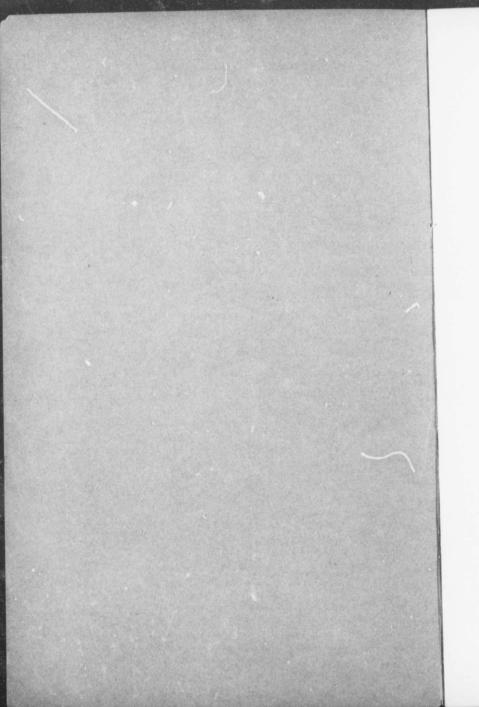
By J. B. TYRRELL, Toronto, Canada.

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Ir gives me a great deal of pleasure to have the opportunity of submitting to this distinguished assembly a few of the facts on which I venture to claim that David Thompson, of whose achievements but little note has been taken, was the greatest land geographer that the British race has produced.

A poor boy from a London charity school, he spent most of his life on the northern part of this continent when it was a wilderness, peopled only by the natives and by a few fur traders, who had little groups of houses or factories, often hundreds of miles apart, scattered along the principal waterways.

He was a fur trader in the employ of the Hudson's Bay and North-West Companies, and in the prosecution of this trade he travelled many thousands of miles in cances, on horseback, and on foot through what was then a vast unmapped country, extending from Montreal on

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the east to the Pacific ocean on the west, and from Athabasca lake on the north to the headwaters of the Mississippi river on the south. Wherever he went he made surveys, and wherever he stopped he took astronomical observations for latitude and longitude. When he left the western country in 1812, he had the material for a great map, which he drew in the following year, and which has been the basis for every map of northern and western Canada published since that time. After retiring from the fur trade, he was engaged on the part of Great Britain in surveying the boundary-line between the United States and Canada, subsequent to which he settled down quietly in Montreal.

David Thompson was born in London, England, on July 30, 1770, his parents' names being David and Ann. His daughters used to say that their grandparents were Welsh or of Welsh extraction, and that their names had originally been ApThomas, but on this point there is no further evidence. When seven years old he was placed in the Grey Coat School, which is still standing, though now used exclusively for girls, about a quarter of a mile west of Westminster Abbey, and not far from the Canadian Government Office on Victoria Street. Here he remained for seven years, absorbing the ordinary subjects that were taught to a boy in those times, and, in addition to the subjects taught to most of the children, he and one other boy received lessons in navigation. He says that in his leisure hours he used to pore over 'The Tales of the Genii,' 'The Persian and Arabian Tales,' Robinson Crusoe,' and 'Gulliver's Travels.'

About the end of the year 1783, the Hudson Bay Company applied "to know if this Charity could furnish them with four boys against the month of May next, for their settlements in America." David Thompson was the only boy available, and in the following May, when just fourteen years old, he was bound as an apprentice to the Hudson Bay Company for seven years, and was sent out to Fort Churchill, on Hudson bay, in the ship Prince Rupert. Samuel Hearne, the discoverer and explorer of the Coppermine river, was then governor of Fort Churchill, and though there seems to have been little sympathy between the older explorer and the younger one, in spite of the fact that they were both natives of London, he was, at his own solicitation, employed in copying a few leaves of Hearne's journal, and he must have added to his love of exploration from what he there read, and from the stories of the trip which he heard from those around him. But no attempt was made to employ him in any surveying work, or to make use of the little knowledge of navigation which had been taught to him in school.

