SMITHSONIAN INSTITUTION. UNITED STATES NATIONAL MUSEUM; THE BIRDS OF MANITOBA, PP. 457-643

Published @ 2017 Trieste Publishing Pty Ltd

ISBN 9780649074532

Smithsonian Institution. United States National Museum; The Birds of Manitoba, pp. 457-643 by Ernest E. Thompson

Edited by Trieste Publishing Pty Ltd.
Cover @ 2017

www.triestepublishing.com

ERNEST E. THOMPSON

SMITHSONIAN INSTITUTION. UNITED STATES NATIONAL MUSEUM; THE BIRDS OF MANITOBA, PP. 457-643

Trieste

SMITHSONIAN INSTITUTION.
UNITED STATES NATIONAL MUSEUM.

THE BIRDS OF MANITOBA.

BY

Seton
ERNEST E. THOMPSON, OF TORONTO, CANADA,
Associate Member American Ornithologists' Union, etc.

From the Proceedings of the United States National Museum, Vol. XIII, pages 457–643, with plate XXXVIII.

[No. 841.]

WASHINGTON:
GOVERNMENT PRINTING OFFICE.
1891.

THE BIRDS OF MANITOBA.*

BY

ERNEST E. THOMPSON, OF TORONTO, CANADA,
Associate Member American Ornithologists' Union, etc.

(With plate XXXVIII.)

INTRODUCTION.

BOUNDARIES OF THE PROVINCE OF MANITOBA.

In treating of the birds of this region it seemed most convenient to make the political boundaries of the province, those also of the district included, though this is scarcely defensible from the scientific standpoint. According to the Revised Statutes of Canada, 1886, chapter 47, the boundaries of the province of Manitoba were fixed briefly as follows: On the south, at the forty-ninth parallel of north latitude, which is the international boundary line; on the west by a line along the middle of the road allowance between the twenty-ninth and thirtieth ranges of townships west of the first principal meridian, which line falls between 101° and 102° longitude west of Greenwich; on the north by the middle of the road allowance of the twelfth base line, which is north latitude 52° 50′; on the east by the meridian of the northwest angle of the Lake of the Woods which, according to Professor Hind is 95° 50′ longitude west of Greenwich.

In preparing my own map full use has been made of the maps pub-

*In offering the following observations in their present shape, *i. e.*, as they were made on the spot, without material condensation or generalization, I believe that I have taken not merely the best but the only right course under the circumstances. My original plan, as may be seen by the "notes" throughout, was to prepare something after a very old-fashioned model, but, widening experience caused a considerable change of view. No one regrets more than myself their imperfectness, and, in some cases which I have pointed out, their unreliability. If I could see my way clear to revisit Manitoba in the near future I would gladly defer publication in the hope that I might first remove numerous doubts and fill many unfortunate blanks, but under existing circumstances there seems to be no course but to carefully revise my old journal and let it go forth for judgment.

My own observations are supplemented by those of numerous observers in various parts of the province, and I have also endeavored to include all available records relating to distribution and all valuable published matter relating to the ornithology of Manitoba that has not appeared in a special work on birds. This excludes only Dr. Coues's field notes * * * forty-ninth parallel, which, however, is constantly cited.

In all the records I have given the exact words of the writer are quoted.

Altogether I spent about 3 years in the province, my first visit extending from March 28, 1882, to November 16, 1883; my second from April 25, 1884, to January 27, 1885; my third from October 25, 1886, to January 12, 1887, broken only by occasional

lished by Professor Hind in 1860, by the Dominion Government in 1874, and by the Canadian Pacific Railway Company at various times between 1880 and 1890, also those drawn by Mr. Shawe for Phillip's Imperial Atlas, and those issued by the Tenth Census Report of the United States. I have also supplemented these by information gained in my own travels, as well as that supplied me by Messrs. Tyrrell, Nash, Macoun, Christy, and other observers.

PHYSICAL FEATURES OF THE PROVINCE.

The general features of the country have been ably and concisely described by Dr. Dawson in the report of the boundary commission (1875), as follows:

The first or lowest prairie level, is that of which the southern part lies along the Red River, and which, northward, embraces Lake Winnipeg and associated lakes, and the flat land surrounding them. A great part of its eastern border is conterminous with that of Lake Winnipeg, and formed by the rocky front of the Laurentian; but east of the Red River it is bounded by the high lying drift terraces surrounding the Lake of the Woods, and forming a part of the drift plateau of northern Minnesota. To the west it is limited by the more or less abrupt edge of the second prairie level, forming an escarpment, which, though very regular in some places, has been broken through by the broad valleys of the Assiniboine and other rivers. The escarpment, where it crosses the line, is known as Pembina Mountain, and is continued northward by the Riding, Duck, Porcupine, and Basquia Hills. The average height above the sea of this lowest level of the interior conti-

expeditions outside of our boundaries. Carberry was my headquarters, and except where otherwise stated all observations were made at that place.

