats; however, there was no evidence that the wolves could keep the deer population within desirable bounds. The eradication of wolves on the grounds that they kill deer is thoughtless, as the predation may be a benefit to the deer population where it is too high.

The coyote, morphologically so similar to the timber wolf, is amply capable of holding its own due to its well deserved reputation for cleverness. The unfortunate bounty on the coyote, if continued, will lead to the extermination of its larger brother. In 1945 bounties were paid on 4,134 wolves and coyotes. The number bountied in 1953 dropped to 1,703, but rose to 4,498 adults and 324 cubs in 1960. The total expended on coyote bounties in 1960 was $93,200, a sum that could and should have been expended on worthy conservation projects. The bounty merely removes a surplus population that nature eventually eliminates without a monetary consideration.

Two valuable furbearers, the fisher (Martes pennanti) and marten (Martes americana), became extinct about 1920. Their restoration was desirable per se. There was also the possibility that if they became sufficiently numerous to permit trapping the returns to the trapper might be sufficient to diminish the pressure for bounties. In 1953, prior to suggesting to the Wisconsin Conservation Department the stocking of marten, I had considerable correspondence with state departments, and private organizations to deter-

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mine if marten could be obtained at a reasonable price. It finally
developed that the state of Montana would provide some of the
animals in exchange for eggs of the walleyed pike. The procure-
ment of five marten from Montana and their release on Stockton
Island in Lake Superior on November 19, 1953 was performed very
efficiently by the Wisconsin Conservation Department that has
since made an annual survey of the wildlife of the island. In June,
1956, five pine marten from the state game farm were also released
on the island. Dr. William H. Marshall, with others, did live-
trapping on the island from September 13 to 18, 1954. One immu-
ture marten was caught showing that there had been some breed-
ing from the original stock. Tracks of marten were seen as late as
March 18, 1959. It was my suggestion that the marten be released
on Stockton Island, an area of 10,560 acres, with the thought that
they could breed here unmolested and the surplus trapped and
released in a suitable area on the mainland. The project has been
far from successful, but seems to illustrate the difficulty in restor-
ing an extirpated species. The area of the island may have been
too small, or too few marten were released. Food does not seem
to be a problem since even in winter dead deer are available.

In September, 1955, having read of the great increase of the
fisher in the state of New York, I suggested to Mr. Cyril Kabat of
the Wisconsin Conservation Department, that some fisher be ob-
tained for release in our state. An exchange for quail was made.
Two shipments were received on February 28 and March 16, 1956,
respectively. The releases consisted of two males and five females.
Three additional fisher were received on January 17, 1957. Subse-
quently 20 fisher were received from the state of Minnesota through
the agency of the U. S. Forest Service. All of the animals were
released in northwestern Forest County. In 1960 one fisher was
trapped accidentally near Crandon, Forest County, and another
near Carpenter Lake, northeast of Eagle River, Vilas County. The
latter animal was released in April, 1959, near the Nettleton fire
tower, hence had traveled 17 miles airline. Since at the present
time there is no difficulty in finding tracks of the fisher on and near
the release area, there is reason to believe that the transplants will
be successful.

The beaver is an excellent example of an animal that can spread
and maintain itself with no other aid than protection from over-
harvesting. A century ago it was extinct in southern Wisconsin,
but now is to be found in most of the southwestern counties. Dur-
ing the 1959 season, 11,515 beaver were trapped in 50 of the coun-
ties of the state. Crawford and Grant Counties contributed approxi-
mately 200 beaver each. It is doubtful if the state ever furnished as
many beaver as at present. Indian and white trappers were unre-
strained and thought nothing of exterminating a colony. In some areas, due to building dams and flooding lands, the beaver becomes a nuisance and must be removed.

The first known release of the white-tailed jackrabbit (*Lepus townsendii*) in the state was made about 1900.6 Of 10 releases made prior to 1945 only three resulted in the establishment of new colonies. Lemke6 traced the history of eight releases made subsequent to 1945 and concluded that additional releases would be useless since this hare had spread into all parts of the state except the extreme northern tip. It is by no means as common as the cottontail and is unlikely to become so. It is at least an addition to our fauna.

