

objections. Again, the surface of the rock has been acted upon by powerful currents, which were the only adequate causes of the wide distribution of their materials, over the surfaces of the other rocks. That these currents have proceeded from the north towards the south is evident, from the debris of each formation being spread abroad, southward of the solid strata from which it has been derived. This thinning off of the beds and distribution of detrital matter, would lead a cursory observer to believe the formation much greater than it really is; and frequently renders the marking of its limits an arbitrary act. But, in an agricultural point of view, those circumstances are extremely beneficial; for, frequently, the situations which have been filled, under other circumstances, by the almost barren sands of the coal formation, are occupied by the fine, marly sandstone and clays of the superincumbent group; and thus a far greater area of fertile land has been produced, than would have resulted under other conditions.

It is true, the same causes that scattered the detritus of the red marly sandstone, also acted upon the less productive strata beneath; and have, in a few instances, spread abroad the barren sand; but as the rocks of the coal series, in general, are much more capable of resisting those causes, the effect has not been so great. The fertility of vast tracts has been greatly improved, by the dissemination of the marly clays and sandstones; which had they remained in their original conditions which have been confined to narrow limits. In these, and numerous other effects, it is easy to be observed, how beneficially the powerful operations of former ages have contributed to the growth of plants and food for the earth's inhabitants.

The shores of the Grand Lake are strewn with boulders of granite, mica slate, syenite and trap: from whence these came, it is difficult to determine. The surface in all directions is low and level, and strongly contrasted with the abrupt hills and mountains of granite and trap rocks, farther south. No sooner does the majestic river descend from the flat grounds of the new red sandstone and coal formations, at the Washademoak, that the scene is changed from the tame aspect of those rocks, to rugged and uneven grounds, where the effects of volcanic agency are every where manifest.

The tide rises in the Grand Lake about six inches, which is somewhat less than its elevation in the Belleisle and Washademoak. It must not be supposed, however, that the sea flows so far up the river and into the Lake: this is by no means the case; but the effect is produced from the sea rising a few feet above the level of the river at and before high water. The result is obvious: the fresh water, being unable to escape, accumulates; a regurgitation takes place, and the lakes and rivers rise, more or less, even a hundred miles above the entrance of the main stream. The common rise at Indian Town is twenty inches; in the Grand Lake six inches; above Fredericton and one hundred miles from the sea, the rise gradually lessens from three inches to one inch, until it becomes imperceptible.

A considerable part of the shore of the Lake is covered with fine sand and shingle, or beds of pebbles, produced by the decomposition and disintegration of the sandstones and conglomerates. Under the constant heaving influence of the waves and meteoric changes, the rocks are gradually yielding, and the lake is becoming wider and more shallow. The courser materials remain upon the shore, while the fine sediment is carried downward by the current; and yearly contributes to the collection of alluvium, at the foot of the lake and along the main stream. The sand and shingle, thrown up by the agitated waters have formed barriers across the outlets of small streams and indentations; and thus large ponds, and finally meadows exist, where at some former period, the lake uninterruptedly prevailed. Wherever the beach is composed of sand, an embankment has been thrown up by the waves, about one hundred feet wide and ten feet high; and while many of the elms and white oaks along its borders have been undermined, the trunks of others, a little more remote from the shore, are half buried in the sand.

At a place called 'The Little Keyhole,' an embankment of sand has cut off a quantity of low ground, and converted into a large pond and tract of 'wild meadow,' the whole occupying an area of a square mile. The pond has a narrow outlet when the freshet is low, and large quantities of herring and alewives enter, to deposit their ova. Their retreat is then cut off, and they are dragged from the pond in nets, prepared for the purpose. This natural fish-pond is owned by Mr. Calkin, who, for the sake of the traveller it may be said, keeps a good Inn near its border.

Near this locality, a quantity of the granular argillaceous oxide of iron is mixed with the sand, and occurs in a soft, argillaceous sandstone; which, by being washed away, leaves the ore scattered along the beach. It appears in small spherical grains, or masses,

from the size of a pea to a musket ball, and is identical with the *Fer oxidum brunum granuleum* of Hany. Between the Little Keyhole and Long Point, a distance of two miles, the red sandstone rests upon the dark red micaceous variety, and both lie upon the sandstone and conglomerate of the carboniferous series. Long Point is a peculiar bar of sand, thrown up by conflicting currents. It is a narrow ridge, a mile and a half in length, having its extremity carried to the south.

On the south side of the Point, the shore is composed of conglomerate, and the new red sandstone is altogether absent. This conglomerate consists of pebbles of quartz, slate, hornstone, trap and syenite. The pebbles of quartz are frequently transparent, and many of them would afford good polished specimens. This rock extends a mile and a half along the shore, and contains the remains of numerous trees, which are embedded in and between its strata, and lie prostrate in all directions in the solid rock, both beneath the water of the Lake and at the highest part of the shore.

