

Technical and Bibliographic Notes / Notes techniques et bibliographiques

The Institute has attempted to obtain the best original copy available for filming. Features of this copy which may be bibliographically unique, which may alter any of the images in the reproduction, or which may significantly change the usual method of filming, are checked below.

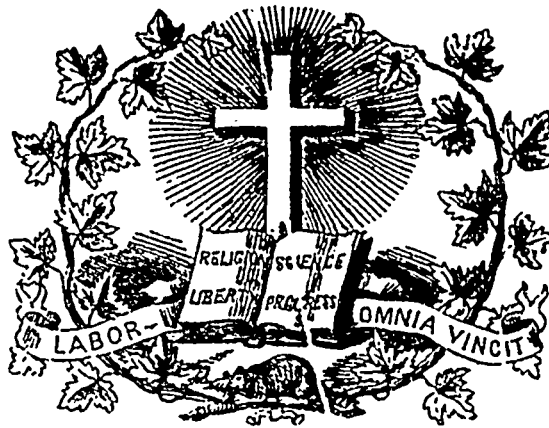
L'Institut a microfilmé le meilleur exemplaire qu'il lui a été possible de se procurer. Les détails de cet exemplaire qui sont peut-être uniques du point de vue bibliographique, qui peuvent modifier une image reproduite, ou qui peuvent exiger une modification dans la méthode normale de filmage sont indiqués ci-dessous.

- Coloured covers/
Couverture de couleur
- Covers damaged/
Couverture endommagée
- Covers restored and/or laminated/
Couverture restaurée et/ou pelliculée
- Cover title missing/
Le titre de couverture manque
- Coloured maps/
Cartes géographiques en couleur
- Coloured ink (i.e. other than blue or black)/
Encre de couleur (i.e. autre que bleue ou noire)
- Coloured plates and/or illustrations/
Planches et/ou illustrations en couleur
- Bound with other material/
Relié avec d'autres documents
- Tight binding may cause shadows or distortion along interior margin/
La reliure serrée peut causer de l'ombre ou de la distorsion le long de la marge intérieure
- Blank leaves added during restoration may appear within the text. Whenever possible, these have been omitted from filming/
Il se peut que certaines pages blanches ajoutées lors d'une restauration apparaissent dans le texte, mais, lorsque cela était possible, ces pages n'ont pas été filmées.
- Additional comments:/
Commentaires supplémentaires:

- Coloured pages/
Pages de couleur
 - Pages damaged/
Pages endommagées
 - Pages restored and/or laminated/
Pages restaurées et/ou pelliculées
 - Pages discoloured, stained or foxed/
Pages décolorées, tachetées ou piquées
 - Pages detached/
Pages détachées
 - Showthrough/
Transparence
 - Quality of print varies/
Qualité inégale de l'impression
 - Continuous pagination/
Pagination continue
 - Includes index(es)/
Comprend un (des) index
- Title on header taken from: /
Le titre de l'en-tête provient:
- Title page of issue/
Page de titre de la livraison
 - Caption of issue/
Titre de départ de la livraison
 - Masthead/
Générique (périodiques) de la livraison

This item is filmed at the reduction ratio checked below/
Ce document est filmé au taux de réduction indiqué ci-dessous.

10X	12X	14X	16X	18X	20X	22X	24X	26X	28X	30X	32X
									✓		



JOURNAL OF EDUCATION.

Volume XI.

Montreal (Lower Canada), February, 1867.

No. 2.

SUMMARY.—**LITERATURE**—Poetry: Going to District School—The Secrets of Sable Island (Concluded).—**SCIENCE**: Observations of the Changes of Color and modes of taking food in the Chameleon.—**EDUCATION**: On Spelling (a Paper by A. C. Williamson).—**OFFICIAL NOTICES**: Elections, &c., of School Municipalities.—Diplomas granted by Boards of Examiners.—**EDITORIAL**: Filling Vacancies in School Boards.—Notices of Books and Recent Publications—*Principia Latina*, By Smith and Drisler.—Chambers's Educational Course.—*Un Contemporain*, G. B. Faribault; By Abbé Casgrain.—*Chansons populaires du Canada*, Edited by E. Gagnou.—*Voyage de l'Atlantique au Pacifique à travers le Canada*, By de Launay.—*Voyages et Découvertes d'Outremer*, By A. Mangin.—McGill University.—Extracts from Minutes of Annual Meeting of the St. Francis District Teachers' Association.—Extracts from the School Inspectors' Reports.—**MONTHLY SUMMARY**: Educational Intelligence.—Literary Intelligence.—Scientific Intelligence.—Necrological Intelligence.—Miscellaneous Intelligence.—**ADVERTISEMENTS**: Chambers's Educational Course.

LITERATURE.

POETRY.

GOING TO DISTRICT SCHOOL.

Barefoot boy and little girl,
She with rosy cheeks and curl,
His a forehead brown with tan,
Sturdy little farmer-man.

Old straw hat, with broken rim,
Is the least that troubles him,
As the dinner-pail he swings,
Full of mother's choicest things.

Happy little pair are they,
Chatting blithely on the way,
In the morning fresh and cool,
Going to the district school.

From the shady farm-house door,
Mother watches, till no more
She can follow—out of sight
They are gone, her heart's delight.

Can you see them sitting there,
On the benches hard and bare,
Tired feet swinging to and fro,
Conning o'er the lessons low?

Sitting at the noon of school,
By the gurgling streamlet cool,
'Mong the brakes and bending trees,
Eating up the bread and cheese!

Jr, with merry laugh and shout,
When the boys and girls go out,
Books, and pencils cast away,
See them jump, and swing, and play.

Glide the busy hours away,
'Till the warm sun's westerling ray
Slants across the open door,
And the hours of school are o'er.

Happy, healthy girl and boy,
Full of simple, careless joy,
Free from tyrant fashion's rule,
Going to the district school.

In the busy noon of life,
'Mid its restless fever strife,
As your pathways shall divide,
From the roof-tree wandering wide.

Memories of these morning hours,
Sons of birds, and scent of flowers,
Bleat of lambs, and song of rill,
Will come sweetly o'er you still.

And your thoughts go yearning back
O'er that simple childhood track,
When the longest road you knew,
Was the one that led you to
The school-house, just a mile away,
Where the birch and rule held sway.

The Secrets of Sable Island.

(Concluded.)

But the patrol does not always bring in a clear bill, and he will tell how he once found a ship's bell tolling its own dirge as it tossed in the land-wash; how he has pulled the exhausted sailor through the ground-swell; how he has found the beach strewn with many a swollen corpse, with carved locker and binnacle, richly bound volumes, and many a trinket and souvenir of a lady's toilet; and how there once drifted ashore a coat of arms richly carved and gilt—the only token the inexorable sea ever gave up of the boom of sullen guns that were heard at night in the height of the storm. Distinct and fresh as when first laid on was the golden motto that surmounted its crest: *Spero Meliesia!* Staunch ship and sturdy crew had all gone to the bottom, with all the world's prospects wrecked

in a single night. Not a vestige remained, save this golden message wafted up from the solemn sea: "*I hope for better things!*" There is but one ignoble consummation for all things temporal, but there is a world beyond to which all may look for better things.

