

SIR HENRY LEFROY - 1817-1890



The following biography of Sir Henry Lefroy was written by Dr. Andrew Thomson as part of a continuing series of biographic sketches on previous Directors

John Henry Lefroy was born at Ashe, Hampshire, England, January 28, 1817, the son of Rector J.H.G. Lefroy, being the sixth of eleven children. He was only six years old when his father died. Soon after, the family moved to Ewshott and in 1826 he first went to school at Alton. In later life Lefroy wrote that the school at Alton was a bad school, so bad that some traits of it would seem hardly credible: "The master was hardly a gentleman but ground Latin grammar into us very well". Lefroy's mother moved him in 1828 to a school at Richmond where Lefroy learned Greek, but little else. In January, Lefroy passed the entrance examination to the Royal Military Academy where he wrote that "swearing and abominable language prevailed to a frightful degree and at the time the moral state of the academy was very shocking". Lefroy graduated from the academy in 1831 and for a few years was stationed at Woolwich before he was finally promoted to 2nd Lieutenant and posted to Chatham.

At Chatham, Lefroy was able to secure professional instruction with the Engineer Officers, which was rarely available to Artillery Officers such as himself. However his lack of science and mathematics when he arrived at Chatham led Lefroy and another junior officer to suggest the establishment of the Royal Artillery Institution to provide adequate instruction. Starting in a small way the Institution grew slowly. However when Lefroy finally returned from his position in Canada he was appointed Secretary of the Institution and securing a large government grant a new building for the Institution was opened in 1854.

In the 1830's the imagination of the scientific world was attracted to terrestrial magnetism in about the same way as pollution is attracting scientific and popular attention today. Resulting from this popular interest, the British Government was approached by the Royal Society, the British Association for the Advancement of Science and by German scientists, to establish magnetic observatories around the world. The British Government agreed with the proposal and selected sites for five magnetic observatories to be located at or in St. Helena, Cape of Good Hope, Van Diemens Land (Tasmania), Canada and India. Col. Edward Sabine was appointed Superintendent of all stations 1839 to 1853.

John Henry Lefroy was one of the specially selected officers to be sent to Prof. Lloyd of Dublin University for instruction before proceeding to a magnetic observatory. Lefroy was appointed to the St. Helena Observatory and after a long devious voyage he arrived at St. James Bay, St. Helena on January 31, 1840. He remained at St. Helena until February 1842 setting up the observatory and subsequently taking observations. Lefroy was present at the day long disinterment of the body of the great Napoleon Bonaparte and he has recorded that the body was perfectly preserved with the features distinguishable and the dress as unimpaired as when he was buried.

In August 1841, Lefroy was offered the Observatory in Canada and together with it the survey of Western Canada. Landing in England on April 4, 1842, he spent fourteen weeks busily preparing for the magnetic

survey. Lefroy crossed the Atlantic in six weeks taking magnetic observations every day. He took a three week visit to the Eastern United States, meeting its leading scientists including Agassiz, Dana and Joseph Henry - also President Jackson. On subsequent occasions Lefroy met, at various times, five American Presidents. Lefroy reached Toronto and then travelled on to Montreal arriving on April 16, 1843 after a rough jolting journey from Toronto in an open country waggon. The effects of the jolting on the instruments was disastrous and the letters from England with introductions to the Hudson's Bay Company and important instrumental equipment had not arrived when Lefroy started up the Ottawa River on May 1st.

Space does not permit giving the exciting details of what Lefroy referred to as the second act of his humble part on the theatre of life. With one European assistant, he travelled from Montreal through Western Canada reaching Fort Good Hope lat. 66°16' on May 20, 1844, returning to Toronto November 18, 1844 and Montreal a week later. A few places and dates are given here to indicate Lefroy's route:

May 20, 1843	-	S. Ste. Marie
June 28, 1843	-	Fort Garry
July 23, 1843	-	York Factory
Aug. 12, 1843	-	Norway House
Aug. 20, 1843	-	The Pas
Sep. 23, 1843)	-	Fort Chipewyan
Mar. 25, 1844)	-	
Mar. 26, 1844)	-	Fort Simpson
May 25, 1844)	-	
May 29, 1844	-	Fort Good Hope
June 30, 1844	-	Fort Chipewyan
Aug. 19, 1844	-	Edmonton
Sep. 6, 1844	-	Norway House
Oct. 10, 1844	-	Fort William

