



CANADA

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### CANADIAN WILDLIFE

(Prepared in the Canadian Wildlife Service, Department of Northern Affairs and National Resources, Ottawa)

As Autumn approaches in North America, as the leaves begin to change colour and the crops begin to ripen, the waterfowl hunter takes out his shotgun in the secure knowledge that the ducks and geese will soon begin their annual migration to the south. How many ducks will there be? This, too, is known in fairly accurate terms. The scientists of the Canadian Wildlife Service, the United States Fish and Wildlife Service and a number of co-operating agencies have been on the job all summer gathering data on the number of ducks on the nesting grounds, the number of ducklings hatched, and the number surviving the first few difficult and dangerous weeks of life. They are thus equipped to forecast the prospects for good hunting.

The co-operative approach to North American waterfowl studies is possible because of the foresight of the Canadian and United States Governments, which, recognizing the international status of wild birds, signed the Migratory Birds Treaty in 1916. Co-operation between the two nations is essential, since the major nesting grounds are on the Canadian Prairies and the major wintering grounds on the southern coasts of the United States. The Treaty made it possible to protect the birds through the year.

#### Rescuing the Whooping Crane

Protection came almost too late for one species, the whooping crane. This crane is the tallest bird in North America, standing almost six feet with a wing spread of eight feet. The number of cranes reached a low of 15 in 1941; since then the species has held its own, but the maximum number in the wild has been 36. In addition, six are held in zoological gardens. Constant efforts have been made to save the species from extinction through protective laws and education. The response of the people of Canada and the United States has been very encouraging. The press has carried frequent stories of the cranes' struggle for survival, and the public has shown a lively, sustained interest in them.

Wildlife has not always had this degree of public interest. The last passenger pigeon died in 1914. The great auk became extinct about 1850. Several Canadian mammals were reduced to very small numbers at one time - the buffalo (more properly, bison), the antelope of the Prairies and the musk-ox of the Arctic tundra all suffered from over-hunting and came to the very brink of complete extinction. Wise management has increased the numbers of all those mammals to a level where they are now considered safe for continued existence.

### Where the Buffalo Roam

The buffalo will never again roam the Western plains in millions as it once did, nor should we be too concerned that it has passed from the prairie scene. With fences, farm crops, hay stacks, and purebred cattle on a large part of the buffalo's former range, there is no room for the wild, roaming herds. Only in sanctuaries such as the 17,300-square-mile Wood Buffalo National Park is the buffalo free to roam. There were fewer than 500 buffalo in Canada by the year 1900. There are now approximately 16,000, and in 1959 the first hunting season in 60 years was allowed in an area adjacent to Wood Buffalo Park.

Wood Buffalo Park is also a haven for the whooping crane. The great white cranes formerly nested on the open prairie but they did not tolerate the presence of man and his livestock. They retreated north to one of the most inaccessible marshes of Northern Canada. There they can nest undisturbed by man, but the long autumn journey, 2,500 miles to the Gulf of Mexico, is still fraught with danger.

### Sanctuary for the Musk-Ox

The musk-ox, once reduced in number to about 500, lives in a very different habitat. The arctic tundra looks like the open plains but has a much more rigorous climate. In winter, which lasts from September till June, the winds sweep constantly across this vast area, untempered by trees or mountains. Temperatures reach 50 to 60 degrees below zero Fahrenheit. During the brief summer, when daylight lasts for 24 hours in some areas, arctic flowers bloom in profusion and myriads of biting flies rise to torment all animals. In this inhospitable area the musk-ox lives and thrives, although it grows and reproduces very slowly. During the 1800's the heavy hunting that followed the introduction of firearms, and the musk-oxen's habit of forming a defensive ring and standing their ground, led to destruction of many herds. With rigid protection, the musk-ox too recovered somewhat and now is estimated to number about 5,000.