Such sea-beaten waifs the patrol occasionally discovers; or, perchance, before he has completed his rounds, the sullen boom of a gun comes heavily from windward, or else the pack lifts and he discerns the outline of a dark hull grinding on the outer bar, with flapping sails and rigging loosely streaming in the wind, and swept with foam from stem to stern. Then quickly the alarm flies to Head-quarters. The signal-flag goes up before the courier has fairly dismounted from his horse. "*A wreck! a wreck!*" resounds on every hand. From every house the tenants issue forth like firemen at the bell stroke. There is a rush for the boat-house and stables, where horses ready harnessed are always in waiting, and in a twinkling the life-boat is mounted on its wheels, the wrecking apparatus is tossed into it, and a motley cavalcade goes galloping along the winding beach in the direction of the wreck. All is excitement, and every eager horseman presses forward to his duty, the lumbering cart following in the rear, with its three ponies strangely harnessed, one in the shafts, and two ahead as leaders, on round many a point and crescent shore, and thence across the Island toward the other beach. But ere they have accomplished half the distance they desery the figure of a stranger toiling wearily toward them. Hurrah! there can be no mistake, it is one of the ship-wrecked crew; one at least is safe! The foremost gather around him with congratulations and eager questions. It is the captain of the vessel, a brig. His men, he says, are most of them safely landed in the yawl, and the vessel is thumping on the beach, but not yet broken up. He will guide them to the scene of the disaster. Now, gathering fresh courage and stimulated to continued exertions, the cavalcade presses forward; but presently a thickening cloud of fog envelops them so that they can scarcely see their horses' heads before them. The guide becomes bewildered, and all are in danger of losing each other in the fog. On this emergency the only means of giving the stranded seamen immediate relief is to form a line of patrol across the narrow strip of land, and thus move forward abreast, keeping each other within sight or hail. Thus they proceed toward the extremity. But presently the fog lifts a little, and the dim outline of the vessel is barely defined just outside the surf, with her bows driven high up into the sand and her stern pounding heavily with each successive surge. Some of her sails are set, and with each lurch of the vessel flap with a loud report. It seems that the captain finding no escape, has wisely driven his vessel ashore before the wind. The yawl is discovered near at hand, with the worn and weary seamen soundly sleeping under the thwart; nor do they express surprise when awakened to see strange faces around them, knowing full well that the captain had gone for aid. Sailors are so much the victims of circumstances that they learn to accept the vicissitudes of life with a show of stolid indifference in whatever shape they come.

While all are waiting for the arrival of the cart and deliberating what course to pursue, they are startled by a voice from the deep, and lo! the form of the steward appears on the fore-castle, and a stentorian voice hails: "*Ahoy there! breakfast is ready! All you chaps what wants breakfast better git aboard in a hurry if you want it hot!*"

Had manna fallen from the clouds the event could scarcely have been more startling, for the crew believed he had been washed overboard and drowned. But the voice and figure were unmistakable. It was the voice of a genuine Cape Cod Yankee, who was lord of the galley, and the figure held in his hand a steaming coffee-pot from which the muddy fluid slopped fitfully with every thump of the vessel. Such a welcome and *bona fide* summons needed no repeating, and when all had satisfied their senses, they clambered up the forechains with unworldly agility and applied themselves to their task as best they could. Nor were they invited to partake of mean fare. There was pork

and potatoes, and pudding afterward, with a ration of gin and oranges for dessert. How the steward contrived to make stove and sauce-pan do duty will ever remain a mystery, for the vessel thumped so that it was difficult to eat, even with the primitive table service of fingers.

From this day forward for a month there is constant work for man and horse. To strip the wreck of spars and sails and every thing of value that can be saved, to land and store the cargo, and haul it down to Head-quarters for reshipment, will cost many an hour of toil and many a tedious trip to and fro through the tiresome sand. All this time some one must remain in camp near the wreck, to guard the goods from depredators or render prompt service in the event of a sudden gale; but, comfortably sheltered by a mainsail thrown over the brig's caboose, and protected from the damp fogs and searching blasts by an overshadowing bluff, their temporary hermitage is not only endured with equanimity, but invested with a spice of romance. The lighter spars of the dismantled vessel furnish tent-poles, a solid mahogany log supplies a sofa, and a barrel set on end serves nicely for a chimney; and at night no moss or down can furnish a more comfortable bed than the softly yielding sand which the pressure of the body moulds to tired and aching bones. And when the day's labor is ended, the lantern swings cheerily overhead, while song and jest go freely round, and startling tale seasoned by oft-replenished pipe. Sometimes the solitude is broken by a visit from the patrol, or perhaps "*Old Sam,*" a worn-out patriarch discarded from the stables, comes down for an evening stroll, and moping near at hand furnishes the butt for many a jibe and jest.

But it is time to look for the return of the cutter, if, peradventure, she has been fortunate enough to weather the gale. Once more the signal flag mounting to the mast-head announces the happy intelligence that she is already in the offing, and in an hour or two she again comes gallantly to anchor abreast of Head-quarters. The Captain states that a few hours' run carried him clear of the circuit of the storm, and that there was only a stiff breeze of wind where he was. He has additional service to perform now, for the shipwrecked crew are to be transported to the main land with their luggage, besides, he has orders to carry back a score of the wild ponies which are to be caught, and sold in Halifax on Government account.

And now follows one of those wildly exciting episodes which annually or twice a year occur to break the monotony of Sable Island life, and whose counterpart may be found on the Texan prairies in the wild chase after mustangs. The fleetest and best-trained horses are selected from the stables, or loosed from the tethers where they have been grazing. There is a careful girthing of saddles and adjusting of bridles. Some dexterous riders leap to the bare back with only a halter to guide, and when all are ready and properly equipped according to fancy, they canter off in motley cavalcade—red shirts and blue, rough pea jackets and stained tarpaulins, hats and caps of fantastic shape, and flaunting bandanas wound round the head, all mingled in a curious mélange, bobbing as they go, like corks upon the waves. Galloping on toward the lower extremity of the Island where the ponies most do congregate, and where they are generally secure from intrusion, videttes begin to mount the hill-tops which overlook their feeding grounds, and taking observation, discover dusky groups moving in the distance. The entire number of ponies does not now exceed two hundred, but they do not herd all together. They are divided into half a dozen gangs (each known to the Island people by a distinguishing name), have separate pastures, and are each presided over by an old grizzled stallion, sagacious as Solomon and conspicuous for his patriarchal length of mane, which falls in tangled masses over head and shoulders. These old custodians are ever on the alert, and even now can be seen standing a little apart from their charges, with head erect, sniffing the tainted atmosphere and tossing their shaggy locks from their eyes.

