

range clear across the State of North Dakota between 1887 and 1915. This cottontail is now well established in southern Manitoba and in some areas has become a pest in young orchards and nursery stock. The Mearns cottontail (*S. f. mearnsi*) was probably found locally in extreme southern Ontario before the advent of the white man, but its northward advance has been rapid and since 1870 the cottontail had extended its range from southern Ontario to the environs of Ottawa where it arrived in 1931; it reached the Montreal region about the same time. The Michigan white-footed mouse (*Peromyscus maniculatus bairdii*) has made extensive northward advances in eastern Ontario as well as in Manitoba, and the white-tailed deer (*Odocoileus virginianus borealis*) which was rare north of the Ottawa river in the days of the early settlements, now ranges nearly to James bay, far into Quebec and into all parts of Nova Scotia including Cape Breton island. The prairie pocket gopher (*Geomys bursarius*) has worked north as far as the borders of Manitoba, and the Oregon mole (*Scapanus townsendii*) has recently been found in the Huntingdon-Sumas region of extreme southwestern British Columbia, having probably entered since the region was cleared of heavy timber. On the whole, the mammalian fauna of any given area is essentially static, being only changed by local extermination of a few species, and the appearance of occasional new forms which extend their ranges as the country is cleared, either by breaking of the soil or by burning of forests.

We can take the mammal fauna of Canada to number approximately 540 different forms. Ontario has an even hundred, while Quebec, which includes a number of Arctic forms from Hudson strait and marine species from its Atlantic seaboard, has 125. The Ottawa district has about 45 species of mammals, which is about the normal number found in any limited area in Eastern Canada. Certain mountain areas in British Columbia and Alberta have a somewhat larger number of forms, as one may pass upward for 6,000 to 7,000 feet from Upper Sonoran or Transition to Arctic-Alpine Zones within a few miles and meet species of the different zones. The average variety of species in any fairly homogeneous region may be seen from the Ontario list of mammals¹⁸: *Ungulata* (hoofed species) 5, including caribou, moose, and deer; *Carnivora* (flesh-eaters) 38, including bear, wolves, foxes, wildcats, mink, otter, and most of the other fur bearers; *Rodentia* (gnawing mammals) 25, including beaver, muskrat, porcupine, woodchucks, squirrels, chipmunks, and mice of various kinds; *Insectivora* (insect eaters) 13, including 10 shrews and 3 moles; *Lagomorpha* 5, hares and rabbits; *Chiroptera* 9, bats; as well as certain marine species—*Pinnipedia*, seals and walrus, and *Cetacea*, whales—which are not found in provinces which have no seaboard.

Economic Importance of Faunal Assets.

Fur-bearing and Other Mammals.—In Chapter X, of this volume, a description of the fur trade and its background will be found, supplemented by statistics of production which illustrate its importance in the national economy.

As is there pointed out, one hundred years ago the value of furs to the export trade of Canada was greater than that of any other commodity, and while the fur trade is now proportionately much less important the aggregate is as large as ever; the number of persons engaged in the industry is much larger and a greater variety of furs is collected.

Nearly all of the mammal species are of known economic importance. The large game mammals are obviously useful for food and clothing; in many areas they still furnish the main sustenance of Indians and Eskimos and are a great help to