Prize Essay.

NOVA SCOTIA

AND HER RESOURCES.

By THOMAS F. KNIGHT.

"*Vires acquirit eundo.*"

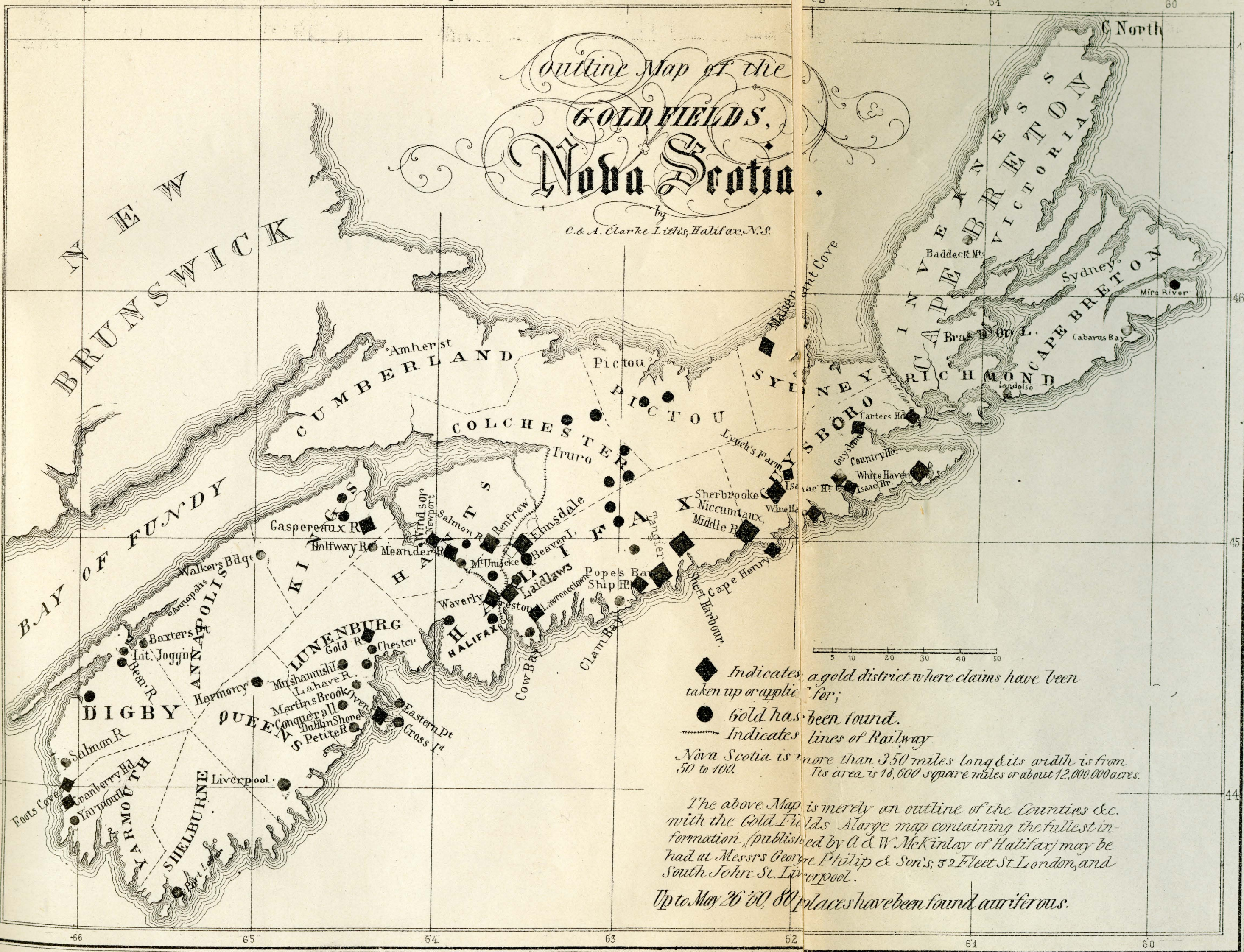
HALIFAX, N. S.

A. & W. MACKINLAY, GRANVILLE STREET.

LONDON:

SAMPSON LOW, SON AND CO.

1862.


Outline Map of the
GOLD FIELDS,
Nova Scotia.
by
C. & A. Clarke Liths, Halifax, N.S.
NEW BRUNSWICK
BAY OF FUNDY
CUMBERLAND
COLCHESTER
PICTOU
SYDNEY
GUYSBORO
HALIFAX
HANTS
KINGS
ANNAPOLIS
DIGBY
YARMOUTH
SHELBURNE
QUEENS
LUNENBURG
CAPE BRETON
INVERNESS
VICTORIA
RICHMOND
C North
Amherst
Pictou
Truro
Sydney
Mire River
Cabarus Bay
Baddeck Mts
Bras D'Or L.
Landoise
Carters Hd
Country Hr.
White Haven
Isaac Hr.
Lynch's Farm
Sherbrooke
Wine Hr.
Niccumtaux
Middle R.
Cape Henry
Sheet Harbour
Tangier
Popes Har.
Ship Hr.
Clam Bay
Cow Bay
Lawrencetown
Laidlaws
Beaver L.
Elmsdale
Renfrew
Salmon R.
Windsor
Newport
Meander R.
Mc Unicke
Waverly
Preston
Gaspereaux R.
Halfway R.
Walkers Bdge
Annapolis
Baxters Ct
Lit. Joggin
Bear R.
Harmony
Gold R.
Chester
Mushamush L.
Lahave R.
Martins Brook
Ovens
Conquerall
Dublin Shore
S. Petite R.
Eastern Pt
Cross Id
Liverpool
Salmon R.
Cranberry Hd
Yarmouth
Foots Cove
Port Latour
5 10 20 30 40 50
Indicates a gold district where claims have been taken up or applied for;
Gold has been found.
Indicates lines of Railway.
Nova Scotia is more than 350 miles long & its width is from 50 to 100. Its area is 18,600 square miles or about 12,000,000 acres.
The above Map is merely an outline of the Counties &c. with the Gold Fields. A large map containing the fullest information (published by A & W. McKinlay of Halifax) may be had at Messrs George Philip & Son's, 32 Fleet St. London, and South John St. Liverpool.
Up to May 26 '60, 80 places have been found auriferous.
66
65
64
63
62
61
60
47
46
45
44

196

Prize Essay.

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PUBLISHED BY ORDER OF THE NOVA SCOTIA COMMISSIONERS FOR THE INTERNATIONAL EXHIBITION.

HALIFAX, N. S.
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PREFACE.

The writer conceives it to be due to those who have in the past contributed to the general stock of information relating to the Colony of Nova Scotia, to acknowledge the assistance which he has derived from their labours, in the preparation of the following pages. He has consulted Haliburton's History of Nova Scotia, Murray's North America, Martin's British Colonies, Dawson's Geography and Natural History of Nova Scotia, Acadian Geology, Agriculture; Nova Scotia as a Field for Emigration, by P. S. Hamilton, Esq.; Nova Scotia and Nova Scotians, by the Rev. George Hill, A.M.; besides other works having a remoter reference to the subject. The statistics have been obtained from official documents, and from undoubted authorities; and the author has assiduously endeavoured to make the Essay a reliable repertory of useful information pertaining to Nova Scotia and its Resources.

Halifax, May, 1862.

PRIZE ESSAY.

HALIFAX, 10th May, 1862.

SIR,—

Carefully to examine, and justly to estimate, the comparative merits of thirteen Essays that have been submitted to us by the Commissioners, we have found to be an office of considerable difficulty.

Under a deep sense of its delicacy, and of our own responsibilities, we have devoted to it as much of our time and attention as our respective engagements left at our disposal.

The difficulty that we have experienced has been much enhanced by the circumstance, that we have found the merits of several of the subjects of competition that we have postponed, so nicely balanced, in comparison with those of the Essay to which we have assigned a preference, that we are by no means certain that other minds would not have awarded the palm to some one of the former.

On the whole, however, we are of opinion, that the Essay marked with the letter C., though more voluminous than it ought to be, is better adapted than any of the others, to convey to intelligent strangers, unacquainted with our Province, useful information respecting its past and present history, its condition, resources and capabilities.

Under that impression, we have the honor to report to the Board of Provincial Commissioners for the International Exhibition, that the Essay above indicated is, in our judgment, the best that has been under consideration.

We have the honor to be,

Sir,

Your most obedient servants,

W. YOUNG,
L. M. WILKINS,
J. W. JOHNSTON

To R. G. HALIBURTON, Esq., Secretary.

CONTENTS.

NOVA SCOTIA AND HER RESOURCES.

It is the object of this Essay to describe the soil, climate, resources, and industry of Nova Scotia; to pourtray its social state, and to commend it as a most desirable field for employment of the industrious emigrant.

The writer, in submitting this essay to the Commissioners for competition, instead of the present brief introduction, included a detailed historical sketch of the Province. He now coincides in opinion with the judges, expressed by a note appended to the manuscript, that the immediate object of the treatise required no more than "a succinct account of the early discovery of Nova Scotia, and of the struggles for its possession." Even this, in the judgment of the Commissioners, would render the pamphlet too lengthy; he, therefore, has substituted a few general observations only, upon its early settlement and subjugation.

Every Colony of our extended empire has a history of its own, more or less replete with incident. Nova Scotia possesses one of even romantic interest. It is, however, so interwoven with the history of the British North American provinces generally, that our Colonial individuality has been almost unrecognized in the fatherland, although since 1713 it has permanently existed as a British colony, wholly distinct from Canada.

Unlike the more recently acquired colonies of other continents, Nova Scotia, in common with the sister provinces, claims a niche amongst the memorials of those States which were created by the intellectual impulse of the fifteenth century. It was then that the mind of Europe was awakened to the glowing subject of maritime discovery. The authenticated as well as the fabulous accounts of the riches of the Indies, stimulated this spirit of enterprise, which, though exhibiting a desire for the sudden acquisition of wealth by uncertain means, rather than by the

plodding pursuits of patient industry, was ultimately overruled by a benignant Providence, to the increased happiness of the human race.

Among the Venetians resident in England during the peaceful reign of Henry VII. was John Cabot, a scientific and experienced mariner, to whom, with his three sons, Henry—prompted by the marvellous tales of gold and silver abounding in America—granted a patent to fit out a small squadron "for the conquest, discovery and occupation of the lands beyond the Western Ocean, inhabited by heathens and infidels, and, till those times, unknown to Christians." The elder Cabot and his son, Sebastian, sailed from Bristol in the beginning of May, 1497, in a ship of their own, accompanied by three small ships of London merchants, laden with articles of traffic. On the 24th of June, they were surprised by the appearance of land, which they called Prima Vista, supposed by some writers to have been the coast of Labrador; by others, the north part of Trinity Bay, in Newfoundland; but there is sufficient authority to warrant the presumption that it was, in reality, the coast of Nova Scotia. The voyages of the Cabots were but the prelude to the enterprise of succeeding adventurers.

Seventy-two years elapsed, during which the English bestowed little attention upon their newly-discovered territory. Newfoundland, because of its valuable fisheries, was yearly visited by the ships of English merchants, of which island formal possession was taken by the Crown; but no attempt was made to colonize the continent.

The apathy of England afforded a favorable opportunity to France to extend her power on the new Continent. The Marquis de la Roche, in 1598, was sent from France to explore the country, with the object of settlement. No important step towards colonization was made, however, until Mon. De Monts, in 1603, was appointed by Henry IV. of France, Governor General of the country, extending from the 40 ° to the 54 ° of north latitude; who founded the first permanent European settlement in the north of the American continent,* on the fertile shores of the Annapolis river, which flows into the Bay of Fundy—the western boundary of Nova Scotia.

About nine years afterwards, this infant settlement was broken up by

* There is an interesting historical memorial of this event, probably executed by De Monts in commemoration of his taking possession of La Nouvelle France, in possession ot R. G. Haliburton, F.S.A., of Halifax. It was found by Judge Haliburton at Annapolis. It bears the inscription, 1606, with rude Masonic characters engraved on it. It may be considered one of the most ancient historical relics extant, of the early discoveries of those adventurous pioneers of civilization, by whom this Continent was explored.

an English Captain, sent by the colonists of Virginia, who considered the French as intruders upon British territory.

Eight years subsequent to this event, Sir Wm. Alexander, a Scottish nobleman, obtained a royal grant of the whole country denominated Acadia by the French, under the title of *Nova Scotia*. Sir William profited little by this splendid acquisition. His attempts at colonizing were unsuccessful, and were cut short by the treaty of St. Germains, by which all the settlements were restored to France.

Nova Scotia reverted to the English in 1654, during the administration of Cromwell, who dispatched an expedition under the command of Major Sedgewick, to retake the country, and restore it to the dominion of Great Britain. Efforts to people the country, and to revive the settlements which had been commenced by the French, were only begun, when the colony was again made over to France by Charles II., in exchange for the islands of St. Christopher's, Antigua, and Montserrat, in the West Indies.

The French enjoyed undisturbed possession for twenty years, when an expedition sent from Massachusetts, under Sir William Phipps, again wrested it from them. But its vicissitudes were not yet ended. Six years afterwards, it was once more restored to France by the treaty of Ryswick. War with France was shortly after declared, when the country was again conquered by the English, and *finally*, peace having been concluded between England and France on the 11th April, 1713, "all Nova Scotia, with its ancient boundaries, as also the city of Port Royal, were, by the treaty of Utrecht, ceded to Great Britain. The name of Port Royal was changed to Annapolis Royal, in honor of Queen Anne. From this period we date the beginning of permanent British rule in Nova Scotia. The city of Halifax was settled, in 1749, by the emigrants sent out with Lord Cornwallis, which then became the seat of government.

Cape Breton still remained in possession of the French, where they founded the strongly-fortified town of Louisburg. Allied with the Indians, they made frequent forays from this island upon the English settlements, local traditions of which exist in many of the older towns of the Province, where the startling and romantic adventures of their forefathers are related with glowing interest. Louisburg was twice conquered by the English. Cape Breton was finally ceded to England by the treaty of Paris, 1763, when France relinquished all claims forever to Nova Scotia, Cape Breton, Canada, and the islands in the river and Gulf of St. Lawrence.

Cape Breton was now annexed to Nova Scotia. In 1784, when the

territory was divided and another province created (New Brunswick), it was established under a separate government. In 1819 it was again annexed, and has continued to the present, a component part of the province of Nova Scotia.

Nova Scotia, thus pursuing so chequered a career, and suffering so many vicissitudes, was hindered from making any progress in population, or in the development of her resources; while the other British American Colonies were, before they had procured their independence, in a steady course of improvement. Their population increasing from a continual influx of immigrants, they had begun to assume the aspect of prosperous and well-regulated communities. With all these disadvantages, it will, however, be seen, from the following pages, that Nova Scotia has increased in an equal ratio, in every respect, with the older American States. To her natural resources, taken as a whole, the Continent affords no parallel; and she needs only energy, population, and accumulated capital, to develope her resources, and to fulfil her destiny.

CHAPTER I.

GEOLOGICAL STRUCTURE.*

Although, in describing the geological structure of the Province, it would be more strictly philosophical to begin with the surface formation and descend to the lowest, or earliest in the order of time, the writer has adopted the inverse order, conceiving it to be more intelligible; that is, to begin with the earliest substratum, as far as discoveries have yet been made, and to ascend through the successive formations which overlie each other up to the surface.

GRANITIC-METAMORPHIC DISTRICT.

The whole line of the Atlantic coast of Nova-Scotia, which is termed by Dr. Dawson "the *Granitic* Metamorphic District," consists of altered rocks, such as clay and mica slates, quartz rock, and gneiss, associated with dikes and masses of granite. These rocks are supposed to belong at least to the Silurian period, or possibly the older Azoic series, which has been recognised in Canada. It is in this portion of the Province that the recent discoveries of *gold* have been made; either contained in the quartz veins imbedded in the slate, or in small particles in the sands which have

* This Chapter is principally compiled from Dr. Dawson's Acadian Geology.

accumulated from the abrasion of the rocks by the action of the sea. The rocks of this class, with the exception of the Carboniferous, occupy the largest part of the geological area of Nova Scotia.

The *Granite*, as it occurs in this district, is a crystalline mixture of white, or more rarely flesh-colored felspar, with smoky or white quartz, and gray or black mica.

The *Gneiss* is a fine-grained granite, arranged in laminæ or layers, as if it had been a bedded rock, fused into a granitic state by heat.

The *Mica-slate* consists of quartz and plates of mica, forming a highly fissile rock, with shining surfaces, and usually of gray or silvery color. When chlorite, talc, or hornblende take the place of mica, rocks of somewhat similar character result; as talcose, chloritic, or hornblendic slates.

The *Quartzite* consists of grains of flinty sand fused together, with occasionally a little mica.

The *Clay-slate*, in this district, is common slate, usually of bluish and black colors, and varying in texture and hardness.

Between these rocks there are many intermediate forms. Granite often passes into gneiss; this into mica-slate; this into quartzite; and this into coarse or flinty slates.

The southern, or coast-side of the granitic-metamorphic group, has a general direction of S. 68 ° W.; its inland side about S. 80 ° W. Its extreme breadth at Cape Canseau—its north-eastern extremity—is about eight miles. In its extension westward, it gradually increases in width, until, at the head of the west branch of St. Mary's River, eighty miles distant from Cape Canseau, it is about thirty miles in breadth. In the western counties, it again increases in width. Its total length is two hundred and fifty miles. The general contour of this district may be described as consisting of thick bands of slate and quartzite, having a general N. E. and S. W. strike, and highly inclined. In several places, large masses of granite project through these rocks; and in their vicinity the quartz rock and clay slate are usually replaced by gneiss and mica-slate, or other rocks more highly metamorphosed than usual.

It is difficult to ascertain with accuracy the geological age of this formation—no *fossils* having been found in it. Dr. Dawson considers it to be undoubtedly older than the Carboniferous, and that there is every reason to suppose it to be older than the Devonian.

THE DEVONIAN AND UPPER SILURIAN

is the next formation, which, like the preceding group, has been only partially explored.

This district occupies some irregular patches in Cape Breton; a very irregular, hilly tract in eastern Nova Scotia, commencing at Cape Porcupine and Cape St. George, and extending towards the Stewiacke River, the long, narrow band of the Cobequid Mountains; and a belt of variable width skirting the northern side of the other metamorphic district in the western counties.

Owing to the alteration and disturbance to which its rocks have been subjected, the structure of this district is complicated, and the interior position causes it to present few good sections to the geologist. For these reasons, less attention has been devoted to it than to the carboniferous districts which overlie it, and the details of its structure are comparatively unknown. There is, however, one interesting section at Arisaig, which has been industriously explored by Rev. Professor Honeyman, and where fossils are very abundant. Associated with these rocks are found immense masses and dikes, or thick veins composed of syenite, porphyry, greenstone, compact felspar, and other igneous rocks. Some portions are of slaty structure, and other portions of it consist of shaly, sandy, and calcareous deposits, considerably hardened and much disturbed, yet retaining abundance of fossil shells, and other evidences of marine origin. In some places where it meets, and apparently unites, with the granitic group, igneous action appears to have continued, or to have recurred as late as the coal-formation period. The fossils found in these beds belong to groups of the same age with the Devonian rocks of England, and the old red sandstone of Scotland.

CARBONIFEROUS DISTRICTS.

The Carboniferous system, the rocks of which are found to rest immediately upon those of the Devonian and Silurian formations, lies north of the metamorphic district first described. It occupies a small part of the east of King's county; the north and middle of Hants; the greater part of the lowlands of Colchester; the lowlands of Cumberland, Pictou, and Sydney, and a part of Guysboro'. It occupies, in Cape Breton, much of the eastern part of Cape Breton county, and a great part of Richmond and Inverness.

These districts have been well explored by eminent geologists; among others, by Sir C. Lyell, who, in his "Travels in North America," gives a detailed account of his researches in this abundant field, in which four-fifths of the fossils are identified with European species. Sir Charles Lyell divides this system into three formations; * the middle one, com-

* Lyell's Travels, &c., Vol. 2, p. 176.

prising the productive coal measures, agreeing precisely with those of Europe in their lithologic character and organic remains; an upper one, composed of sandstone and shale, with fossil plants, but without coal; and a lower carboniferous group, chiefly made up of red sandstone and red marl, with subordinate beds of gypsum and marine limestone. Dr. Dawson gives the thickness of the upper formation as being 3000 feet; of the middle, 4000 feet, or more; and the lower or gypsiferous, 6000 feet, or more. Several localities in the carboniferous districts, offer excellent opportunities to the geologist to examine the character and relative position of the rocks, where transverse sections of them are exposed on the sea coast and river banks. The South Joggins section is well known to geologists. There is also a fine section laid open in the cliffs of the Shubenacadie, cutting through the gypsiferous strata for a distance of twenty miles.

THE NEW RED SANDSTONE.

The new red sandstone, which corresponds with the upper new red of Europe, occupies the isthmus connecting Digby Neck with the mainland, and the long valley extending from Annapolis to Minas Basin; skirts the shore of Cobequid Bay, from the mouth of the Shubenacadie to Truro; and extends along the north side of the bay, in a narrow, though continuous belt, from Truro to Moose River, and beyond that river in isolated patches as far as Cape D'Or. It consists entirely of red sandstone and red conglomerate.

The *trap* associated with the new red sandstone, forms the range of hills extending from Cape Blomidon to Brier Island; and on the opposite side of Minas Channel and Basin, several isolated patches between the Five Islands, Partridge Island, Spencer's Island and Isle Haut. In most of these localities, the trap rests on the new red sandstone. These trap rocks include basalt, greenstone, and amygdaloid. In appearance, they resemble the lava of modern volcanoes, and are similar in composition; their principal constituent mineral being *augite*, a dark-green or blackish mineral, composed of silica, lime, and magnesia. It affords an abundance of agates, jaspers, and other forms of quartz, which might be used for ornamental purposes. It also contains veins of magnetic iron ore, and copper ore.

DRIFT, DILUVIUM, OR BOULDER FORMATION.

Between the drift and the new red sandstone, there is a *hiatus* in the geology of Nova Scotia. During all those periods in which the middle and older Tertiaries, the Cretaceous, and the Oolite systems were

produced, no rocks appear to have been formed within the area of our province; or, if they were formed, they have been swept away. This remark likewise applies to an immense region, extending through New Brunswick, Canada, and the Northern States, and, in some directions, far beyond the limits of those countries. It will, therefore, be seen that those formations which include the clays and sands of the Southern States, and also of England, are entirely wanting in Nova Scotia.

The *drift* is spread over a large part of the surface of the province. It consists of clay, with stones and boulders, or of beds and mounds of gravel. This deposit marks the last change which the surface has undergone by the agency of water. The soils and subsoils of any country, as far as they consist of mineral matter, are derived from the waste of rocks which lie beneath, by the action of the air, the water, and the frost. Hence we find the soil overlying sandstone rocks to be sandy; that over shales and slates to consist, in great part, of clay; or that overlying limestone to be calcareous. In our province, however, the larger portion of surface deposit cannot be better described than by the terms employed at the head of this section, which are also applicable to the surface deposits of the greater part of the northern, temperate and arctic latitudes. On examining the materials exposed in ordinary excavations, or on the coasts and river banks, and which extend from the surface down to the solid rocks, we find them to consist of clay or sand, intermixed with large stones, with their interstices filled with soil; or in some localities, beds of rolled gravel. We find, too, that the large stones in the drift are of different kinds: some of them the same kind with the rocks in the vicinity; others of them found at great distances, and all the materials confusedly intermixed. Occasionally it contains large boulders, derived from distant localities. On the hills are found fragments of the sandstone from the plains, and on the plains fragments from the hills. It is apparent that no such operations as those which formed these deposits are now in progress on the surface of the land, and geologists unite in considering them as relics of the past. In Nova Scotia the boulder clay exists under the same conditions as in Canada, and so do the overlying stratified sands and gravels; but the intermediate deposit, the "Leda clay" of Montreal, does not appear; nor are there marine shells.* In the island of Cape Breton, the bones of a large elephantine quadruped, supposed to be a species of mastodon, have been found in connection with the superficial gravel. A thigh-bone, now in the Museum of the Mechanics' Institute in Halifax, measures 3 feet 11 inches in length.