My companions, whose names appear, were Mr. Wm. G. A. Brodie, whose untimely death by drowning in the Assiniboine, May, 1883, robbed Canada of one of her most promising young naturalists; my brother, Dr. A. S. Thompson, with whom I lived, and Mr. Miller Christy. The last was with me during the latter part of the summer of 1883 and again for a few days in the July of 1884. He was the first ornithologist of experience that I had ever met, and I have to thank him for correcting in me many wrong methods of study that naturally were born of my isolation.

My thanks are due to Dr. J. A. Allen, of the American Museum of Natural History; Prof. Robert Ridgway, of the Smithsonian Institution; and Dr. C. Hart Merriam, ornithologist to the U. S. Department of Agriculture, for the identification of numerous specimens, and other assistance, and especially to the last for placing at my disposal the manuscripts of Miss Youmans, Messrs. Calcutt, Criddle, Nash, Plunkett, Small, and Wagner; to Prof. John Macoun, of the Canadian Geological Survey; Messrs. Christy, Nash, Hine, Hunter, and Guernsey, for numerous manuscripts, notes, and much valuable assistance; to Dr. R. Bell and Mr. James M. Macoun, both of the Canadian Geological Survey; Dr. William Brodie, of Toronto; Dr. Charles Carpmael, of the Canada Meteorological Department, and Mr. Ernest D. Wentle, of Montreal, for help in various ways; and to the Hudson's Bay Company for access to the Hutchins manuscripts. Indispensable assistance in preparing the manuscript has been rendered also by my father, Mr. Joseph L. Thompson, and my cousin, Miss M. A. Burfield.

The measurements throughout are in English inches.

ERNEST E. THOMPSON,
86 *Howard street, Toronto, Ontario.*

JULY, 1890.

nental region is about 800 feet; the lowest part being that surrounding the Winnipeg group of lakes, which have an elevation of about 700 feet. From this it slopes up southward, and attains its greatest elevation—960 feet—at its termination far south in Minnesota. The edges of this prairie level are also, notwithstanding its apparent horizontality, considerably more elevated than its central line, which is followed by the Red River. Its width on the forty-ninth parallel is only 52 miles; its area, north of that line, may be estimated at 55,600 square miles, of which the great system of lakes in its northern part—including Lakes Winnipeg, Manitoba, Winnipegosis, Cedar, and St. Martin's—occupy 13,900 miles. A great part of this prairie level is wooded more or less densely, and much of the low-lying land near the great lakes appears to be swampy and liable to flood. The southern part, extending from the boundary line nearly to the south end of Lake Winnipeg, includes the prairie of the Red River valley, with an area of about 6,900 square miles; one of the most fertile regions, and, at the same time, the most accessible portion of the Northwest.

The superficial deposits of this stage are chiefly those of a great lake which occupied its area after the glacial submergence. This part of the interior of the continent being the last to emerge from the Arctic waters and having been covered for a long time afterward by a sea of fresh water, held back either by drift deposits or by rocky barriers, which have subsequently been cut through, and which must have united all the lakes now found in the region into one sheet of water, which extended with narrower dimensions about 200 miles south of the boundary line.

The Red and the Assiniboine Rivers and their tributaries have not yet cut very deeply into its alluvial deposits and its surface is level and little furrowed by denudation.

The second steppe of the plains is bounded to the east, as already indicated, and to the west by the Missouri coteau, or edge of the third prairie level. It has a width at the forty-ninth parallel of, probably, 200 miles, though it can not there be strictly defined. Its total area is about 105,000 square miles, and includes the whole eastern portion of the great plains, properly so called, with an approximate area of 71,300 square miles. These occupy its southern and western portions, and are continuous westward with those of the third prairie steppe. To the south, the boundaries of this region appear to become more indefinite, and in the southern part of Dakota, the three primary levels of the country, so well marked north of the line, are probably scarcely separable. The rivers have acted on this region for a much longer time than on the last-mentioned, and are now found flowing with uniform currents in wide ditch-like valleys, excavated in the soft material of the plains, and often depressed from 100 to 300 feet below the general surface. In these the comparatively insignificent streams wander from side to side, in tortuous channels, which they only leave in time of flood. The surface of this prairie steppe is also more diversified than the last, being broken into gentle swells and undulations, partly, no doubt, by the action of denudation, and partly, also, as will appear, from the original unequal deposition, by currents and ice, of the drift material which here constitutes the superficial formation. The average altitude of this region may be taken at 1,600 feet, and the character of its soil and its adaptability for agriculture differ much in its different portions.