Warily the hunters now move forward in ample circuit, always keeping the hills between themselves and their prey, and at length appear in long, unbroken line behind them, stretching from shore

to shore. The ponies are now again out-witted, and the quandary in which they find themselves caught for the thirtieth time in their day and generation is evinced by their restless and anxious movements. The ocean foams on either side; their pursuers are behind; while before them, though now far distant, lies the inevitable pound into which they are to be driven. As the hunters slowly advance the jealous stallion collects his outlying mares and foals, and gathers his herd together, and then keeping them well in pack, boldly confronts the enemy, while they retreat at a gallop. Up and down the line he marches, backs and fills, luffs and cruises to windward, like a gallant frigate, but finding himself closely pressed, fires off a snort of defiance and follows after his convoy. Gradually the several herds are driven together and mingled with each other; and then, with a yell of exulting triumph, the hunters dash after them at the top of their speed—the wild stallions, now thoroughly alarmed, mixing with the rest of the herd, and all scurrying away in promiscuous and wild career. Now follows a headlong chase and desperate riding over hill and dale, through tangling grass and sandy plains, accompanied by many a fall and ridiculous antic. Here one wild poney, detached from the herd, charges straight over the crest of a cone—leaping, with a plunge of full twenty feet, sheer over the back of his pursuer, who has coursed around its base to head him off, and then rolling over and over in the sand until he recovers his feet again. Anon some rider spurs gallantly up the gentle slope of a sand-hill, whose bold precipitous face is hidden from sight, and reaches the top to lapse suddenly from view amidst an avalanche of sand, which half buries himself and horse at the foot. This brings a shout and a jeer from the whole cavalcade, which is presently followed by some other mishap; and thus, with many a roll and plunge and fall, the terrified ponies are driven far up to the north end, where, amidst yelling and shouting and waving of caps and handkerchiefs, they rush headlong into the yawning chasm of the large corral which is waiting to receive them.

Then follows "confusion worse confounded"—a snorting kicking, plunging—a curious mixing up of heads and tails, a rushing and huddling of terrified masses together, a crushing of half-smothered colts, and a general desparate struggle to break through the bounds. This commotion is measurably increased by the efforts which are now made to lasso some victim from among the struggling mass. The process is as laughable as it is novel. A noose is made at one end of a long rope, the other end being secured outside of the pound. This noose is then carried upon the end of a long pole by an active fellow, who warily approaches the animal selected, and by a dextrous movement slips it over his head. Instantly this feat is accomplished he drops the pole and runs, while several men outside pull lustily until the tightening rope chokes pony into good behavior, and the creature is then drawn or led out of the inclosure, and from thence is pulled and pushed by main force down to the water's edge. Here two men seize the ends of a long rope, and, running in opposite directions, wind it around pony's legs, and drawing it tightly bring him submissively to his feet. His legs are then firmly tied, and half a dozen men lift him bodily into the boat. This process is repeated upon each successive victim until the desired number is secured. The balance of the impounded herd are then let loose from the inclosure, whence they scamper away, and speedily find their way back to their old feeding-grounds.

The boat carries three or four ponies at a time to the schooner, where a waist-band and tackle hoists them into the hold. Their legs are then untied, and they are properly secured for the prospective voyage. At first they are disposed to be fractious, and make the first night hideous by their furious kicking, altogether banishing sleep. Sometimes they seem to take a malicious revenge by fastening their teeth into the trowsers of their groom as he is descending backward into the hold to feed them, and snap at his head and hands when he distributes their provender; but the sea voyage soon quenches their fire, and by the time they are landed at Halifax they have become well-behaved brutes,

gentle as lambs, and the most vicious can be fondled with impunity.

It is not positively known when the present breed of horses was introduced upon Sable Island, though it is generally believed that they sprang from certain stock known to have been placed there by an American named La Mercier, about the year 1735. Some, however, think their origin of much earlier date. Dr. J. Bernard Gilpin, of Halifax, Nova Scotia—a naturalist of note, who has contributed many valuable papers and specimens to the Smithsonian Institute and the Natural History Societies of the Provinces—in a carefully-prepared paper describes them as a race of large-headed, low-withered ponies, with tail set very low into a very short quarter; a cock-thrappled neck, and a short, square ear; from twelve to thirteen hands high; mane and tail reaching nearly to the ground, and covering the nostrils; the coat long and shaggy during winter, especially under the chin and on the legs. He mentions an instance where the mane measured *three yards*. In form they resemble the tarpany and wild horse of Tartary, and are almost the counterpart of the horses depicted on the Elgin marbles and Nineveh sculptures. Their type is also found in the fecal breed of the Ukraine. As regards color, there seems a remarkable tendency to assume the Isabella, the light chestnut, and even the piebald, known from earliest ages. The bays and browns are the most numerous; of blacks there are a few, and of grays none. The bluish mouse color is also frequent. They persistently refuse the shelter of a stable in all kinds of weather, and always avoid the society of man. They are never observed to lie down to rest, but seem to sleep standing. Fights are frequent between the stallions of the several gangs, in which they are often nearly disabled. The young horses between two and three years old are driven from the herd by the leader, and hung in small bands upon the outskirts; and when an old or disabled mare, unable to keep up, drops behind, as sometimes happens, she at once becomes an object of greatest attraction to them, soon produces foals, and thus the nucleus of a new herd is formed.

From these observations it is plain that the horse, if left to himself for a long period of years, following the laws of natural selection, will return to the habits and appearance of the old primal stock, and the necessary inference is, that the numerous known varieties of the horse do not belong to distinct and different species, but have all one common descent from one common stock.

Should any reader wish to farther investigate this interesting page of Natural History, should he desire to roam the broad field of Romance, or more startling Fact; to read aright the lesson of Humanity; to moralize upon the instability and uncertainty of earthly things, or tremble at the majesty of the elements in anger, let him venture a trip to Sable Island. It is one of the strange places of creation. And when his visit is ended, and he turns a last look at its receding shores, he may perchance obtain, at a single glance, a comprehensive picture of the whole—a human skull bleaching on the sand, a wild horse snuffing the salt-sea breeze, and an ancient wreck surf-worn and barnacled. The single glance embodies volumes.—*Harpur's Magazine*.

SCIENCE.

Observations of the Changes of Colour and Modes of taking food in the Chameleon.

BY JONATHAN COUCH, F. L. S.,

The chameleon has ever been an object of curiosity, and in the times of great ignorance of natural history, it was a special subject of wonder, as well as of much fable, in consequence of its frequent and unaccountable changes of colour, and its supposed faculty of living without food; its only diet being the air, of which it drew within itself a large abundance, and from which it was believed to acquire a considerable increase of size. But its habits in these respects were differently represented, even by those who appeared to

be careful observers; and it was therefore with much pleasure that I had an opportunity of observing them in an example which was presented to me, and which was embarked on board of a ship at Cadiz, with several others, the larger number of which died on the voyage to England. It came to my hands about the end of the month of July in perfect health; and when presented to me the only caution given with it was, that I should be careful to provide it with water, and, it was added, that those which had died on the passage had refused it, whilst such as drank freely remained alive. To this observation and recommendation, however, I paid no attention; as a Mr. Jackson, who studied the habits of this creature in its native country, in his *Account of the Empire Morocco*, had asserted that the chameleon was not accustomed to drink.