These trees are from four inches to two feet in diameter; their cortical parts have been converted into coal, and the wood itself changed either into sandstone or heavy compact mineral masses, in which all the distinctive characters of the wood and the vegetable fibre remain, perfect and distinct. The sulphate of barytes enters into the composition of the latter variety, and is frequently beautifully crystallized, in rays proceeding from the original pith towards the circumference of the plant. Many of these specimens would be very beautiful, were they carefully polished across the fibres of the original wood. With the sulphate of barytes appears also the sulphuret of iron, in bright yellow crystals, filling up former cracks, and enclosing the knots of original trees. Both the fossils and the strata containing them embrace much iron pyrites. This mineral, by attracting oxygen from the atmosphere, is finally changed into the sulphate of iron or copperas, which is often seen incrusting the fossil trees and the edges of the strata exposed to the weather. So perfect is the resemblance of these fossil trees to decayed wood, that they are readily observed by the inhabitants, and supposed by them to be petrified beech and maple. But they are very different from any trees now growing in the Province, and closely resemble the coniferæ of tropical climates; evidently belonging to that herbage, from which the bituminous coal in this quarter has been produced. One *Phytolithus transversus* (Stenhausner) and one *calamite* were found; but none of the cactæ were observed.

Colonial.

NOVA-SCOTIA.

Halifax Morning Post, February 23.

The Casual and Territorial Revenues.—One of the most stirring debates that have yet transpired, during the session, took place yesterday, in the House of Assembly, on the second reading of Mr Goudge's bill for granting a Civil List to the Queen, in commutation of her Majesty's Casual and Territorial Revenues in this Province. This subject, which has agitated the colony for years, and has called forth, in both branches of the Legislature, session after session, the most protracted and animated discussions,—and the disposal of which has at different periods, given rise to some of the most ingenious displays of parliamentary tactics; was acted on by the new House, in a manner not very decisive of the mode in which they intend to dispose of it this session. The question arose on a motion of the hon. Attorney General, to postpone the bill, as his Excellency had received positive instructions not to consider any proposal of the kind. The debate which followed was sustained with much spirit and vigor, till late last night, by Messrs. Huntington, Young, Marshal, Goudge, and Henry—against the Resolution, and for committing the Bill; and by the honbles. Attorney General, Mr Uniacke, Mr Dodd, Mr Dewolf, and Messrs. Fairbanks, J. R. Dewolf, and Fulton, in favor of the resolution. On the question being taken, the numbers stood— for the resolution, 23 against it 26. The hon. Mr Dodd then moved, in amendment to the Bill, that an address be presented to the Queen, praying Her Majesty to relinquish those revenues, on a suitable Civil List being granted by the House; and the amendment gained a majority of 23 to 21.

Halifax Journal, Feb. 22.

On the arrival of the Britannia a committee of the passengers waited upon Captain Cleland with an Address, expressive of their high sense of his kindness and attention during the voyage, and requesting his acceptance of a piece of Plate.

The Britannia brought 80 passengers, five of whom were for Halifax. She left for Boston with 19 additional, making in all

95.—She brought 75 bags of Letters and Papers for these Colonies.

From the Halifax Royal Gazette.

Lord John Russell has conveyed to Sir Charles Fitzroy, the Lieutenant Governor of Prince Edward Island, Her Majesty's Gracious permission to propose to the Colonial Legislature at its next meeting, that the sum of £1000 Sterling per annum should in future be paid from the funds of the Island towards the support of the Lieutenant Governor.

PRINCE EDWARD ISLAND.

Colonial Herald, Feb. 22.

A bill to authorize the Crown to purchase the lands, and to regulate the settlement of the inhabitants of this island, has passed the House of Assembly, without, it may be said, the show of an opposition. It is now in the hands of the Legislative Council. It is, word for word, a transcript of the bill of last year.

NEW-BRUNSWICK.

Fredericton Gazette, Feb. 24.

CIVIL APPOINTMENT.

Henry W. Baldwin, Esq., to be a Commissioner for the management of Wrecks and derelict Goods, in the County of Gloucester. IN THE SUPREME COURT.

Hilary Term, 4th Victoria, 1841.

James S. Morse, Theophilus Des Brisay, Robert H. Gilbert, James F. Berton, and Edward B. Peters, Gents., Attorneys of this Court, are called to the Bar, and admitted, sworn and enrolled Barristers.

Gustavus R. Jarvis, and James J. Kaye, Students, having produced the requisite Certificates, and having been examined as to their fitness and capacity are admitted, sworn and enrolled.

Tuesday, the 25th day of March next, is appointed for the examination of Students applying for admission as Attorneys, at the ensuing Trinity Term; to be held at the residence of Mr. Justice Parker, in the City of St. John.

ORIGINAL.

ON FEMALE EDUCATION.

NO. II.

INTELLECTUAL.

Mr. Editor,

My former letter was merely introductory. In this I propose to illustrate, in general terms, the importance of an intellectual education, leaving it to a closing communication, to enter into details. Knowledge gives the human mind its high and commanding superiority over the beasts that perish. Man can justly claim no right to the cultivation of the mind, to the exclusion of woman. It is equally her birth right by heaven's gift, and she should possess a full share in its advantages.