From Fort Churchill he was sent down the bleak, open shore of Hudson bay on foot to York Factory, a distance of 160 miles. Here he remained for two years, employed as a clerk in the fur-trading store and in hunting the birds and other game of the country to help to

provide food for himself and those living at the fort with him. All ideas of making surveys had been forgotten—in fact, it is not likely that any serious intention was ever entertained of employing him as a surveyor in the interior countries. His knowledge of navigation was doubtless merely to enable him to sail one or other of the little sloops which were kept by the Hudson Bay Company at their trading-posts on the shore of the bay.

In the year 1787, when seventeen years old, he was, however, sent inland with a party which was going to establish new trading-posts on the Saskatchewan river, and for the next three years he lived on the banks of that stream and on the adjoining plains to the south of it, learning the habits of the Indians, and inducing them to bring their furs to the stores to exchange for the commodities brought from England by the white people. One whole winter was spent in the tent of a chief of the Peagan Indians, one of the wildest native tribes of the West, and the friendships there formed stood him in good stead in his after-life.

In 1789, when at Cumberland House on the Saskatchewan, he began to use a notebook, and to take and record regular meteorological observations. The following year, while on a journey to York Factory with the brigade of furs, he made his first survey in the country. His notebooks show the courses and distances of all the reaches on the Saskatchewan and Hayes rivers, as well as the north shore of Lake Winnipeg.

After his return to Cumberland House in this year, he had the advantage of the society of one Philip Turner, a surveyor who had been sent out by the Hudson Bay Company to make a survey of Lake Athabasca, and under him he devoted himself heartily to the study of practical astronomy. During that winter he took many observations for the latitude and longitude of Cumberland House, and the position which he determined for it is the same which it now occupies in the latest maps published by the Canadian Government, although the position has varied greatly in the maps which have been published in the intervening one hundred and twenty years.

In 1791 he returned to York Factory, where he remained for more than a year, assisting in the fur trade and filling in all his spare time with taking astronomical observations. In 1792 he again left York Factory, but this time he went into what he calls the "Muskrat Country," which lies west of Nelson river, between Saskatchewan and Churchill rivers, where he spent the following winter. In 1793 he returned to the Saskatchewan, spending the winter at a place called Buckingham House, about halfway between Battleford and Edmonton; and the following summer he made a survey of the river down to Cumberland House, thus adding a considerable stretch to the part of the river he had already surveyed below that point.

The next three years were spent in the Muskrat country, making surveys of all the lakes and streams that he passed through in his

search for furs. These surveys extended northward as far as Reindeer lake and westward to the east end of Lake Athabasca, where he connected with the survey previously made by his tutor, Mr. Turner.

The year in which he made this latter survey would seem to have been a poor one for fur returns, and his superior officer in the company probably thought he had neglected the fur trade in the interest of exploration, so he gave orders that the surveying must be discontinued. This Thompson refused to agree to, and as his second term of engagement was expiring, he withdrew from the service of the Hudson Bay Company and entered that of the North-West Company, which was particularly anxious at the time to have the position of its trading-posts determined. This was on May 23, 1797, the following entry being written in his journal of this date : " This day left the service of the Hudson Bay Company, and entered that of the Company of the Merchants from Canada. May God Almighty prosper me." Thus for the sake of a trifling shortage in the fur returns for the year, the Hudson Bay Company lost the greatest man it ever had in its employ. a man whose name will be a household word' with educated men and women in America long after all the fur traders and their beaver-skins have been forgotten. On May 28 he arrived on foot at the house of Mr. Alex. Fraser, at the head of Reindeer river, where he was very hospitably entertained by this partner in the North-West Company. He at once proceeded from Reindeer lake to Grand Portage on Lake Superior, making as usual a survey of the route which he followed. Here he received his instructions, and made final arrangements for his future work. The explorations of the next year are worth following in some detail, as they show what such a man could do under reasonably favourable circumstances.