* Supplement to Acadian Geology.

MODERN ALLUVIAL DEPOSITS.

Of this nature are the large and valuable tracts of dyked marsh, and the intervals on the margin of most of the rivers of the Province. The western part of Nova-Scotia presents some fine ranges of marine alluvial soils. The tide wave that sweeps to the north-east along the Atlantic coast of the United States, entering the funnel-like mouth of the Bay of Fundy, becomes compressed and elevated, as the sides of the Bay gradually approach each other, until in the narrower parts the water rushes at the rate of six or seven miles an hour, and the vertical rise of the tide amounts to sixty feet or more. The rising tide sweeps away the fine material from every exposed bank and cliff, and becomes loaded with mud and extremely fine sand, which, at high water, it deposits in a thin layer on the surface of the flats. The falling tide has little effect on these deposits, and hence the flats gradually reach such a height that they can be overflowed only by the high spring tides. So far the process is carried on by the hand of nature; and before the colonization of Nova-Scotia, there were large tracts of this grassy alluvium to excite the wonder and delight of the first settlers on the shores of the Bay of Fundy. The process of land-making, however, has been carried further by the ingenuity of man. By diking and draining so as to exclude the sea water, a soil is produced capable of yielding for an indefinite period, without manure, the most valuable cultivated grains and grasses.

In addition to the deposits already described, there are *fresh water alluvia*, or river intervales. *Bogs* and *peaty swamps* form another class which are numerous in the districts of the Atlantic coast. Portions of bog have been reclaimed, and have proved that they require only the application of skill and industry to render them valuable. Small quantities of bog iron ore, and bog manganese ore are found in the vicinity of many of these swamps.

Though Nova-Scotia has not enjoyed the benefit of a thorough geological survey, its structure has been somewhat minutely examined, and its mineral resources considerably developed by mining enterprise. It is the intention of the Provincial Government to provide at once for a geological survey of the Province. This measure possesses additional importance from the recent and continued *gold* discoveries in the metamorphic districts. Much praise is due to the eminent Nova-Scotian already referred to, J. W. Dawson, F.G.S., for his valuable work on the geology of Nova-Scotia and portions of the neighbouring Provinces. The results of the investigations of eminent geologists, who have at different times been interested in the

lithology of our Province, scattered through the numbers of scientific journals and other publications both of Britain and America, Professor Dawson has interwoven with the fruits of his own industry, and has concentrated in his "Acadian Geology" nearly, if not all the geological knowledge relating to Nova-Scotia which we possess. Professor How of Windsor College, and Rev. D. Honeyman,*—both of whom have aided the Commissioners in the preparation of mineral specimens for the Exhibition,—have contributed to the results of geological investigation; the latter by a variety of new *fossils* obtained at Arisaig, and the former by the discovery of *three new minerals* in the *trap* of the Bay of Fundy.

CHAPTER II.

GEOGRAPHICAL FEATURES.

The Province of Nova Scotia, as will be seen by the Map, is situated on the eastern side of the continent of North America. It consists of a peninsula, called Nova Scotia Proper, connected with the main continent by an isthmus of about sixteen miles in width; and of the island of Cape Breton, separated from the peninsula by the Strait of Canseau (or Canso) —an outlet of the Gulf of St. Lawrence. It lies between north latitude 43° 25′ and 47°, and between 59° 40′ and 66° 25′ west longitude. It is above 350 miles in length, and from 50 to 100 miles in breadth, and contains an area of nearly 18,600 square miles. It is bounded on the north-east by Northumberland Strait, St. George's Bay, and the Strait of Canseau; on the south and south-east by the Atlantic Ocean; and on the north-west by the Bay of Fundy, Chiegnecto Bay, and the Province of New Brunswick.

NOVA SCOTIA PROPER.

The peninsula of Nova Scotia, which contains a superficial area of about 15,600 square miles, is somewhat triangular in form. Its length is 256 miles, and its greatest breadth 100 miles. Its surface, generally, is undulating, but not mountainous. It has numerous lakes and rivers; the former numbering not less than 400 in the latest Maps of the Province. The coast abounds in bays and commodious harbours, which greatly conduce to its maritime prosperity. It is the nearest point of communica-

* Mr. Honeyman has been entrusted by the Provincial Commissioners with the arrangement of the Nova Scotia Department in the International Exhibition. Since his arrival in London he has been constituted a Fellow of the Geological Society.

tion with Europe of any part of the British possessions on the continent of America. It lies in the direct course of vessels sailing between the north of Europe and America; it is obvious, therefore, that it possesses, from its geographieal position, peculiar commercial advantages. It is not too much to assert that Nova Scotia must ultimately become the great highway for traffic between Europe and the North American continent; and when the projected railways shall have been completed—which passing circumstances seem to indicate, will be at no distant time,—*Halifax* will be, from the possession of its peerless harbour, the *entrepôt* of the British Provinces, and, perhaps, of the far-western States.

The *bays* of Nova Scotia are numerous and spacious. The largest of these is the Bay of Fundy, which is about 50 miles in width, and after extending a hundred miles inland, is divided into two branches. The northern branch, called Chiegnecto Bay, continues to be the boundary between Nova Scotia and New Brunswick. The southern of these branches, called, at its mouth, Minas Channel, rapidly narrows to a width of six miles, and then suddenly expands into the Minas Basin—an expanse of water about 40 miles in length, and nearly twenty in width; its eastern and narrowed prolongation being called Cobequid Bay. Westward of Halifax the coast is indented by two deep bays, known, respectively, as Margaret's Bay and Mahone Bay, which are studded with islands, and contain numerous coves, affording ample room and protection for ships. The other principal bays are St. Mary's and Chedabucto, opening to the Atlantic; and St. George's, Tatamagouche, and Bay Verte, on the coast of the Gulf of St. Lawrence.

Perhaps no other country in the world is so favored as Nova Scotia in the number and excellence of its *harbours*. The coast-line embraces a distance of not less than 1000 miles. On the coast of the Bay of Fundy, owing to the tides, there are no harbours. To remedy this deficiency, a number of artificial harbours have been formed by means of piles, where the vessels ride in safety at high water; but on the recess of the tide, they are high and dry upon the mud-flats. These tides have become widely celebrated for their great rise and fall, and for the rapidity of their currents. "At the commencement of a flood," writes Dr. Dawson, "a slight ripple is seen to break over the edge of the flats. It rushes swiftly forward, and, covering the lower flats almost instantaneously, gains rapidly on the higher swells of mud, which appear as if they were being dissolved in the turbid waters. At the same time, the torrent of red water enters all the channels, creeks, and estuaries; surging, whirling, and foaming, and often having in its front a white, breaking wave, or

'bore,' which runs steadily forward, meeting and swallowing up the remains of the ebb still trickling down the channels. The mud-flats are soon covered, and then, as the stranger sees the water gaining with noiseless and steady rapidity on the steep sides of banks and cliffs, a sense of insecurity creeps over him, as if no limit could be set to the advancing deluge. In a little time, however, he sees that the fiat 'hitherto shalt thou come, and no further,' has been issued to the great bay tide: its retreat commences, and the waters rush back as rapidly as they entered." The northern harbours in the Gulf of St. Lawrence are but little affected by the tides, and here merchant-ships may lie at the wharves undisturbed, within a few yards of the shore. On this coast are the harbours of Pugwash, Wallace, Tatamagouche, and Pictou, at all of which a thriving lumber-trade is carried on. Merigomish is the only good natural harbour between Pictou and Cape St. George. At Arisaig, a pier has been erected, at considerable expense, for the protection of coasters. Between Cape St. George and the Strait of Canso there are several small harbours, the best of which is Pomket. It is on the Atlantic coast that the most numerous and capacious harbours are to be found. First in importance is *Halifax harbour*, which embraces the outer harbour, the North West Arm, and Bedford Basin. It is celebrated as one of the best in the world. Mr. Montgomery Martin, in his history of the British Colonies, says without any qualification: "The harbour of Halifax has not, perhaps, a superior in any part of the world." It is easy of access for ships of every class, very capacious, and affording protection from every wind. Besides Halifax, situated between the mouth of the Bay of Fundy and the Strait of Canso, a distance of little more than 300 miles, there are a multitude of harbours of greater or less capacity, and easy of access, the most of which are available to ships of 500 tons, from which an increasing trade is carried on with the capital of the Province and the principal ports of the United States. At Yarmouth, on the west side of Cape Sable, there is carried on the largest shipping-trade in the province, next to that of Halifax.

Nova Scotia is eminently a well-watered country. Its *rivers* are numerous; but, owing to the peninsular form of the country, are necessarily small. Twenty rivers empty their waters into the Basin of Minas, the largest of which are the Shubenacadie (the largest river in the province), and the Avon; from both of which an extensive trade is carried on. The Annapolis, another of the largest rivers, empties into the Bay of Fundy. Near its mouth, it expands into a beautiful sheet of water, affording anchorage for ships of the largest size. In this Basin

was the principal French settlement of Port Royal (Annapolis), which figured prominently in the early history of the province. The other rivers which are worthy of mention are Rivers Philip, Wallace, John, West, Middle, East, Barney's, and Antigonish, emptying into the Gulf of St. Lawrence; the St. Mary's, Musquodoboit, Gold, La Have, Port Medway, Liverpool, Jordan, Roseway, Clyde, Tusket, and Sissiboo rivers, emptying into the Atlantic Ocean. Nearly all of these are navigable for a short distance from their mouths.

The great inequality in the surface of Nova Scotia is the cause of the existence of numerous *lakes*, which are scattered over it in every direction. Some of them are of very great extent, and in many places form almost a continued chain of water communication across the Province. The largest is Rossignol, situated to the westward of Liverpool, which is said to exceed thirty miles in length. There is a chain of lakes extending from the head of Allan's River, near Annapolis, to within a short distance of the Liverpool River. In the township of Yarmouth alone there are eighty, besides Lake George, which is nearly as large as Rossignol. There is another chain, from the head of the Shubenacadie River, reaching nearly to the harbour of Halifax. There are similar connexions between Windsor and the Atlantic, and between the sources of the Gaspereau and Gold Rivers. Some of these lakes are extremely beautiful, often containing small wooded islands, of every imaginable shape; while the hills which environ them are embellished with the greatest variety of scenery. The most of these lakes abound with trout, perch, and other varieties of fresh water fish.

The principal *capes* and *headlands* of Nova Scotia are, Cape St. George on the Gulf Shore, Cape Canso, Cape Sambro, and Cape Sable on the Atlantic Coast; and Digby Neck, Cape Split, Cape Blomidon, and Cape Chiegnecto in the Bay of Fundy. The most remarkable cliff on the whole coast is the summit of Aspotagoen, on the promontory that separates Mahone from Margaret's Bay. This land, which is about 500 feet in height, may be discerned at a great distance, and is a known landmark to ships approaching the coast.

The principal ranges of *mountains* and *hills* are the Cobequid Mountains, a ridge extending from Cape St. George through Sydney and Pictou Counties, and the South and North Mountains of King's and Annapolis Counties. The highest of these is the Cobequid Chain, which attains an elevation of 1200 feet. Ardoise Hill, situated between Windsor and Halifax, is said to be the highest land in the Province.

CAPE BRETON.

The Strait of Canso, which separates Cape Breton from Nova Scotia Proper, is eighteen miles in length, and varying from half a mile to a mile and a half in breadth. Its depth is from fourteen to thirty fathoms. This strait is the highway of vessels running between the Gulf of St. Lawrence and the American coast, as well as between Europe and the gulf coasts of Nova Scotia and New Brunswick; and it is often preferred by transatlantic ships, bound up the St. Lawrence, to the more dangerous route north of Cape Breton.

The Island of Cape Breton is of a very irregular form, and in its general features closely resembles the Peninsula of Nova Scotia Proper. Its greatest length is 100 miles and its greatest breadth 72 miles, its area about 3000 square miles. In the northern part of the Island the surface is elevated and uneven; in the southern and eastern parts it is undulating, with some ranges of low hills. The eastern coast is very much indented by arms of the sea, while on the western coast the harbours and inlets are few.

The most striking geographical peculiarity of this Island is the existence of a salt-water lake, or small *inland sea*, called the Bras D'Or Lake, which occupies the central portion of the Island, and nearly divides it into two. It is entered from the east by two channels separated by Boulardarie Island, and known as the Great and Little Bras d'Or, which, after extending inland for a distance of about thirty miles, unite and expand into a basin called Le Petit Bras D'Or. From this the tide flows southwardly through the Straits of Barra into the main body of water called the Big Bras D'Or, or the Bras D'Or. Its greatest length is 40 miles, and its greatest breadth 20 miles; its area about 500 square miles. It is navigable throughout for vessels of the largest class.

The most important *bays* are, Aspy Bay (which receives the west end of the submarine telegraph cable, communicating with Newfoundland), St. Ann's Bay, Miré Bay, Gabarus Bay, and St. Peter's Bay, all opening to the Atlantic.

The eastern coast of Cape Breton is advantageously formed for the possession of excellent *harbours*, of which the harbour of Sydney is the most important. Besides Sydney there are the harbours of Fourchu, Louisburg, Bridgport, St. Ann's, and Ingonish; Port Hood and Ship Harbour on the west coast; and Arichat in the Isle Madame.

The most important *rivers* are the Margaree, Inhabitants, and Miré.

The principal *lakes*, besides the Bras D'Or, are Lake Margaree in the

County of Inverness, and the Grand River Lake, intersected by the boundary line between the Counties of Cape Breton and Richmond.

The principal *capes* are Capes North, Egmont, Enfumé, and Breton, on the east; and Capes St. Lawrence and Mabou on the west.

The *mountains* and *hills* are extensive, though not remarkable for their height.

SABLE ISLAND.

Sable Island is situated between North Latitude 44° and 43° 54′, and between West Longitude 60° 12′ and 59° 40′. Its breadth varies from one to two miles, and its length is 25 miles. It consists of sand thrown up by the sea and wind and forming hillocks, some of which are 100 feet in height. The greater part of its surface is covered with coarse grass, and cranberry and whortle bushes. It possesses some local celebrity from the existence of herds of wild horses, of which the best are occasionally brought to Halifax for sale.

This Island has frequently been the scene of shipwrecks; the shoals by which it is surrounded causing it to be extremely dangerous to navigators. Of late years, however, shipwrecks have been infrequent. It is easily avoided by ships sailing between the North of Europe and Nova Scotia, being situated 87 geographical miles from Cape Canseau. There are stationed on the Island a Superintendent and several men, for the purpose of rescuing and aiding shipwrecked mariners.

The scenery of Nova Scotia is diversified and picturesque, the surface presenting the alternate features of hill and vale. The less cultivated portions of the Province, with their variety of wood, and stream, and lake, possess attractive pictures of natural beauty. The scenery of some of the spacious bays is beautiful beyond description, especially that of Mahone Bay, which is studded with numberless islets; and the rugged scenery of parts of the Basin of Minas present striking pictures of the grand in Nature. The more cultivated tracts of country, as the extensive Annapolis valley, the rich farms of Cornwallis, and the Grand Pré of Horton, may vie with either England or Scotland in their appearance of fruitfulness and fertility. Wealth has not imparted to them that degree of neatness and perfection which charm the beholder in older countries; yet, notwithstanding the absence of those features, their appearance could not fail to fill the mind of the traveller with agreeable surprise.

Besides the seventy post-towns, there are a considerable number of villages, in the inhabited parts of the Province, each distinguished by its particular kind of beauty. The houses are generally built of wood, but

are frequently designed with taste, and are surrounded in many places with gardens and cultivated trees.

CHAPTER III.

CLIMATE.

Before treating upon the resources of Nova Scotia, some observations upon the character of its climate are important. The climate of Nova Scotia, in common with that of all the British North American Colonies, is supposed to be of uncommon severity, so as almost to deter the European emigrant from choosing it as a place of permanent settlement. There is much misconception, however, upon this subject. The climate of Nova Scotia, though at certain seasons extremely cold as compared with that of England and Ireland or the South of Scotland, is nevertheless remarkably salubrious. The winter, in its greatest severity, is less uncomfortable than the humid atmosphere of this season in Britain. This is found to be the experience of colonists who have passed the winter months in the Mother Country.

TEMPERATURE.

While Nova Scotia may boast of its comparative dryness, and the more constant serenity of its sky, it must be acknowledged that it lacks the early genial spring and protracted summer which characterise the climate of Great Britain. The most important points in which the climate of Nova Scotia differs from that of Great Britain are, its higher summer temperature, and the shortness of this season (which, however, is compensated to some extent by a remarkable rapidity in the process of vegetation), and the lower temperature of its winter. The severity and the length of its winter are also compensated by the unexampled mildness and beauty of its autumn, which is frequently protracted to the early part of December.

There is an absence of statistical information concerning the climate of Nova Scotia, although the labours of a few individuals who have noted the degrees of temperature at different seasons, and over a period of years, furnish an approximation to the true *mean*. The extreme of cold in late years is 15. Fah.; the extreme of heat, 95. in the shade. It is seldom, however, that the temperature attains to these extremes. The mean temperature of the year is 43.; and there are about one hundred days in which the temperature is above 70. in summer, and about twenty nights

in which it is below zero. The coldest season is comprised in the first three months of the year, during which the cold weather is not continuous, sudden changes of temperature being frequent.

The mean temperature of different localities in Nova Scotia varies but little. Professor Everett of King's College, from a comparison of meteorological observations made by Mr. Murison at Halifax, Mr. Poole at Pictou, and at King's College, Windsor, makes the *annual mean* of Halifax to be 43.8 ; Pictou, 42. ; and Windsor, 43.6.

The following table will show the *annual mean temperature* of various localities in Europe as compared with Halifax and Toronto, Upper Canada :—

Latitude.			*Farenheit.*
44 °	40′	Halifax, - - -	43.8
43	39	Toronto, - - -	44.4
53	23	Dublin, - - -	49.1
50	7	Frankfort, - - -	49.5
52	31	Berlin, - - - -	47.5
49	39	Cherbourg, - - -	52.1

Mean Summer Temperature.

Halifax, - - - - - - -	62.
Toronto, - - - - - - -	64.5
Greenwich, - - - - - -	60.9
Berlin, - - - - - - -	63.2
Cherbourg, - - - - - -	61.9

The annual quantity of *rain* which falls is about 41 inches, of which about 6½ inches falls in the form of *snow*, making the annual depth of snow about 8½ feet. There are about 114 days of rain, and 60 days of snow, on the average, in each year.

The prevailing *winds* are the south-west and north-west. The north, north-west, and west, are, in summer, cool and dry, and in winter cold. The south-west wind is mild and agreeable, though, in spring and autumn, sometimes stormy. The south and south-west winds, on the Atlantic coast, are frequently accompanied by fog, but it does not extend inland.

THE SEASONS.

Spring in Nova Scotia commences in the latter part of March or the beginning of April. This season, it has been already remarked, is neither so pleasant nor so protracted as that of Britain ; being characterised by frequent and sudden transitions of temperature. A prominent cause of these changes is the the proximity of the masses of ice floating southward from the Arctic, and the Gulf of St. Lawrence, often attended

by squalls of snow. The fogs, too, though scarcely extending any distance inland, sensibly influence the atmosphere. Agricultural operations commence in April, and the "seed time" continues throughout May and part of June.

The *Summer*, which comprises the next three months, is moderately warm. Vegetation is rapid,—so much so, as to admit of the crops being harvested in August.

The *Autumn* season, throughout, is unsurpassed for its healthful, exhilarating atmosphere. There invariably occurs in the autumn, a continuance of from one to two weeks of peculiarly mild weather, known as the "Indian Summer," which partakes more of the mildness and serenity of the Summer season.

The *Winter* in Nova Scotia may be said to comprise nearly four months of the year. It usually commences in the beginning or the middle of December, and continues till the end of March. December is sometimes an autumnal, sometimes a winter month. January is remarkable for a thaw; February, for the lowest depression of the atmosphere and the heaviest falls of snow; March, though cold, variable and blustering, frequently affords more days of clear sunshine than April. The winters, however, are variable; sometimes moderate and open; and again cold with less frequent changes.

The mean temperature of the Spring is 49.; of the Summer, 62.; of the Autumn, 35.; and of the Winter, 22.

HEALTH AND LONGEVITY.

The climate of Nova Scotia is highly favourable to health and longevity. Eighty years is a frequent age, with the full possession of the bodily and mental faculties, and many exceed ninety and even one hundred years. The following tables will show the comparison which Nova Scotia bears to the State of Rhode Island, situated nearly 500 miles further south, in the proportion of the different classes of diseases; as well as the proportion of deaths to population compared with Rhode Island* and with Great Britain.

Diseases.	*Nova Scotia.*	*Rhode Island.*
1. Epidemic, Endemic and Contagious . . .	34.025	31.543
2. Dis. of Nervous System	6.070	13.543
3. " Respiratory and Circulating Organs	29.044	28.571
4. " Digestive Organs	7.930	4.971
5. " Urinary and Generative Organs . .	1.239	2.571
6. " Uncertain Seat	8.207	9.486
7. Violent and Accidental	3.740	4.000

* The writer has not *selected* the State of Rhode Island from among the other American States. He has been unable to obtain statistics of any others.

Proportion of Deaths to Population.

1861.	Nova Scotia—1 in 70.71, or less than . .	1½ per cent.
1856.	Rhode Island—one in 46.11, or more than .	2 "
1859.	Great Britain—one in 44.75, or more than .	2 "

The first table shows that Rhode Island has double the proportion of that of Nova Scotia in diseases of the nervous system, while Nova Scotia shows a large excess in diseases of the digestive organs. The other causes specified do not exhibit any difference worthy of note. The deaths from epidemic, endemic and contagious diseases appear more numerous in Nova Scotia. It is but just to state, however, that the past year has been one of unusual mortality from this class of diseases, as the deaths from *Dyptheria* alone were 1003 out of 1592 deaths from those causes. The climate of Nova Scotia is not remarkable for the generation of any disease peculiar to itself; and the disease just referred to has appeared with equal virulence in other parts of the Continent.