A great, tangible achievement of the Wisconsin Conservation Department is the creation and development of waterfowl habitat. Horicon Marsh, Germania Marsh, Pine Island, Meadow Valley Flowage, Wood County Public Hunting and Fishing Grounds, and Crex Meadows, are especially worthy of mention. During the migrations Horicon Marsh draws hundreds of whistling swans and many thousands of geese. It was estimated from an aerial census that at one time in the spring of 1961 there were 100,000 geese at Horicon Marsh and the surrounding area. The marsh has no small aesthetic value for in the fall of 1960 approximately 80,000 people came to see the display of waterfowl. This heartening form of utilization may in the future surpass hunting in importance.

The Wisconsin Conservation Department has been active in attempting to increase the wood duck population. Breeding birds were obtained from the Illinois Conservation Department in exchange for ruffed grouse. The wood ducks were turned over to the Badger State Sportsman’s Club, at La Crosse. In 1958 and 1960 this club released 855 wood ducks hatched from eggs laid in captivity. It is too early to determine the results of this program.

The sharp-tailed grouse (*Pedicetes phasianellus campestris*) was formerly abundant in southern Wisconsin. The oak openings which it inhabited by preference earned for it the name of “bur oak” grouse. This species is far less tolerant of civilization than the prairie chicken so that its range was soon limited to the northern part of the state. The habitat requirement is semi-prairie containing grasses, and many shrubs and open woodlands.7 Management tools to maintain a suitable habitat comprise spraying with herbicides, bulldozing, and burning. Where feasible burning is the cheapest and most efficient practice. The Wisconsin Conservation Department is managing several areas. Burning has been very successful

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in the jack pine barrens of Douglas County. Here two or three burnings within a period of three or four years are necessary. Burning releases the seeds from the hard jack pine cones and the young pines that spring up must be destroyed by another burning. Other areas being managed for sharp-tailed grouse are located in the Chequamegon and Nicolet National Forests, the Dorothy Dunn area in the Northern Highland State Forest, Vilas County, the Spread Eagle Area in Florence County, and the Coleman Lake area in Marinette County. There is no immediate prospect that the population of this grouse will become dangerously low.

Disregarding outlying remnants, our prairie chicken (*Tympanuchus cupido americanus*) population is limited to the Buena Vista Marsh, southern Portage County, and the contiguous Leola Marsh in Adams County. The prairie chicken demands large areas of grassland, now very scarce in Wisconsin, of which not over one-fourth is wooded. Vital for survival of the prairie chicken is nesting cover and winter food. An area of 40 acres per section, covered with grass of the proper height, will provide adequate nesting cover. Food patches of standing corn for winter use need be no closer to each other than four miles. The Conservation Department is now managing 5,052 acres of which 3,623 acres are in the Buena Vista Marsh. In addition there are about 5,000 acres in the Soil Bank. This spring the population should begin recovering from the low of the cycle, and if the hatching season is favorable, Mr. F. N. Hamerstrom estimates that the fall population should be 1,000 to 1,500 birds in the two marshes. The full beneficial effects of the management program will not be attainable for several years. There is little doubt but that this species can be retained as a part of our fauna. It is questionable that the population will increase sufficiently to permit an open season, but this is of secondary importance.

Planting of ruffed grouse (*Bonasa umbellus*) particularly on islands, has seldom been successful. Warden William Barnhart stocked some of these grouse on Washington Island in 1900. This grouse, though supposedly present in 1910, eventually disappeared. The state restocked Washington Island in 1956. Madeline Island was also stocked in the years 1954–56. Prior to this time I spent several vacations on the island. None of the inhabitants with whom I talked had ever seen a ruffed grouse on the island. The present status of the species on the two islands is unknown.

The quail is a most difficult bird to manage in Wisconsin. It was incredibly abundant in the period 1845–1854.* The most favorable

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factor was a succession of mild winters. It is reasonably certain that at this time there was ample food and cover. In 1854 it was stated that the cultivated portion of Dane County, consisting of about 1,600 farms, comprised only one-eighth of its area. The quail population declined so rapidly that private introductions were begun in 1884 and continued into the early 1900's. Quail were imported from Texas, Louisiana, Tennessee, and Kansas. These plantings were failures. No thought seems to have been given to the unsuitability of southern quail for survival during a Wisconsin winter. The experimental plantings of native birds in recent years by the Wisconsin Conservation Department soon disappeared. Quail released in the Arboretum at Madison in 1950 and in Waukesha County in 1953 and 1955, simply vanished. A planting at Horicon Marsh, Dodge County, in 1950, disappeared within less than a year, while two plantings in Milwaukee County in 1950 and 1952 survived for two years.