The musk-ox shares the northern tundra with some of Canada's most interesting animals. The barren-ground caribou, for example, which once numbered millions, still roams the tundra, though in greatly reduced numbers. The regular migrations which led them from tundra to forest during the winter and back to the tundra in spring gave many Indians and Eskimos the opportunity to hunt them for food, clothing (hides), implements (bones and antlers) and thread (sinew), which were the natives' main items of supply.

### Wolf, Wolverine, Fox

The tundra wolf is found with the caribou and migrates with it, in contrast to his cousin the timber wolf, which is likely to spend all seasons in the same locality. He is a stocky animal, often pure white in colour. Some individuals weigh up to 140 pounds.

The wolverine, a 30-pound member of the weasel family, is found in much the same range as the wolf. It is noted for its strength, cunning and ferocity. It is rarely seen in the wild but many a trapper can testify to its destructiveness on the trapline or in the trapper's food cache. Much as wolverines

are disliked, their pelts are highly valued by the Eskimos. The fur is used for trim on mitts and mukluks (moccasins) and, more particularly, on parka hoods, where its ability to resist the accumulation of frost helps protect the traveller from the biting arctic wind.

The other major fur-bearer of the tundra is the arctic fox, whose pure white winter pelt, which changes to grayish brown in summer, is highly valued as a luxury fur in the markets of America and Europe. The white fox is smaller than the red fox of more southerly regions but its pelt is much more valuable. A good skin may bring as much as \$50. A hard-working trapper can make a great deal of money in years when prices are high and foxes abundant.

The arctic fox extends its range far into the north beyond the sea-coast to the Arctic Islands, even to within a few hundred miles of the North Pole. It may be found far out on the pack-ice following the polar bear and living on scraps of food too small to interest the king of the North.

### King of the Arctic

And the polar bear is truly a king in its own realm. It fears nothing except perhaps man, a fear it has only recently learned. It has no dread of winter cold; its shaggy yellowish-white fur protects it in all weathers. It spends much of its time in the water swimming among the ice floes, catching fish, searching for its favourite food, the seal, or just travelling. The female may lie up for the winter when she bears her young but the adult male is abroad at all seasons. The only animal reasonably safe from the male is the walrus, whose long tusks and gigantic (one-ton) size make it a fearful opponent. On land, however, the walrus does not care to dispute with the polar bear. Only in the water does it feel secure.

Many other animals inhabit the Arctic Ocean. In the days when whale-bone was a mainstay of feminine apparel, whaling ships penetrated far into arctic seas in search of huge whales. The large whales are no longer hunted so avidly but small ones such as the white whale, a mere ton in weight, are still hunted by Eskimos in small boats for their meat and blubber.

The narwhal is probably the most interesting of the sea mammals. One lower tooth projects before it in a long spiral that may reach six feet in length. Its exact use is questionable but it did inspire stories of unicorns, the one-horned creatures of legend. The narwhal has now received a prominent place on the coat-of-arms of the Northwest Territories.

### The Adaptable Species

So far we have considered mainly the animals that have not been able to survive well in the face of changes brought about by the invasion of the white man with his guns and his ability to alter the landscape to suit his own purposes. There are, however, several animals that have found the changing conditions much to their liking and have increased their numbers.

Consider the beaver, chosen as Canada's emblem to indicate hard work and an ability to plan for the future. The beaver was actually one of the chief reasons for the development of the New World. Commerce in beaver pelts began as early as 1530, and the trade subsequently led explorers on long arduous journeys that took them eventually across the entire continent.

The beaver's instinct to build dams and houses and store food had a profound effect on the landscape. Its dams formed pools where fish and muskrats could live and waterfowl could feed. The impoundment of water prevented early spring floods from carrying away the soil. In time the dams filled up with silt and organic material and the beaver raised them higher and thus built up broad, fertile valleys. In these valleys the deciduous trees that formed the beaver's favourite food grew up, but were followed by the climax evergreen forest, where spruce and pine predominated. Such trees do not provide much food for any animals but the squirrel and spruce grouse; and the beaver died out or was forced to leave. Thus its own handiwork led to its undoing.