The example which thus came into my possession measured ten inches in length, of which the tail was four inches and a half. The head compressed, jaws of equal length, furnished with slight cartilaginous teeth. From above, the upper jaw commenced on each side a ridge, which passing backward formed an elevated crest of a triangular shape, the posterior edges of which passed down, one on each side, to the hindmost angles of the jaw. The eye large, projecting, conical, covered with the common skin; the pupil deeply seated in a hole scarcely larger than would be made with a pin. It is black and lively, and encircled with a gold coloured iris that is not wider than a thread. The projecting eyeball is capable of very extensive movement, and the movements of each eye are independent of its opposite; so that they are rarely seen directed to one object, except when this creature is intent on seizing its prey. The body is usually much compressed, but on the inhalation of air it becomes greatly distended, and it may be readily supposed that the difference in its appearance from this cause was what led to the opinion that air formed the material portion of its diet. The back is ridged, and, on account of the tubercles on it, slightly serrated, the belly also has an obscure ridge. Above the hind legs the body is slender; the tail flattened at its origin, round and tapering through its posterior half; the legs long, those behind longest and with a very extensive motion at their articulation with the body: the claws sharp, five on each leg, and united in sets; that is, on the anterior legs two of the toes are joined together on the outward side and three inward, on the hind legs, three are joined together on the outward side and two inward. The body is covered with slight papillous elevations.

This creature moves slowly and with much apparent deliberation, especially when on the ground; but its favourite place of resort is a bush or branched stick, along which it proceeds with great care, never losing its grasp with one hand—as its singularly formed feet may well be termed—until it has secured a firm holdfast with the others; and the tail at the same time is employed in keeping itself safe by twisting round the branch on which it is to advance. This last named expedient is especially needed, in order to keep the body erect when on a slender twig; since for this purpose the feet alone appear to be of comparatively small service.

The colour of the chameleon is subject to continual change; but if a creature that rarely retains the same hue for ten minutes together can be said to possess one which may be termed its own, it is dusky brown, or almost black nearly approaching to the darkness of soot. This it is which it assumes when it compresses its sides, and places its body with the plane of its surface, to be exposed to the direct beams of the sun, so as to receive the full benefit of its rays; of which, as we shall have further to remark, the light is of more importance to its health and comfort than the heat. And when thus enjoying itself even the mouth is extended to receive the influence, although at other times it is kept closely shut. It was noticed also that as a dingy black was the common colour when enjoying itself in the usual habit of basking in the sun, a light, or whitish yellow prevails when it is asleep, during which time it never changes its position.

Desirous of obtaining a knowledge of the temperature of its body, at nine o'clock of the evening of the 18th of August, when a thermometer in the room stood at 64°, this instrument was moved carefully to the side of the chameleon, when the colour changed from yellow to greenish, and then to deeper green, followed by purple spots, and it expanded itself by inhaling air, an action which sometimes is accompanied with a rushing or hissing sound, the lungs appearing to occupy the lower portion of the belly. While the thermometer lay in contact with its side, in a few minutes it rose to 68°; and a few hours afterwards, when the animal was still asleep and distended with air, with the colour a light yellowish green, and the thermometer in the room stood at 63°, on its being applied to the side it again rose to 68°. At this time, although the touch of the thermometer did not cause it to awake, two rows of purple spots made their appearance on the former ground: and it was observed that whenever two rows of spots were produced they were large, and in one situation and direction.

On another evening, at eleven o'clock, when the thermometer stood at 62°, and the chameleon was asleep, with the colour light yellow, although the touch of the instrument did not cause it to awake, yet the colour changed to darker, and it became covered with numerous purple lines; and then, in a few minutes the colour was dark green with obscure purple spots. But both sides do not always adopt the same colours, for while basking in the sun with the side towards the light a very dark brown, the shaded side was lighter, with green tints and two large rows of purple spots, and yet sometimes spots in the same order are altogether white. When asleep at night, the colour was light yellow with two rows of white spots, on holding a lighted candle at only a sufficient distance to communicate warmth, the side thus acted on became of a uniform brown, while the other side continued of the former light yellow. Afterwards, while still asleep, and the colour was yellow with two rows of white spots, when a candle was held within the distance of three inches, the side exposed to the candle became brown with a row of deeper brown spots, and the other side continued with the unchanged light yellow and white spots; the change when it took place not requiring more than a minute, and within a minute afterwards, on removing the candle both sides were of a greenish yellow with two rows of large purple spots. When the stick on which it rested was touched gently, without waking it, it became instantly covered all over with minute brown spots. On another occasion, when the colour was altogether yellow, a book was held so as to cast a shade on the anterior part of the body, while a candle was held within four inches of the hindmost portion; and then presently the illuminated part changed to a light brown, while the shaded portion remained as before; and when the screen was remove the exact limit of the shade was visible. When again the colour was yellow with two rows of white spots, in breathing on it so gently that nothing beyond the warmth of the breath could have been perceived, it immediately became covered with minute brown spots on both its sides; and at all times it was discerned by examination with a lens, that the colours existed entirely in the very small tubercles with which the body was covered, and not in the skin which lay between them.

I had hitherto paid no attention to the question whether it was necessary to its health that it should be supplied with drink; but it was not long before an opportunity was afforded for removing all doubt on that subject. Whilst the chameleon was near me at a window, basking in the sun, I was engaged in drawing the figure of a fish; and in order to preserve it alive, it had been wrapped up in seaweed that was charged with salt water. Having removed the weed, some fresh water was poured on the fish, on perceiving which the chameleon immediately left its station at the distance of about a foot, and hastened with unusual speed to the place; where it scrambled into the vessel, and began to lap the water by repeatedly placing its tongue in contact with the fish, in which action the fleshy portion of its tongue being thrust a little beyond the lips, and then lifting its head, swallowed the water in repeated efforts. When the fish was removed to different parts of the vessel, the chameleon followed it, without being alarmed, as it usually was, at my meddling with it. In order to ascertain whether it was the salt that might be still on the fish which attracted its attention, I sprinkled a portion of the fish with salt; but when it touched this part with its tongue, it turned away to where the water was fresh; but having lapped it for a moment it returned and applied its tongue to a portion of the fish which I had newly turned up; and it was from this manner of proceeding that I concluded its habits to be to quench its thirst by taking moisture, from some fixed surface rather than by drinking from a pool or floating liquid. At this time the quantity of water swallowed appeared to be equal to a tablespoonful, and when satisfied its sides had become very much distended. From the 23rd of August this chameleon did not again drink until the 12th of September; and I afterwards observed that it required water once in about a fortnight. As the opinion that the chameleon does not drink was thus proved and error, so it seemed equally clear that the popular opinion of its assuming the colour of any substance on which it rests is equally so. It has passed over and rested on carpets variegated with different colours—a large green cloth, a large growing myrtle, with other coloured substances, without my being able to discern that there was ever any connection between the colour of its surface and that of the material on which it rested. On one occasion, indeed, there appeared something like this; for when it had made its escape to the outside of the window, it became so much like the stones on which it rested—black and white—as to escape observation for a considerable time; but it has been known to assume precisely the same appearance under other circumstances, and when surrounded with substances very different in colour. It was not kept in greater restraint than was afforded by a large room, but after continuing for several hours on a green or scarlet cloth, or on green vegetables,

it was not seen to assume these colours; nor, indeed, was it ever seen to assume the colour of scarlet.