The precise requirements for perpetuating quail in an area after it has been stocked are unknown. The two factors, weather and food, are seemingly readily capable of appraisement, yet differences of opinion arise. Errington\(^{20}\) thought that strong well-fed birds could survive the severest cold. On the other hand, Leopold\(^{21}\) found that fat, well-fed quail died during the winter of 1935–36. Mortality ranged from 30 to 88 percent. Buss\(^{22}\) followed the population trends of quail on an area in Dunn County. The greatest loss occurred just prior to the nesting season and was due presumably to predation, though supporting data are lacking. There is general agreement that the greatest need for quail restoration is cover. Between "clean farming" and the fervor for destroying every shrub along the highways, cover has been reduced to a minimum. The recent program for quail management by Kabat and Thompson\(^{23}\) stresses the necessity of hedgerows. Restoration requires a minimum area of 15,000 acres with one mile of hedgerow for every 550 acres. Management of this magnitude, to be successful, requires the full cooperation of the owners of the farm lands.

Our largest gamebird, the wild turkey, has shown resistance to establishment. It was not common originally except in the wooded hilly areas of southwestern Wisconsin. The extremely severe winter of 1842–43, with its deep, crusted snow reduced the population to a remnant that gradually disappeared. The first attempt at restora-


tion of which I am aware was made in 1887 when a pair of wild turkeys from the Indian Territory was released in woods at Lake Koshkonong.\textsuperscript{14} Crossing with domestic turkeys soon followed so that birds of pure stock never became established. A few turkeys were released by the Wisconsin Conservation Department prior to 1929 but no records were kept of their number. Between 1929 and 1939 there were planted, mainly in Grant and Sauk Counties a total of 2,942 turkeys.\textsuperscript{15} Though the best stock of game farm birds available was used, the turkeys refused to become wild and associated with their domestic relatives. An open season in 1939 for bow hunting resulted in the killing of 54 turkeys. It was thought that hunting would remove the least wary birds and render the remainder more wild. Five turkeys from the Sauk County plant appeared in 1937 near Grand Marsh, Adams County, and became permanent residents. The last member mixed with domestic blood, died February 1, 1958.\textsuperscript{16}

The project was renewed in 1954. In 1954, 1956, and 1957 a total of 746 game farm turkeys were released in northern Juneau County on the Meadow Valley wildlife management area.\textsuperscript{17} The plantings have undergone various vicissitudes. The blackhead disease was introduced in 1937 through the release of infected young raised at the game farm at Poynette. In March, 1959, a blizzard deposited 36 to 45 inches of snow.\textsuperscript{18} Some birds died of starvation while the survivors were in poor condition for breeding. On May 7, 1960, seven inches of wet snow fell causing the females to abandon their nests. May and June were exceptionally rainy, wetness being highly injurious to the young that hatched. The desire to restore the wild turkey is understandable. There is no doubt also that the Meadow Valley area was the best available for restoration, as the wild turkey requires a large tract of wilderness with a minimum of human disturbance. The Meadow Valley area was originally a marsh. It has been greatly changed by repeated burnings and the digging of drainage ditches. It is now covered with a growth of trees, jack pine, aspen, oak and other hardwoods. The terrain is by no means ideal for turkeys and the area lies north of their original range. The spread of the turkeys from Juneau County into Adams, Wood, Jackson and Monroe Counties indicates a search for a more suitable habitat. There is a high hunting pressure for deer, within the

\textsuperscript{18} S. Plis, 1960. How are our turkeys doing? Wis. Cons. Dept. Ms. 3 pp.
birds’ range, which aside from poaching, cannot fail to have a disturbing influence. Long experience in turkey management has shown that the first essential is stocking with completely wild birds. These are difficult to obtain in sufficient number. Game farm birds rarely have the ability to establish themselves. In the long run, therefore, it is unlikely that there will be a successful stocking of the turkey in Wisconsin.

There is always the hope that game birds of foreign origin can be found to fill the areas vacated by native species. The only species that has produced respectable populations is the ring-necked pheasant (Phasianus colchicus). Private introductions of the pheasant in Wisconsin began in 1895 and continued for many years before the species became well established.\(^{29}\) Little knowledge of the bird was shown when the state planted 50 pheasants near Washburn in the fall of 1897. There was no chance for survival in this locality. Due to the Pabst liberations beginning in 1911, the pheasant became firmly established in the southeastern counties. The state program of raising and liberating pheasants, begun in 1928 and continued without interruption, served to spread them over four-fifths of the state. The peak populations reached in the early 1940’s have never been equalled since. This condition is due in part to a steady reduction in suitable cover.