On August 9 he left the "Grand Portage," at the mouth of Pigeon river on Lake Superior, in company with Mr. Hugh McGillis, and descended Rainy river, passing a fort at the Falls on the 21st, went on through Rainy lake and Lake of the Woods to Lake Winnipeg, which he reached on September 1. Crossing this lake and ascending the Dauphin river, he reached Lake Manito (Manitoba) on September 10. He crossed this lake, and reached Lake Winnipegoosis by way of the Meadow portage. On September 17, being camped 1½ mile north of the Little Dauphin (Mossy) river, provisions were received from Fort Dauphin, on or near Dauphin lake.

On September 17, having received provisions from Fort Dauphin, the party proceeded northward up the west shore of Lake Winnipegoosis. On the 19th, Mr. Hugh McGillis left him to go up Red Deer river, while he himself reached the mouth of Shoal river. He ascended this river, passed through Swan lake, and ascended Swan river for 44 miles to Swan River house, on the north bank of the river, which would place it near the north line of Tp. 39 in lat, 52° 24′ 5″ N. The Hudson's

Bay Company also had a post in the immediate vicinity. Horses were then in common use on the Swan River valley, for after stopping a day at this post, he and Mr. Grant started on horseback up the valley on a trail which ran for most of the distance along the north side of the river. On the second day they crossed the Swan river to the south side, and rode 6 miles to a house kept by one Belleau in a "hammock of Pines" on the bank of Snake creek, almost on the Second Initial Meridian, about 6 miles north of Fort Pelly. From here he turned southward, and continued his survey past the post of the Hudson's Bay Company at the Elbow of the Assimiboine river to the house of Cuthbert Grant, which was situated in Tp. 28, Range 31, and south-west of the present village of Runnymede, on the Canadian Northern railway.

Here he remained till October 14, when he returned to Belleau's house on Snake creek, in order, if possible, to obtain guides to take him up the Swan river, across the watershed to Red Deer river, and thence around to the headwaters of the Assiniboine river. From this date to November 28 his journal was lost, but he states, "I surveyed the Stone Indian (Assiniboine) river upword and its sources, and the Red Deer river and its sources, and from thence returned to the house of Mr. Cuthbert Grant, at the Brooks, on the Stone Indian river."

He, however, gives traverses worked out by latitude and departure which show his course to have been from Belleau's house to the upper house on Red Deer river in lat, 52° 47' 44' N. From here he turned south-westward, and continued his survey to the "upper house on the Stone Indian river," afterwards known as Alexandria, where Daniel Harmon spent five years of his life in the west, from 1800 to 1805, and which is said by him to have been "built on a small rise of ground on the bank of the Assiniboine, that separated it from a beautiful prairie about 2 miles long and from 1 to 4 broad, which is as level as the floor of a house." At a little distance behind the post are small groves of birch, poplar, aspin, and pine. From Alexandria he travelled down the river to the Elbow, and thence to Cuthbert Grant's house. Thence he continued sonthward to Thorburn's house on the Qu'apple river, a few miles above its mouth, in lat, 50° 28' 57", and McDonald's house, $1\frac{1}{2}$ mile above the mouth of the Souris river.

The winter had now set in, when travelling on the open plains was unpleasant and dangerous, but Thompson was anxious to find out the exact positions of those Indian villages on the Missouri, where the people lived by the cultivation of corn as well as by hunting buffalo, and personal inconvenience and danger were not to be considered when compared with the satisfaction of this craving for knowledge. Besides this, some of the Indians might be induced to establish a regular trade with the North-West Company. So on November 28, 1797, he left McDonald's (Assiniboine) house with nine men, a few horses, and thirty dogs, and started south-westward across the plain. On December 7 he

reached Old Ash House on the Souris river, "settled two years ago, and abandoned the following spring."