It was only after it had been a fortnight in my possession, that I had an opportunity of seeing it take a fly; but after this it not only took all that came in its way, but would seize them as fast as children would bring them; and it even became so familiar with the act as to take them repeatedly from the hand. It was thus easy to measure the distance to which it was able to dart its tongue in seizing its prey, which was found to be six inches—or rather more than the length of its body; but the more usual distance was about three inches, and it was very rarely seen to miss the mark. In approaching a fly, the motion at first was slow and cautious, and within a favourable distance the mouth opened and the tongue protruded slowly to the extent of about an inch, beyond which it darted swiftly, although not as has been represented for it has been described as more sudden and swift than human sight could follow it. The extremity of the tongue is usually flat and pointed; but when darted forward to its prey, the end is formed into the shape of a (large) pen, the middle being the most projecting part. To this the fly adheres by means of the tenacious mucus with which it is covered, and it is instantly conveyed into the mouth. But it is necessary to the success of this operation that the fly should be on some fixed substance, and almost, if not entirely, at rest; for if otherwise the chameleon will not attempt to take it, and repeatedly it has been observed to protrude a portion of the tongue, and then withdraw it as the fly has been in motion, until at last it has either secured the prey, or given up the attempt.

About the middle of September, when the weather had become moist, and the thermometer had ceased to stand at 60° at noon, its activity was greatly lessened, scarcely moving when awake, and sleeping the greater part of the day; but the appearance of sunshine restored some degree of activity. It was noticed also that when asleep, at night, with the thermometer below 56°, the colour had ceased to be yellow or whitish, as was formerly the case under these circumstances of rest, but pea green. But the greatest changes were in the first week of December, when, with the thermometer at about 50°, it ceased to take the flies presented to it and when the thermometer was at 46° it had become so torpid as, although taken in the hands, it seemed unable to move or open its eyes. As coldness of the air appeared to be the cause of this insensibility to impressions which at one time effected visible alterations in its actions, as well as in its changes of colour, it was often brought within the influence of artificial heat; but this appeared to produce little effect, and it never spontaneously sought the aid of the fire; whereas the faintest sunbeam was a source of enjoyment, in which it would bask, and for the sake of which it would change its position as the gleam moved in the room. Its breathing at this time appeared distinctly to be counted; the portion of its body presented to the sunbeams was darker than the rest, and when, on the 5th of December, it was found dead, the general colour of the surface was dark.

From later and extensive observation of the change of colour found in fishes, it seems certain that there is no physiological analogy between what occurs in them and in the chameleon, but that the circumstances, as well as the causes, are altogether different.—*Intellectual Observer*.

EDUCATION.

On Spelling.

A Paper read before the Teachers' Association in connection with McGill Normal School, 9th November 1866, by A. C. Williamson, Esq., Secretary.

Benjamin Franklin I think it was who said: "It is no honour to be a good speller; but a great disgrace to be a bad one." While agreeing with the sentiment I think at the same time that the difficulties connected with the subject are apt to be underrated. I can suppose a Teacher whose mind has been directed to the nature and capabilities of the human mind—of its heavenly origin and high destinies—of the real or supposed power of arousing these faculties and of determining these destinies; and in his zeal fresh from a Normal School enthusiastically endeavouring to realize the object of his mission. But he wishes at once to produce the efflorescence without having paid sufficient attention to the seed in which the embryo is incased.

There is no wonder in all this. The young teacher has just risen from the feet of eminent Professors, full of the glow which

their prelections have produced, and fraught with the zeal these were fitted to inspire. He imagines he has just to pour upon the minds of his youthful charge the sacred inflatus with which he has been inspired.

When children get gardens they wish to see the flowers spring up all at once, and any exposition of the physiology of the plant would be impatiently listened to, although upon a knowledge of that the future condition of the plant depends. So, very often the Teacher, anxious for results, forgets, or is inattentive to the means by which these are to be secured.

If certain conditions are required for a result, surely an ignorance of these conditions, or inattention to them, is both unwise and dishonest. A young farmer who would look for luxuriant crops without the fatigue of preparing the soil, would be a just object of derision; and not less so should the teacher be who expects to reap mental fruit without sowing the seed.

Like the farmer the teacher has two things to do, he has to prepare the soil and to sow the seed. In agriculture the two are separate, in teaching they are combined. This holds most especially true in the early stages of education. We have children, who in a general way possess the same capacities, and before they come under our charge have been exercised to a certain extent by the objects with which they are surrounded, and the circumstances in which they were placed.

We now wish them to be directed to a new set of objects which are to afford them the means of developing the mental powers with which they are endowed. In the earlier stages of their existence they are entirely dependent upon external objects for mental activity; now, we are to commence the process of internal activity.

Each mind we have to do with may be regarded as an "Electric cable" and the power of working it lies with the teacher, and surely it will be sad and strange should he think that correct modes of recording its power should not receive his most serious attention. In telegraphy certain signs are determined upon to render it the communicator of thought and in our alphabet and its innumerable combinations we have what is to open up to the human mind almost every thing that is connected with its present existence and employment as well as its future and eternal destiny.

The first thing therefore teachers of elementary schools should have impressed on their minds is the *importance of the exercise*: A language is a language, not only in its highest sense—a vehicle of thought; but in the arrangement of the symbols of which it is composed.

We have not to do here with what might, could or should be those symbols, but what have been handed down to us as the venerable signs, defective or otherwise; and which we have as teachers and interpreters to "keep pure and entire." The signs and arrangement may seem arbitrary and to some unphilosophical, but by having been rendered venerable by age and use, and found adequate for the purposes for which they were designed, a thousand voices would at once be raised against any change which might be introduced, except such as would enlarge its powers as an instrument of thought. Were there not a stereotyped form for these signs, what would be the fate of language.

As a true philosopher the elementary teacher will take language as he finds it, and will make his pupils intimately acquainted with the objects which are invested with such potency.

Letters and words are artificial objects, but they are objects of thought, for the conveyance of thought. As well might the naturalist refuse to observe the various objects from which his science is to be deduced, as that the teacher of a language is to fail to observe and teach the objects from which the pupils are to be enabled to open up for themselves immense fields for investigation and reflection.

From such considerations an intelligent teachers will perceive that his situation is by no means an ignoble one; for upon him depends in a great measure the equipment of the young with

those weapons by which ignorance is to be dispelled and knowledge propagated.

After a due appreciation of the importance of the subject, the next thing necessary for the teacher is energy and perseverance. The humblest occupation in life when pursued with vigour affords pleasure; and no spectacle is more gratifying to the mind than the loftiest avocations of life performed with such an energy as to convince the observer that there appears in the operator nothing more ambitious than the discharge of the duties assigned him, with a hearty good-will.

Not only is success in the attainment of his object attained, but his diligence will be the best preparation, as well as the best recommendation to something better; and should that not be the case his activity has its own reward. An elementary teacher may never rise higher, but let him look to the effects of his labours and he will find they are neither mean nor unimportant. True he has to turn the same unvarying wheel without intermission but like the undershot in the humble mill, he is gladdening the hearts of multitudes, and raising up hosts who may yet work wonders on society, or if not so will render permanent and increase the joy already in their possession.

A seamstress has to make the same kind of dresses over and over again. The carpenter has to use the same tools and construct the same frames over and over again—the smith is perpetually hammering at like bars of iron, and filing and polishing with the same tools; but will the dutiful of these grumble when that is the avocation they have chosen for life, rather do they not see, that when viewed in the light of duty—or in the lower sense of necessity, there is an impulsive power which renders their occupation preferable to all others beside.