If a similarity in agricultural productions can be understood as furnishing a criterion for the comparison of the climates of different countries, the climate of Nova Scotia cannot differ very essentially from that of the northern States of America, and the middle and northern parts of Europe. Wheat, rye, oats, buckwheat, barley, maize, turnips, mangel-wurtzel, potatoes and other roots grow in abundance. Apples, pears, plums, cherries, and the smaller garden fruits attain the utmost perfection. Peaches and grapes ripen with the protection of glass, without requiring the aid of artificial heat.*

* The Secretary of the Nova Scotia Commission informs us in his Catalogue, sent to the Exhibition, that "the climate of Nova Scotia is particularly suitable to the growth of the Apple Tree. Crop is generally sure and large. Sorts which in England require a wall or espaliers will here grow and thrive in the open orchards, as standards. Fruit attains an enormous size; specimen of 'Gloria Mundi,' sent to England, measured from 15 to 17 inches in circumference." He states that "hardy sorts of Grapes will, in the Western Counties, do well in the open air, and even Black Hamburg and White Cluster have, during the past year, ripened their fruit in open air. All the best sorts will (under glass, without artificial heat) grow most luxuriantly, and bear better than in England under the same treatment. Mr. Justice Wilkins, for several years, most successfully ripened Black Hamburg at Windsor, on a stone wall, and in the last year raised, on two vines not more than seven years old, thirty-three pounds of Grapes, of quite equal flavor to those ripened in a hot-house. The vines, of course, required careful covering in winter. Mr. Downing, the eminent American authority on horticulture, in a communication addressed to Judge Wilkins, expressed his great surprise at the adaptation of Nova Scotia for the growth of the grape, and stated that the Black Hamburg, with similar treatment, would only ripen one year in six, at his gardens, at Newburg, on the Hudson. The Pear grows vigorously, is very productive, and sorts such as Marie Louise. William Bon Chretien, Louis Bon of Jersey, Knight Monarch, Flemish Beauty, Passe Colman, Vicar of Wakefield, and other hardy sorts will, as standards, do exceedingly well—crop constant."

It may therefore be confidently asserted that the climate of Nova Scotia is such as to conduce to the health of its inhabitants, being free from those diseases which prevail in many more fertile tracts of the Continent; and to produce all that is necessary for animal subsistence and enjoyment.

CHAPTER IV.

NATURAL RESOURCES.

To describe the Natural History of the Province, it will not be necessary, nor is it practicable in the limited space of an Essay, to include minutely all the varieties or even species; but simply to refer to the more prominent individuals of the animal, vegetable, and mineral kingdoms.

ZOOLOGICAL.

When Nova Scotia was first discovered, it abounded with a great variety of native animals. The chase and the fishery were the chief objects of attraction to the early emigrants; and such was the eagerness with which the chase was prosecuted, that in less than a century, many species became extinct. Among the *vertebrated animals* which are still found in the province, are the moose, carriboo, bear, fox, lynx, weasel, martin, otter, minx, fisher, woodchuck, hare, raccoon, porcupine, squirrel, bat, mole, beaver, musquash. The *Moose* is the largest animal of our forest, and is generally about sixteen hands high. He is of the deer kind, with palmated horns weighing from thirty to forty pounds.

The *Cariboo* is not so tall as the moose, but of amazing swiftness, and its hoofs being very large in proportion to its legs, it is not so easily overtaken. Both the moose and carriboo are fast disappearing. The latter are rare. Of *Bears*, the *Black Bear* only is found in Nova Scotia. He sometimes attains the weight of 600 pounds. There are four varieties of the *Fox*—the silver, the red, the grey, and the black. Their fur is valuable, which, with that of the otter, mink, beaver, and musquash, is much sought after, and forms a valuable export.

The *Birds* of Nova Scotia are numerous, and represent every order. Of the *birds of prey*, we have the bald eagle, hawk, and owl; of *perching birds*—the thrush or robin, the yellow bird, the sparrow, the snow-bird, the blue jay, the crow, the raven, the kingfisher, the hawk, the swallow,

the humming-bird; of *climbers*, we have the woodpecker; of the *grouse* kind, the spotted grouse, and the spruce partridge; of *pigeons*, the passenger pigeon. The *aquatic* birds are the heron, the snipe, and the plover; the wild duck, the wood duck, the eider duck, the wild goose, the teal, the loon, the gull, and some others.

The *Reptiles* of Nova Scotia are few in number, and neither of great size, nor injurious to man. The principal are, the fresh-water tortoise, some lizards, and a few species of snakes.

In *Fish*, the resources of Nova Scotia are most abundant; they throng her coasts, and swarm in every river and stream. Cod, haddock, halibut, mackerel, herring, shad, alewives, and salmon, are found in her seas in quantity inexhaustible, and of quality unsurpassed; while trout, salmon, perch, and other varieties of fresh-water fish are drawn in large supplies from her rivers and lakes. The *cod* and *haddock* frequent the shores and banks which lie off the coast, throughout nearly its whole extent, and in quantity almost unlimited. The *mackerel*, next in importance, frequent the coast in immense masses. These masses are called "schules" by the fishermen, who watch for their appearance with intense interest. These *schules* are sometimes seen of several miles in breadth, forming a mass so dense as even to impede the progress of the smaller vessels. Immense captures are sometimes made by means of seines, not unfrequently securing 1000 barrels at a single haul. Next to the mackerel, the most deserving of notice is the *herring*. There is no part of the Atlantic coast in which herring may not be canght in abundance. They are said to differ from the European varieties, and, in quality, are not quite equal to the herring of the Labrador coast. When properly cured, however, they command a ready market in the United States, West Indies, and the adjoining Colonies. Among the species of salt-water fish most peculiar to Nova Scotia is the *halibut* (Hypoglossus vulgaris), which attains to a prodigious size, sometimes weighing 500 pounds. It resembles in appearance the common flounder, but is often seen from four feet to six feet in length. The *Shad* (Alosa vulgaris) is taken in great numbers in Cumberland Basin, Minas Basin, and the estuaries of the rivers which empty into them. The shad is a delicious fish of delicate flavor, and always commands a high price. Its resort is almost exclusively confined to the places just mentioned, being seldom found on the Atlantic coast. The *alewife*,* or *gaspereau* (Alosa vernalis), is found in the rivers and streams, where it resorts in spring to deposit its spawn, and

* The word is properly *aloof*, the Indian name of a fish.—WEBSTER.

is then easily caught in great quantities. It is not so much esteemed as the common herring, which it much resembles; it forms, however, an important article of export. The *salmon* is found in most of the large rivers of Nova Scotia, and is also taken on the coast in spring, before it has entered the rivers. It is usually taken in nets, or speared, but in some instances it is angled. Two species of *trout*—the salmon trout, and the common trout—are found in all the rivers, brooks and lakes. The *perch*, the *smelt* and the *eel* are abundant in the harbours and streams. There are also species of *bass* and *sturgeon*, but they are rarely found. Of the *cetacia*, or whale tribe, the species are the common whale, the grampus, the finner, and the porpoise. Several species of the *shark* are occasionally seen on the coast of Nova Scotia, though none are abundant. The *dogfish*, a small species of shark, abound on the shores,—large numbers of which are taken for their oil. The most useful of the *mollusca* are the oyster, the muscle, and the clam; and of the *crustacea*, the lobster. There are innumerable varieties of *worms* and *insects*, but none of any economic importance.

BOTANICAL.

The wild plants of Nova Scotia are too numerous to admit of even a list of them in this essay. It must suffice specially to refer to those only which pertain to the commerce of the country. The most important of these are of the order *Coniferæ*, as the white pine and red pine (*Pinus strobus* and *P. resinosa*); the hemlock (*Abies Canadensis*); the black, red, and white spruce (*A. nigra*, *A. rubra*, and *A. alba*); the fir (*A. balsamea*); and the hacmatac (*Larix Americana*). Other species, as the ground hemlock, scrub pine, and the ground juniper, are of small size, and of little value.

The trees of this order, commonly called *soft-wood* trees, are brought into market, sawed into boards, plank, shingles, and scantling. They are also made into spars, and sometimes exported in the shape of square timber. The hacmatac, or juniper, is especially valuable as ship timber. Among the most useful trees called *hard-wood* trees, but which comprise many orders, are the white sugar maple (*Acer saccharinum*), the black sugar maple (*A. nigrum*), the white or soft maple (*A. dasicarpum*), the red maple (*A. rubrum*), the striped maple (*A. striatum*), the mountain maple (*A. montanum*), the white ash (*Fraxinus acuminata*), the black or swamp ash (*F. sambucifolia*), the elm (*Ulmus Americana*), the white and red beech (*Fagus sylvatica* and *F. ferruginea*), the white and black oak (*Quercus*), the hazel (*Corylus Americana*), the yellow, black, white, canoe, and poplar-leaved birch (*Betula*). Of the hard-wood trees, the rock maple

is entitled to the first rank, from the superior quality of its timber. There is a beautiful variety known as bird's-eye maple, which is much used in the manufacture of furniture. The ash is a valuable wood; durable, flexible, and free from knots. The birches are used in ship-building, and for many other purposes. The black birch, when polished, much resembles mahogany, and is likewise employed in the manufacture of furniture. The beeches are mostly used for fuel.

There are several varieties of *ornamental* trees found in Nova Scotia, viz., the sumach (*Rhus typhina*), the wild pear (*Aronia botryapium*), the rowan, or mountain ash (*Pyrus microcarpa*), the wild hawthorn (*Crataegus*), the wild red cherry (*Cerasus Pennsylvanica*), willow (*Salix*), and the aspen, the tree-poplar, and the white-leaved poplar (*Populus*).

The black cherry tree (*Cerasus nigra*), and the sarsaparilla (*Aralia*), are valuable on account of their medicinal virtues.

Among the wild plants of Nova Scotia distinguished for the beauty of their *flowers* are those of the orders *Nymphæaceæ* and *Liliaceæ*, of which the white pond lily is remarkable for its powerful fragrance. Belonging to the order *Ericaceæ* we have the fragrant mayflower (*Epigea repens*), which has been adopted as the floral emblem of Nova Scotia. Without inserting their respective botanical names, may be added the singular and beautiful Indian cup, the wild rose, Solomon's seal, the pigeon berry, the tree cranberry, Indian hemp, medlar or wild pear, starflower, violet.

The principal *fruit-bearing* plants are the strawberry, the raspberry, the blackberry, the blueberry, the whortleberry, and the cranberry, all of which exist in the greatest abundance.

AGRICULTURAL.

Although, if compared with some tracts of the neighboring States, and with Western Canada, the lands of Nova Scotia do not offer such tempting facilities for agricultural operations, it is still eminently entitled to be considered an agricultural country. On the Atlantic coast, where much of the soil is rocky and sterile, the pursuit of agriculture is but little prosecuted. But nearly all the soil of the interior is capable of profitable cultivation, and in many parts is unsurpassed for its fertility. The character of the soil of Cape Breton is very similar to that of Nova Scotia Proper, so that the following observations will apply to the whole province.

The character of the soils of Nova Scotia will now be briefly described. For the sake of perspicuity, they will be referred to according to the

geological divisions of the province, which mode of description possesses some advantage above that of considering them according to the several counties; many of the counties containing within them more or less of every description of soil.

First in order is the soil of the *Metamorphic District** of the Atlantic coast. Lay the edge of a ruler along the map of the province, from the northern part of Clare to the head of Chedabucto Bay, and nearly all the country to the south of this line will belong to the district now to be considered. The surface in this extended tract is uneven, but not very elevated; composed of slate granite and quartzite rocks, full of lakes, streams and rocky ridges, and contains the greater part of the barren lands of the province. Of the cultivable soil, there are two kinds; first, the *granitic*, which is generally coarse and sandy, often covered with a black vegetable mould, which is capable of producing good crops. Such soil is abundant in the county of Shelburne; between Chester and Halifax; at Musquodoboit harbour; and between Indian harbour and Cape Canseau; also in the southern part of Annapolis and King's counties, which are upon the northern margin of this district. These soils are generally deficient in lime, gypsum, and phosphates, though they often have a good supply of alkaline matter. It has been found that this soil is rendered fertile by the addition of compost of fish-offal (which contain lime and phosphate), mixed with swamp mud. The second class of soils in this district is the *slaty* variety. These are usually clays, more or less stiff, or light or shingly. When not encumbered with fragments of rock, or too shallow, they are generally cultivable, and often of fair quality. Soils of this class occur abundantly in Yarmouth, the northern district of Queen's, Lunenburg, Halifax, and southern Guysborough; many large tracts of which are of excellent quality, and may be classed with the second-rate uplands of the province. These tracts of land, if properly treated, might be made to support valuable herds and flocks. The quantity of cultivable ungranted land in this district is about 140,000 acres.

The soils of the *inland hills* (Silurian and Devonian) come next. This district includes the Cobequid range of hills extending from Cape Chignecto to Earlton; the hills on the south side of the valley of Cornwallis and Annapolis; all the hilly country extending from the sources of the Stewiacke through Pictou, Sydney, and northern Guysborough, and the

* The description of the soils of Nova Scotia is compiled from Dawson's Agriculture.

greater part of the hills of Cape Breton. The soils of this district may be generally characterized as good. Some of them are formed from the waste of syenite and greenstone—rocks allied to granite, but differing in composition and producing more fertile soils. The greater part of the soils of these hills are *slaty* in their character, and consist of a brownish loam. They are often deep, and easily worked and always fertile. They produce in their natural state a fine growth of hardwood timber; and when cultivated, are favorable to the growth of hay and grain crops. They are well supplied with lime and phosphates; and are less easily exhausted than most other kinds of upland. Hence, in the more fertile parts of these hills, there are fine, flourishing agricultural settlements, which are advancing rapidly in wealth. Much of the soil included in the *granitic* Metamorphic District, where the limits of the two districts approach each other,—as in Clare, northern Yarmouth, northern Queen's, and in Rawdon and Douglas townships in the county of Hants,—approaches in quality to the good soils of this district. The quantity of ungranted cultivable land in this district may be estimated, as a mere approximation,* to be 400,000 acres.

The next in order are the soils of the *Carboniferous* and *New Red Sandstone*. These occupy the low country of Cumberland, Colchester, Pictou, Hants, Kings, Annapolis, Guysborough, Sydney, and the counties of Cape Breton; and, in some places, rise on the flanks of the hills. The loamy and marly soils of the carboniferous system usually occur in the vicinity of large deposits of limestone and gypsum which are found in so many parts of the province. In all these localities, the prevailing soil is a sandy or clay loam, of reddish color, well supplied with lime, gypsum and phosphates; and deserving the character of first-class upland. Professor Johnston characterises the lands of this descriptipn in New Brunswick as equal to the best upland of any country. This description of soil is often covered with fine hardwood forests. The clays, sands, and strong grounds of the carboniferous system, which are scattered over it very irregularly, are much inferior, though strong and productive when drained. The quantity of ungranted land of the superior class just described, as situated in the carboniferous district, may be estimated to be about 200,000 acres. This estimate includes the counties of Cape Breton. The soils of the *New Red Sandstone*, though favourable to the culture of potatoes, turnips, and indian corn, are inferior as grain soils to those of the carboniferous district. These soils are limited to the country

* These estimates are deduced from the gross returns of Official documents.

bordering the Bay of Fundy. They occur near Truro, and in a band skirting Cobequid Bay; in some few places on the Northern shore of Hants; and more extensively in the valley of Cornwallis, and thence toward Annapolis. They are inferior as grain soils to the best soils of the carboniferous and silurian; while they are admirably adapted to the culture of the apple, potatoe, turnip and Indian corn.

The *trap* district is confined to the north mountains of Kings and Annapolis, and its prolongation in Digby; and a few isolated patches on the opposite side of the Bay. It contains all the chemical elements of fertility; bears a fine natural growth of timber; and yields good crops to the settler.

The character of the ungranted land in Cape Breton is principally that of the Devonian and Upper Silurian, and the Carboniferous districts, of which that island is largely composed.

The *best* soil in Nova Scotia is the *alluvial;* which will bear continual cropping without manure for a very long period. The remarkable fertility of this soil has occasioned culpable neglect in its management. Much of it is rapidly falling off in its productiveness for want of draining and ploughing. There are various kinds of marshes, distinguished by the appellations of *red* marsh, *blue* marsh, *low* marsh, &c.; but the red marsh is considered the best. There is also skirting most of the rivers, the fresh water alluvium, which is, generally, a fine and productive soil. Nearly the whole of the alluvial tracts are settled, and with the contiguous uplands, include the wealthiest and most thriving agricultural settlements in the province. It is doubtful if there is more than 40,000 acres of alluvial soil ungranted; and this must be of the inferior sort.

The agriculture of Nova Scotia is in a transition state. It is to be found in all stages of advancement, from the rude attempts of the half lumberer—half farmer, to the productive results of formal and scientific husbandry. The succeeding chapter, in which the "industrial resources" of Nova Scotia are considered, will furnish some idea of the results of its agriculture. It may be confidently stated, however, that should those results not compare as favourably as they might with the returns of other countries, it must be ascribed to the want of a more advanced and intelligent system of culture, or to the injudicious impoverishment of the soil, and not to its natural sterility.

The reader will find an enumeration of the principal agricultural products which attain maturity at the end of the chapter on "climate," page 19. The following table of comparative average produce will

convince every unprejudiced mind of the *superiority* of Nova Scotia as an agricultural country :—

*Comparative Table of Produce per Acre.**

	State of New York. 1845.	State of Ohio. 1848.	Canada West. 1848.	New Brunswick. 1849.	Nova Scotia.†
Wheat, bushls.	14	15¼	12¾	20	25 to 33
Barley	16	24	17½	29	39 to 40
Oats	26	33¾	24¾	34	35 to 45
Rye	9½	16½	11½	20½	35 to 45
Buckwheat ..	14	2 ¼	16¾	33¾	40 to 45
Indian Corn .	25	41¼	24¾	41¾	
Potatoes	90	69	84	226	200 to 300
Turnips	88	—	—	460	400 to 600
Hay, tons ...	—	1¼	—	1¾	1¼ to 2

GRANTED AND UNGRANTED LANDS.

The area of Nova Scotia, including Cape Breton, is computed to contain 11,767,173 acres, of which 5,748,893 acres, or about one half, has been granted. The following tabular statement shewing the quantity and character of ungranted lands, is furnished by the Deputy Commissioner of Crown Lands, W. A. Hendry, Esq. :—

	Amount alienated.	Estimated amount remaining for alienation.	Estimated amount available for settlement.	Lands open for settlement.
Nova Scotia	4,935,349½	4,112,384½	556,664½	3,412,384½
Cape Breton	813,543¾	1,207,438¼	356,676¼	777,438¼
	5,748,893	5,319,822¾	913,340¾	4,189,822¾

The price charged for crown lands in Nova Scotia is 1s. 9d. sterling per acre. The prices of cultivated lands vary from their degree of improvement, as well as from their situation. Upland farms range from £100 to £500 the one hundred acres, partially under the plough, and containing house and barn. The average price of *marsh* is from £16 to £20 sterling, while the best quality will greatly exceed the highest of those prices.

The *improved* lands in 1851 amounted to 839,322 acres. The returns of 1861 make them to be 1,027,792.

MINERALS.

It has been already intimated that Nova Scotia has not enjoyed the

* Dawson's Agriculture in Nova Scotia (from Professor Johnston's Report on New Brunswick).

† From statistics furnished by James Irons, Esq., the Secretary of the Central Board of Agriculture.

benefit of a thorough geological survey, so that her mineral resources are but imperfectly known. The metamorphic district is an almost unexplored field. Since *gold* was found to exist in this district, two gentlemen of some scientific celebrity* have been employed by the Government to examine its formation, with especial reference however to the deposits of gold. The report of this survey has not yet been made public, but, from the lateness of the season at which it was commenced, it cannot have resulted in furnishing much additional information to that which we already possess.† It is indisputable that Nova Scotia is endowed by nature with mineral wealth in a very extraordinary degree.

Gold must now occupy the first place amongst our *ores* and *metallic* substances. But, as the discoveries of gold in Nova Scotia have assumed an aspect of especial importance, the subject is deemed worthy of having a separate chapter devoted to it. (See chapter IX.)

Next in importance is *iron*. The principal deposit of iron ore is situated along the southern slope of the Cobequid hill, in Londonderry, where the "Acadian Mining Company" have erected works, and have begun mining operations. Westward of the "Acadian" mine, the course of the vein is marked by the color of the soil to about a mile distant; and further eastward, on the high ground between the Great Village and Folly Rivers, indications of the existence of iron have been discovered. Professor Dawson, who reported on this deposit in 1846, and again in 1849 in company with J. L. Hayes, Esq., of Portsmouth, U. S., furnishes the following description as the result of analysis. The deposit contains—1. *Specular Iron Ore*, or nearly pure peroxide of iron. 2. *Magnetic Iron Ore*, a compound of the peroxide and protoxide, capable of affording from 60 to 70 per cent. of pure iron. 3. *Ochery Red Iron Ore*, which is the most abundant in the vein, and is the material of which the *mineral paint* is manufactured. 4. *Ankerite*, or carbonate of iron, lime and magnesia, containing 33 per cent. of peroxide of iron. 5. *Yellow Ochery Iron Ore*, or peroxide of iron combined with water, containing 74.52 of peroxide. 6. *Brown Hematite*. 7. *Sulphate of Barytes*. Dr. Hayes says, in his report: "I have no doubt that iron, of the first quality for purity and

* Messrs. Henry Poole and J. Campbell.

† The reports are since published by authority of the Provincial Government. Mr. Poole has gathered an interesting collection of geological specimens, and his report is confirmatory of Dr. Dawson's description of the Granitic Metamorphic District. Mr. Campbell's report has particular reference to the Auriferous Deposits, their character and extent—which he intelligently describes.

strength, and which will demand the highest prices in the market, can be made from these ores."

It has been proved by experiments that these ores will furnish steel-iron equal to the best Swedish. Their proximity to the places of export, compared with those of other countries, must consequently, ere long, be the means of opening up an extensive market for their consumption. Veins of iron ore, similar in character, occur in nearly every part of the inner metamorphic district, though of less magnitude. In addition to the *veins* of iron ore, conformable beds exist in the Devonian slates, and have been opened at Moose River, Nictaux, and at the East River of Pictou. They consist of scales of specular iron firmly cemented together, and intermixed with silicious and calcareous matter. At Nictaux the bed is stated to be six feet in thickness, and the ore is of excellent quality. At the East River of Pictou the bed appears to be of great magnitude, but the ore is more silicious than at Nictaux, and contains only about 40 per cent of metal. Iron ores also occur in veins traversing the lower carboniferous limestone and sandstone, near the mouth of the Shubenacadie. The ores are, red ochre, red hematite, and brown hematite. The *trap* district also contains small veins of magnetic and specular iron ore, but not of mining importance. Iron ochres and also *bog ores* of iron are found in the low ground of the granitic-metamorphic district, though not in large deposits.

Copper ore occurs at several places in Nova Scotia. In the country eastward of the Lochaber Lake, in the county of Sydney, large fragments of copper pyrites are found in the surface gravel, and have no doubt been derived from a vein containing this ore. The pyrites contains from four to seventeen per cent of copper. Copper ore of very rich quality has been found on the south branch of the Salmon River. It has also been found in small quantities near the Acadian iron mine, and in the barytes veins of the Five Islands. This ore has likewise been found at Carriboo River, at West River, and East River in the county of Pictou, where the deposits are rich and valuable, though limited. The following is the composition of a sample from Carriboo, analyzed by Dr. Dawson :—

Copper, ...	40.00
Iron, ...	11.06
Cobalt, ...	2.10
Manganese, ...	50
Sulphur, ...	25.42
Carbonate of lime, .	92
	80.00

In the *trap* are found in small quantities, native copper in irregular masses; and gray sulphurite, green carbonate, and oxide, associated with the magnetic iron.

Galena, or sulphuret of lead, is found in crystals and small veins in limestone at Gay's River, at Guysboro', and other places. Some specimens contain *silver*.