### Recovery of the Beaver

When the era of lumbering began, great stands of spruce and pine fell before the woodsman's axe. Many forest fires started and burned over vast areas. The first step in forest regeneration after heavy cutting or fire is the growth of hardwoods, birch, aspen, poplar and willow -- all preferred beaver foods. Unfortunately, the beaver had been so heavily trapped by that time that its recovery in numbers was slow at first. Protective laws were passed and beaver were transferred on a considerable scale from areas where they were plentiful to other areas where they were scarce or absent. As a result the species has made an astonishing comeback in the past few decades. There are now believed to be more beaver in Canada than in 1530, when Jacques Cartier first reported the trade in their pelts. Indeed they have become so abundant that they are a nuisance in some areas. Their dam-building activities flood highways and fields and their sharp teeth are just as effective on ornamental trees as on the willows along a wilderness creek.

Another animal that has benefited from the same conditions is the moose. In primitive times the moose browsed in the evergreen forest on the willow and aspen of the forest openings or, in summer, by feeding in shallow water, where water-lilies abounded. Upon the destruction of the original forest the moose, too, was able to find an abundance of food and began to extend its range and increase rapidly in numbers.

### The Western Moose

The Province of British Columbia provides an excellent example of what can happen under these circumstances. Before 1900 there were few, if any, moose in the Pacific province. But great forests of deciduous trees were springing up in the wake of intensive lumbering and wide-spread fires. A few moose migrated through the Rocky Mountains into this new habitat. By 1935 they had increased to thousands. In a few years there were many more than the land could produce food for. The result was starvation and an excellent opportunity for disease and parasites to strike. The moose began to die off. The decline was rapid although not complete. Today there is a stable population able to live on the food available and furnish excellent hunting. It may seem paradoxical, but it is true that, if more moose had been killed before 1935, the population might have been larger today and much of a wasted resource would have been salvaged. Man, the forest, and the moose would all have benefited.

Similar, though less spectacular, increases have been noted throughout Canada. In 1958 the Ontario game authorities estimated that there were more than 40,000 moose in that province. During the hunting season at least 6,700 were killed. In calculating the monetary value of this hunt, including such items as licences, guides, transportation, lodging, rifles and ammunition, they estimated that \$3,665,000 was spent during the open season.

The situation in Newfoundland is somewhat similar. Moose were introduced into Newfoundland about 1900 and have done very well. Open seasons for the past few years have indicated that the population is increasing rapidly and can maintain a substantial yearly harvest without harm. Indeed a wise-use policy is essential if the population is not to increase beyond its food supply and bring destruction on itself.

### Deer Population

The white-tailed deer, the most frequently hunted big game mammal in North America, has a history similar to that of the moose. There were only a handful of the deer in Canada in the "good old days". They lived mainly in the hardwood forests of southern Ontario. With the destruction of the coniferous forest a great food supply developed and the deer population increased rapidly to occupy this favourable habitat. There were no deer in Nova Scotia before 1900; at present that province has an annual kill in excess of 30,000. Still the deer continue to increase, and damage by deer to farm crops and orchards in Nova Scotia is common. When food is plentiful a doe may produce twins or even triplets every year. When the range is over-browsed and winter starvation becomes a danger, the reproductive potential may decline by 80 per cent. Again the paradox: to have more deer, shoot more deer.