Let not therefore the Teacher say that his is the only irksome occupation of an unvarying character.

The next thing to be attended to by the Teacher is *Method*. There is an effective and an ineffective way of doing every thing, it is only by systematising our labour that we can sustain our energy or expect for success.

There are principles upon which correct spelling depends; and it is the duty of teachers to endeavour to discover and apply them.

What then are the principles upon which right spelling depends?

We look at the alphabet, and we say—"there are the elements by the combination of which I am to open up almost unlimited sources of pleasure and knowledge—there capability of combination is almost infinite—their combinations however are not simple but complex.—There forms are fixed, but their sounds vary; and these forms and sounds are only means to an end, the production and conveyance of thought, as well as for the excitation of emotion; and as they are to be taught to beings capable of thought and emotion; the means which are best fitted to produce these mental conditions, will of course be the most successful. Were our alphabet complete, it would contain a distinct symbol for the sounds of which it is comprised, but ours being both defective and redundant, many difficulties have to be encountered and pains and practice alone will overcome them.

The following remarks made by Mr. Laurie upon reading, will equally apply to spelling "To initiate a child into the art of reading, is to give him the power of recognising the conventional symbols of words, and of uttering them accurately.

"All words whatsoever are merely different grouping of a limited number of conventional signs, and the labour of learning to read is thus infinitely less than if every word had a distinct symbol written or drawn. Were we in the latter unhappy predicament, the primary teacher would be almost wholly occupied in teaching the ten or fifteen thousand different symbols necessary for the instruction of a child in the art of reading his Bible or the daily paper, and even after this was accomplished, the pupil would find that an immense number of word-signs were still to him a sealed book. By arresting words in the act of enunciation, and analysing their sounds into their individual parts, we find that the same sounds are continually recurring in different

combinations, and that, while words seem infinite in number, the sounds which enter into them are few. In the English language, even including bi-lateral sounds, the total number probably does not exceed thirty. To these elementary simple sounds, we have only to attach written symbols, and the art of reading becomes simply the act of recognising these sound symbols, and re-combining them into words.

The first step in teaching to read, therefore, manifestly ought to be to give the child a knowledge of the elementary sounds and their corresponding symbols,—I say *sounds*, not the accidental names of the sounds, the second, guide them in the attempts to group them into words of the most simple kind, but gradually increasing in difficulty. The first step is only a lesson in form to be taught as lessons in form ought to be taught, and is purely an act of memory, the second step is a lesson in the building up of parts into a whole,—bringing into play in an arbitrary way certainly, those powers whereby the child has been acquiring all his knowledge up to the date of his entering school, namely the powers of attention, comparison, analysis, and synthesis."

"This, shortly summarised, is the method which is best adopted for giving a sound and rapid knowledge of reading and spelling, for while calling for continual acts of observation and memory, it also subserves the intellectual purpose of an easy, because unforced and natural discipline." *****

"In spelling, we find further confirmation of the practical superiority as well as the philosophic character of the phonic method of teaching to read. According to the ordinary method, spelling is an act of memory performed by the eye, which carries away an impression more or less accurate, of the elementary forms entering into a word, and by the ear, which aids the eye by recalling the order in which the names of the letters were uttered, when spelling out the word with a view to the reading of it. According to the phonic method, spelling is all this and something more, for it is an effort to disentangle into its separate parts a complex sound resulting from the fusion of several elements into one whole, and therefore it is an intellectual act. *****

"But it must be admitted that the mind of the child as well as of the adult, has a tendency to run instinctively to the easiest way of overcoming a difficulty, and that spelling, consequently, becomes practically an act of eye-memory more than of intelligence.

From this exposition, then, it appears, that three powers are required to be employed and disciplined—the eye—the ear—and the understanding, and these sometimes separately—but more generally combined. In the early stages the eye and ear are chiefly employed, at a more advanced one the understanding must come into play.

To discipline the eye, the best plan so far as letters are concerned, is to engage the children in printing them on slates, and for the ear to give the power—not the name—sound of the letter. The various sounds of the vowels will be best taught by a copious supply of words in which they occur, and these presented to the eye as well as the ear.

For example lists may be presented of the four sounds of a—as in

fate—fat—far—fall
of e—as in—me—met—her
of i—as in—pine—pin
of o—as in—note—not—move
of u—as in—tube—tub—full.

By presenting a few of these at first and encouraging the children to find more, a considerable degree of interest will be excited, and the dryness of the process removed; and if in addition to an oral, a written exercise were required, the effects would be still more valuable.

The next thing to be attended to should be "verbal distinctions."

These consist of:—

1st. Words pronounced exactly alike, but differing in form and signification—you, ewe, yew.

2nd. Words pronounced alike, excepting that one of each pair is aspirated—as ail, hail—air, hair.

3rd. Words pronounced almost alike,—as boy, buoy,—calander, calendar—liar, licr.

4th. Words often confounded as accident, accidents—edition, addition—aloud, allowed.

5th. Words distinguished by pronunciation as desert', dèsert—essay'—es'say.

6th. Words to be distinguished in application as disease—distemper—the one applying to man—the other to brutes.—Colours—of a regiment—flag of a ship—Esteem, veneration, respect.

These verbal distinctions will be much better taught by examples than by definitions. A definition is often unintelligible to a child, but an example of the distinction will be easily perceived and enjoyed. The wind blew away my blue handkerchief, tie the ewe to the yew tree, or you will loose it, will at once excite attention and a strong desire to exhibit the difference in spelling; and so with regard to all the others.

At this stage some of the more obvious "Rules for spelling" may be given. As "The final consonant is doubled before an affix beginning with a vowel."

"Final C, preceded by a vowel, assumes K at the end of nearly all morosyllables. And so on.

There is another branch of the subject which seldom fails to interest both pupil and teacher very much—namely that of derivation and will give the key to the spelling of a very large number of words, as well as supply a most copious vocabulary for future use. The pre-fixes and affixes should be taught first—and the finding words into which these enter will generally be found a pleasing task, and although many mistakes may occur at first, the correction of these will not generally be found irksome. When Latin and Greek primitives have been taught, and encouragement given as well as pains taken to find derivatives, a great impetus will be given to the study of the structure of the language and Etymology will in this case be made the hand-maid of Orthography.

BEST METHODS OF TEACHING SPELLING.

Having stated some general plans to be observed, it is now necessary to allude to some special ones which have been found very effectual for the purpose we have in view. We must premise generally however first, that there is one essential requisite on the part of the teacher and that is the power to interest the pupils—Nothing will, nothing *can* supercede this. What appears to an adult mind, more unmeaning than some of the games and amusements of children, a straw, a few chips of wood or a few pebbles, will delight for hours. We must take hold of this circumstance and press it into our service.

Now in the games of all children one secret of pleasure derived from them seems to be the feeling of *Suspense*, as for example in "Hide and Seek"—or better still in a game among boys in Scotland "Kittie Kout, find him Out." In applying this in spelling I have never failed to arouse and sustain attention, as well as delight the children. The first thing done is to arrange the class so as to command the attention of every eye. Then the word is spelled simultaneously, after by one or two individually, they are then required to name letter by letter, on a particular signal being given, such as the lifting up of the fore finger, or a pointer. The suspense is produced by making the intervals between the giving of this sign irregular—but taking care that the longest of the intervals never be such as to give room for diverting the attention from the particular letter or word.