Manganese ores occur in the iron veins of the Shubenacadie, and in the limestone of Walton and Cheverie.

Sulphate of Barytes, which is manufactured into a pigment employed as a substitute for white lead, has been quarried on the banks of the Stewiacke. It also occurs in the Acadian iron veins, and traversing the slates in the banks of the East river of the Five Islands.

Ochres, from which good paints may be manufactured, occur on the banks of the Shubenacadie, East River, Chester, and at other places; and *clays*, suitable for bricks and common pottery, can be procured in large quantities.

Coal is the most valuable mineral deposit in Nova Scotia, as may be seen from the map accompanying this essay,* shewing the very extensive area of the carboniferous rocks. The most important coal measures yet explored are those of the Albion mines. They are principally composed of grey sandstone, with occasional beds of bituminous carbonaceous shale, the underclay shewing roots of stigmaria and other fossils. They differ from the Joggins measures in the arrangement of their materials and fossils; instead of a great number of thin beds of coal and bituminous shale, they consist of a few beds of enormous thickness. In one section at this locality, the vertical thickness of the two large seams of coal, the main and deep seams (the largest yet known in Nova Scotia,) is 37½ feet and 22½ feet respectively. A block from the largest of these seams will be seen at the London Exhibition.† The Pictou coal holds a high place among bituminous coals as a steam producer. It contains a considerable

* The writer prepared with considerable care, Maps, intended to illustrate the geography and resources of the Province, but it has been found impracticable to include them, as causing too much delay in the publication.

† A similar section was exhibited in 1855 at Montreal, with the following label attached:—

"Section of the Main Coal Seam, Albion Mines, Pictou, N. S. This vein is one of the largest in the world; its vertical section being from 33 to 36 feet, and its qualities excellent for the following purposes: generation of illuminating gas, and of steam, for manufacturing and domestic purposes. It is the property of the General Mining Association, and is worked by them to the extent of about 70,000 tons per annum. This specimen was extracted by James Scott, Esq., Superintendent of the Mine, for the exhibition at Montreal."—*Catalogue International Exhibition.*

quantity of light bulky ashes, for which reason it is less esteemed for domestic use.

Assay of Pictou Coal from Dalhousie Pit.

Moisture,	1.550.
Volatile Combustible,	27.988.
Fixed Carbon,	60.837.
Ashes,	9.625.

The yield of Pictou coal for gas purposes Professor Dawson estimates to be 3902 to 8504 cubic feet per ton.

The important and productive coal fields of Sydney, which is second only to Pictou in its export of coal, covers an area of 250 square miles,* and probably exceeds 10,000 feet in thickness. One section on the north-west side of Sydney harbour, exhibits a vertical thickness of 1860 feet. The dip is N. 60°, E. 7°. Mr. Brown (the manager of the mines) has published an elaborate section and description of the Sydney coal-measures, from which we learn that the beds composing the section are as follows:—

Arenaceous and argillaceous shales,	1127 feet 3 inches.
Underclays,	99 " 6 "
Sandstones,	562 " 0 "
Coal,	37 " 0 "
Bituminous shales,	26 " 5 "
Carbonaceous shales,	3 " 3 "
Limestones,	3 " 11 "
Conglomerate,	0 " 8 "
	1860 ft. 0 inches.

The shales at Sydney are much more rich than those at the Joggins or at Pictou in the leaves and other more delicate parts of plants. "Single fronds of ferns are sometimes found as sharp and distinct in their outline as if they had been gathered only yesterday from a recent fern, and spread out with the greatest possible care, not a single leaflet being wanting or even doubled up." The coal from the Sydney mines is used principally for domestic fires, for which it is admirably suited.

Assay of Coal from Sydney Mines.

Volatile matter,	26.93
Fixed carbon,	67.57
Ashes,	5.50
	100.00

* A square mile of 24 vertical feet of coal will yield 23,000,000 tons.

Valuable coal fields also occur at Lingan, east of Sydney, One of these, about nine feet in thickness, affords a fine caking coal, having a very small percentage of ash, and yielding 35.16 of volatile combustible matter, which makes it superior as a gas coal.

The next important coal field is at the Joggins, in Cumberland. This section is 14.570 feet 11 inches in thickness. Like the Albion Mines section, it is composed of gray sandstone and shale, with occasional beds of bituminous limestone. This section is known as the South Joggins; and being much exposed in the cliff and on the beach, is a favorite field for palæontological research. It abounds in roots of *stigmaria* and erect *calamites*, and several varieties of animal fossils. The Joggins section is remarkable for the great number and small thickness of its coal-seams. The main seam, worked by the General Mining Association,* consists of two beds, 3 feet 6 inches, and 1 foot 6 inches in thickness.

Assay of Joggins Coal from the Main Seam.

Moisture, - - - - - - - - -	2.5
Volatile combustible matter, - -	36.3
Fixed carbon, - - - - - - -	56.0
Ashes, - - - - - - - - -	5.2
	100.0

There are mines in the Pictou coal-measures, one in particular called the "Fraser Mine," where "oil coal" is found—a bituminous underclay. These deposits are likely to prove a profitable source of wealth, as the material is valuable, affording 63 gallons of crude oil per ton.

We will next consider Nova Scotia in her resources of *building materials* and *mineral manures*. Among the former may be mentioned *granite*, which is found in great abundance in many parts of the Atlantic coast. The principal quarries are at Shelburne and Halifax. *Sandstone*, for building purposes, is found at Horton, Halfway River, Windsor, and the Shubenacadie. The red sandstone is too soft and perishable for building, but is useful for interior purposes. The *gray freestone* is found in a great number of places in the Pictou coal-formation, and is quarried both for domestic use and for exportation. It is also obtained at Port Hood Island and Margarie in Cape Breton. There are some beautiful descriptions of *marble* at Five Islands, and *syenite* and *porphyry* in various parts of the Cobequid mountains and in Cape Breton. *Slate* of excellent

* This Association also work the seams just described at Pictou, at Sydney, and at Lingan.

quality is found at New Canaan, and at different places in the counties of Colchester and Pictou. An *artificial slate*, which is much approved, is manufactured from the iron ochres of the Folly mountain. It is said to render wood impervious to damp, and proof against fire. *Grindstones* are manufactured extensively from the gray freestone of Cumberland, which is particularly adapted to such use.

The principal *mineral manures* are *gypsum* and *limestone*. The former is most abundant in the counties of Hants and Colchester. It is largely quarried at Windsor, Newport, Walton and Shubenacadie. The quantity in these counties may be considered to be inexhaustible. We find it associated with marls and limestone at Windsor, Pugwash, Shubenacadie, and at Mabou, in Cape Breton. Bituminous limestone occurs in the carboniferous districts of Guysboro', and on the Joggins shore in the county of Cumberland, the latter of which is highly valuable as a manure, from the presence of phosphate of lime in large proportion.

There have been recently discovered in the *trap* of the Bay of Fundy, by Dr. Webster and Professor How, three new mineral substances,* which, from their constituents, ought to be included in our *mineral manures*. They have been named respectively *cyonolite*, *centralassite*, and *cerinite*. The first of these contains 27.09 of lime, and 61.10 of silica, both of which are important ingredients in the composition of soils. The analysis of the second exhibits 27.09 lime, and 61.10 of silica. The third contains a smaller proportion of lime, for the absence of which is substituted 12.21 of alumina. It contains 58.13 of silica. Professor How looks upon the last as an entirely new mineral combination. The three substances were found united in a solid mass. The specimens experimented upon were of small size, and it is not known that they occur in any great quantity.

We have lastly to glance at those mineral substances which may be distinguished as *precious stones;* and in this connection to refer to the *pearls* of Nova Scotia. Many of these minerals are very beautiful, and include the topaz, cornelian, agate, jasper, garnet, amethyst, zeolite, chalcedony, opal, onyx, heulandite, stilbite, laumonite, Acadiolite, apophylite, calcareous spar, and many more. These gems are found throughout the whole Trap district.

The *pearls* are found in the shell of the fresh water mussel, (Alasmod Margaritifera.) They occur in the Annapolis lakes and in the Sackville

* Transactions of N. S. Lit. and Scien. Society, 1859.

river. Many of the specimens are very fine, and have already been made to adorn the work of the jeweller.

Some of the choicest Nova Scotian jewels set in Nova Scotian gold are being sent to the Industrial Exhibition. Among others is a beautiful bracelet, ornamented with pearls, having a wreath of Mayflowers, and the motto "We bloom amid the snow;" and a necklace ornament of gold, with a large pearl as a pendant—the upper part shewing the figure of a gold digger, with a pickaxe uplifted, and a piece of quartz at his feet.

There is a complete collection of the minerals of Nova Scotia prepared for the Exhibition properly classified, which it is believed will be creditable to the Local Commissioners, and tend to promote the interests of the Province.

CHAPTER V.

POPULATION.

The first important accession to the population of Nova Scotia was at the time of its first occupation by the English as an organized colony in 1749. Prior to this, the population consisted almost wholly of the French Acadians. The emigrants who arrived in Halifax with Lord Cornwallis, being sufficiently settled, were desirous of obtaining some addition to their numbers. A proclamation was accordingly sent over to Germany inviting people, with fair promises, to remove to Nova Scotia; the result of which was, that before the lapse of three years, more than a thousand had arrived at intervals in Halifax. The soil around Halifax not appearing favourable to the operations of farming, they took up their settlement in Merleguish Bay, which name they changed for the German *Lunenburg*. They landed at Merleguish on the 7th June, 1753. But fifteen families remained in Halifax. The descendants of the German emigrants retain the distinguishing marks of their origin, by the use of the German language, though somewhat degenerated, as well as their marriage amongst themselves.

The expulsion of the disloyal Acadians took place in 1755, at which time it is supposed they numbered 18,000, about half of whom were actually exiled. We learn from the *London Magazine* of May, 1755, that the British population numbered 5000. When peace was concluded between England and France, in 1763, a considerable number of the

exiled Acadians were permitted to return, and were allotted certain lands as a recompense for their former loss. Profiting by the severe lesson which they had learned in their misfortunes, they afterwards proved a loyal, inoffensive and industrious people, which traits of character have been continued in their descendants. Their largest and most prosperous settlements are in Clare, bordering on St. Mary's Bay; in the county of Digby; Pubnico, in Yarmouth; Minudie, in Cumberland; and some smaller communities in Halifax county, and in the counties of Cape Breton. They numbered, in 1861, 20,859.

Just before the return of the exiled Acadians (1758–9) Governor Lawrence issued a proclamation, inviting the people of New England to settle in the land of the banished Acadians. These liberal proposals induced many hundreds of substantial farmers from those colonies to remove to Nova Scotia, who founded many flourishing settlements. The inhabitants of Horton, and of many parts of Hants, are the descendants of emigrants from Connecticut and Massachusetts, with some from Ireland.

Some portions of the Province are settled almost exclusively by Scotchmen. In Pictou, and in the Island of Cape Breton, the majority of the inhabitants are from either the Highlands or Lowlands of Scotland, whose immigration dates as early as 1770–75. *New Scotland* is deeply indebted for her settlement and progress to the ancient country whose name she bears.

A great number of Loyalists, who were unwilling to remain in the revolted States, removed to Nova Scotia. Not less than 20,000 arrived prior to the close of the year in which the independance of the United States was acknowledged. Their descendants are to be found in the counties of Digby, Annapolis, Guysborough, Shelburne, and Hants. To the spirit which actuated those self-denying men, it is believed, may in a great measure be attributed the marked loyalty of this Province.

When peace was restored between England and the United States, the employment of those who had served in the army became a serious question. As an inducement to settle down to habits of industry, they were assigned lands in different sections of the country. Some were taken to Annapolis; others occupied the counties of Sydney and Guysboro; and many of them were taken to Hants. While many, unfitted from their previous life, were unsuccessful in improving the opportunities thus afforded them, some laboured diligently and prospered.

The north of Ireland has at different times subsequently sent us a goodly number, who have settled in Colchester, Cumberland, and other counties.

There are in the colony, we learn from the last census, 5927 negroes, or colored people as they prefer to be called, whose ancestors came to the country in four distinct bodies. The first were originally slaves, who accompanied their masters from the older colonies. There were secondly a number of free negroes, who came at the close of the revolutionary war, the most of whom were removed at their own request to Sierra Leone. Next came the insurgent negroes of Jamaica, known by the name of Maroons. Their idleness and licentious habits determined the Government to send them likewise to Sierra Leone. The last arrival of Africans was at the conclusion of the second American war in 1815, from whom, with those who were first received, have sprung those of the race who are now resident in the Province.

A remnant yet remains of the once noble race who were the original occupants of the soil. But how degenerated! They exist as a distinct class, retaining the roving and indolent habits of their ancestors, but degraded and miserable to the last degree. They are sadly enslaved by habits of intemperance; reduced through disease; and are fast disappearing. Humane efforts have for years been made to bring them under the influence of the gospel, but with little success. In some cases, hopeful signs of reformation have been witnessed, but they have soon relapsed into their former indolence and indifference. Unlike other Indian tribes of North America, they do not seem to possess the physical and mental stamina which is needful to bear the transforming impress of religion and civilization. They have dwindled down to the insignificant number of 1407. They are not, however, wholly neglected by the "white man." A commissioner is employed to distribute the annual grant usually appropriated to the purchase of coats and blankets, and generally to represent their interests. The grant in 1860 was $1359. They are largely dependant upon charity, and though enjoying reserved lands, cannot be induced to labour.

STATISTICS.

The total population of Nova Scotia as represented by the census returns of 1861 is 330,857.

Table shewing the rate of increase during successive intervals.

A.D.	Population.	Interval of years.	Rate of increase.
1784	32000*	—	———
1818	82053	34	156.41
1828	153848†	10	087.49
1837	199906	9	029.93
1851	276117	14	038.12
1861	330857	10	019.82

* Exclusive of Cape Breton. † Inclusive of Cape Breton.

The progress in the population of Nova Scotia, or of any of the Lower Provinces, cannot reasonably be compared with that of either the whole United States or of Canada. Nearly three fourths of the present population of Canada, and one half of that of the United States, have arisen from immigration during the last one hundred years; while Nova Scotia, since the arrival of the loyalists after the Revolution, has received no important addition to her population from that source.

The tide of emigration has generally flowed due west from 36° —37° N. to 43° —44° N., taking in the central and southern parts of New England, the Middle and North-western States, Maryland and Delaware; and the central and northern parts of Virginia, Kentucky, and Missouri. Passing by Nova Scotia and New Brunswick, the course has been (via Boston and New York) westward to Canada and the new territories.

It is generally computed that by births, or natural increase, population increases 100 per cent in thirty years. The foregoing table shews that in the thirty-four years from 1784 to 1818, the rate of increase in Nova Scotia was 156.41 per cent. Computing the increase the last 33 years, from 1828 to 1861, it proves to have been 115.05 per cent. Compared with *Great Britain*, it shews a remarkable contrast. The rate of increase in the population of G. B. in the fifty years from 1801 to 1851, was 93.47 per cent., at which rate it will require fifty-two and one half years to double itself. The disparity, however, is to be accounted for chiefly from the accelerated emigration from Great Britain during the ten years 1841—1851.

To furnish a correct view of the progress of Nova Scotia according to population, it is necessary to compare it with a few of the New England States, which were settled a considerable time earlier; and the result of

this comparison is startling, and proves that the taunts of our boasting neighbours, the Yankees, are unjust. It will be seen that Nova Scotia far exceeds them in the increase of her population. It will appear from the following table, that while from 1783 (the year of the Peace), to 1850, Connecticut increased less than two fold, Rhode Island and Massachusetts nearly three fold, New Hampshire nearly four fold, Nova Scotia proper increased from 1784 to 1851 more than *six fold*, and to 1861 more than *eight fold*—including Cape Breton more than *ten fold*.

	1783.*	1850.†	
Rhode Island,	50,400	147,545	
New Hampshire,	82,500	317,976	
Connecticut,	206,000	370,792	
Massachusetts,	350,000	994,504	
‡Nova Scotia (1784)	32,000	(1851) 221,239	Not including Cape Breton.
		(1861) 267,774	

In comparing our progress with that of Canada East, it is found that Nova Scotia falls but little behind, (and from 1834 to 1844, was greatly in advance of) Lower Canada. "The increase in Lower Canada in the 13 years between 1831 to 1844, was 13.94 per cent."§ The increase in Nova Scotia during that period was more than 38 per cent. In the 24 years from 1827 to 1851, Lower Canada doubled her population, during which period her emigration had placed her a little in advance of Nova Scotia, who increased but ninety per cent. The Quebec *Chronicle*, in a late article, gives the following: "Comparing our population (the whole of Canada) in 1861 with that in which we were in 1852, we note that the total population has increased 36 per cent." The increase of the whole United States in the same period is 35½ per cent.

No considerable portion of the population of Nova Scotia is collected together into towns. It has seventy post-towns and villages, and three hundred and thirty six smaller settlements. Some of the towns and villages are, however, becoming more populous; and the growing commerce of the shipping-ports is tending to centralization. The population of the city of Halifax is 25,026. The principal places which might properly be designated towns, are Pictou, Yarmouth, Windsor, Truro, Liverpool, Wolfville, Kentville, Bridgetown, Annapolis, Amherst, Digby, Lunenburg, Sydney, Guysborough.

* Murray's Hist. of North America. † Hunt's Merchant's Magazine, 1854. Haliburton's Hist. and Census. § Canada and her Resources.—A. Morris, A.M.

POPULATION OF NOVA SCOTIA BY COUNTIES.

COUNTIES.	1851	1861	Increase in 10 years.
1. Halifax	39112	49021	9909
2. Lunenburg	16395	19632	3237
3. Queen's	7256	9365	2109
4. Shelburne	10622	10668	0046
5. Yarmouth	13142	15446	2304
6. Digby	12252	14751	2499
7. Annapolis	14286	16753	2467
8. King's	14138	18731	4593
9. Hants	14330	17460	3130
10. Cumberland	14339	19533	5194
11. Colchester	15469	20045	4576
12. Pictou	25593	28785	3192
13. Sydney	13467	14871	1404
14. Guysborough	10838	12713	1875
15. Inverness	16917	19967	3050
16. Victoria	27580	9643	2929
17. Cape Breton		20866	
18. Richmond	10381	12607	2226
	276117	330857	54740

NOTE.—There are 54,469 families in the province averaging 6.07 individuals.

POPULATION OF NOVA-SCOTIA BY ORIGIN.

Nova Scotians,	294,706	Other British colonies,	4,629
Scotland,	16,395	United States,	1,950
Ireland,	9,313	From other countries,	774
England and Wales,	3,090		330,857

PROFESSIONS, TRADES, AND OCCUPATIONS.

Public, Judicial, and Municipal,	1,623	Mechanical Trades and occupations,	13,516
Clerical, Legal, Medical and other professions,	1,800	Lumbering,	3,109
Mercantile,	2,986	Ship Building,	1,510
Agriculture,	47,203	Mining,	715
Fisheries,	14,322	Maritime,	5,325
		Domestic, (not servants),	1,509
		Labourers,	3,908

RELIGIOUS CENSUS.

Church of Rome,	86,281	Congregationalists,	2,183
United Presbyterians,	69,456	Christian Disciples and Reformed Baptists,	901
Baptists,	62,040	Universalists,	846
Church of England,	47,744	Reformed Presbyterians,	236
Wesleyan Methodists,	34,055	Quakers,	158
Church of Scotland,	19,063	Other creeds.	3,512
Lutherans,	4,382		

CHAPTER VI.

INDUSTRIAL RESOURCES.

The productions of Nova Scotian industry, from the singular diversity of her natural resources, constitute as great a variety as may be found in any of the British Colonies. They comprise the products of the forest, the mine, the ocean, the river, and the soil. Her geographical position, it has been already stated, renders her eminently fitted for the pursuits of commerce. Her harbors afford every facility to the building of ships, and her fisheries are a nursery for the supply of able and hardy mariners. As well from their relative importance, as for convenience of detail, the industrial resources of Nova Scotia may be distinguished as *agricultural, fisheries, manufactures, lumbering, ship-building, mines, commerce.*

AGRICULTURAL.

In its present relative state of progress this is by far the most important of the industrial pursuits of Nova Scotia. The soil and climate, it has been already proved, are admirably adapted to the pursuits of agriculture; the usual products of temperate climates, attaining to as great perfection as in any country similarly situated. (See chapters III. and IV.)

As a *grazing* country, Nova Scotia, considering her extent, ranks first among the British North American Colonies. All the interior counties, together with many parts of those on the Atlantic coast, are admirably suited to this purpose. King's, Hants, Colchester, and Cumberland, are pre-eminently so, owing to the extent of their marshes and intervales.

Nova Scotia is not extensively a wheat-producing country. She cannot compare with those wheat-growing countries which surround the great lakes. Perhaps the obvious reason is, that the cultivation of other grains, as well as of fruits and vegetables, has been found to be less precarious and far more profitable. But although she does not raise her own bread, in the article of wheat she exceeds five of the New England States, and twelve of the more recently settled states and territories.*

"In the growth of rye, Nova Scotia goes far ahead of sixteen of the neighbouring states and territories. In the production of Indian corn, (though the quality raised in this Province is excellent,) most of the United States surpass Nova Scotia; but yet, in the growth of oats, she beats

* Official Report to the Secretary for the Colonies, 1853.

thirteen, in buckwheat twenty-three, and in barley every state and territory in the union, except Ohio and New York." "In the growth of hay, and in the production of the dairy, only the older, larger, and more populous of the states, are in advance of this Province; while in the yield of potatoes, of which there is a large quantity exported from Nova Scotia to the republic, she leaves twenty-three of the states behind her."

The farms of Nova Scotia might be made doubly productive if a better system of tillage were generally adopted. The cheapness of the land is a great obstacle to improvement. New land is found to yield an abundant crop, and sowing and planting are continued year after year in succession; in consequence of which treatment the land begins to lose its fertility, when the farmer is induced to prepare new land on which to repeat the process. One important cause of this improvident mode of culture is the want of capital to bring the land to a high state of fertility. The great evil however is, that in nearly all cases too much land is brought under tillage. Were the labour which is spread over so wide a surface directed to fewer acres, with more systematic and more thorough cultivation, the operations of farming would be carried on with incalculably greater profit. Of late years the farmers have become more sensible of the need of improvement. Judging, however, from the Agricultural Report to the House of Assembly in 1860, there is much still to be learned before we attain to the standard of the best agricultural countries. The "Report," among other evils to be remedied, refers to the want of system; ignorance of the laws of rotation; want of economy in the preservation of manures; and want of management with respect to live stock. As a remedy, it suggests the duty of increasing the efficiency of the Agricultural Societies in the several counties, and the re-organization of the Central Board on an improved basis.

There are two valuable products which hitherto have been but little cultivated in Nova Scotia, and which, from the place which they occupy in domestic manufactures, claim particular notice. These are *flax* and *hemp*; which, if cultivated, (and they have been successfully tried,) might also be made a profitable article of export.

The male population returned as engaged in agriculture, number 47,203.† The quantity of land under cultivation is 1,027,792 acres, valued at $18,791,325. The value of live stock the writer estimates to be $6,802,399. The value of agricultural products $8,021,860.

† Census, 1861.

Returns of Agricultural and Dairy Produce—1851 *and* 1861.

