Geological Survey Department,

Canada.

HONOURABLE EDGAR DEWDNEY, MINISTER

ALFRED R.C.SELWYN, C.M.G., LL.D., F.R.S.,&c, DIRECTOR.

MAP

SHOWING FOREST DISTRIBUTION IN NORTH WESTERN MANITOBA

and portions of the Districts of Assiniboia and Saskatchewan,

by

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Assisted by

D.B.DOWLING B.A.Sc.

1891.

SCALES:

Geographical Miles.

Statute Miles.

Natural Scale : 1/306.880

HEIGHTS IN FEET ABOVE SEA LEVEL

Contour intervals 100 feet

Geographical Authorities.

Surveys by Messrs Tyrrell and Dowling of the Geological Survey Dept, and by the Departments of Interior, Indian Affairs, and Railways and Canals.

LEGEND.

- Region generally wooded.
- Burnt Forest.
- Region partly wooded and with scattered trees and coppice.
- Open Prairie.

NOTES.

The above Map is coloured on the same general plan as the Map of the Bow and Belly Rivers Region by Dr. G. M. Dawson, and the Map of Northern Alberta by J. B. Tyrrell; the parts covered with full green horizontal bars representing thickly or heavily timbered areas; those covered with vertical bars the areas thinly wooded with poplar and willow, interspersed with grassy glades; and the uncoloured land areas, almost entirely confined to the south-west corner of the sheet, representing open grassy prairie. Broken horizontal lines have, however, been introduced to represent thickly wooded tracts that have recently been burnt over, and on which are now found only dead timber or small second-growth poplar and willow.

The Duck and Riding Mountain area is shown as nearly as possible as it existed in 1887, while the vicinity of Lake Winnipegosis was explored in 1889, and the colouring refers to that date.

As shown above, by far the largest part of the district depicted on the map is thickly forested, and travel through this country is very difficult, except on well-beaten Indian trails. The surface of the higher plateaux on the summits of the "mountains" is irregular, occasionally rising in rounded morainic hills, thickly scattered with boulders of gneiss and limestone, and then extending out into wide plains underlain by alluvial deposits. The sides of the "mountains" are, as a rule, fairly regular slopes, heavily wooded with spruce and poplar; while the lacustral plain to the north and east has a very even floor, chiefly of light grey till containing a few boulders, and is wooded with belts of smaller spruce and poplar separated by tamarac swamps.

1. The White Spruce (*Picea alba*) is the most important timber-tree of the region, and is found scattered almost everywhere throughout the forest. Groves of much economic value to the lumberman are, however, not very plentiful, and are chiefly confined to the slopes of the Duck and Porcupine Mountains, and to the head-waters of the Shell and Valley rivers. Narrow belts of excellent white spruce are also growing by the banks of many of the streams.

2. Black Spruce (*Picea nigra*) is also scattered over the low land everywhere, but the trees are generally smaller than those of the former species, and are seldom clustered together in large groves.

3. Balsam Fir (*Abies balsamea*) grows to a large size on the top and sides of the Duck Mountains among the white spruce.

4. Tamarac (*Lariz Americana*) is scattered over the low wet land everywhere, but especially in the swamps east of the Manitoba escarpment.

5. Scrub Pine (*Pinus Banksiana*) was found growing on the high dry hills in the north-eastern portion of Duck Mountain, on the sandy ridges on Duck and Pine rivers, and on dry or sandy areas further north. It nowhere grows to a large size.

6. Cedar (*Thuja occidentalis*) is confined entirely to the extreme north-eastern portion of the map, comprising the district lying between Lake Winnipegosis and Cedar Lake. This strip of land rises as an abrupt ridge to a height of ninety feet above the former lake, and descends gently into low swampy country south of the latter. Throughout the swamps cedar grows in considerable abundance, and up to a foot or more in diameter and forty feet in height. It here forms an isolated colony beyond the line of its general north-western limit of distribution, which line just touches the south-eastern extremity of Lake Winnipeg.

7. Aspen (*Populus tremuloides*) and (8) Balsam Poplar (*Populus balsamifera*) are growing everywhere throughout the wooded districts, the latter chiefly on low land, and along the banks of streams, while the former is the commonest tree in the country, growing to enormous size around the Porcupine Mountains, and comprising the scattered groves in the half-wooded areas, decreasing gradually in size towards the edge of the prairie.

9. Elm (*Ulmus Americana*) grows on the low country by the lakes and streams, at least as far north as Macoun Point on Lake Winnipegosis,

(10) Ash-leaved Maple (*Negundo aceroides*) extends north to the banks of Red Deer River, forming groves to which the Indians annually gather in spring for the making of sugar.

11. White Birch (*Betula papyrifera*) is a common tree everywhere in the more thickly wooded tracts, but is not often met with of large size.

12. Oak (*Quercus macrocarpa*) was found on the west side of the Duck and Riding Mountains as far north as ten miles above Assessippi in the valley of Shell river, and on the lower plains to the east of the Manitoba escarpment its northern limit is reached at the south end of Dawson Bay, where some small trees are growing on a salty plain.

13. Mountain Ash (*Pirus Americana*) flourishes on many of the islands in Lake Winnipegosis and Dawson Bay, where it reaches its northern limit, and a few small trees were found on both the Duck and Riding Mountains.

14. Mountain Maple (*Acer spicatum*) is sparsely scattered over the country from Riding Mountain to the shore of Dawson Bay, and here attains its largest size.

15. Ash (*Frazinus pubescens*) and (16) Tree Willow (*Salix nigra*) are thickly distributed over the low country and by the lake shores almost everywhere.

The partly-wooded districts are underlain by boulder-clay with a few pebbles and boulders, or by stratified alluvial clay, the former having an undulating and the latter an even surface. The higher ground is dotted with aspen groves, while the low wet country is covered with small willows. Between the groves the surface is clothed with an even sward of short grass. In the deep valleys and ravines spruce may often be seen, and elm was observed overshadowing the Assiniboine River from Stony Creek southward.

The open grassy plains of the Second Prairie Steppe merely touch the south-western corner of region mapped. Their surface is gently undulating and often dotted with small lakes.

Longitude West from Greenwich.

Compiled and drawn by D.B.Dowling, B.A.Sc.

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