On the long stay at Chipewyan September 23, 1843 to March 25, 1844, he built a temporary observatory and when finished on October 15th observations were commenced. These were taken hourly, day and night, by Lefroy and Corporal Henry and on all occasions of magnetic disturbance were taken at intervals of about two minutes uninterrupted for hours at a time. Until about 1910, Lefroy's continuous and painstaking method of observation was universally recognized as the ideal standard for all work of this kind. During the survey through Western Canada, he travelled 5,475 miles and made observations at 314 stations en route.

A very interesting account of Lefroy's travels is given in "In Search of the Magnetic North" being intimate letters of Lefroy to his mother while making the survey. The letters were collated and edited by George F. Stanley and published by MacMillan Canada 1955.

On his return to Toronto in November 1844, Lieutenant Lefroy found the work at the Observatory "terribly in arrears and the buildings

in very bad shape". A year later, on November 21, 1845, Lefroy was able to write to Lieut. Col. Sabine that he was transmitting the magnetical returns for the last two months. In addition to Lefroy's extraordinary efforts the N.C. officers had exerted themselves to the full to clear off the accumulation of arrears which had not been caused by any deficiency on their part.

On April 16, 1846, Lieut. Lefroy was married to Emily Robinson and the happy couple left for England. While there Sabine, who was "hot" on introducing photographic recording of magnetic records, insisted on Lefroy learning photography from a teacher who was quite incompetent. Lefroy's life, on his return to Toronto November 21, 1846, was made miserable for the two following years with his experiments on photographic registration.

For his work in St. Helena and Canada, Lefroy was elected a Fellow of the Royal Society on June 9, 1848. About the same time a dear friend of Lefroy's, Augustus Fraser, died leaving Lefroy a legacy of £4,000.

Lefroy's heavy routine work at the Observatory combined with his efforts to reduce photographic registration to a certainly brought about a general impairment of his health and in 1850 his physicians ordered him to take leave in England. Also in 1850, the Ordnance Department decided to discontinue and dismantle the Toronto Observatory and recall Captain Lefroy to England on completion of his term of duty in Canada.

After his convalescence Captain Lefroy, on his return to Toronto, strongly recommended that the Canadian Government continue the Observatory. The Canadian Institute, which was an important general science organization in Toronto of which Lefroy was Vice-President, also memorialized the Government and it was finally agreed that the Observatory would be taken over by the Provincial Government on March 31, 1853. The Government made a grant of £2,000 to replace the wooden Observatory building, located on the site of the present Galbraith Engineering Building, by a stone building. This stone building was subsequently moved stone by stone to its present site south of Hart House.

Lefroy's departure for England was greatly regretted by Toronto's leading citizens as can be judged by their accounts at this time of his character and standing in the community -- "Lefroy was a man of singularly attractive personality --- A fellow of the Royal Society, he was at the same time, a man of simple piety --- Few gentlemen ever visited this country who acquired so general esteem as Mr. Lefroy; his gentlemanly bearing and affable manners endeared him to us all".

On his return to England, Lefroy was appointed "scientific adviser on artillery subjects" and wrote "Handbook of Field Artillery for the use of Officers" which was a textbook for Artillery Officers until 1884. In 1855 the entire administration of the British War Office was placed on a new basis. The Board of Ordnance, which had existed from Henry VIII's

time, was abolished and although Lefroy's title was changed his duties remained the same as adviser on artillery subjects. His most important recommendation was to have the barrels of all weapons, from rifles to cannons, rifled instead of having a smooth bore.

On October 26, 1855, the Minister of War ordered Lefroy to proceed immediately to Constantinople to improve hospital arrangements in the Crimea for wounded soldiers in the field and during their journey home. He made the acquaintance of Florence Nightingale, with whom he enjoyed a life-long friendship.