		1851.	1861.
Hay,	tons	287,837	334,287
Wheat,	bus.	297,157	312,081
Barley,	"	196,097	269,578
Rye,	"	61,438	59,706
Oats,	"	1,384,437	1,978,137
Buckwheat,	"	170,301	195,340
Indian Corn,	"	37,475	15,529
Peas and Beans,	"	——	21,333
Potatoes,	"	1,986,789	3,824,864
Turnips,	"	467,127	554,318
Other Roots,	"	——	87,727
Apples,	"	——	186,484
Plums,	"	——	4,335
Timothy Seed,	"	——	9,882
Maple Sugar,	lbs.	——	249,549
Butter,	"	3,613,890	4,532,711
Cheese,	"	652,069	901,296

Return of Live Stock of Nova Scotia—1851 *and* 1861.

Counties.	Neat Cattle exclusive of Cows.		Milch Cows.		Horses.		Sheep.		Swine.	
	1851	1861	1851	1861	1851	1861	1851	1861	1851	1861
1. Halifax	6456	7741	5185	6645	1762	2392	12845	15720	3605	3022
5. Lunenburg	9142	10491	3744	5485	669	621	11934	16786	2989	3190
3. Queen s	3231	3496	1553	2080	295	460	5540	4591	933	896
4. Shelburne	3295	3019	2236	2417	311	282	9241	8563	1450	1235
5. Yarmouth	8022	6152	3364	3980	662	801	12449	10336	1694	1616
6. Digby	6063	5420	2568	3041	496	637	11709	10381	1222	1424
7. Annapolis	12546	10857	5158	6190	1514	2452	17526	19353	2852	2540
8. King's	14176	11I72	5216	5760	2381	3860	19383	18199	4652	3369
9. Hants	10232	8280	4967	5974	2176	2919	16377	19655	3100	2309
10. Cumberland	11082	12514	5483	7074	2623	3753	20677	22122	4342	4265
11. Colchester	15278	12585	7092	8789	2636	3923	22143	27494	4410	3757
12. Pictou	18920	14005	10030	13590	4561	6163	29920	36453	8224	5079
13. Sydney	9388	13503	6328	8795	1628	2695	20827	27113	2771	4531
14. Guysboro'	3211	5086	2810	3919	659	1048	9495	11765	1638	2270
15. Inverness	11227	12828	8547	11905	2946	4386	24127	36143	3521	6483
16. Victoria	11636	5051	10125	4697	2755	1337	29000	14025	3257	1849
17. Cape Breton		6165		6762		3087		20170		4075
18. Richmond	2952	3428	2450	3437	715	1111	8987	13793	873	1307
Total	156857	151793	86856	110504	28789	41927	282180	332653	51533	53217

The relative position of each of the counties in this department of industry is as follows:—1. Pictou; 2. Colchester; 3. Cumberland; 4. Kings; 5. Annapolis; 6. Inverness; 7. Sydney; 8. Hants; 9. Lunenburg; 10. Halifax; 11. Cape Breton; 12. Yarmouth; 13. Digby; 14. Victoria; 15. Guysboro'; 16. Queen's; 17. Richmond; 18. Shelburne.

FISHERIES.

This important branch of industry next claims our notice. Nova Scotia has been long celebrated for the extent and value of its fisheries. Along a coast line of more than nine hundred miles, and in her numerous bays and harbours, next to those of Newfoundland she possesses the finest fisheries in the world. (See chapter on Natural Resources—Zoological section.)

Prior to the "Reciprocity Treaty" with the United States in 1854, it was found necessary to employ British armed cruizers to protect the Colonial Fisheries from unlawful encroachment. Since the treaty referred to, this protection has not been required, as the American fishermen are now entitled to equal privileges with our own. The effect of that Treaty, though supposed to be productive of benefit to the interests of the whole province, has not been of advantage to the fishing interest as a section. Foreign fishermen prosecute to an increasing extent what is called the "trawl" or set-line fishing, not only in the banks, but in the bays and along the shores of the province. It is said by those who are well informed upon the subject of our fisheries, that if this mode of taking fish is persisted in, in a few years the banks will be rendered altogether unproductive. It appears that these lines, having hooks suspended from them about three feet apart, are made to reach nearly to the bottom of the sea, where the mother fish repose before depositing their spawn. These baited hooks are seized by these fish, which are generally of the largest size, and they are thus destroyed in the very act of reproduction. United efforts have been made by the Colonial Legislatures to call the attention of the Governments of France and the United States to this mode of fishing, so destructive to the interests of all.

The number of our male population prosecuting this arduous employment, is stated in the late census to be 14,322. It is impossible, however, from those returns, to ascertain the precise number, as a large proportion of the farming population are also engaged in the fisheries. The returns shew that 900 vessels and 8,816 boats are employed, which may

be valued, together with 43,965 nets and seines, at $1,780,450. The value of fish caught and cured, and fish oil, amounts to $2,376,721.

The following are the returns of fish caught and cured—1860–61:—

	Dry Fish.	Mackerel.	Herring.	Shad.	Alewives.	Salmon.	Smoked Salmon.	Digby or smoked Herring.	Fish Oil.
Quintals	396425								
Barrels		66108	192932	8233	12565	2481			
Boxes								36278	
Gallons									230979
Number							2738		

The relative position of each county in this department of industry is as follows:—1. Halifax; 2. Guysboro'; 3. Richmond; 4. Lunenburg; 5. Shelburne; 6. Yarmouth; 7. Digby; 8. Cape Breton; 9. Inverness; 10. Queen's; 11. Victoria; 12. Annapolis; 13. Sydney; 14. King's; 15. Pictou; 16. Colchester; 17. Cumberland; 18. Hants.

MANUFACTURES.

The manufactures of the Province are only in their infancy. In this department, as to their extent, we expect to occupy a lower place than Canada, or even New Brunswick, in the colonial contributions to the Great Exhibition. They are annually increasing, however, and have been much stimulated within a few years. They do not much exceed what are termed domestic manufactures; and indeed possessing the lowest tariff of any of the British North American colonies, it cannot be expected that we can advance very rapidly. The cheapness of labour and the superabundance of capital in Great Britain, must, for some time to come, secure to her the whole of her American colonies as a market for her manufactures. Many of the useful articles which we have heretofore imported from the United States we are beginning to manufacture ourselves, and gradually will become independent of that republic, except as consumers of our native exports.

In nearly all textile manufactures, cutlery, hardware, pottery, shipchandlery, chemicals, &c., we are the customers of Great Britain.

As, however, capital becomes more abundant, and science reveals the inexhaustible treasures which abound beneath her soil and upon the surface, Nova Scotia must occupy the highest position on this continent as a manufacturing country. The facilities which she possesses are to be

found no where in an equal degree but in Great Britain; and it is interesting to observe the similarity of the two countries in this respect: their geographical position and conformation; the abundance of water so generally distributed; the inexhaustible deposits of coal; the variety and value of their minerals; and chiefly the energy and intelligence of their people—for Nova Scotians are proud to feel that their fathers belonged to the noble races that people the British Isles.

But though we have written thus much (in rather a depreciatory tone, it will be said,) this department is by no means insignificant, or we should not have placed it in this middle position, in treating of the industrial resources of Nova Scotia. It is usual to consider the several employments which are connected with the productions of the forest, as pertaining to manufactures; but we have chosen to treat of those employments separately, in the two following sections, under the distinctive titles of lumbering and shipbuilding.

The census shows but an imperfect return of the fruits of our manufacturing labour. It informs us that there are 13,230 hand looms, which produced 1,320,923 yards of homespun cloth, 281,709 yards of which were fulled. The number of bricks manufactured was 7,659 M.; the number of grindstones made, 46,496; bushels of lime burnt, 136,848; carriages made, 2,131; gallons malt liquor made, 109,867; value of leather manufactured, $240,386. Total, $1,146,900. If we include under this head the returns of lumbering and ship-building, the whole may be estimated as $3,098,619, exclusive of mills, factories, &c., $1,741,584 more. But if we could include the returns of labour from the following list of trades and factories, the amount would be very much larger:—7 brush makers, 47 block and pump makers, 12 brass founders, 4 boiler makers, 147 cabinet makers, 1,147 coopers, 15 chair-makers, 22 confectioners, 2 chocolate makers, 6 gunsmiths, 14 gas fitters. *Factories*—3 soap and candle factories, 3 axe factories, 2 rake factories, 3 chair factories, 1 paper mill, 1 tobacco mill, 11 iron foundries, 2 nail factories, 3 cabinet factories, 1 brush factory, 1 trunk factory, 2 biscuit factories, 8 shoe factories, 1 woodware factory, 1 engine factory, 1 pottery, 1 pail factory, 414 grist mills. The whole value of the mills and factories under this head, including breweries, grindstone factories, brick factories, tanneries, carriage factories, and cloth factories, (from all of which the returns are given) is $1,011,480. Population engaged in manufactures, 13,516.

LUMBERING.

The products of the forest in Nova Scotia are similar with but few exceptions, to those of the province of New Brunswick and of Canada, though in this department of industry she is greatly surpassed by those provinces from their possession of a greater extent of forest land. The products of the forest form a most important item in Nova Scotian exports. They comprise deals, boards, scantling; spars, knees, and other ship timber; hoops, staves, laths, shingles and firewood. The county of Queen's takes the lead in this branch of industry. In 1860 there were produced in that county: 639 M. deals, 25,361 M. pine boards, 1,318 M. spruce and hemlock boards, 139 tons timber, 214 M. staves. Queen's saws more than half the whole quantity of pine boards that are sawed in the province; Cumberland the greatest quantity of deals; Pictou exceeds all the other counties in hewed timber; Halifax in staves. The whole value of the returns of timber, deals, boards and staves in 1861 the writer estimates at the average market value to be $1,098.888. The population engaged in lumbering cannot be estimated, as it is combined with other employments; so that the accuracy of the number specified under the head population cannot be relied upon.

There are in the Province 1401 saw mills, 130 shingle mills, 6 lath mills; the saw mills turning out in 1860–61, 25,072 M. feet deals, 46,607 M. feet pine boards, 36,422 M. feet spruce and hemlock boards.

There are no returns of shingles and laths. Staves, 7659 M.; timber, 22,592 tons.

The value of saw, shingle, and lath mills, is $730,104.

The relative position of each county in this department of industry is as follows:—1. Queen's; 2. Lunenburg; 3. Digby; 4. Pictou; 5. Colchester; 6. Cumberland; 7. Halifax; 8. Hants; 9. Shelburne; 10. King's; 11. Yarmouth; 12. Guysboro'; 13. Annapolis; 14. Sydney; 15. Inverness; 16. Cape Breton; 17. Victoria; 18. Richmond.

SHIP-BUILDING.

The great abundance of valuable timber in proximity to the coast, as well as the number of convenient harbours and navigable rivers, render Nova Scotia peculiarly suited for carrying on this noble employment on an extensive scale.

The greater proportion of the vessels constructed in Nova Scotia are of the smaller class, adapted to the coasting trade of the Province, the sister

Colonies, and the neighbouring States. In addition to these, ships of a larger class and of superior description, ranging from 300 tons to 1200 tons, are built for exportation, which usually command a remunerative price.

The following table will shew to what extent ship-building has been prosecuted during the last nine years :—

Year.	No. of vessels.	Tonnage.	Value.
1853	203	31,376	$1,557,090
1854	244	52,814	2,546,595
1855	236	40,469	2,240,710
1856	208	39,582	1,852,540
1857	—	—	—
1858	151	16,366	757,900
1859	—	—	—
1860	233	20,684	852,831
1861	216	23,634	972,448

As the greater number of the vessels built in Nova Scotia are owned in the Province, and intended for domestic trade, this branch of industry is not so liable to reverses, caused by frequent fluctuations in the foreign demand, as is the case in the sister colonies, where they are built principally for exportation. For this reason the table shews but little variation in the number built from year to year. The section on "commerce" will give the number exported.

MINES.

Although, as has been sufficently shown in the place in this essay devoted to the consideration of our mineral resources, that Nova Scotia is endowed by nature with mineral wealth in a very extraordinary degree; if we except the article of coal, comparatively little has been done to *develope* those resources, and make them of practical value. The principal obstacle consists in the scarcity of capital in a new country, where all, or nearly all the capital is fully employed in the ordinary pursuits of commerce. It is not improbable, that even the *coal* might have remained in its native beds until now, had not British capital been employed in our coal fields.

It is known to all who are conversant with Nova Scotian affairs that the "Mining Association" held their privileges under a lease to the heirs of the Duke of York at an early date in the history of the province. It was usual in passing grants of Crown Land, to reserve to the Crown all mines, and deposits of gold, silver, coal, iron, and copper ore. This

monopoly was long a cause of much dissatisfaction to the colonists, and strenuous efforts were made by the Legislature to induce the Imperial Government to annul the grant or to limit the term of its continuance. It was impossible but that the discussion of such a measure, in which rival interests and existing rights were involved, must have been prolonged and sometimes discordant. It was at length, however, satisfactorily compromised, and now—reserving to the Association their former privileges within a circumscribed distance from the centres of their operations—the minerals of Nova Scotia have been resigned to the control of the Colonial authorities. This has given a stimulus to mining operations. Many new coal mines have been opened, some of them containing the oil-coal, and bituminous shales.

The principal mining operations of the General Mining Association are at Albion Mines, Pictou. The quantity of coal raised from these pits in 1860 was 167,004 tons. The greater proportion of this quantity (141,744 tons) was shipped to the United States, where it is used in iron foundries and gas works, for the production of steam. The coals are carried to the loading ground at South Pictou, six miles distant, by a railway worked by locomotives. A community of 2,000 souls is supported by the labour arising from these mines.

The Association has also mines at the Joggins, in Cumberland. They raised from these mines in 1860, 8,319 tons, of which 1,000 tons were shipped to the United States, and the remainder supplied the settlements skirting the Basin of Minas—with a portion of New Brunswick.

The mines of the Association at Sydney supply the province with fuel for domestic use, being admirably suited to that purpose. 117,615 tons were raised from these pits in 1860, 100,000 tons of which were consumed in Nova Scotia and the sister colonies.

The Association intend opening a new colliery at Little Pond, and are building a branch railway to be continued to Point Anconi, five miles distant.

The sales from the more recent mines at Lingan are increasing; *e. g.*,—1859—9240 tons; 1860—16,298 tons.

Since the beginning of 1858, fifteen new coal mines have been opened by private individuals, 7 of which are in Cape Breton, 6 in Pictou and 2 in Cumberland. Two of these are oil-producing mines. In 1860 11,709 tons of common coal were sold from these new mines; and oil-coal, 1643 tons. Nineteen additional licenses were granted in 1860—9 for Pictou,

4 for Cape Breton, 2 for Cumberland, and 1 in each of the counties of Colchester, Sydney, Richmond and Inverness.

The coal raised in the whole province in 1860 amounted to 286,700 tons large, and 22,540 tons small; of which 59,121 tons were for home consumption, 72,881 tons were exported to the N. A. Colonies, and 187,506 tons to the United States.*

The Inspector's Report for 1860 informs us that the sales had largely increased beyond previous years, both at the Association's mines and at other mines. The report directs attention to the circumstance of 459 tons having been shipped to Brest by order of the French Government, and quotes from the Report of the Directors of Naval Construction to the Minister of Marine concerning the quality of the coal; which states that "its steam power is little inferior to Cardiff coal and equal to that of Newcastle.' Sydney is likely to become an important coal depot for steamers, sixty-six steamers having coaled there in 1860.

Iron-mining in Nova Scotia seems to make but slow progress. Works have been erected at the falls of the Nictaux river, and at Clements, in the county of Annapolis; but though the situations possess great natural advantages, and the ore is abundant and of good quality, the operations have not been very successful;—though we learn from the "*Bridgetown Register*," that the works at Clementsport, *after a stoppage of thirty-three years*, are again in full blast, and are turning out five tons per day.

At Great Village river, in the township of Londonderry, are situated the works of the "Acadian Iron and Steel Company," (incorporated by Act of the Legislature in 1855.) The iron made from the ore of this famed deposit, is equal to the best quality produced in any other part of the world. The operations of this company are widening every year; and as the quality of the iron becomes better known, and the appliances for extracting it perfected, it must become a source of immense wealth to the projectors, and conduce to the prosperity of the province. The supply of the ore may be said to be inexhaustible. In one place where the veins are exposed, its breadth was found to be 120 feet. (See chap. IV., sec. "Mineral.")

Mineral Paints are manufactured from the ochrey ores of the iron deposits, and are likely to constitute an important article of commerce.

Granite is quarried extensively in the counties of Halifax and Shelburne.

Gypsum is largely quarried at Windsor, Newport, Walton, Shubenacadie

* Journals of House of Assembly 1860-1. Appendix 12.

and numerous other places, of which 105,431 tons were exported in 1860.

Grindstone is quarried at the Joggins, Seamen's Cove, and Ragged Reef in the county of Cumberland. There were 46,496 grindstones made in 1860.

Reddish brown and gray Freestone for building purposes are quarried in many parts of the carboniferous district, both for domestic use and for exportation to the United States and the other colonies. The principal quarries are at Wallace, and at the head of Pictou harbour, at which latter place stone of excellent quality and color, both in blocks and flags, is prepared.

Although *slate* and *marbles* abound in various places, they have not yet been quarried to an extent worthy of notice. Some polished specimens of our *marbles* will be seen at the Exhibition.

The principal attractions, however, in the Nova Scotia department of the Great Exhibition will be BARS OF GOLD FROM TANGIER; BOTTLES OF GRAIN GOLD FROM WINE HARBOUR, SHERBROOKE AND LAIDLAW'S; WASHINGS FROM THE OVENS, AND OTHER SPECIMENS—*amounting* in all TO MORE THAN TEN THOUSAND DOLLARS.

For a full description of the GOLD MINES, *see chapter IX.*

COMMERCE.

Although Halifax is the principal seat of provincial commerce, other places, as Pictou, Yarmouth, Liverpool, Windsor, Pugwash, Sydney, C.B., with 47 more shipping ports, contribute to swell the aggregate amount. The geographical position of Nova Scotia is eminently favourable to commercial pursuits; and as the resources of the Province become developed, the general commerce must increase to an almost illimitable extent.

The largest portion of the exports of Nova Scotia are drawn from its fisheries and agricultural resources. The total value of fish exported in 1860 was $3,094,499; of live stock and agricultural products, $786,526; of lumber, $767,136; products of mines and quarries, $658,257; furs, $72,218; manufactures, $69,978; vessels, $168,270; miscellaneous, $151,132; imported from other countries and re-exported, $1,019,788—making the total exports for 1860, $6,787,804. Of the amount imported and afterwards exported, $53,320 was shipped to Great Britain, $47,877 to foreign countries, and $918,591 to the other B. N. A. colonies.

The principal exports to Great Britain consisted of timber, (squared and

sawed,) and of ships built in the Province, in return for which there were imported from the United Kingdom manufactures of every description, suited to the wants of the country. The imports from Great Britain far exceed the exports thither. The West Indies is the principal market for our fish, in return for which the produce of these Islands is imported. To the United States, besides fish, are exported coal, gypsum, wood, and agricultural produce; imported, breadstuffs and manufactures.

The trade with the United States has grown more rapidly since the "Reciprocity Treaty" came into operation, by which all unmanufactured articles, the growth and produce of Nova Scotia, may be imported into the United States free of duty. Any advantages which may accrue to our commerce from that treaty, are likely to be of short continuance, as the influence of the agricultural interest in the United States is likely to prevent its renewal after the termination of the stipulated period. Nova Scotia need not, however, contemplate such a change with any apprehension. The superior advantages arising from cheapness in the construction of vessels, must secure to her a large proportion of the carrying trade; and the superiority of her soil for the growth of many agricultural productions which the United States consume, her fisheries, as well as the important articles, coal and gypsum, must always secure to her an increasing trade with that country.

The trade of Nova Scotia with the neighboring British Provinces is steadily increasing. There is already a growing trade with Canada in West India produce, which is reciprocated by Canada in the article of breadstuffs. Previously to 1850 but little commercial intercourse existed between the B. N. A. Colonies. The inter-colonial treaty which has since been established providing for the interchange of native commodities, has afforded a stimulus to commercial intercourse generally; the trade with Canada, however, must consist more in articles of commerce *in transitu* than in the respective products of the two colonies.* The increased intercourse amongst the colonies of B. N. America must inevitably tend to bind their interests more closely together; and it is hoped will create on this continent a cordial national policy, uniting in a common bond of self-preservation and progress the loyal millions of the Anglo-Saxon race, who claim descent from the same ancestry, and unitedly boast of their allegiance to the constitution and crown of Great Britain. The American people justly apprehend the rivalry which must reasonably

* Canada, however, which is now supplied by Pennsylvania, ought to be able to obtain her coal from Nova Scotia.

exist between themselves and these Colonies, if the latter maintain their present state of progress, more especially if a great highway is constructed wholly within the British territories. An intelligent American writer* upon this topic, urges upon the United States to cultivate the most liberal commercial intercourse with Canada, Nova Scotia, and New Brunswick, offering as they do an extensive market for the manufactures of the United States. He writes—"We cast our eyes upon their trade, our merchants go to their cities in search of customers, our manufacturers study their tastes, and we already rival England in their markets to so great an extent, that we carry fully one-half of their whole foreign trade, and are ready to compete with our English friends for the other half."

Imports and Exports from 1852 *to* 1861.

	Imports.		Exports.
1852	$5,970,877	1852	$4,853,903
1853	7,085,431	1853	5,393,538
1854	8,955,410	1854	3,696,525
1855	9,413,515	1855	4,820,645
1856	9,349,160	1856	6,864,790
1857	9,680,880	1857	6,967,830
1858	8,075,590	1858	6,321,490
1859	8,100,955	1859	6,889,130
1860	8,511,549	1860	6,619,534
1861	7,613,227	1861	5,774,334

The table of exports and imports does not include the value of ships exported, which item in 1860 amounted to 8,842 tons—value 295,054. Of these, 6755 tons were sold in Great Britain, and 2087 tons in the B. N. A. colonies.

In addition to the statistics already furnished, a reference to the amount of shipping owned in the Province, and a comparison of it with that of other countries, will probably enable the reader to form a better idea of the extent of our commerce. The following is extracted from Sir Gaspard LeMarchant's official report to the Right Hon. the Secretary for the Colonies—1853: "This Province, being nearly surrounded by the sea, is destined, at no distant day, to be one of the largest ship-owning countries in the world. She owns now nearly one-third as much tonnage as France. She beats the Austrian empire by 2,400 vessels, and by 69,000 tons; and owns 116,000 tons of shipping more than Belgium. She beats the two Sicilies by 38,449 tons; Prussia by 90,783. Holland, which once contested the supremacy of the seas with England, now owns but 72,640

* Hunt's Merchant's Magazine, 1854.

tons of shipping more than this, one of her smallest colonies; and Sweden, with a population of three millions, only beats Nova Scotia in shipping by 36,927 tons." "Of all the republican states and territories included in the confederation, the tonnage of only six exceeded that of Nova Scotia: Maine, Massachusetts, New York, Pennsylvania, Maryland, Louisiana."

In 1846 the tonnage of Nova Scotia was more than half of all the British North American colonies collectively, the tonnage of all these colonies being 252,832 tons, while that of Nova Scotia alone was 141,093 tons. In 1853, the tonnage of Nova Scotia had increased to 189,083 tons. In 1861, notwithstanding the depression which has prevailed during recent years, it had increased to 248,061 tons, comprising 3258 vessels, valued at $6,487,490,—only 13,161 tons less than the whole mercantile marine of England at the end of the reign of the third William.