The third or highest prairie steppe may be said to have a general normal altitude of about 3,000 feet, though its eastern edge is sometimes little over 2,000 feet and it attains an elevation of 4,200 feet at the foot of the Rocky Mountains.

Obviously none of the third steppe would fall within our limits were it not for a curious exception that is presented by the Turtle Mountain, which, though belonging to the third steppe, stands like an island upon the open sea of the second. Of this Dr. Dawson says:

Turtle Mountain, an outline of the third prairie steppe, is a broken, hilly, wooded region, with an area of perhaps about 20 miles square (400 square miles), and slopes

gradually upward from the plain around it, above which it is elevated, at its highest points, about 500 feet. It appears to be the culmination westward of the hilly drift region previously described, and forms a prominent object when viewed across the eastern prairie, from the contrasting somber tint of the foliage of its woods. From the west it can be seen from a distance of 45 miles, and when thus viewed has really much the general outline of a turtle shell. It is bisected by the forty-ninth parallel.

According to Mr. Tyrrell's map, the altitudes of the large lakes, etc., to the west have hitherto been given fully 60 feet too low; as, however, I am without corrected figures for other points whose altitudes are given, I have elected to let older computations stand, and they may be taken as relatively correct.

"*The sand hills*," so often referred to, are certain low sand dunes that cover a considerable extent of country in the vicinity of Carberry. They are in most cases low undulations rather than hills, are sparsely covered with grass and dotted over with beautiful clumps of trees, while the hollows and flats are diversified with lakelets that swarm with waterfowl and lower forms of life. The general appearance of the sand-hills country is quite park-like, and notwithstanding its unattractive name this region as a whole is the most pleasing to the eye and fuller of interest and varied pleasure for the naturalist than any other that I have seen in Manitoba. "*The Big Plain*" is an unusually level prairie extending from Carberry northward about 30 miles.

"*The White Horse Plains*" form a similar region between Shoal Lake and the Assiniboine.

"*The Souris Plains*" include the southwestern corner of Manitoba that is drained by the Souris River. This is a remarkably level region, entirely cleared of trees excepting in the river gorges, and diversified by numerous marshes and alkaline flats.

"*Bluff*" is, in Manitoban parlance, the name applied to any isolated grove of trees on the prairie. The term is never used here, as in the Western States, to mean an abrupt bank or escarpment.

Distribution of forest and prairie.—All that portion of Manitoba that lies to the eastward of the lowest prairie steppe, as above defined, is a rocky Laurentian region full of rivers and lakes of fresh water, and thickly wooded, being within the limits of the great coniferous forest. A wide strip of the flat country lying to the westward of Lake Winnipeg, likewise the elevat d plateaus of Riding, Duck, and Porcupine Mountains, are also to be classed as parts of the northern forest. There is good reason for believing that at one time, not very remote, the rest of Manitoba was covered with a forest of aspens or poplars (*Populus tremuliodes*), slightly varied by oak (*Quercus macrocarpa*), spruce (*Abies alba et nigra*), birch (*Betula papyracea*), etc., which has been removed by fire, so that trees are now found growing only in such places as are protected from the fires by streams, lakes, marshes, or sandy tracts where so little grass grows that the fire can not travel; consequently, notwithstanding the prevalent idea of Manitoba as a purely prairie region, there is more or less timber in nearly all parts of the country as indicated on

the map. Thus I have endeavored to make a record of the distribution of forests in 1885, for evidently no natural feature is more likely to change in a few years than the extent of woodlands. The line limiting the coniferous forest on the south is copied from the forestry map issued with the Tenth Census report of the United States. It is suspiciously straight and even, but is doubtless correct when understood merely as a broad generalization. I regret that I am without the material necessary to define this limit more accurately. To the southward of Carberry is a small isolated forest of spruce that is known as the Spruce Bush or the Carberry Swamp, by which names it is herein referred to.

Water.—The province is plentifully, almost too plentifully, supplied with water. In addition to the numerous extensive lakes indicated on the map are thousands more of smaller extent, while the region of the Red River Valley in particular is diversified by vast stretches of marsh and lagoon. The various lakes are of two kinds, first the sweet water or live water lakes, fed and drained by living streams, teeming with fish and varying in size from that of a mere pond to that of Lake Winnepeg; second, the alkaline lakes, which are mere drainage basins and depend solely on evaporation for the removal of their accumulated waters.

