

The progress of some of the principal cities and towns, between the years 1881 and 1889, is indicated in the following table :

NAME.	POPULATION.		ASSESSMENT.	
	1881.	1889.	1881.	1889.
Montreal	140,747	202,000	\$ 180,273,910	110,000,000
Toronto	77,034	172,463	56,286,339	137,230,778
Quebec	62,446	65,000		16,270,500
St. John, N. B.	26,127	* 50,000	15,624,000	* 24,058,900
Hamilton	35,359	44,799	15,650,000	21,573,100
Ottawa	25,600	44,000	10,198,530	17,145,350
Halifax	35,100	47,000	14,468,520	21,562,405
London	19,725	26,786	10,194,919	13,443,492
Winnipeg	6,240	21,328	9,195,435	18,607,860
Victoria, B. C.	5,935	20,000		8,986,000
Kingston	14,091	18,284		7,780,270
Vancouver		14,000		9,500,000
Charlottetown	11,485	13,000	2,500,280	3,640,120
Guelph	10,095	10,413	2,899,060	3,234,140
St. Thomas	9,675	10,408	2,541,925	3,748,112
St. Catharines	9,495	10,095	4,060,510	4,590,305
Windsor, Ont.	6,377	10,058	1,945,400	4,221,970

† Real estate only. * 1890.

Education which, by the provisions of the British North America Act, is placed under the control of the Provincial Government, receives a large share of attention, and the expenditure thereon forms an important item in the annual outlay. The number of pupils attending the Public, High, Normal and Model Schools is fully one million; the number of teachers exceeds 21,000 and the annual expenditure is about \$8,500,000. Higher education for men and women is afforded very efficiently in institutions of acknowledged excellence, in which close upon \$10,000,000 are invested, with an annual income of upwards of \$656,000, providing for the education of over 7,000 students.

The Geological Survey.

Connected with the machinery by which the lands of the Dominion are managed is a branch of the public service whose special work is to make a study of the mineral wealth of the country.

The Geological Survey of Canada was instituted by the provincial government in 1843, in consequence of petitions presented by the Natural Society of Montreal and the Literary and Historical Society of Quebec. Previous to this date, a number of papers having reference to local points in the geology of the Provinces of Quebec and Ontario had appeared, but no extended systematic work had been undertaken, though the necessity of a geological survey had several years before this time rendered itself apparent to many of the more intelligent people of the country. As early as 1832, Dr. Rae presented a petition praying for pecuniary assistance to prosecute a geological and statistical survey of

the Province of Upper Canada—a petition which was not even considered by the Committee of Supply to which it had been referred. Mr., afterwards Sir, William Logan, on the recommendations of some of the most eminent geologists of the day, was selected to conduct the geological investigations for which provision had been made, and in 1843 assumed the position of provincial geologist. From this small beginning, the survey has continued to increase in importance and usefulness to the present time, and in the course of its operations some of the greatest additions to the progress of modern geology have been made. After Confederation the field of activity of the geological survey became co-extensive with that of the new Dominion. Prof. Sedgwick had designated the survey, as originally undertaken, a "Herculean task," but that now involved by the addition of half a continent to the two provinces of old Canada, Sir W. Logan, in failing health, found himself unable to undertake, and in 1869 resigned in favor of the present director, Dr. A. R. C. Selwyn. Up to the date of Sir W. Logan's resignation, about 35 annual reports and other publications were issued, making in all over 4,000 pages, giving the results of explorations and reports on minerals, ores and fossil remains met with in the course of the work. Of these publications the most important is the *Geology of Canada*, a volume of 983 pages which summarizes the results obtained by the survey to 1863. In 1881 the offices and museum of the geological survey were removed from Montreal, where they had been situated from the inception of the work, to Ottawa. There are now arranged and displayed in the museum thousands of geological specimens, consisting of rocks, ores and fossils. There are also considerable collections of shells, plants, insects, an ethnological collection and the nucleus of a collection of the birds and mammals of Canada. The survey is also supplied with a library of scientific reference works and a well equipped chemical laboratory.

In the more thickly populated eastern portions of Canada the work of the geological survey approximates in character to that of similar surveys in Britain and Europe; but, even here, a larger portion of the time of the geologist or his assistants is necessarily occupied in correcting and adding to the maps of the districts in which he may be at work, a circumstance rendered necessary by the want of really accurate topographical surveys. In the newer province and in the uncultivated northern and western portions of the continent, however, the geologist must often be as well the pioneer, and is frequently obliged to carry out running surveys and construct reconnaissance maps of vast tracts of country through which no instrumentally measured lines have as yet been carried. While not forgetting that his more special work is geological, the explorer must also endeavor to bring back with him such observations on the meteorology, botany, zoology and even details as to the number and character of the natives inhabiting these imperfectly known regions as may be of use in extending our knowledge of them. It will easily be understood from this explanation that geological work in such new districts is replete with interest and may frequently result in bringing