Vessels entered inwards at the ports of Nova Scotia, 1861.

Great Britain,	No. 194	Tons, 97538	Men, 5111
British West Indies,	259	31436	1916
British North America,	2681	227596	14451
United States,	2851	303638	18225
Other Countries,	338	36555	2101
	6323	696763	41804

Vessels cleared outwards at the ports of Nova Scotia, 1861.

Great Britain,	No. 152	Tons, 68289	Men, 4262
British West Indies,	476	52890	4541
British North America,	2655	239036	14995
United States,	2509	306333	15836
Other countries,	297	29034	1886
	6089	695582	41520

SUMMARY OF THE FOREGOING ESTIMATE OF INDUSTRIAL RESOURCES.

Sections.	Land Stock, Vessels, Mills, Factories, &c., 1860-1.	Agricultural products, Fish, Lumber, Minerals, &c., 1860-1.
Agricultural,	$25,593,724	$8,021,860
Fisheries,	880,450*	2,376,721
Manufactures,	1,011,480	146,900†
Lumbering,	730,104	1,098,888
Ship-Building,	Included in "Commerce."	168,270
Mines,	. . . . .	813,392§
Commerce,	6,096,780	. . . . .
Total,	$34,312,538	$13,626,031

NOTE.—This Estimate is exclusive of Real Estate, Stocks, Shares, &c., in the city of Halifax and the towns of the Province.

* Boats, nets and seines only; vessels included in "Commerce" estimate.
† Return incomplete. § Coal, grindstones, and gypsum; no return of iron.

The Census return of real and personal property is: Personal—$17,224,084; Real—$43,041,330; Total—$60,265,414. This Estimate must be considered to be much below the true amount. The returns were very imperfect.

CHAPTER VII.

RAILWAYS, ELECTRIC TELEGRAPH, STEAMERS, &c., &c.

Railways are of but limited extent in Nova Scotia, notwithstanding the natural position of Halifax, from being the nearest to Europe of the Atlantic ports *open to navigation at all seasons*, has always marked it as the destined terminus of British railway communication on this continent. Several projects of inter-colonial railways had been mooted, but had not succeeded; when the public of Nova Scotia were convinced that, to wait till such a period as would connect them at once with the rest of the continent, was now futile; and they consequently commenced to construct railways upon their own resources, and within the bounds of the province. This course was determined upon during the session of 1854, in which year the works were commenced. The lines then proposed have been only partly completed. It was intended to construct a main trunk, with branches to Pictou on the St. Lawrence, and to Annapolis on the Bay of Fundy. The railways now constructed, and in full operation, consist of a trunk line, extending from Halifax to Truro—a distance of about sixty miles,—and a branch to Windsor, of about thirty-three miles. The whole length in miles is 92.75. The eastern branch to Pictou is being located, and it is expected that, in two or three years, it will be completed; and thus connect Halifax with the Gulf of St. Lawrence, as the Windsor branch connects it with the Bay of Fundy. Should the pending negotiations with the Imperial Government, undertaken by Canada, Nova Scotia, and New Brunswick, terminate favorably, the main trunk line will be immediately continued to the New Brunswick frontier, which will be an extension of 75 miles.

The cost to the province of the 92 miles already completed has been $4,236,109, which amount, for the most part, is represented by debentures bearing interest at six per cent payable half-yearly. Of these debentures $3,500,000 are held in Great Britain, and $500,000 in Nova

Scotia. The stock has reached as high as 108 and 109 in the English market.

The character of the road is much superior to that of the United States railways; and with the exception perhaps of two—the Great Western and Great Northern, will compare favourably with English railroads. There is an obvious inferiority in the station houses, but those of Nova Scotia are quite suited to the circumstances of a young country.

The railway is managed by a commissioner who is a member of the Executive Council, and who is wholly responsible for its successful management. Under this commissioner are employed a superintendent of the locomotive department, a superintendent of the traffic department, and a general inspector of upholdence and construction; all of whom are responsible to the Railway Commissioner for its sub-management. The upholdence of the road is by tender for one year; the department finding rails, chairs, spikes and keys, and allowing twenty cents to the contractor for every sleeper removed and renewed.

Two trains leave Halifax each day for both Windsor and Truro, stopping at intermediate stations; from which places two trains arrive each day. The rate of passenger traffic is three cents per mile 1st class, and two cents per mile 2nd class—speed, about 20 miles per hour, including stoppages.

The following table shews the traffic, receipts, &c., for 1860:

	Passengers.		Horses & Waggons.	Freight.
	No.	Amount.	Amount.	Amount.
Main Line,	50570	33949 52	6016 93	22228 19
Windsor Branch,	37454	27835 86	5898 73	16541 69
Total,	88024*	$ 61785 38	$11915 66	$38769 88

* 1st class—44,637. 2nd class—43,387.

Total receipts from all sources, $112,470 92c. Working expenses, $94,890 99c.; leaving a balance of $17,579 93c. towards the interest on provincial loan.

The freight hitherto has principally consisted of the industrial products of the province. The largest proportion of the amount of interest to be paid on our debentures must, for many years to come, fall upon the general revenue. The indirect advantages, however, which have accrued to

the province from the introduction of railways, cannot be duly estimated. A stimulus has been imparted to general trade, and the sphere of industry has been commensurately enlarged. They must be considered as the great highways of the province; which have always been maintained at the public expense. Indeed it has become a matter of grave question, whether railways in any country have succeeded as a mere pecuniary speculation. But among the indirect benefits derived from them are the cheapness and increased comfort of travelling and the economy of time; the value of which no railway statistics can possibly exhibit: it must be sought for in our bills of health, and in the augmented returns of our industrial income.

CANALS.

As early as 1825 operations were commenced for connecting the harbour of Halifax with Cobequid Bay, by means of a canal, combined with the Shubenacadie river and the Dartmouth lakes. These works were continued for some time, involving a large expenditure of money, but were at length abandoned whilst still incomplete. A new company was incorporated in 1853, to resume and complete the works thus commenced, and the works began early in the following year.* This canal, after a series of financial difficulties, is nearly completed. It consists of a series of locks and two inclined planes, worked by means of machinery. It will afford very great facilities for the transportation of lumber, coal, building stone and gypsum, and all the more bulky articles of freight.

The "St. Peters canal," to connect the waters of St. Peter's Bay on the Atlantic coast of the island of Cape Breton with those of the Bras d'Or lake, was commenced in the autumn of 1854, as a provincial work. When completed, it will divide Cape Breton into two islands. It will open to the Bras d'Or lake a safe and easy entrance, and one by which access will be had to it more conveniently than through its natural outlet. The length will be 2,300 feet. It is intended to have one lock at the St. Peter's Bay termination, and a guard-gate at the Bras d'Or. As the depth of water in the Bras d'Or lakes is sufficient for ships of the largest burthen, such an undertaking must be important to the commercial interests of the island.

ROADS AND POSTAL COMMUNICATION.

The roads of the province are very numerous, and are generally in good condition. The cost of opening new roads is defrayed in part by legisla-

* Nova Scotia as a field for Emigration.—P. S. Hamilton, Esq.

tive grants, applied directly to that purpose, and in part by sums granted out of the treasury of the county in or through which the road is made. To these sources may be added the labour contributed by the people in each county. The legislative grant to this object, in 1860, was $103,855.

The post office department in Nova Scotia is subject to the control of the Legislature, who are always ready to extend postal communication, as the wants of the country require. Besides the mails conveyed over the net-work of post roads covering every county of the province, overland mails are conveyed between Nova Scotia and the neighbouring provinces of New Brunswick and Canada, as well as to the United States. There is a direct communication with the latter country every fortnight, by means of the Cunard steamers; and a more frequent communication is maintained between various ports of Nova Scotia and the United States by steamers and sailing packets. The mail communication with Great Britain is carried on through the Cunard steamers, which make fortnightly trips each way between Boston and Liverpool, touching at Halifax. By branch steam-packets belonging to the same company, a fortnightly mail communication is kept up between Halifax and Newfoundland, and between Halifax and Bermuda.

From the report of the Postmaster General, for the year ending 30th December, 1860, are gleaned the following items:—There are 72 central offices, and 344 branch offices, or "way offices" in the province. There were delivered and posted at Halifax during the year: 2,080,520 newspapers, and 1,426,878 letters, being an increase over the preceding year of 251,212 newspapers, and 128,102 letters.

There is now an uniform established rate of postage throughout the North American Continental provinces—five cents (or 2 4-10d. sterling,) for letters weighing half an ounce.

The post-office department is not yet self-sustaining; the receipts during the year 1860 falling short of the expenditure $27,748.20. The returns, however, show an increase in the receipts, over 1859, of $6,035.36, an indication that the department is gradually becoming independent of aid from the general revenue.

ELECTRIC TELEGRAPHS.

Nova Scotia is quite up to the age, in the use of this modern auxiliary to commerce; every county being connected with the metropolis, and with the interior of the continent. The lines in the province are owned by the "Nova Scotia Electric Telegraph Company." The wire extends

over a distance of 1151 miles, and the company have 46 telegraph offices. They have 3 submarine cables—one across Pugwash harbour, half a mile wide; one across the Strait of Canso, 1½ miles wide; and one at Lennox Passage (separating Isle Madame from Cape Breton) one mile wide. The charge for messages is 12 cents for 10 words, over a distance not exceeding 80 miles—beyond that distance, and under 160 miles, 24 cents.

The Newfoundland Telegraph Company enjoy the privilege of extending their line from Aspy Bay (the terminus of the Cape Breton end of the submarine telegraph connecting it with Newfoundland) through Cape Breton to Port Hood, a distance of 140 miles, where it connects with the Nova Scotia lines. This company have besides Port Hood, offices at Baddeck, Ingonish, and Aspy Bay. The Newfoundland terminus of the ocean telegraph is at Port au Basque.

The Telegraph Companies of Newfoundland, Nova Scotia, and New Brunswick have, under certain conditions, leased their lines to the "American Telegraph Company," which is composed of shareholders in the Colonies, and in the Northern and Confederate States. This Company have under their exclusive control a continuous line of communication throughout the whole length of the Continent, from Cape Breton to New Orleans.

STEAMERS.

Halifax, notwithstanding its acknowledged superiority as a safe and commodious harbour, and its commercial relations with Great Britain, has no line of steamers projected and sustained by local enterprise. This may arise from the fact that all the advantages to the public from such a commercial undertaking are enjoyed from the steamers of the B. N. A. R. M. S. Co., (better known as the Cunard company), which call at Halifax to land and receive passengers and freight, both from Liverpool to Boston and on the return voyage to Liverpool. This celebrated line has, beyond question, been the most successful of any line of ocean steamers, British or American. Its success, as far as human causes are to be considered, may be attributed principally to the superiority of the ships, both as to their construction and machinery; and in the second place to the judicious management of the Company. The maintenance of the strictest discipline on board these ships, is a sufficient explanation for the occurrence of so few disasters, over so long a period.

The importations of the finer descriptions of merchandize, British and foreign, which a few years ago were conveyed in sailing ships, are now,

with few exceptions, brought to the port of Halifax in these steamers. The quantity of freight for Halifax is steadily increasing every year; and the time, perhaps, is not very distant, when—railway communication being completed with New Brunswick and Canada—the imports of these provinces, together with those of Halifax, may be of such importance as to preclude the necessity of the extension of the voyage to Boston.

The Cunard Company have, stationed at Halifax, a line of screw-steamers regularly plying between Halifax and Newfoundland, and Halifax and Bermuda, conveying H. M. mails. The steamers to Newfoundland receive a subsidy from the provincial treasury.

There are also steamers occupying several routes from different parts of the province to the adjoining provinces, all of which receive subsidies from the province. One of these plies between Windsor and St. John, and between Annapolis and St. John, N. B.; one between Pictou, Georgetown, P. E. I., and Port Hood; one between Pictou and Prince Edward Island; and one in the Bras d'Or. The amount granted by the Legislature, in 1860, in aid of steamers, packets, &c., was $7,700.

There is also a line of steamers projected, to ply in the summer months between Quebec, Pictou, and Charlottetown, in the Gulf of St. Lawrence. This line will be in part sustained by the Legislatures of the other provinces.

REVENUE.

The Revenue of Nova Scotia, extending over a period of ten years, shews a healthy increase in all the departments of trade. The past year, instead of an increase, shews a diminution in the revenue; as the trade of Nova Scotia has probably suffered as much, or more than that of any of the B. N. A. Colonies, from the unhappy and protracted war in the neighboring republic. The following table will shew, at a glance, the growth of the public income during the ten years ending in 1860:

Revenue.	Expenditure.
1851—$433,120 00	1851—$423,742 00
1852— 485,582 00	1852— 482,895 00
1853— 510,192 00	1853— 458,712 00
1854— 752,642 00	1854— 776,802 00
1855— 833,069 00	1855— 783,052 00
1856— 691,015 00	1856— 696,397 00
1857— 726,666 00	1857— 793,809 00
1858— 716,025 00	1858— 737,108 00
1859— 698,938 00	1859— 690,595 00
1860— 870,055 00	1860— 852,133 00

PUBLIC DEBT.

The direct liability of the province of Nova Scotia on 31st Dec., 1860, was $4,901,305 42, viz.:

Provincial Bonds,	$4,000,000 00
Provincial Notes,	447,458 00
Savings' Bank,	453,847 42

This indebtedness is chiefly incurred for public improvements and works of general utility, contributing to the advancement of the province; first among which is the Provincial Railway.

THE CURRENCY.

The currency of the Province has, since its first settlement, undergone important changes in its relation to the *sterling* or currency of Great Britain. The first rule was to count the one pound note, equal to 18s. sterling; by which rule, currency was converted into sterling by the deduction of a tenth—£100 currency being nominally equal to £90 stg. By the same rule, sterling was converted into currency, by the addition of a ninth. The next change made the English sterling equal to 1s. 3d. currency, or sixteen English shillings equal to the Treasury note of twenty shillings, or one pound. Consequently, under the new law, to reduce currency into sterling, was to deduct a fifth instead of a tenth; and to reduce sterling into currency, to add a fourth instead of a ninth. The latest change, which now obtains, is one of denomination only, the relative currency value of the English coins remaining unaltered. The province of Nova Scotia, and the provinces of Canada and New Brunswick, have very recently adopted the decimal mode of computation, which has involved the adoption of the cent (the hundredth part of a dollar,) as the copper currency, to replace the pence and half-pence formerly in use. Under the decimal system, as concerns Nova Scotia, the English florin is equivalent to fifty cents, or half a dollar; and the English sovereign is equivalent to five dollars, Nova Scotia currency. The smaller coins then will be, one shilling equal to twenty-five cents, and sixpence equal to twelve and a half cents. In calculating large sums, a somewhat different rule applies than before the change to the decimal system, viz.: *to reduce currency into sterling, divide by five; to reduce sterling into currency, multiply by five.*

Ex, 1.—$5 00 cy. ÷ 5 = £1 stg., or $500 cy. ÷ 5 = £100 stg.

Ex. 2.—£1 stg. ⋈ 5 = $5 cy., or £100 stg. ⋈ 5 = $500 cy.

Besides the one pound or four dollar Treasury note, and the five dollar

Treasury note, the Banks issue, under their charters, five pound, or twenty dollar notes, which are redeemable in specie. The Banks are not permitted to issue notes of a less sum than the amount named.

The par of Exchange on England is 12½ per cent. Correctly speaking, the par is 25 per cent added to the sterling; but the Banks have always adopted the old rule of adding the ninth, viz: as £100 is to £90, so is £125 to £112 10s.; hence a ninth added to £112 10s., is £125. In decimals, it would be—

£100 or $400, at 12½ per cent.,	$450	
Add one-ninth,	50	
£100 sterling, at 25 per cent., is	$500	N. S. c'y.

The Banks of Halifax are—the Bank of Nova Scotia, Bank B. North America (Branch), Union Bank, Halifax Banking Company, (the oldest established bank in the Province.) It is worthy of remark, as affording a proof of the judicious character of banking operations in Halifax, that there has never occurred an instance of a Halifax bank having suspended payment, even for a temporary period.

CITY OF HALIFAX.

Halifax was settled under Lord Cornwallis, in the latter part of June, 1749. The harbour is situated about midway between the eastern and western extremes of the Atlantic seaboard of Nova Scotia Proper. It is entered from the south; and from Sambro Island, upon which stands a lighthouse, extends northward nearly sixteen miles, terminating in a magnificent sheet of water—Bedford Basin,—which is separated from the outer waters by a deep channel called the Narrows. It is said that on the bosom of the Bedford Basin, which is completely sheltered, and navigable throughout, the whole British navy might ride in safety. The harbour has two entrances, formed by McNab's Island, and known as the eastern and western passage. The eastern passage is narrow, and is obstructed by a sand-bar, and is open to small vessels only. The western or main entrance is broad, with water sufficiently deep to float vessels of the largest size. Opposite to the southern extremity of the city, is George's Island, which, being well fortified, forms one of the chief defences of the city. On the summit of the hill, which rises behind the city two hundred and fifty feet above the level of the sea, stands the Citadel—a fortress of great strength, overlooking the harbour and city, and commanding the country for miles around. This fortress, next to

Quebec, is the strongest and best constructed British fortification in America. Its elevation is so great, that, if assailed from the harbour, no impression could be made upon its massive walls.

The city and its suburbs, north and south, extends over two miles; but in width, barely reaches at any point a half mile. It is built upon the slope of the hill, and is laid out in streets at right angles. The growth of Halifax has been slow. In 1760, eleven years after it was founded, "the three towns, Halifax, Irish-town (south suburbs,), and Dutch-town (north suburbs), contained about one thousand houses, great and small." In 1790, the population did not exceed 4000. An old geography of 1807 informs us that "the capital of Nova Scotia is Halifax, which contains about 15000 inhabitants, and is the most populous town of British America." The present population is 25,026. Inhabited houses, 2484. Taxable property, $14,400,000.

The principal public buildings in Halifax are Government House, the Province Building, (one of the finest edifices in B. N. A.,) Dalhousie College, Lunatic Asylum, Provincial Penitentiary, County Court House, City Hospital, and Wellington Barracks. In the commercial part of the city, the unsightly wooden buildings are yearly giving place to substantial and elegant brick and stone structures. Two devastating fires have laid bare whole squares, which are being rebuilt wholly of stone and brick. Under a late city enactment, the erection of other than temporary wooden buildings in the centre of the city is prohibited, which prohibition will cause the city gradually to assume an improved aspect.

The city Corporation includes a Mayor, and eighteen Aldermen—three for each of the six wards.

There are sixteen places of religious worship, four of which belong to the Church of England, three to the Wesleyan Methodists, two to the united Presbyterians, two to the Baptists, two to the Established Church of Scotland, two to the Church of Rome, and one to the Universalists.

There are in the city of Halifax, two Bible Associations, nine Christian and Benevolent Societies, five National Societies, two Total-Abstinence Associations, three Clubs, six Masonic Lodges, one Literary Society, one Museum, one Debating Club, four public Libraries, one Gas Company, five other Joint Stock Companies, five Gold-mining Companies, one News-room, four Commercial Banks, one Savings' Bank, agencies of thirteen British and four American Life Insurance Companies, and of sixteen American and four British Fire Insurance Companies, Halifax Fire

Insurance Company; New York, Provincial, Nova Scotia and Union Marine Insurance Companies; Fire Companies; Consuls and Vice Consuls: Prussia, Portugal, Spain, Brazil, Hamburg, Bremen and Lubec, France, Austria, United States.

The principal commerce is carried on with the North American and West Indian colonies and the United States. The exports during the year ending Sept. 30, 1860, amounted to $3,902,638, of which $1,136,-352 were to the North American colonies, $960,091 to the West Indies, $998,936 to the United States, $175,832 to Great Britain, and $633,427 to other countries. The imports in the same period, were $6,431,581, of which $2,743,290 were from Great Britain, $2,009,713 from United States, $810,304 from North American colonies, $96,707 from West Indies, $771,667 from other countries. Total number of vessels entered inwards; 1291 with cargoes, 118 in ballast. Total number of vessels cleared outwards; 1330 with cargoes, 85 in ballast. Vessels registered in the port of Halifax: 1581—tons, 78,696—value, $1,692,540.

Halifax is an important military post—the head quarters of the Lower Provinces. There are usually stationed here two battalions or regiments of Infantry, and companies of Artillery and Engineers. It is also the chief naval station for the Provinces and the West Indies. The Admiral resides here in the summer months, but in the winter removes his flag to Bermuda.

On the east side of the harbour is situated the town of Dartmouth, settled in 1750. The town is well situated, and is admirably adapted to the employment of ship-building. It is connected with the city by steamboats.

CHAPTER VIII.

SOCIAL INSTITUTIONS.

In treating upon the social institutions of the province, they will very briefly be considered in the following order: Religious, Political, Judicial, Educational, The Press, The Militia.

RELIGIOUS.

By a law of the province, passed as early as the year 1758, it was enacted "That the sacred rites and ceremonies of Divine Worship according

to the Liturgy of the Church established by the laws of England shall be deemed the fixed form of worship." "Provided, nevertheless, that Protestants dissenting from the Church of England, under what denomination soever, shall have free liberty of conscience, &c., and may choose and elect ministers, for the carrying on divine service, and administration of the sacraments, according to their several opinions; and all contracts &c.," "and all such dissenters shall be excused from any rates or taxes to be levied for the support of the Established Church of England." The clause which gave the supremacy to the religion of the Church of England as the authorized religion of the province has been since repealed.

The Church of England, which is the oldest protestant body in Nova Scotia, numbers 47,744 adherents. The clergy of this church are 67 in number, and are under the control of a bishop, whose jurisdiction also extends over Prince Edward Island. The Church of England in this country is mainly supported by the liberality of the Society for Propagating Religion in Foreign Parts. It is interesting to observe that the first Colonial bishopric in the British dominions was established in Nova Scotia in 1787.*

The Presbyterian churches combined, comprise the most numerous religious denomination in Nova Scotia: the Established Church of Scotland numbering 19,063 adherents, and the United Presbyterians (the Presbyterian Church of the lower provinces and the Free Church) 69,456. Their ecclesiastical concerns are under the supervision of their respective synods. The clergy of the former number 21, and of the latter 68. The Synod of the United Presbyterian Church has also jurisdiction over the Presbytery of Prince Edward Island.

The Baptist churches include the second most numerous adherents of the protestant bodies in the province. The Associated churches number 55,336 adherents and 83 clergy, and the Free Will and Free Christian Baptists 6,704 adherents.

The Wesleyan Churches in Nova Scotia are under the direction of the Eastern British North American Affiliated Conference, which is a branch of the British Wesleyan Methodist Conference. This Affiliated Conference includes within its supervision the Churches of Nova Scotia, New Brunswick, Newfoundland, Prince Edward Island, and Bermuda. It is presided over by one of its clergy, who is nominated by the colonial body, and appointed by the parent conference. Its clergy in Nova Scotia number 54, and its adherents 34,055.

* Journal of House of Assembly, 1852, Appendix 4.

The most numerous among the lesser Protestant denominations are the Lutherans, who number 4,382. The Congregationalists number 2,183, with 5 clergy. The African Baptist Association has 4 clergy and 10 licentiates. The Universalists number 846 adherents; Quakers, 158; Bible Christians, 112. There are 13 Swedenborgians, 27 Mormons, and but 3 Deists.