After this has been done, by the class collectively, the members of it may take letters about, beginning at the top, or what is better, let the teacher dart with his pointer from point to point in the class and he will soon find that the most exhilarating effect is produced, while at the same time he has perfect command over the children, and the slightest uproar in a moment quelled.

This process may be begun with the lowest class and carried through all, up to the highest.

From single words we proceed to sentences. In the first instances these are short, but are gradually increased till sentences consisting of one or two clauses are given out.

The greatest pleasure seems to be afforded, when sentences containing verbal distinctions are given such as "they ate twenty eight of the best pears in our garden." "Bow down and take up that bough of an evergreen tree." "In performing the great feat of jumping a fence five feet high, he hurt one of his feet.

"Does he *ait* because he was out in the field during the heavy storm of *hail*."

"Although he rudely called you a liar, for saying that he was a great *lier* in bed, yet you only told him what was too true."

"In the new edition of that book a large addition has been made to the first part of it.

"The boys who were absent from the last rehearsal must not on any account absent themselves again."

This exercise may be varied by taking any single word which has one or more of the same sound and request and pupils to name them.

I cannot pass this part of the subject without alluding to other benefits which result from this exercise.

1st. There is the advantage derived as regards pronunciation. No child will feel interested in a tabular view of the various powers of letters, but when these are embodied in words, he will acquire them with both facility and pleasure.

2nd. The minute distinctions will train to oral and visual accuracy.

3rd. It will produce fluency of speech and produce a considerable amount of mental energy by concentrating their thoughts upon the letters of the sentence, while at the same time they are required to give expression to them. Which is just the philosophy of public speaking.

At the stage at which we have arrived, the sentences have been supplied to the children, but contemporaneously with this they ought to be encouraged and trained to form sentences for themselves. This will be a source of great pleasure. When a boy gets some pieces of wood and a few tools, he likes to make them into something, and the greater the number of combinations, the greater the pleasure, an improvement in mechanical skill. So if you take the words which form the spelling lesson, give a word to each child and require it to form a sentence; if care is taken to select them according to the capacity of the child, it will engage in the exercise with great spirit and will generally be successful.

Exercise in derivation may be advantageously used for this purpose. If a few roots are given which yield a large number of derivatives such as *porto, cedo, credo, mitto* and so on; the appending of pre and affixes will accustom the eye and ear to the changes produced, and at the same time will train them to substitute Anglo-Saxon for Latinised-English.

But we will fail in a great measure of attaining our object if we make such exercises entirely oral. When children are able to write pretty correctly they should have large practice in copying.

In the Standard-Books published by the Messrs. Chambers the spelling lesson is required to be written in addition to the oral exercise, which with other advantages will prepare them for the finishing exercise of Orthography—writing from dictation. On this part of the subject I need say no more than if it is neglected spelling will only be half taught.

For every hour spent in oral exercises, two should be spent in written ones.

In learning a foreign language, the pupil is not supplied with long lists of words, as when learning his native tongue, but the fact that it is foreign calls forth that attention to its structure as to secure correct orthography, our mother-tongue we learn first by sound, and its purity and correctness must be maintained.

In conclusion I can fancy two objections taken to the plans suggested. 1st. The time required for such exercises; and

2nd. That many of the exercises seem more like those in composition than in orthography. 1st. Time in all our schools is of great value, but I believe that more time is spent under the old plan of long columns of words, than would be by those we have sketched, in fact that the results under the old plan bear no comparison to the time spent, not to take into consideration the distaste to the subject which has been engendered. If you create a fondness for the exercise, a vast amount of time will be gained instead of lost. But time is not the question under discussion—but good spelling—and therefore whatever time it takes let it be done, and let no primary teacher imagine that his and the childrens' time would be better occupied by subjects requiring higher degrees of thought. He is laying the foundation not building the superstructure.

With regard to the 2nd objection I cannot do better than repeat it by a quotation from Mr. Coutie's. "Suggestions as to the best modes of teaching the spelling and meaning of words." When he says "It may be affirmed that the learning of the spelling and meaning of words, and of arranging words into sentences or composition, can be in a great measure blended together, and such made the hand-maid of the other; and so far from the progress in the one being impeded by being bound up with the other, the study of each would, in reality, be more successfully prosecuted than if taken wholly by itself."—p. IX.

OFFICIAL NOTICES.



ERECATIONS, &c., OF SCHOOL MUNICIPALITIES.

His Excellency the Governor General in Council was pleased, on the 20th October, 1866,

1. To unite the School Municipalities of St. Raphael North and St. Raphael South, in the County of Jacques Cartier, into one municipality only, for school purposes, under and by the name of *The Municipality of St. Raphael*; to take effect on the 1st July, 1867.

2. To detach from the Municipality of St. Canut No. Two, in the County of Two Mountains, that tract of land extending from the line of division between the Counties of Terrebonne and Two Mountains to the property of François Charbonneau, inclusive, and to annex said tract to the Municipality of St. Jérôme, in the said County of Two Mountains, for school purposes.

DIPLOMAS GRANTED BY BOARDS OF EXAMINERS.

BOARD OF PROTESTANT EXAMINERS OF QUEBEC

1st Class Model School E.—William Thompson.

1st Class Elementary School.—Wm. F. Moore.

August, 1866.

2nd Class Model School E.—Joseph H. Richardson.

1st Class Elementary School. E.—Neil Edwin McKillop.

2nd Class Elementary School E.—Ann Bailly, Sarah Hill, Sarah McKillop, Agnes Maxwell and Jane Maxwell.

December, 1866.

D. WILKIE,
Secretary.

BOARD OF EXAMINERS OF THREE RIVERS.

2nd Class Academy E. & F.—Zéphirin Baril.

Model School E. & F.—Marie Anne Fortin; F.—Marie Fideline Mailhot.

1st Class Elementary F.—Marie Elizabeth Boergeois, M. Léa Cormier, Amaryllis Charland, M. Henriette Descormiers, M. Anne Godin, M. Arthémise Lafèche, Anne Lemire, M. Louise Lamothe, M. Eulalie Marguerite Martel, M. Alice Marchand, M. Delphine Papin, M. Georgiana Rompré, M. Amélie Roy, M. Louise Rhéau, M. Elise Toussignan, Marie H. Toussignan and M. Maxime St. Louis.

2nd Class Elementary F.—Marie Céline Brière, Rose de Lima Deshayes, Mathilde Faucher and M. Célanire Massé.

May, 1866.

1st Class Elementary F.—Maurice Deleghise; Emélie Guillemette, M. Anne Hamel, Séraphine Lord, Thérèse Lafond, Marie Leonie Nasse, Z. Virginie Pinard, E. Mathilde Traversy and Marie Olive Vézard.

2nd Class Elementary F.—M. Sara Brunelle, Mario Bédard, M. Ezilda Hébert, M. C. Thérèse Lavergue, M. Joséphine Moreau and Mario Clarisse Papin.

August, 1866.

1st Class Model School E.—John Godwin.