They owe their alkaline impregnation not to anything of the nature of salt-bearing strata, but to the continual influx and evaporation of surface water very slightly impregnated with alkali through running over the prairies strewn with the ashes of the annual fires. These "dead waters" never, so far as I know, contain fish, but they are usually swarming with a species of amblystoma and numerous kinds of leeches and aquatic insects. These lakes abound on the prairies and in the sand hills, but are usually of very small extent. They have, I believe, several peculiar species of sedge, and are especially frequented by certain kinds of birds that seem to avoid the fresher waters, *e. g.*, Baird's Sparrow, Avocet, etc.

Salt springs, etc.—The following extract from Professor Macoun's well-known work on "Manitoba and the great Northwest, 1883," will prove an interesting item of physiography:

> Lying farther south [than the Silurian], and possibly underlying the greater part of the western side of the Manitoba Plain, is the Devonian Series. These rocks are known to be largely developed on both sides of Lakes Manitoba and Winnepegosis. Numerous salt springs are found in connection with them, and during the last summer the writer saw salt springs and brooks of strong brine flowing from them in various localities at the head of Lake Winnepegosis. The subjoined list of salt springs known to occur on Lakes Manitoba and Winnepegosis may tend to excite interest in these extensive deposits:
>
> 1. Crane River, Lake Manitoba.
> 2. Waterhen River, Dickson's Landing.
> 3. Salt Point, east side of Lake Winnepegosis.
> 4. Salt Springs, Winnepegosis.
> 5. Pine River, Winnepegosis.
> 6. Rivers near Duck Bay.

7. Turtle River, Lake Dauphin.
8. Swan or Shoal, two localities.
9. Salt River, flowing into Dawson's Bay.
10. Numerous salt springs and bare, saturated tracts of many acres in extent on Red Deer River, which flows into the head of Dawson's Bay, Lake Winnepegosis. For 10 miles up this river salt springs are quite frequent, and excellent salt was collected in three places, where it formed a crust on the surface of the ground. Some springs were examined where a respectable rivulet of strong brine issued from them, as clear as crystal, and evidently quite pure. All the springs and marshes seen were bordered with seaside plants, and one of them, which has never been found from the seacoast before in America, was found in abundance. The plant referred to is Sea-Side Plantain (*Plantago maritima*).

The following extract from Professor Hind's report (1858) shows that this line of saliferous strata goes right across our province:

Near and west of Stony Mountain many small barren areas occur, covered with saline efflorescence; they may be traced to the Assiniboine, and beyond that river in a direction nearly due south to La Riviere Sale and the forty-ninth parallel. These saline deposits are important, as they in all probability serve, as will be shown hereafter, to denote the presence of salt-bearing rocks beneath them, similar to those from which the salt springs of Swan River, Manitoba Lake, and La Rivière Sale issue.

Meteorology.—I have not been able to obtain the material necessary for a general chapter on the meteorology of Manitoba, and must content myself with a few statistics taken from Professor Bryce's article on Canada in the Encyclopædia Britannica.

The mean annual temperature for 11 years, (1871-1881, inclusive), taken near Winnipeg, was 33.06°, the maximum 95.34°, the minimum −40.51°; the mean amount of rain, 16 977 inches; the mean amount of snow, 52.72 inches; the mean total precipitation of rain and snow, 23.304 inches; the mean height of the barometer, 29.153. The mean average temperature for the years 1880 and 1881 was as follows: January, 2°.9; February, 3°; March, 9°; April, 30°.2; May, 51°.2; June, 63°.6; July, 65°.9; August, 64°.8; September, 51°.3; October, 40°; November, 14°.6; December, 0°.6; the year, 32°.6.

The isotherms indicated on the map were taken from the map prepared to Professor Macouns' work.

Topography.—The topography of Manitoba is somewhat perplexing through the duplication of names. Many, such as Pelican Lake, Swan Lake, Shoal Lake, Rat Creek, etc., appear several times over. None of these duplications have been entered on the map, with the exceptions of Shoal Lake and Boggy Creek. In the first case I have added the word "West" to the name of the lake which is of secondary importance and probably of later naming. In the second the three creeks are distinguished as Boggy Creek, Big Boggy Creek, and Little Boggy Creek. Every name referred to in the notes, with exceptions noted herein later, will be found on the map, with many additional ones that are of importance. Frequent allusion is made to Professor Macouns' journeys and the region observed by him in making them. These expedi-