The Church of Rome has 86,281 adherents, and is under the control of the Archbishop of Halifax. It includes two dioceses, the diocese of Halifax and the diocese of Arichat. Its clergy number 42.

Places of Worship in the Province.

Associated Baptist,	182	Church of Rome,	121
United Presbyterian,	143	Other Baptists,	34
Church of England,	139	Other Denominations,	51
Methodist,	136		
Church of Scotland,	25		831

POLITICAL.

Prior to 1719 (at which time Annapolis was the seat of government) the management of the civil affairs of the province was vested solely in the Governor; and, in his absence, in the Lieutenant-Governor or the Commander-in-Chief. In 1719, Governor Phillips, who succeeded Mr. Nicholson, received instructions from the British Ministry to choose a Council from amongst the principal English inhabitants, and, until an Assembly could be formed, to regulate himself by the instructions of the Governor of Virginia. This Council was composed of twelve members, principally officers of the garrison and the public departments. The Governor and Council, from the necessity of the circumstances, combined both the legislative and judicial authority, which, except in so far as they were restrained by the general principles of law, was absolute in all cases. In 1749 the seat of government was transferred to Halifax, where Governor Cornwallis formed a Council somewhat similar in its functions to the one at Annapolis. This method of administration continued until after the conquest of Louisburg in 1758, when Governor Lawrence, who had before the sailing of the expedition, received an order to issue writs for the election of representatives, but which was delayed because of the unsettled state of public affairs, proceeded to constitute a House of Assembly. This Assembly was composed of 16 members, eleven of whom formed a quorum for the transaction of business. The province at this time was not divided into counties. Lunenburg township was al-

lowed to send two representatives, and the township of Halifax four. The representatives entered upon their duties with zeal and intelligence. The most important measures which they adopted were the confirming the past proceedings of the Courts of Judicature, the establishing a form of religious worship, the granting the security of full liberty of conscience, the confirming the titles of land, rendering real estate liable for payment of debts, and passing an act for the punishment of criminal offenders. On the accession of George III., in 1761, a new Assembly was convened, the number of members being increased to 24. During the three years which had elapsed since the first Assembly was convened, several counties had been formed, and the population of the province had greatly increased, (by colonists from New England.) During this session, a formal treaty was executed with Joseph Arginault, chief of the Monguash tribe of Indians, in which it was stipulated that "the hatchet was now to be buried in token of their submission to, and amity with his Majesty."

The civil constitution which now existed, continued without any fundamental change, until the concession by the Crown, of the modern form of administration called "Responsible Government," which Nova Scotia received in the year 1841. The way was in some measure prepared for this latest reform, in 1838, when two Councils were created, an Executive and a Legislative; and the deliberations of the Legislative Council were for the first time made open to the public.

The present political constitution of Nova Scotia may be briefly described as follows:

The highest authority is vested in the LIEUTENANT GOVERNOR, who is styled His Excellency (as the Queen's Representative.) The Lieutenant Governor of Nova Scotia is nominally subordinate to the "Governor General of British North America." It is, however, only a distinction of rank, as the administration of the respective colonies is in no respect connected.

The Lieutenant Governor is surrounded by an EXECUTIVE COUNCIL, chosen from the Legislative Council and the House of Assembly, and appointed by the Crown, who are his sworn advisers in the exercise of his administrative and legislative duties, and who are responsible to the people for the acts of his administration. Five of the members of the Executive are, in accordance with the principles of Responsible Government, heads of public departments, viz: the Attorney General, Solicitor General, Provincial Secretary, Financial Secretary and Receiver General.

The LEGISLATIVE COUNCIL, which is analagous in its legislative functions to the House of Lords, consists of twenty-one members, one of whom is *President*. They are appointed by the Crown, upon the recommendation of the Executive, and hold their seats for life.

The House of Representatives, or more frequently called the HOUSE OF ASSEMBLY, consists of fifty-five members, representing counties and townships, who are elected every four years. The elective franchise is granted to every male of twenty-one years of age, who is a natural-born or naturalized subject of the Queen of Great Britain, and who has been for one year a resident of the county or township in which he votes.

In its mode of procedure, the House of Assembly, as far as possible, conforms to the usages of the lower house of the British Parliament.

JUDICIAL.

The Law of Nova Scotia and the mode of administering justice, are in all essential and substantial points the same as in Great Britain. The common Law of England is the common law of Nova Scotia; and the statutory enactments of the British Parliament up to the time of the colonization of this country have force here so far as they are applicable to our circumstances, whilst a body of Local Statute Law judidiciously framed and adapted to the simpler forms of colonial life, but based upon British principles, has grown up and has lately been carefully revised and consolidated. To one fact in this connection it may be permitted to refer with some degree of pride as an evidence of the spirit at once humane and intelligent which has characterized our legal reforms. To Nova Scotia belongs the honour of having first set the example of limiting the punishment of death to crimes of Treason and Murder; an example which if not implicitly followed, has yet been pretty closely imitated in the meliorations of sanguinary laws as well in the Mother Country as in the adjoining Colonies. It is pleasing to add that the mildness of her criminal code has not been to Nova Scotia the source of any mischief, and that crimes of a heinous character are of very rare occurrence.

The principal Tribunal in Nova Scotia is the SUPREME COURT; having within the province the same powers as are exercised in England by the Courts of Queen's Bench, Common Pleas, Exchequer, and Chancery. It has original jurisdiction in all causes over five pounds, and is the Court of Appeal from the decisions of Justices of the Peace in civil actions. This Court is presided over by a Chief Justice and four puisne

judges, who sit *in banco* in the city of Halifax twice in the year; the terms being respectively of two weeks and four weeks duration. The remainder of the time of the judges is chiefly occupied on circuit, there being spring and fall terms or sittings of this Court for the trial of civil and criminal causes in every county of the province. The Chief Justice receives a salary of £640 sterling, and each of the Puisne Judges £560 sterling. From this Court there is an appeal to the judicial Committee of the Privy Council.

Justices of the Peace, of whom there are 1412 in the province, being one to every 234 of the population, have civil jurisdiction to the amount of ten pounds currency, and exercise in criminal matters the same powers as are held by the same class in England. General Sessions are held in every county once or oftener every year, and special sessions may be summoned at which larcenies of £10 or under can be heard and determined.

There is a *Court of Marriage and Divorce* consisting of the Governor, as President, and one of the Judges of the Supreme Court appointed by him as Vice-President, and the members of the Executive Council, which has full jurisdiction over all matters relating to prohibited marriages and divorce: but it says something for the morality of the country that this Court seems to exist only in the statute book. A *Court* of *Vice-Admiralty* is established at Halifax. A *Court* of *Probate* in every county has control of the administration of estates of deceased persons.

EDUCATIONAL.

The public Educational institutions of Nova Scotia afford to the community a fair opportunity of acquiring a sound ordinary education, or a more enlarged classical and scientific training; though the system is far behind that of Canada in its efficiency. The higher institutions of learning, viz: the academies and colleges, are fully adequate to the wants of the province. The department most inefficient is that of the common schools, which though yearly attaining a higher standard through the beneficial advantages of the Normal School—a training school for teachers, are not of that character which is earnestly desiderated by those who are interested in the work of education.

The *common schools* are supported by legislative grants of money, together with the voluntary payments of the people. In each county there is a board of School Commissioners, whose duty it is to regulate the division of the county into school districts, apportion the legislative

grant, examine and licence school teachers, furnish statistics, and superintend the interests of education generally within the county. There exist likewise, a superior class of common schools, designated grammar schools, where higher qualifications are required in the teachers, and where the classics are taught.

The Normal and Training School situated in the village of Truro, is supported by a provincial grant, and has been in operation since 1855. The Principal of the institution is also the provincial Superintendent of Education. The system of supporting schools free to all classes by direct taxation, as adopted in the United States, has been agitated for several years, on which subject the Committee of Education in 1860 reported to the Legislature: "Your committee believe that the people of this country are from year to year, becoming more alive to this mode of supporting schools."

The oldest established of the *Colleges* is *King's College*, founded in 1789—Patron, the Archbishop of Canterbury. It is under the management of Governors, being members of the Church of England; but is open to all classes, receiving from the Treasury an equal grant with other denominational institutions. Dalhousie College, at Halifax, was incorporated in 1820, at the suggestion of the nobleman whose name it bears, and its Trustees are incorporated by law. It has never answered the objects of its foundation, mainly because of the existence of several denominational colleges and academies; and the building, which is a handsome freestone structure, is now used for a Post-office and other public purposes. There is an efficient grammar school taught in a part of the building. There is also Acadia College, at Wolfville, connected with the Baptist denomination; St. Mary's College, at Halifax—Roman Catholic; and the College of the Presbyterian Church of the Lower Colonies—Truro and Halifax. Of the *Academies* the principal one is at Sackville, New Brunswick, (about equi-distant from Halifax and St. John,) but being under the control of the Eastern British North American Wesleyan Conference, its sphere embraces both provinces. It comprises two branches, male and female; to each of which a capacious building is appropriated; and a lecture hall for the use of both. There are likewise academies or preparatory schools attached to the several colleges. The curriculum of study maintained in these Institutions includes the several branches of Mental and Natural Philosophy, with the ancient and modern Languages. The departments are filled by gentlemen, who are college graduates thoroughly qualified for those positions.

There are in the province 52 grammar schools, containing 1600 pupils, and 1000 common schools—pupils 35,000. The legislative grant for educational purposes was in 1860 $65,893 25.

THE PRESS.

The "fourth estate" is tolerably well represented in Nova Scotia. In the city of Halifax there are published six tri-weekly and one weekly general newspapers, four weeklies—organs of religious denominations, and one total-abstinence journal. There are also one or more newspapers in the towns of Yarmouth, Pictou, Liverpool, Bridgetown, Antigonish, and Sydney, C. B. The city papers contain a large amount of general reading and editorial matter, reports of debates in provincial parliament, commercial and general intelligence, and are conducted with considerable ability and energy. Their editorial columns are chiefly devoted to the discussion of local topics; though the occasional consideration of subjects bearing upon the interests of the nation and the world, exhibit a vigour and intelligence not behind the ordinary press of Great Britain.

The stirring events which have recently transpired in our relations with the republic of America have presented a fertile topic for Colonial pens, and have tended to impart an unwonted stimulus to the intellectual gyrations of Colonial brains.

The circulation of the city papers is from 1200 to 2500 copies at each publication.

MILITIA.

The latest reliable census of the Militia force of Nova Scotia, dates as far back as 1846, when it was returned as comprising 47 regiments, 1445 commissioned officers, 2,494 non-commissioned officers, 53,920 rank and file. Of the rank and file 4878 were from 15 to 18 years of age, 41,650 from 18 to 45, and 7,392 from 45 to 60. This body of Militia though constituting numerically so imposing a band of soldiery, are virtually disbanded, no systematic drill having been enforced for several years.

The Volunteer movement has, however, aroused the dormant warlike spirit of Nova Scotians, which has manifested itself in the organization of an effective Volunteer force, numbering throughout the province not less than 2500 men, comprising 44 companies, 6 of which are Artillery corps. His Excellency the Earl of Mulgrave, who, in his capacity as Civil

Governor, has the command of all the Militia, has taken a laudable interest in this movement ever since its inception, frequently attending the drill-room to inspect their exercises, and expressing his gratification with their progress in the difficult art. The law enacts that "every man of the age of sixteen, and not over sixty years of age, except Clergymen, members of the Executive Council, Judges of the Supreme Court, the Receiver General, the Financial Secretary, and the Provincial Secretary, shall be enrolled in the Militia." The census of last year returns 67,367 males between the ages of *twenty* and sixty; if, then, what is contemplated by the authorities be done—to resuscitate the Militia under an improved organization,—should any imperious necessity call forth her aid in the mutual defence of the British possessions in North America, Nova Scotia would proudly take her position alongside the other colonies, with a contingent of at least 60,000 men.

CHAPTER IX.

GOLD DISCOVERIES AND MINES.

Dr. Dawson in his Acadian Geology, enumerating the minerals of the Atlantic metamorphic district of Nova Scotia, mentions the probability of the existence of gold being discovered in the quartz veins of the metamorphic rocks, from the rocks bearing so close a resemblance to those of the auriferous districts in other parts of America. Nothwithstanding this statement of the geologist, perhaps not one inhabitant of Nova Scotia ever seriously thought of searching for the precious deposit. Nothing therefore could have excited greater wonder in the minds of the people than the startling announcement that *gold* had been discovered at *Tangier*, sixty miles from Halifax. Indeed, had it not been for this circumstance, Tangier might have enjoyed undisturbed its imposing name and forest seclusion for half a century to come. Like most of the modern discoveries of gold, its discovery in this province was purely accidental. The Hon. Mr. Howe, Provincial Secretary, who early visited the place accompanied by Professor How, of King's College, in his report to His Excellency Lord Mulgrave, gives a brief and graphic account of the particulars of the discovery at Tangier. He states that in March, 1861, "a man stooping to drink at a brook, found a piece of gold shining among the pebbles over which the stream flowed, and upon further search he found more. This

was about half a mile from the east of Tangier river, a small stream taking its rise not far from the source of the Musquodoboit, and flowing through a chain of lakes which drain for many miles on either side a wilderness country, and flowing into the Atlantic about forty miles to the eastward of Halifax." As Mr. Howe found about one hundred men collected at the place who were impatient to try their fortune at this novel employment, he instructed a surveyor to lay off a square mile in lots of 20 feet by 30. Lots were soon taken up, some of them by miners who had worked in California and Australia. Though no very valuable nuggets were as yet found, confidence in the extent of the deposits steadily increased, and the pioneers worked on cheerfully and industriously. The Government, while giving every facility to those who were disposed to "prospect," acted with caution, lest too great inducement might be held out to persons who had employment, hastily to rush to the diggings.

A few months after the discovery at Tangier, intelligence was brought to the city that gold was also found in Lunenburg, at a place called *the Ovens*, about sixty miles west from Halifax. The Ovens is a peninsula which forms the western side of Lunenburg harbour, and which, extending from the town of Lunenburg a distance of five miles into the Atlantic, terminates in a bluff promontory, about forty feet high, with steep cliffs on the eastern side, but on the western side sloping down to a stretch of level land with another bay beyond. The average breadth of this peninsula is about half a mile. The bluff promentary called the "Ovens," occupies about half of this distance, presenting a frontage to the sea, where deep caverns have been worn into the bluff by the action of the waves. Mr. Howe states that the quartz veins are in all directions through the promontory, and are visible to the naked eye, without labour. Whilst attention was generally directed to the quartz veins in the upland rocks, it was conjectured by one or two individuals that the sands below the cliffs would be impregnated with particles of gold. Experiments proved successful, and those shore claims have proved to be the most remunerative of any, whether at the Ovens or at Tangier. The astounding revelations of the existence of gold lying at their feet, startled the imagination of the stolid Germans; and so great was the excitement for some weeks before the claims were adjusted, that buxom matrons and maidens might be seen in diligent search for some shining nugget, or gathering sand with the hope of extracting the precious dust. What tale of queenly or faery riches can rival the negligent luxury of these honest Dutch people? Cleopatra, to impart splendour to a feast, dissolved and drank off her

choicest pearls; but the worthy dames of Lunenburg have for generations past, after scrubbing their farm-house floors to their wonted whiteness, strown them broadcast with sand of gold.

Not long after the discovery of gold at Lunenburg, specimens were found about nine miles distant from Halifax on the property of Mr. Charles P. Allen, at Lake Thomas, which Gold locality was immediately distinguished as *Allen's farm.* The account of this discovery created so much excitement that in two days fifty applications for claims were lodged with the Commissioner of Crown Lands. Several of the finest specimens yet found were from this place, and the prospect appeared so promising as to induce the agent of the London Company to purchase a property contiguous to Allen's (Laidlaw's,) at a large advance upon its previous valuation.*

Then followed discoveries at other places on the Atlantic Coast; at *Indian Harbour*, and at *Wine Harbour* in the County of Guysborough. This was about the middle of September. Mr. Smith, the discoverer of gold in this neighbourhood, (who had been prospecting for some days in the vicinity of Indian Harbour,) upon searching at Wine Harbour discovered near the tideway, a ridge of whinstone cropping out, and slaty formation adjoining; the two being separated by a small vein of quartz, which he found to contain gold. This seam of quartz extends for some distance nearly parallel with and close to high water mark on the shore of Wine Harbour, the direction being S. 63° East.

A few weeks later, gold was found at *Sherbrooke*, about a mile and a half from the west bank of the St. Mary's River, opposite the village of Sherbrooke, also in the County of Guysboro'.

The discoveries until now were confined to the Atlantic metamorphic district. On the 26th October a letter appeared in one of the city papers, written at Wolfville, in King's County, informing the public that gold had been discovered, in small quantities, at a place called Little Chester, on the south of *Horton Mountains.* This locality is just at the inner edge of the granitic metamorphic district, where it joins the carboniferous.

About the same time, or perhaps a little before the discovery at Horton Mountains, it was announced in the Yarmouth Tribune, that gold had been discovered at Foote's Cove, near *Cranberry Head.* The part of the coast where the auriferous particles were found, was said to bear a

* These two localities are now denominated the Waverley Diggings.

striking resemblance to the coast in the vicinity of the Ovens. The results of this discovery have not been very promising.* Other discoveries have been made at different times at *Lawrence-town*, *Chezitcook*, *Isaac's Harbour*, *Sheet Harbour*, *LaHave*, and at *St. Mary's River*, all on the Atlantic coast. In the beginning of the present year gold was found at a place four miles from the railroad station at *Elmsdale*, both in quartz and sand. Sufficient proof has however already been given of the fact, that the granitic metamorphic district of the Atlantic coast and parts of the inner metamorphic, are exceedingly rich in deposits of this precious mineral. A few observations concerning the nature of the deposits, and some particulars about the mining localities will be necessary to a full consideration of the subject.

MINES.

Tangier is most favourably situated for mining operations, being within only half a mile of navigation. Communication is kept up between the mines and the city, by means of a steamboat running in the summer season, to and from, twice a week. Mining operations have been chiefly confined to single claims, though two or more persons have taken up larger areas, and are working them on an extended scale. The miners have suffered loss of time and money through the delay attending the erection of crushing machines. They were for many months obliged to resort to hand-crushing, which is a slow and unsatisfactory process; and consequently tons of quartz were accumulated, which only lately have been subjected to the crushing process, and thus enabled them to realize the fruit of their toil. These mines are situated sixty seven miles east of Halifax, and about half a mile from the coast. The outcropping rocks form a series of low hills, which are covered with a thick growth of spruce and hemlock. The strata which contain the gold consist of clay slate, traversed in various directions by veins of quartz, which is generally very compact. The strata which are very much disturbed, have been pretty well exposed by recent explorations. At one point they have a strike of S. 84° E., and a dip of 67° S. The gold at Tangier occurs mainly in the quartz veins. It is disseminated through the matrix in the usual manner—frequently in isolated particles and masses; and where the quartz is white, furnishes specimens of great beauty. The minerals in association with the gold, are

* Within the last two months, a number of claims have been taken up at this place.

principally iron pyrites and mispickel. Chalcopyrite, magnetite, hematite, and galena also occur in small quantities.* Tangier is our most important mining district, and has become quite a considerable village. The facilities for profitable labour are continually increasing. Two or three crushing machines have been set up, and arrangements are made by individuals and by companies, to commence extended operations.

At *Lunenburg* (the Ovens), as soon as the auriferous character of the *sands* was known, there was not a little excitement. Every body rushed from the upland diggings; and as many were eager to participate in the allotment who had no share in the discovery, it was not without some difficulty that the Government finally adjusted the respective claims. Mr. Campbell, who first directed his attention to the shore claims, having associated himself with William Cunard, Esq., and Mr. R. G. Fraser, succeeded in securing the best locality; and it is currently believed that those gentlemen have been so fortunate as to extract a large amount of gold. It is not pretended to state what amount; but judging from the short period in which they enjoyed them, and the expense attending the working of the claims, any "guess" at the amount would be probably much exaggerated. These claims were afterwards sold to a larger Company for the sum of $4800. All the holders of shore lots have been more or less successful. The upland claims are, notwithstanding, the most likely to prove lastingly remunerative. The facilities for mining at the Ovens are even greater than at Tangier; every part of the peninsula being accessible by water. Before the winter had set in, there were from 50 to 80 shanties and tents on the ground, and two or three hundred people. The strata at this place are similar in appearance and structure to those at Tangier, and seem to have been equally disturbed. At one point near the shore (writes Mr. Marsh, who visited the spot) where they were well exposed, the strike was S. 80 ° W. and the dip about 75 ° N. Quartz veins pass through the slate in many directions, and are generally found to contain gold, especially those running north and south. Several dikes of basaltic trap were also observed, one of which was seven feet in width and appeared to be conformable to the strata. The auriferous sand on the shore rests on the edges of the up-turned slate which has been worn into "pockets" of various sizes, well adapted to retain the gold as it is washed over them. At this place all the shore claims for miles around the

* O. C. Marsh A. B. in Amer. Jour. of Science and Arts.

Ovens had been taken up, to the number of 82, up to October last—and 360 upland claims.

The number of claims applied for at *Wine Harbour* (Mr. Howe informs us by his letter to Lord Mulgrave of 28th October) was at that time 30; the number of people employed about two hundred. At *Isaac's Harbour* 23 applications had been made for claims, and about 70 persons were employed. At Laidlaw's farm 16 claims had been taken, and 50 persons were employed.

At *Sherbrooke*, we learn from a correspondent of the *Sun* newspaper, who seems to write intelligently upon the subject, the gold fields promise to be equal to any yet discovered. On the claims laid out, eight fine veins of quartz, all more or less gold bearing, have been discovered. One man took out forty dollars worth in an afternoon, by breaking it up with a small hammer. The general direction of the veins is about 68° W., corresponding to the strike of the enclosing strata, which are hard and slaty in structure, and considerably shattered, dipping about 22° E., at a very high angle. The quartz is highly impregnated with metallic minerals, as bisulphate of iron and copper, arsenical pyrites, and a mineral resembling silver.

PRODUCTIVENESS, &C.

The following figures will afford some information as to the productiveness of the quartz. A Tangier miner classified his quarts into three parts: No. 1 consisted of quartz in which gold was clearly apparent; No. 2 where gold was only barely perceptible; No. 3 where there were no apparent signs of gold. At the request of a bystander, who had witnessed the failure of the temporary mechanical appliance of crushing, the miner proceeded in his own way to pound and wash the quartz so classified, and afterwards to amalgamate and produce the gold. The result was as follows:

Quartz	No. 1	weighing	5 lbs.	produced	fine	gold	1 dwt. 22 grains.
"	No. 2	"	8 lbs.	"	"	"	4 dwt.
"	No. 3	"	6 lbs.	"	"	"	60 cents worth.

More recently a lot of quartz (not picked), weighing a few cwt. less than six tons, was crushed at Tangier which yielded $1,080 (£216 stg.), or $200 (£40 stg.) to the ton.

At Lunenburg, the shore washings have been exceedingly remunerative. Their true productiveness is not easily ascertained, as the most extensive operations have been carried on by a company, who have prudently maintained the greatest secrecy regarding them. It is stated, how-

ever, that a shareholder refused $2000 for a half share, the original price of which was $200 ; and that one hundred bags of sand shipped to Halifax realized $400 worth of gold per bag. Three different samples of *quartz* sent from Lunenburg to London was found upon analyzation to produce respectively (to the ton) 61 oz., 1 oz., and one-tenth of an ounce of gold.