### The Larger Carnivores

Canada's National Parks play an important part in preserving wildlife populations. We have already seen how Wood Buffalo Park became a haven for the bison and how they increased under protected conditions. Canada's parks in the Rocky Mountain Region also have an abundant and interesting fauna. With the settlement of the Prairies, many plains-dwelling mammals, such as the grizzly and the elk, were forced to seek refuge in the rugged areas. In the National Parks they found wilderness and undisturbed conditions that suited them and they continue to thrive there. For neighbours they have the original mountain dwellers, the bighorn sheep, the mountain goat, the mountain caribou, and the cougar, to mention a few. Grizzly bears and cougars particularly need the protection of large wilderness areas if they are to survive. One or two of these carnivores can cause much destruction among ranchers' cattle and bring serious economic loss. The rancher then feels justified in condemning all predators and demanding their complete destruction. Thinking Canadians feel, however, that those magnificent animals have a right to continued existence without too heavy persecution by man. The National Parks provide the protection they need. The parks also provide for recreation in areas of unspoiled natural beauty and give scientists a chance to view and study, in natural game areas, the game animals and the large predators who depend upon them for food.

## Game Fishing

Canada has long been known as a fisherman's paradise. Indeed a great historical debt is owed to these aquatic members of the wildlife family. The codfish, which abounds on the Grand Banks of Newfoundland, provided one of the first incentives for travel to the New World. Fishing villages and camps established on the nearby mainland grew into the modern cities of today.

A second great commercial fishery is that on the Pacific Coast. There the salmon, which spends most of its life in the vastness of the Pacific Ocean, returns in great swarms to ascend perhaps hundreds of miles of mountain streams to the spawning ground where it was born. The development of dams, and silt deposition in the spawning beds, are hazards to the continued existence of the great salmon runs. With wise management, however, this great resource should continue to supply food to world markets.

Inland, the Canadian sport fisherman comes into his own. Cold mountain streams excel in trout fishing. The warmer southern lakes are populated by trout, pike, maskinonge, pickerel, bass and many other fish that take the fisherman's lure and furnish the best of eating. Northern lakes, as yet little fished, produce lake trout that may weigh up to 40 pounds. From them also come the grayling, a fighting two-pounder, and the arctic char, which has recently been recognized as a fine-fleshed, flavourful member of the salmon family.

## Fish Conservation

Wise use is a requisite of productive fishing also. The Canadian Wildlife Service has pioneered in the experimental planting of sport fish in small lakes and streams of the National Parks. Often these lakes become overcrowded with small coarse fish that have to be poisoned to remove them before better-quality fish will thrive. The results of these experiments have been phenomenal. Canada looks forward to maintaining its place as a fisherman's paradise.

To complete the picture of Canadian wildlife, a few imported species may be mentioned. Many animals and birds have been imported, some of them on the theory that if they provided good hunting in one continent they would do the same on another. The results have seldom borne out the theory. Many introductions have failed for reasons difficult to determine. A single food element not in sufficient supply, or one detrimental factor, may be sufficient to prevent increase. Some species have done well, some too well. The ring-necked pheasant and the Hungarian partridge are examples of game birds that have done well in their new habitat. The starling, the English sparrow, the European carp and the brown rat are examples of introduced wildlife species that have become pests. With the changes wrought by agriculture in the New World some of the original inhabitants, such as the prairie chicken, declined in number. Some birds imported to replace them found conditions much to their liking, however, and increased rapidly. For example, in 1930 three dozen pheasants were released on Pelee Island in Lake Erie. Seven years later 10,000 birds were harvested in a single autumn and the annual kill has remained high ever since. The Hungarian partridge, after the introduction of a few hundred individuals in 1907, began to increase rapidly and within 20 years had spread throughout the entire prairie area. Since then it has become one of the most interesting game birds to be found anywhere.

Canadian wildlife has had an interesting history as a lure to exploration of a continent and in providing food and clothing for pioneers and native peoples. Some species could not adapt to the changing conditions wrought by man. Some were able to adapt readily and increase far beyond their primitive numbers. Some of the credit for abundance of wildlife in Canada today must go to the scientist and the administrator who gave protection when it was needed and provided safe retreats where animals could live without being disturbed by man. And so, when the autumn season approaches, the hunter can take down his rifle secure in the knowledge that game is available. Whether he will bag it or not depends solely on his own skill.

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