Having been unable to procure a guide here, he himself assumed the head, and, going by Turtle mountain, again reached the Souris or Mouse river, which he followed up to the "bight," whence he crossed the plains, a distance of 37 miles, to the Missouri river, reaching it on December 29 at a point 6 miles above the upper of the Mandan villages. These villages are stated to have been five in number, and contained in all 318 houses and seven tents, inhabited by Mandan and Willow Indians in about equal numbers. The number of the Willow Indians in another place in his notes (there called Fall Indians) is placed at 2200 to 2500. He remained at these villages till January 10, trying to induce the Indians to come north to trade, but with very little success, as they were afraid of the Sioux. While here he wrote down a vocabulary of the Mandan language, containing about 375 words.

On January 10, 1798, he left the villages, but being delayed by severe storms, it was the 24th before he reached the Souris river, and February 3 when he arrived at McDonald's house at the mouth of the Souris river. At Souris river post he remained till February 25, 1798, not to rest and enjoy himself after the hardships of his journey, but to make up his notes and plans and prepare for a longer trip, this time on foot, to connect the waters of the Red and Mississippi rivers, and thence onward to Lake Superior, a trip which his companion ridiculed as being impossible to accomplish before the advent of summer. On the above date he started out on foot with a dog-team, and followed the course of the Assiniboine eastward to its mouth, making, as he always did, a survey of his route, passing on his way Pine fort and Poplar house, both of which had been abandoned, and some houses a little below the Meadow Portage to Lake Manito Bab.

On March 7 he reached the forks of the Assiniboine and Red rivers at the present city of Winnipeg, though no mention is made of any habitation there at the time. Travelling on the ice, he turned up the latter stream, and on the second day reached Cheboillez's old house of the North-West Company, a quarter of a mile up Rat creek above its mouth, the latitude of which was 49° 33' 58" N., which would be a few miles west of Niverville on the Emerson branch of the C.P.R.

On March 14 he crossed the boundary-line into the United States, and reached the house of Mr. Charles Cheboillez at the mouth of Summerberry or Pembina river in lat. 48° 58' 29" N., at the present town of Pembina in North Dakota. After staying here for a week he continued up Red river, passing the house of the North-West Company kept by Mr. Roi, at the mouth of Salt river, also in North Dakota, to the mouth of Red Lake river, which he ascended to the mouth of Clear river, where there was a North-West Company's house kept by Baptiste Cadotte, which he places in lat. 47° 54' 21" N., close to the present site

of Red Lake falls. He reached this house on March 24, and at once endeavoured to proceed eastward on foot, but was obliged to return and wait for the breaking up of the ice, as "the snow thawing made the open country like a lake of open water."

On April 9 he again started from Cadotte's house, but this time in a canoe with three men, and ascended Clear river for six days, when he carried across to Red Lake river, which he ascended to Red lake, reaching it at a point in lat. 47° 58' 15" N. Two miles to the south was an old house once occupied by Mr. Cadotte. After traversing the south shore of Red lake for a considerable distance eastward, he turned southward, and at a point in lat, 47° 53' 42" N. crossed a carrying-place 6 miles long, after which he wound his way through small lakes and brooks, and walked over short portages till, on April 27, he arrived at Turtle lake, from which flows "Turtle brook," which he states to be the source of the Mississippi, since it is from here that the river takes the most direct course to the sea. Thus, to this indefatigable but hitherto almost unknown geographer belongs the honour of discovering the head waters of this great river, about whose source there has been almost as much discussion as about that of the Nile itself. His course is well laid down on his great "Map of the North-West Territory of the Province of Canada, made for the North-West Company in 1813-1814," drawn on a scale of about 15 miles to an inch, and now in the possession of the Government of the Province of Ontario.