Knowledge, under proper influences, is a grand means of conferring happiness on the possessor; and mental enjoyments are confessedly the most exalted that rational beings can experience. Woman therefore should have access to those sources of gratification. She should tread the paths of literature, and luxuriate in the fields of useful science. Her trials are often many and severe, and she should have elements of comfort within her own bosom. When misfortune and disappointments combine to oppress the spirits, stores of useful knowledge would afford nutriment to the soul, and preserve its elasticity and vigor; while, during the period of prosperity, they would furnish matter for solid and pleasing meditation. Useful knowledge would be to her a source of enjoyment, of which no vicissitude or calamity could deprive her.

The importance of intellectual attainments will be no less apparent, if we contemplate woman in the aspect of a companion for man. Personal beauty, if this should have won his affections, may lose its charms. Exterior personal accomplishments, however important in their place, can never be substitutes for a rich, or even moderate amount of mental endowments. A fascinating exterior may please at a distance, but in close companionship, man likes the beamings of intellect—the radiance of the soul. He wants a companion at the fireside. Does he devote his leisure hours to intellectual pursuits, and does he feel disposed to converse on the topics which engross his attention, he wishes beside him a kindred spirit. At home he desires intellectual feasts, at which his dearest companion, along with himself may be a delighted guest. Wives of this stamp, directed by prudence and affection, might often preserve the youthful husband, for whom the snares of the voluptuary are laid,

from evening and midnight wanderings, and the formation of habits which conduct to ruin: or they might, under the divine blessing, win back from vice, if it has been their lot unwittingly to be united to men who have begun the career of infamy and woe.

As mothers, the immense importance of mental cultivation in females, will be unhesitatingly acknowledged. They have the first access to the infant mind; and during the period of minority, if we remain under the parental roof, they exercise an almost perpetual influence. The early instructions of intelligent and pious mothers have been, with gratitude and exultation, referred to by many of the most distinguished persons who have flourished during the last few centuries: and were we furnished with biographies, we should unquestionably be assured that many others, who have not spoken to the world on the subject, trace much of their earliest and best tuition to the same source. This is one of the highest encomiums which a son or daughter at mature age, could pay to a parent. What pleasure must that man feel who goes forth to his daily avocations, under the assurance that his children at home, are trained by an intelligent and judicious mother! He is nerved for toil; he is steeled against the buffetings of the world; he boldly faces dangers, and bears up under misfortunes, knowing that his offspring at home are being furnished with an inheritance more valuable than the richest patrimony. Whatever trial may have crossed his path abroad, he returns to his dwelling to meet the intelligent and engaging smiles of those that call him father, and this gladdens and cheers him. The mother, too, has her own reward. She witnesses the success of her efforts; and she is the more delighted when she sees the father exultingly appreciate her labors. They both enjoy the pleasures of hope, in looking forward to future years, when their children shall rank among the useful and honored ones of society. Intelligent mothers are among the best guarantees of an intelligent offspring: and they do more, in their retired and unseen department, for ennobling and benefitting our race, than upon a cursory view most persons imagine.

Home is indeed the appropriate sphere of woman; but it is her duty and privilege nevertheless, to mingle in some measure with the world. Abroad, as well as in the domestic sphere, intelligence renders her a benefactor, and commands for her the respect and homage of the circle in which she moves. In enlightened christian communities, woman has assigned to her the first place in society; and when intelligence and judgment combine to direct her movements, her influence is irresistible. Her society is sought for the rational pleasure it affords. Conversation, in the promiscuous assemblies of both sexes, is generally regulated by the views and tastes of the female portion, the other sex being always studious to please. If females then are possessed of intelligence, and are capable of engaging in useful conversation, instead of that insipid and demoralizing gossip, which too often characterises our social intercourse, the conversation would be dignified, instructive, and agreeable; fewer would suffer under the blighting influence of scandal; there would be less heart-burnings, envyings, and divisions; and society would be knit together by strong and enduring bands. To enjoy the approving smiles of cultivated females, the other sex, instead of squandering their time in frivolities and dissipation, instead of being satisfied with very moderate attainments and esteeming a few outward accomplishments superior to mental acquirements, would betake themselves to intellectual improvement. When they are made to feel that useful attainments combined with good moral principles, are the passports to favor, they will forego many of their frivolous and enslaving indulgences, and strive to elevate themselves in the scale of national being. These are not among the least advantages resulting to society, from a high state of intellectual culture by the female sex. Enlightened woman can do much towards promoting a taste for mental improvement, and it is the imperative duty of our sex, having the power in our hands, to place her in that high intellectual position, calculated to accomplish these great objects. Let parents then be inspired with a lofty and laudable ambition, to secure for their daughters an intellectual education, which will make them at once respected and beloved, and the means of shedding beneficial and lasting influence on society.

Industrial education in my next.

PHILOS.

Chatham, March 1, 1841.