A gentleman from Sherbrooke sold to a firm in Halifax 120 ozs. at $18.50 per ounce, which, with some other lots sold at the same time by other parties, realized nearly $10,000. Part of this was washed out of the soil overlying the quartz reefs, and the remainder from the quartz.

It is quite impossible to arrive at even an approximation to the aggregate amount of gold extracted since its discovery, and large quantities of quartz are in possession of miners, yet uncrushed. In addition to what has been sold in Halifax, large and valuable specimens have been sent to England, Ireland, Scotland, and the United States.

There have been several companies formed for the purpose of quartz mining, one of which was formed in London bearing the name of the Nova Scotia Gold Mining Company, whose agent, Mr. Thomas Belt, has passed several months in the province in the interests of the company.* Companies have also been organized in Halifax and in other parts of the province.

From the foregoing facts it must be conceded that henceforward *gold-mining* must be added to the various industrial resources of Nova Scotia. The government from the novelty of their situation have had to contend with some trifling difficulties, arising from the conflicting interests and misapprehension of individuals, but they seem to have done all that a Government could do in so sudden an emergency. His Excellency, the Lieutenant Governor has on several occasions visited the mining localities, and has exhibited a warm interest in the success of a branch of industry which promises to increase the material wealth of this highly favoured colony,

POSTSCRIPT.

Although the foregoing chapter was written in January of the present year, it comprises all that is important relating to our gold fields. The localities therein described are now the principal centres of attraction to adventurers.

* This company's works are now in successful operation.

The writer has ascertained from the Gold Commissioner's office, that there were sold to 31st Dec., 1861—

	Small lots.	¾ acre lots.	5 acre lots.
At Tangier,	248	7	4
Ovens,	630	61	1
Wine Harbour,	21	24	6
Stormont, { Isaac's and Country Harbours, }	69	5	2
Sherbrooke,	—	23	19
Waverley, (Laidlaw's,)	—	31	6

There are no available statistics later than the above date. A large number of claims have, however, been taken up since Dec., '61, at Sherbrooke and at the new diggings of Oldham (Elmsdale,) and Renfrew. It is supposed that more than eighty places throughout the province have been found to be auriferous.

Extracts from the Act relating to the Gold Fields of Nova Scotia.

"The Governor in Council is hereby authorized to select and appoint a suitable person to act as Deputy Gold Commissioner for the Province, and suitable persons to act as Deputy Gold Commissioners, as occasion may require, in the several districts, and to define the limits of their jurisdiction respectively; and by virtue of and during the continuance of such appointment, such Gold Commissioner within all the gold districts, and such Deputy within the districts to which he is appointed, shall exercise the power of a Justice of the Peace: provided always that no such Commissioner shall act as a Justice of the Peace at any Court of General or Special Sessions, or in any matter out of session, except for the administering of affidavits, the preservation of the peace, the prevention of crimes, the detection and commitment of offenders, and in carrying out the provisions of this Act.

"No Gold Commissioner or Deputy Gold Commissioner shall be directly or indirectly interested in any gold mine, or in the proceeds or profits thereof, nor shall he act as the agent or attorney of any interested therein, under a penalty of one thousand dollars for every offence, to be recovered by proceedings in the Supreme Court."

"The Chief Gold Commissioner and each Deputy shall be provided with a Book of Record, uniformly ruled, wherein shall be entered all applications for areas, with the precise time of their being made, showing the description of area applied for, the amount paid, the name or names of the applicants in full, with the name of the party paying, which shall be open, at all reasonable times, to the inspection of all persons desiring to see the same; and as each applicant shall pay for and file his written application for a mine, the name of the applicant shall be written on the area or areas applied for; and each deputy shall make a return weekly, or oftener, if required, to the Chief Gold Commissioner, of all applications so made, and of the names written on the plan required by the 13th section, and remit the amounts paid."

"It shall be the duty of each Deputy Gold Commissioner to prepare and keep a plan of the gold field or fields within his jurisdiction, with the areas that shall have been laid off, all distinctly marked out thereon; and with his weekly or other return to the Chief Gold Commissioner he shall forward a duplicate plan of all surveys made during the week, and the Chief Gold Commissioner shall cause such plan to be forthwith copied upon a general plan to be prepared and kept by him, of the gold fields in question.

"The form of an application for a mining area shall be as in Schedule B., or to that effect, and the Deputy Commissioner shall endorse thereon the precise time when received; but no application shall be valid unless made in writing, defining the area applied for, and accompanied (except in case of free claims by discovery or otherwise,

under the provisions of this Act,) by payment of a first instalment as hereinafter provided for such area; or, in case of a lot of one thousand square feet in alluvial or placer diggings, by payment of the entire yearly rental. A receipt signed by the Receiver General, acknowledging payment at his office, shall be taken, when presented to the Deputy Gold Commissioner of the district, as equivalent to the production of the money therein specified, and thereupon such Deputy Commissioner shall deliver to the applicant a receipt in form."

SCHEDULE B.

Application is hereby made for a lease for one year, from the day of 186 , of Lot No. , at Gold District, measuring feet by feet—subject to the terms and conditions of the Act relating to the Gold Fields.

Dated this day of , A. D., 186

"Quartz mines shall, so far as local peculiarities or other circumstances may permit, be in general laid off in areas, and be subject to the rents and royalties hereinafter specified.

"Area number one shall be one hundred and fifty feet along a lead by two hundred and fifty feet across.

"Area number two shall be one hundred and twenty feet along a lead by five hundred feet across.

"Area number three shall be three hundred feet along a lead by five hundred feet across.

"Area number four shall be four hundred and fifty feet along a lead by five hundred feet across.

"Areas shall be laid out, as far as possible, uniformly, and in quadrilateral and rectangular shapes. Measurements of areas shall be horizontal, and each area shall be bounded by lines vertical to the horizon.

"The rents per annum of these areas shall be—for area number one, forty dollars; area number two, eighty dollars; area number three, one hundred and sixty dollars; and for area number four, two hundred and forty dollars.

"No more than one area shall be included in one lease; but such area may be of any of the classes above named.

IMMIGRATION.—CONCLUSION.

There is not, perhaps, one of the colonies of Great Britain, suited to the reception of emigrants, where so little effort has been made to invite emigration, as in Nova Scotia. Indeed, the historian of our Province was of opinion that any accession to our population by means of immigration was not desirable, and he considered it to be a matter of self-gratulation that the unfavourable character which the province sustained abroad, both as to its soil and climate, has diverted the tide of emigration to other colonies. The learned author writes (History of Nova Scotia, vol. ii. p. 359)—"We require all the unoccupied land in Nova Scotia for the expansive growth of our own population. It is now (1827) little short of 150,000, and, if it should increase at the rate exhibited during the last ten years, it will in half a century amount to upwards of 500,000. Under these circumstances, although there is yet ample room for emigrants, their

introduction in any great numbers, if not to be regretted, is a matter o perfect indifference." We dissent from this opinion. Admitting the learned Judge's probable rate of increase giving us a population of 500,000 in seventeen years from the present time to be tolerably correct, (which it has proved to have been by the actual increase since 1827); 500,000 will be an exceedingly sparse population for a country containing an area of 18,600 square miles. There is not one of the hitherto flourishing states of the Federal Union whose number of population to the square mile does not far exceed 26. In 1850 Massachusetts had 137.17 to the square mile; Rhode Island 122.95; Connecticut 78.06; New Jersey 71.46; New York 67.33; Maryland 53; Pennsylvania 49.19; New Hampshire 39.6; Maine, the least dense of all the northern states, being 16.66.* Nova Scotia in 1851 had 14.84 to the square mile; in 1861, 17.78. It will be found, upon closer examination of statistics, that the states referred to are in a prosperous condition industrially, in the ratio of the density of their population. New York, whose cities' population constitutes 50 per cent. of the whole state, may be wealthier in her industrial resources than other states which are more densely populated. Rhode Island, however, the smallest in area—only 1200 square miles—ranks second in the density of her population; and it is proverbial that this small state is proportionately the wealthiest in the Union. Massachusetts, which ranks first in density, is well known to be the principal seat of manufactures, and is rapidly increasing in wealth. On this subject the writer recalls to memory an article in a British review† upon the industrial state of the West Indian Colonies. Referring to Barbadoes as a prosperous island, containing 724 inhabitants to the square mile; he accounts for the miserable condition of Jamaica, from having barely 60. Happily, Nova Scotia, with less than a third of the density of Jamaica, is in exactly the opposite condition.

The question now arises, *does Nova Scotia need immigration?* And the question here is not, will it make her present inhabitants richer or happier? but rather, will it tend to urge her forward in a career of industrial and commercial progress? Will it tend to develop those inexhaustible resources with which the God of Nature and Providence has endowed her? In a word, shall she take her place, humble though it may be, in the advance car of the world's progress? It cannot be denied, that our province might move on in a happy and contented condition, securing to her people, *all* that a people ought reasonably to

* Hunt's Merchant's Mag., 1854.
† London Review, Jan. 1861.

demand—the healthiest climate under the sun; the largest liberty which is consistent with the reserved power and authority of a well organized state, and a dependency of a great empire; admirable facilities for education; enjoying the purifying and elevating influences of Christian institutions, with the fullest toleration of religious opinion; with a generous soil, and a surface diversified with the most varying forms of beauty—nevertheless, failing to fulfil her destiny. But what superior advantages she possesses!

A country is what its people make it to be. Read the history of the flourishing states of Europe. There, energy has overcome the most formidable natural obstacles to progress; here, Nature invites us to open her treasures, and promises to reward the patiently industrious with plenty. There, industry and commerce have struggled against the combinations of wealth and power; here, such hindrances are but little felt. There, the accumulations of years are jeopardized or lost in an hour by the ruthlessness of political dissensions or aggrandising war. Alas the American Continent may not boast, after the vandalism enacted at Charleston, disgraceful to a people professing to occupy a place in the comity of nations. Is the United North so righteous, forsooth, that it claims to be the Minister of Divine Vengeance upon the sins of modern cities? Pitiable arrogancy!

During the last twenty years, Nova Scotia has suffered deeply from one of the evils just cited. There is not a British Colony excepting Canada, where the heat of party conflict has been so intense. But in Canada, the constitutional struggle was more brief, and Canada has since bounded onwards with a giant stride. Nova Scotia has been the principal theatre of the constitutional struggle which gave Responsible Government to the B. N. A. Colonies; and the exacerbated passions of some of the disputants have never been effectually calmed. The Legislature for the past ten years or more, has been a scene of party recrimination; and only when some absorbing subject, such as the Inter-colonial Railway, has awakened unusual interest, have party animosities been forgotten and the country's real welfare been seriously regarded. The most intelligent and influential men of both parties are indulging the hope that those hindrances are things of the past, and as a variety of circumstances of recent occurrence have combined to unite the public mind, it is reasonable to presume that the Colony has already commenced a course of unexampled prosperity. No event has succeeded so much in uniting together the hearts of the

people, as the interesting visit of His Royal Highness the Prince of Wales, in the summer of 1860. And Nova Scotia was behind no Colony of the realm, in her cordial and unanimous welcome to the son of her beloved and august Sovereign. No less sincere is she, in her expressions of condolence, in the mournful event which has enshadowed the Royal home.

After all, governments at best are but feeble instruments of national progress, if the spirit of self reliance, manly independence, and untiring energy do not characterise the people. These qualities are not lacking in Nova Scotia, maugre the insinuations of some English politicians. In the neighbouring States, the young men of Nova Scotia are generally reputed to be the best mechanics, and the best employees in every branch of labour. The cause is not easily assigned unless it be that a conviction of the importance of moral and mental training is so widely diffused throughout the Province, and such training generally imparted. Nova Scotia, in the tardiness of her progress has been spared the evil which exists to such an alarming degree in the United States; of large influxes of population of most vicious and demoralized character. This disease in the body politic of the Union, has lately reached its climax; its seat being in the selfish and unprincipled element, which is hurrying on the nation to imbecility if not to destruction. It may now be considered a political axiom, that in the ratio of the existence of enlightened religious faith, *cæteris paribus*, a country is fitted for the enjoyment of civil liberty. The experiment of liberty without religion has been tried in Europe and has failed. Christian nations have looked upon America, with a feeling akin to admiration, as an example of successful democracy. But even the great American republic, has to add her fate to those republics of the past which rose like a meteor and as suddenly vanished. And it must be apparent to every reflecting mind, that the nations of Europe, who are now depressed by reason of the despotic and injudicious exercise of irresponsible power, cannot hope to enjoy the boon of government based upon the popular will, unless the "illuminism" of religion, I mean of true Christianity, has prepared them for it.

Having written so much upon the general subject of immigration and kindred topics, and presuming to believe that the preceding chapters have succesfully proved that Nova Scotia is a desirable home for emigrants, whether from Britain, Norway, Sweden, or Germany, it will be necessary now to refer to the classes of emigrants who are suited to the cir-

cumstances of the colony. In the first place, then, professional men, such as belong to the legal and medical professions, would find a most unfavourable prospect of success in Nova Scotia. These professions are fully pre-occupied by such as possess the influence of local connection, and possess, likewise, qualifications which, in the older countries, would be considered of the most respectable kind. Many of the medical practitioners are licentiates of British Medical Colleges. The class of emigrants who are most likely to succeed, are those who *voluntarily* and deliberately seek for a new field of exertion, as a better means of rising and going forward in the world than any they can find at home, where competition is worked to its highest power, and where, in many cases, the industrious head of a family sees no prospect for himself or for his children of rising above the struggling position in which it is his lot to be placed. And it must be considered by those who are desirous of emigrating, that emigration is not to be understood as a mere refuge from privation. "One of the most common opinions," observes an intelligent writer upon this subject, "is, that if the removal to a new country be a difficult thing to accomplish, yet, when once accomplished, it leads at once to prosperity and riches. If the emigrant believes that the mere change of place is to operate a change of fortune—if he believe that the struggle, the toil, and the disappointed hope, are the fixed characteristics of one hemisphere; and success, wealth, and happiness those of another—if he believe that in his flight he may safely abandon care, and toil, and energy; yet become comfortable and independent—he looks on the whole question from a false light—he has grievously mistaken the economic effect of emigration. He must remember that the new country does not pour forth spontaneously the elements of success; it is merely, after all, *a field for exertion*. Its existence does not make the world a farthing richer; it only gives mankind a wider field for the acquisition of riches by energy, intelligence, industry, and self-denial."

There is, perhaps, no feature which an emigrant should seriously consider, belonging to the country he may choose for his new home, more important than that of climate. Many emigrants, tempted by the prospect of acquiring sudden wealth, risk the hazard to life and the numberless inconveniences of unhealthy and semi-barbarous countries or colonies. He should consider, however, that he is choosing a residence—it may be for his children's children; and what so important that the country of his choice should possess, not only the elements of subsistence and the promise of independence, but where the blessing of health (which consti-

tutes nearly all the happiness of physical life) may be continuously enjoyed.*

There is no doubt that the possession of *capital*, however small, is of great advantage to the emigrant, as it is to every class of men in every part of the world, who can use it discreetly. So much greater as are the productive resources at the command of an inhabitant of a new country, by so much greater is the value of capital which is the machine by which they are made effective. Take an agricultural emigrant, for instance. He naturally expects on arriving at a new country to exchange the position of a tenant, or that of a hired farmer for one of a proprietor. Whether he purposes to buy a farm partly cultivated, or trusting to his stalwart arm, and indomitable energy, proposes to clear away the forest and cultivate the virgin soil, he must have a little capital, either to buy the farm or to secure his title to the government land. In the latter case not much is required, as *one hundred acres can be had for* £8 15s. 0d. *stg.* Or suppose the case of a skilful mechanic; he must expect to suffer the loss of some portion of unemployed time on his arrival, as he cannot expect to find a place prepared for him. To the latter class, however, Nova Scotia, just at the present, does not hold out the greatest inducements, unless associated with the enterprise of manufacturing capitalists.

To the agricultural emigrant it has been said, Nova Scotia offers superior inducements. The government lands are sold on favourable terms, without reference to quality or situation, except marsh or water lots, the price of which is fixed by the Governor in Council. (The reader is referred to the chapter on "agricultural resources" for particulars as to the quality and quantity of ungranted lands.) The most suitable season for the arrival of the agricultural emigrant is in the Spring, at which time he will only require in addition to the price of his land, stock and implements, the needful for six months' support; whereas if he arrives in the Autumn, he can do nothing until the following Spring, and will have to support himself 12 months instead of six. An allowance of six months is made in both cases for the maturity of the crops.

"The demand for farm servants is increasing. Labour has been so scarce for some years, that farmers have found it difficult to husband their crops at the proper season. The best men can earn from £25 to £28 sterling per annum, and women from £10 to £12; both being fed

* It was omitted to remark in the chapter on *Climate*, that ascertained from meteorological observations, the Military authorities have stated that Halifax is among the healthiest colonial stations of the Empire.

and lodged in the families where they are employed. House servants, especially females, are much wanted in all the towns and villages. Places are easily obtained and wages are good, ranging from 12s. to 20s. per month. They are provided with everything but clothing. Boys and girls from 12 to 15 years of age would be readily taken by the farmers as apprentices."*

Workmen in the various mechanical trades generally receive better wages than in England. The price of labour varies at different times, so that no sum named here would furnish a true criterion. The mechanic will learn from Chap. VI. sec. Manufactures, the occupations most in request in the country.

Carpenters and Joiners receive per day	from	5s. to 6s.	sterling.
Masons and Bricklayers, . . .		6s. to 8s.	"
Blacksmiths, &c., ...		do. do.	"
Tailors, ...		5s. to 6s.	"
Other trades in proportion, and labourers		3s. to 4s.	sterling.

Mr. Philips, in his paper on "Gold Mining and the Gold Discoveries made since 1851," (read before the Society of Arts in London on the 14th of May last,) when describing the Gold Discoveries in Nova Scotia, judiciously observes: "It must also be taken into consideration that Nova Scotia possesses many decided advantages over both California and Australia. Each of these countries is situated at a great distance from Europe, and can only be reached after a long and expensive passage, and, as a natural consequence, wages were for a long time exceedingly high and provisions proportionately dear. Nova Scotia, on the contrary, is within an easy distance both from Europe and the United States of America, and possesses a considerably settled population of intelligent, industrious, and sober people, eminently adapted after a little experience to become steady and efficient miners. The whole of the gold-bearing portion of the province also lies within a convenient distance from the coast, which abounds with magnificent harbors, affording ample security to shipping, whilst wood in large quantities is to be everywhere procured for all descriptions of mining uses, and an abundant supply of water is generally to be met with for the purposes of washing and amalgamation. From these circumstances, it is impossible that wages can ever reach the extravagant rates that mainly led to the failure of nearly all the gold-mining enterprises of 1852, since which period many of the mines have been advantageously

* From official documents furnished by Crown Land Office.

worked which were then abandoned on account of the enormous expenditure necessary to carry on the operations."

The following list of prices of food will afford a fair criterion of the expenses of living in the Colony: *beef*, 4d. to 6d. per lb.; *mutton*, 2d. to 4d. per lb.; *pork*, 3d. to 4d. per lb.; *turkeys*, 5d. to 8d. per lb.; *geese*, 1s. to 1s. 8d. each; *fowls*, 1s. 3d. to 1s. 8d. per pair; *salmon*, 4d. to 6d. per lb.; *codfish*, 6d. to 1s. each; *mackerel*, 2d. to 3d. each; *herring*, 4d. to 6d. per dozen; *trout*, 9d. to 1s. per dozen; *lobsters*, 1d. to 2d. each; *oysters*, 3s. to 4s. per bushel; *flour*, 24s. to 30s. per barrel of 196 lbs.; *cornmeal*, 14s. to 16s. per barrel of 196 lbs.; *butter*, 8d. to 1s. per lb.; *cheese*, 6d. to 8d. per lb.; *eggs*, 6d. to 10d. per dozen; *tea*, 1s. 8d. to 2s. per lb.; *sugar*, 4d. to 5d. per lb.; *potatoes*, 1s. 2d. to 1s. 8d. per bushel (in season); *turnips*, 1s. to 1s. 4d. per bushel. The foregoing prices are in sterling.

Coal is 20s. to 25s. sterling per chaldron; *wood*, 10s. to 14s. per cord.

There is one class of persons who seldom are included in the lists of emigrants, to whom the writer considers Nova Scotia offers many inducements as a field of enterprise—the small manufacturer, and capitalist. It is true that there are many advantages in older countries which do not exist here, as the plentiful supply and the cheapness of labour, which secures the employer from any sudden embarrassment in his operations for the want of hands. Here however there is but little competition; and the protective duty of from 5 to 20 per cent on all imported manufactures, is a considerable offset in his favour against the disadvantages which may be found to attend his operations in the colony. It could not be expected that at present the province would afford a market for several manufacturing establishments in each department. Not more perhaps than two or three at most could be sustained, and those such as are manufactories of the most useful products of industry, such as plain cloths or trowserings, or several departments of woollens, combined—grey domestics, white shirtings, denims, drills, and stripes, united—common pottery and glass house combined. Should manufacturers be induced from the existence of an abundance of raw material of every description, and a plentiful supply of coal, to try Nova Scotia as a sphere of industry, it would be requisite to transport every mechanical appliance, and all the skilful labour required for successful operations.

One word more, to all who may emigrate to Nova Scotia, viz: the means of conveyance. There are twice in the year, generally in the months of March or April, and August or September, ships leaving the

ports of Glasgow, Liverpool, and London for Halifax, and occasionally other parts of the province. The passage money by these ships will be from six pounds to ten pounds sterling.

The Cunard Steamers carrying H. M. Mails also sail every alternate Saturday from Liverpool to Boston, calling at Halifax. These ships carry 1st. and 2d. cabin passengers. The cost of passage is—1st. cabin, £22; 2d. cabin, £16.

The agents of this Company are D. & C. McIver & Co., 8 Water St. Liverpool, G. B.

CONCLUSION.

In conclusion it is but just to ourselves to indulge the conviction, that if our valuable resources may remain for years to come undeveloped; if we cannot tempt English capital and English skill; and if agriculturists will prefer the soil of our republican neighbours to our own, we may not despair—our Country must progress. But we must content ourselves with a slower measure of progress. And we have a notable example in the steady, industrial and commercial advancement of Great Britain herself. It is chiefly within the last sixty years that Great Britain has made any rapid strides in material prosperity. Our resources are very similar to hers. It may not strike the cursory reader, but it is so. And may it not be more than the enthusiastic dream of a patriot to predict, that Nova Scotia is destined to become in the extent of her commerce and manufactures the Great Britain of this Continent.

Our cousins of the neighbouring republic, rejoicing in the splendour of their mushroom progress, may read this prediction with a feeling of contempt. But Time—the great umpire of terrestrial events—will decide. We do not believe as some do, in the immediate end of sublunary things. We believe that the world, as concerns her progress in wealth, science and jurisprudence, is but now in her adoloscence. We anticipate the period—and passing events seem to indicate its accelerated approach—when this continent shall exhibit the reproduction of the older continent of Europe, characterized by states, or federations, or dependencies, as diverse in their intelligence, in their industrial pursuits, and in their national character, as the more highly cultivated states of Europe. There will be this difference however. The mighty progressive power of constitutional liberty will prevent the re-appearance of those despotic empires which are the bane of Europe—whether based on the decaying foundations of hereditary empire, the momentary power of the sword, or the crumbling system of a religio-political hierarchy.