An excellent account of the early expeditions to the headwaters of the Mississippi is given by Mr. N. H. Winchell, in his Historical Introduction in the Final Report on the "Geology of Minnesota," 1884. In speaking of Lieut. Pike's journey to Red Cedar (Cass) lake in 1806, he there states that, "Mr. Thompson's maps and papers nover having been published, Lieut. Pike is to be accredited with the first authenticated examination of the Mississippi valley from the St. Francis river to Red Cedar lake." The first man who is stated to have travelled through the country north of Red Cedar lake was J. C. Beltrami, an Italian gentleman, who accompanied Major Long's expedition as far as Pembina. He ascended Bloody (Red) lake river, and thence followed Thompson's route to Turtle lake, whence he descended the Mississippi to its mouth. This was in the summer of 1823, nine years after Thompson had recorded his discoveries on the above-mentioned map, and twenty-five years after he had made the survey of his course.

From Turtle lake, Thompson descended Turtle brook to Red Cedar (Cass) lake, on which there was a North-West Company's house, kept by Mr. John Sayer, which he places in lat. $47^{\circ} 27^{\circ} 56^{\circ}$, long. 95° Remaining here from April 29 to May 3, he again embarked, and struck across to the Mississippi river, down which he travelled, through Winnipegoosis lake, to the south of Sand Lake river, where he left the main stream and turned up Sand Lake river to Sand lake, on which was

a house belonging to the North-West Company, south 14° , east 14 mile from the head of the river, and in lat. $56^\circ 46' 39.''$ From this house he crossed the lake to the mouth of Savannah brook, which he followed up to the Savannah carrying-place, a deep bog 4 miles across. Crossing this portage to a small creek that flows into St. Louis river, he descended the latter stream to Fond du Lac house, in lat. $46^\circ 44' 2,'' 21$ miles up the river from Lake Superior. He reached this post on May 10, two months and eighteen days after leaving the mouth of the Souris river. From here he surveyed the south shore of Lake Superior, arriving at the falls of Ste. Marie on May 28.

On June 1 he left Sault Ste. Marie in a light canoe with eleven men in company with Messrs, McKenzie, McLeod, and Stuart, and reached Grand portage on the 7th, where he remained till July 14. The time was a busy one at this the central post of the company, and in his journal he gives a very interesting account of the men who were almost daily arriving from and departing for many widely separated points throughout the west. Since he had left here one year before, he had been on a continuous journey of survey and exploration of unexplored country, and his survey, approximately 4000 miles long, made in that time is a record that has rarely been equalled. From that time, year after year, he continued his survey throughout the northern portions of the North American continent, travelling in canoes, on horseback, or on foot, as occasion offered.

In addition to the surveys enumerated above, he re-surveyed the Saskatchewan river from its mouth to its source, and, east of the Rocky mountains, he also made surveys of the Bow and South Saskatchewan river; Churchill river down to South Indian lake; Athabasca river from its source to its mouth; Peace river from Fort St. John down to its mouth; Clearwater river, Beaver river, and the whole or parts of Lakes Athabasca, Lesser Slave, La Biche, Winnepeg, etc.

In 1807, he crossed the Rocky mountains by the Saskatchewan pass into what is now the province of British Columbia, and ascended the Columbia river to its source, where he built a trading post and spent the winter. From that time onwards until 1812, much of his time was spent in British Columbia and the adjoining states of Washington, Idaho, Montana, and Oregon. During these years he surveyed the Columbia river from its source to its mouth, the Kootenay river, parts of Canoc, Pend d'Oreille, Clark's fork, and Lewis rivers, Flathead lake, and many other smaller rivers and lakes, in all covering many thousands of miles of new and previously unexplored country.

In 1811, when he reached the mouth of the Columbia river, he wrote as follows, "Thus I have fully completed the survey of this part of North America from sea to sea, and by almost innumerable astronomical observations have determined the positions of the mountains, lakes, and rivers, and other remarkable places on the northern part of

this continent. The maps of all these surveys have been drawn, and they are laid down in geographical position. This work has occupied me for twenty-seven years."

These surveys were not merely rough sketches sufficient to give some idea of the general character of the country, but they were careful traverses made by a master in the art, short courses being taken with a magnetic compass, the variation of which was constantly checked; distances carefully estimated by the time taken to travel them, and the whole checked by numerous astronomical observations for latitude and longitude.