It was once thought that the Hungarian partridge (Perdix perdix) would become an abundant bird in the North Central States. Habitat proved to be more subtle than was anticipated with the result that most of the plantings failed. Apparently the summers must not be too warm, the rainfall should be between 15 and 25 inches annually, and the terrain open with rich soil. The first release of this bird was made in 1911 by Gustav Pabst on his farm near Oconomowoc. Based on hunting statistics, a peak was reached in 1939 when 50,478 birds were killed. The kill declined to 2,636 in 1945, a low that was followed by a closed season. The kill was approximately 50,000 birds annually from 1950 through 1954, since which time the population has declined steadily. The data indicate that the species may be cyclic. This partridge continued to increase in Ohio and Indiana until about 1937–40 then declined rapidly. Westerskov\(^{20}\) concluded that the bird is not cyclic in Ohio. McCabe and Hawkins,\(^{21}\) in their comprehensive study of the Hungarian partridge in Wisconsin, concluded: “Despite averages, the climographs


emphasize the facts that the climate in the north central United States does not conform to the European optimum during the nesting season of the partridge and that severe cold alone is not a limiting factor." It is doubtful if management could effect an increase in the population to any degree commensurate with the cost.

The chukar partridge (Alectoris graeca chukar) has refused to become established in spite of numerous plantings. Between 1935 and 1945, 35,285 pen-reared chukars were released in Wisconsin, some in every county. All disappeared within one year after release. Chukars usually disperse widely after release. As a result, too few birds may settle down in any one locality to form a permanent colony. A semi-arid, rocky, broken country seems to be essential to the chukar and Wisconsin can not provide a habitat of this kind. In 1950 and 1952 a total of 122 European red-legged partridges (Alectoris rufa rufa) were released in Waushara County to determine the length of survival. They vanished within one and one-half years.

A project for stocking the capercaillie (Tetrao urogallus) and black grouse (Lyrurus tetrix) in Wisconsin was initiated by Gardiner Bump of the Fish and Wildlife Service. The capercaillie is a large grouse, the males weighing up to twelve pounds. It is a bird of coniferous forests and its food from October to April consists almost entirely of the needles and buds of conifers. The flesh becomes so tainted from this diet as to be unpalatable. Outer Island was selected for release of the birds owing to its isolation and as an apparently suitable habitat. There would be little incentive for emigration since the nearest islands are distant 4.5 miles which is the limit of the flight capability of the capercaillie. The stock was obtained from northern Europe. Releases of 26 capercaillie and 9 black grouse were made in the fall of 1949, and 4 each of capercaillie and black grouse in the spring of 1950. Of the 60 birds purchased only 43 were released, the others having died of disease and accident. The total cost of the project was $7,954.50, or $185 for each bird released. This is not a high figures when we consider that in 1950 it cost a hunter $187 to kill a turkey gobbler in Texas. Prior to release, some predators, raptors and foxes, were eliminated. Two black grouse are known to have been killed by hawks shortly after liberation. A female capercaillie, seen in September, 1950, was the last bird observed. Though disease and predation played a part, the main reason for the failure of the plantings remains unknown. The causes of the decline or disappearance of a population remains one of the most baffling problems in wildlife management. Many introductions of the two species into North America have been made

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and all have ended in failure. A case close to home was the planting of 201 capercaillie and black grouse on Grand Island, Lake Superior, in 1904 and 1905 by the Cleveland Cliffs Iron Company. All the birds vanished within a year or two. Hope is eternal, so it should occasion no surprise if, within another generation, the stocking is repeated on the basis that it was not done properly in the first place.

Some members of the Legislature, in a moment of exuberance, decided that since Wisconsin was a prairie state it should have prairie dogs. Some were procured and released in June, 1881 on the grounds surrounding the Capitol. A local newspaper was not long in printing an obituary: "The prairie dogs which the state tried to nurse went up the spout. They wouldn’t live." Since the above date several other species have gone "up the spout"; however, in view of the difficulties so frequently encountered, restoration of wildlife in Wisconsin should be judged highly successful.

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24 Madison Democrat June 29, July 20, 1881.