Lefroy continued in the War Office until his retirement on April 1, 1870 with the honorary rank of Major General. His wide range of activities, from hospital reorganization in Crimea in 1855 until 1870, included membership in the Royal Commission on the Defence of the United Kingdom 1859, and Secretary and later President of the Ordnance Select Committee. He was finally appointed Director-General of ordnance, but when he failed to secure the changes in the administration of the army that he desired, he resigned, his last service in the War Office being as a member of a committee to consider the proposed submarine defence of certain harbours.

In March 1871, Lefroy was appointed Governor and Commander-in-Chief of Bermuda. While Governor he wrote a history of the discovery and early settlement of the Bermudas in two bulky volumes and resumed magnetic and meteorological observations in the colony. He was interested in the social welfare of Bermuda and its scientific, literary and social activities. He had much sympathy with the negro population and was often spoken of as the "Negro Governor" by those who despised this race. Altogether Lefroy greatly enjoyed his six year term of service in Bermuda.

He returned to England by way of New York, Washington, Boston and Canada, visiting many friends and distinguished Americans including Prof. Joseph Henry at Washington and at Boston Prof. Asa Gray, Longfellow, Russell Lowell and many scientific men. While at Niagara Falls he heard that the Queen had conferred on him the honour of knighthood (K.C.M.G). After spending three weeks in Canada, Sir Henry and Lady Lefroy sailed from Quebec on July 7, 1880.

Sir Henry Lefroy had been greatly weakened by an illness in 1877 while in Bermuda and had never fully recovered. He had planned, after his return to England, to spend the winter in Malta. However, shortly after his arrival in England he received, unexpected and unsought, an offer of a temporary appointment as Governor of Tasmania. Sir Henry gladly accepted and on October 21, 1880 was able to take up residence in Government House, Tasmania, which was so much grander and more comfortable than Government House, Bermuda. He was enthusiastically received by the people of Tasmania and enjoyed the beauty and novelty of Tasmanian scenery. His interest in terrestrial magnetism continued and he wrote a paper published by the Royal Society on "The Magnetic Variation at Hobart".

Sir Henry Lefroy returned to England in May 1882 and lived in London for three years. He wrote his "Diary of a Magnetic Survey of a Portion of the Dominion of Canada" at this time which was published in 1883. Sabine's maps of Lefroy's magnetic survey published in 1846 and 1872, had shown only smoothed values for Lefroy's observations which was not satisfactory to Lefroy as the latter rightly considered his determinations of the magnetic values at each station were accurate.

Sir Henry visited Canada in August and September 1884 as President of the Geographical Section of the British Association for the Advancement of Science, and gave his Presidential address at Montreal. He received the LL.D degree from McGill University and wrote to his sister that he had "at last the right to a cap and gown, the object of my ambition". He travelled as far west as Winnipeg, and on his return visited Toronto where he saw his younger son, A.H.F. Lefroy K.C. (1852-1919), married. This son practiced law in Toronto, became a leading authority on constitutional law and was a member of the law faculty of the University of Toronto from 1900 until his death. Sir Henry Lefroy's name is preserved in Canada by having a mountain in the Rockies named after him and a village in Simcoe County, Ontario.

Sir Henry and Lady Lefroy returned to London from Canada, but a severe attack of congestion of the lungs forced Sir Henry to leave London in the autumn of 1885 and settle in Cornwall where he died on April 11, 1890. He was buried near his birthplace at Crowall, Hampshire beside the body of his first wife. He was twice married. As already noted his first wife was Emily Robinson of Toronto and his second wife Charlotte Anne, widow of Colonel Armine Mountain, who with two sons and two daughters survived Sir Henry.

Sir Henry Lefroy was a good scientist and an incredibly hard worker. As a friend wrote of him "he contrived to find for himself ceaseless work such as few men venture to undertake". He wrote eight books and over eighty papers. These books and papers showed high scientific attainments, but these were not the particular qualities which endeared him to all who came within the range of his charm. His clear blue eyes and winning smile invited confidence and admiration. Sir Henry was a devout member of the Anglican Church and a stalwart kindly christian gentleman.