It has been my fortune to follow Thompson's courses for thousands of miles through this western country, and to take astronomical observations on the same places where he took them, and it is impossible for me to speak too highly of the general excellence of these surveys and observations. For three-quarters of a century Thompson's map was the standard of North-Western Canada, and even yet some parts of it have not been superseded.

In 1812, after having spent twenty-eight years in the wilderness of Western America, but at the same time being only forty-two years of age, Thompson retired from the service of the North-West Company and settled at Terrebonne, in Lower Canada (Quebec), where for a couple of years he was engaged in completing his great map of the North-West Territory which for years hung in the headquarters of the North-West Company at Fort William, and is now in possession of the Province of Ontario.

In 1816, this boy from a charity school in London, who had educated himself as a surveyor in the forests and on the plains and mountains of the west, was appointed by the Government of Great Britain as its astronomer and surveyor to determine and define the boundary-line between the United States and British North America (Canada) under the Treaty of Ghent. The years from 1816 to 1825 were occupied in performing this great international survey, and the maps which he made are still and will always continue to be the ultimate authority on this long line dividing two nations, extending from the state of Maine to the north-west angle of Lake of the Woods.

His last years were spent either in Glengarry county, Ontario, or in Longueil, opposite Montreal, where he died on February 10, 1857, at the ripe old age of nearly eighty-seven years. His wife, a child of the Western country, whom he married at Isle a la Crosse, on the Churchill river, survived him by less than three months, dying on May 7 of the same year.

Thompson's work must not be confused with that accomplished by ordinary explorers, or even with that of many of the clerks of the fur companies who have written journals and have given us excellent accounts of the new countries through which they travelled. Their

work was descriptive and general, his was detailed and exact, so that wherever he went others could follow him. They described small portions of the country, he learned of the physical features of all the vast country through which he travelled, and grouped these features together on a map in one harmonious whole, so that not only could any individual course or route of his be followed, but the relations of these courses to each other, their distances from each other and from any other place on the surface of the Earth was known for all time to come.

Dr. J. J. Bigsby, the naturalist of the International Boundary Commission, thus speaks of his first meeting with David Thompson in Mr. McGillivary's home in Montreal about the year 1817. "A singularlooking person of about fifty. He was plainly dressed, quiet, and observant. His figure was short and compact, and his black hair was worn long all around, and cut square, as if by one stroke of the shears just above the eyebrows. His complexion was of the gardener's ruddy brown, while the expression of deeply furrowed features was friendly and intelligent, but his cut, short nose gave him an odd look. His speech betrayed the Welshman.

"No living person possesses a tithe of his information respecting the Hudson's bay countries, which from 1793 to 1820 he was constantly traversing. Never mind his Bunyan-like face and cropped hair; he has a very powerful mind, and a singular faculty of picture-making. He can create a wilderness and people it with warring savages, or climb the Rocky mountains with you in a snowstorm, so clearly and palpably, that only shut your eyes and you hear the crack of the rifle, or feel the snow-flakes on your checks as he talks.

"Mr. Thompson was a firm Churchman, while most of our men were Roman Catholics. Many a time have I seen these uneducated Canadians most attentively and thankfully listen, as they sat upon some bank of shingle, to Mr. Thompson, while he read to them in most extraordinary pronounced French, three chapters out of the Old Testament, and as many out of the New, adding such explanations as seemed to him suitable."

He never used alcoholic liquors, and during the time that he was in control of the fur trade west of the Rocky mountains, and while most of the posts kept by the fur traders were merely bar-rooms of the very lowest type, where the Indians were encouraged in drunkenness and debauchery of every kind, no alcoholic liquor was allowed to be brought to any post under his charge. Both morally and scientifically, he was a man of the very highest type. As a discoverer and explorer of new continental lands, he stands in the highest rank.

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