

ander Skakel, afterwards headmaster of the Royal Grammar School, in little St. James street. Skakel was a determined Scotchman, and like many a schoolmaster of his day and generation, was thoroughly acquainted with the art of flogging; but he was a good classical scholar, and trained his scholars well. Under him young Logan seems to have progressed satisfactorily, and to have acquired, among other things, a capacity for thrashing bigger boys than himself. Whether he had learned all that his Montreal master had to teach him we are unable to say, but at any rate, in 1814, his father determined to send him to the High School at Edinburgh, which was then in the zenith of its reputation. Here he made good progress, and became a student in the University, and during the session of 1816-'17 attended the classes in logic, chemistry, and mathematics. During this one session at college he studied with great diligence, and obtained the first prize in mathematics, with "the goodwill of all the competitors," and here young Logan's university career came to an end. In 1818 he entered the mercantile office of his uncle, Mr. Hart Logan, of London, and after a time became a partner in the firm. After returning to Canada for a short time, where his attention was drawn to the geological characteristics of this country, he again crossed the Atlantic in 1829, and took up his residence in South Wales, Swansea, as manager of copper smelting and coal mining operations, in which his uncle was interested; but he left this situation soon after the death of the latter in 1838. During his seven years' residence in South Wales, Mr. Logan devoted himself to the study of the coal fields of that region; and his minute and accurate maps and sections were adopted by the ordnance geological survey, and published by the Government, under Sir Henry de la Bèche's superintendence. He was the first to demonstrate that the stratum of under clay, as it is called, which always underlies coal beds, was the soil on which the coal vegetation grew. In 1841 Sir William visited the coal fields of Pennsylvania and Nova Scotia, and communicated several valuable memoirs on the subject to the Geological Society of London. At this time he began an examination of the older palæozoic rocks of Canada; and the celebrated geological survey of Canada having been commenced, he was appointed its head, a trust which sufficiently indicated the high opinion entertained of his abilities and attainments by the government. This preference was,

however, nothing more than he was entitled to, considering the immense sacrifice which he made to remain in, and confine his studies to, a country endeared to him by all the ties of birth and station. It is a well known fact that he refused several offers from other governments for his services, including India, where a princely fortune was to be made by the geologist. In the course of his investigations upon the rocks of the Eastern Townships, which are the continuation of those of New England, Sir William showed that, so far from being, as had been supposed, primitive azoic rocks, they were altered and crystalized palæozoic strata; a fact which, although suspected, had not hitherto been demonstrated, and which was the key to the geology of North-Eastern America. He found the rocks, which form the Laurentide and Adirondack mountains, previously regarded as unstratified, to be disturbed and altered sedimentary deposits of vast thickness, equal perhaps to all the hitherto known stratified rocks of the earth's crust. In 1851 Sir William represented Canada in the Great Exhibition in London; and had charge of the Canadian geological collection which had been made by himself or under his immediate direction. It was exhibited with great skill and judgment, displaying to the best advantage the mineral resources of Canada. The labour of arranging the specimens was very great, and so enthusiastic was he that frequently he sallied out at eight or ten in the morning, and would work for twelve hours without waiting to take refreshment. He had the satisfaction of knowing that his countrymen appreciated his services, and medals in profusion were allotted to Canada. He was also a commissioner from Canada at the Industrial Exhibition at Paris in 1855, when he received from the imperial commission the grand gold medal of honour, and was created a Knight of the Legion of Honour. He received the honour of knighthood from the Queen's hands, in 1856; and in the same year was awarded by the Geological Society, of which he had long been a member, the Wollaston Palladium medal, for his pre-eminent services in geology. Sir William Logan was not only a Fellow of the Royal Society of London (1851), the Royal Society of Edinburgh (1861), and the Geological Societies of London (1837) and Edinburgh (1867), but also a member of the Geological Societies of France (1842) and Belgium (1847), of the Imperial Leopoldo-Carolinian Academy of Germany (1857), the