2nd Class Model School F.—Edouard Lesage.

1st Class Elementary F.—M. Louise Birabin dit Vadeboncoeur, M. Adeline Cosset, M. Illuminée Désilets, M. Virginie Hébert, Eliza Tourigny, M. Elise Toussignan.

2nd Class Elementary F.—Joséphine Biron, M. Herméline Lacroix, Louise Lesage and Hermine Lévêque.

Nov. 1866.

J. M. DÉSILETS,
Secretary.

BOARD OF EXAMINERS OF KANOURASKA.

1st Class Elementary F.—Palmyre Nadeau, and Philomène Plourde.
Dec. 1866.

P. DUMAIS,
Secretary.

JOURNAL OF EDUCATION.

MONTREAL (LOWER CANADA), FEBRUARY, 1867.

Filling Vacancies in School Boards.

As much confusion sometimes ensues in the organization of school Boards, with reference to the time at which members are required to go out of office and the manner in which vacancies should be filled up, we would impress upon parties concerned, the necessity of paying strict attention to the following requirements of the law.

1st. After a first or general organization of a Board of School Commissioners in a municipality, whether by election or through appointment by His Excellency the Governor General in Council, two of the five commissioners so elected or appointed are to be balloted out of office during the ensuing month of July (in the way pointed out in Chapter 15, section 50, of the Consolidated Statutes for Lower Canada), no matter at what time the Board may have been organized; two more (of the three remaining) are in like manner to be balloted out of office during the month of July in the following year; and the fifth or remaining commissioner retires (of course without balloting) during the month of July next following. Thus, two of the five original members of the Board are bound to remain in office during one year only (the time which shall have elapsed from the date of organization to the date at which their retirement takes place in July, as above specified, being reckoned as the first year); two remain in office two years, and one (the fifth member) remains during the full term of three years. The chairman is liable to be balloted out of office in the same way as the other commissioners.

2nd. After the expiration of the first three years, each of the five members of the Board remains in office during the full term of three years and retires without balloting; those who are to retire being indicated by the time during which each shall serve (reckoning from the first Monday in July of the year within which he shall have been elected.)

3rd. The regular annual vacancies thus occurring, from the first or general organization of the Board, must be filled immediately in the manner prescribed in the statute (Cap. 15, sec. 35.)

4th. All the provisions of the law above referred to apply equally to the Trustees of Dissident Schools, except that, as regards the first three years, from and after the original or general organization of their Board, in each municipality, one only of the three members constituting such Board is balloted out of office at the end of the first year (or term reckoned as the first year, that is, in July then ensuing), one more is balloted out at the end of two years, and the third or remaining member at the end of three years. The vacancies are to be filled regularly as they occur, as with the Commissioners. After the first three years above specified, each Trustee is bound to serve during the full

term of three years from the first Monday in July of the year within which his election shall have taken place.

5th. When the elections have not been held in accordance with the provisions of the law, or when the retirement from office has not taken place, or when the vacancies have not been filled as prescribed, it is necessary that the School Commissioners or Trustees, or their Secretary-Treasurers, should report the fact to the Department of Education, and they should at the same time recommend the person or persons to be appointed by the Executive in order to legalise the organization of the Board.

6th. As to any casual vacancy which may be occasioned by the death of a School Commissioner or Trustee, or by his permanent absence from the municipality, or when he becomes incapacitated through illness or infirmity, it should also be filled up immediately as it occurs, in the manner required in section 47 of said chapter 15; but when there has been no one elected by the ratepayers to fill such vacancy within one month of its occurrence, the fact should at once be reported to the Department and a fit and proper person recommended for appointment; and the cause which led to the vacancy should be stated.

7th. Commissioners and Trustees appointed to fill casual vacancies—that is, vacancies occurring under the provisions of section 47 of said Chapter 15—and also vacancies within the meaning of section 42 of the same chapter, remain in office only during the time which those whom they were appointed to replace should have served.

8th. In reporting vacancies it is important that the dates at which they may have taken place respectively should be given, with the name and surname of each out-going member and of his successor, or of the candidate recommended to succeed in the office, as the case may be.

9th. Names and qualifications should always be given in full.

Notices of Books and Recent Publications.

SMITH AND DRISLER.—PRINCIPIA LATINA.—Part II. A First Latin Reading Book. Containing an Epitome of Caesar's Gallic Wars, and Lhomond's Lives of Distinguished Romans. With a short Introduction to Roman Antiquities; Notes and a Dictionary. By William Smith, LL.D., and Henry Drisler, LL.D. New York: Harper and Brothers, Publishers. 1 vol., 12mo, 375 pp. To be had at Dawson's.

It has long been felt in the schools that a sudden transition from the simple text of the exercise book to the matured style of the classics is attended with serious disadvantage; and many attempts have been made to produce a work which would prepare the learner to grapple successfully with the more complex difficulties of Latin construction. That the result has not been as completely successful as rigorous Latinists might have wished, is doubtless due to a cause inherent in the subject itself. The ancients wrote for men, not for children; hence the difficulty of combining a pure Latinity with a mode of treating the subject intelligibly for boys. The tediousness of an uncongenial or imperfectly understood subject is indeed a serious element of weakness in teaching, and Dr. Smith, in compiling the present reader, has sought to awaken a proper degree of interest in the narrative while providing approved exercises calculated to assist the reader in mastering the idiom. Some alterations have been made in the American edition, of which the most important is the substitution of Dr. Woodford's Epitome of Caesar for extracts from the *Elementarbuch* of Jacobs and Döring.

CHAMBERS'S EDUCATIONAL COURSE.—Reid, Macfarlane & Co., Agents, 153 Great St. James Street, Montreal.

That well established popularity is a sure test of excellence in works of a literary nature is a rule that will be found applicable as well to the unassuming school-book as to the finished treatise or the inspired poem. Perhaps the trial to which the first is subjected is, on the whole, the more severe, because the more constant and less independent of immediate practical results. In the midst of the ever flowing tide of improvement, of progressive methods and systems, of discarded theories, the school-book that can maintain its claim to favor in the eyes of an intelligent body of teachers must necessarily possess intrinsic worth of a high order. The educational series which forms the subject of this notice, and which comprises some two hundred and fifty publications, has won its way to public confidence

on both sides of the Atlantic. It is extensively used in the public and private schools of the United Kingdom, as well as in those of many parts of British North America; and we have no doubt that wherever it is known, its merits cannot fail to be appreciated. To notice in detail so comprehensive a collection would far exceed the limits of our space. We have, however, glanced at several volumes of the series, and, while referring our readers to the advertisement on the last page of this journal for particulars, we may take occasion to say that we have been very favorably impressed with the methods of treating the various branches, the pains taken to embody in the text the results of the most recent researches and discoveries, and with the attention given to modern usage—a point so often ignored in school dictionaries and grammars that the reader is sometimes tempted to believe they were prepared for a by-gone generation.

CASGRAIN.—*Un Contemporain: G. B. Faribault. Par l'abbé H. R. Casgrain. Québec: Léger Brousseau, Editeur. 1 vol, 18mo; pp. 123. Embellished with a photographic portrait and a fac simile autograph.*

A short biography of the subject of this brochure appeared in our last.

GAGNON.—*Chansons populaires du Canada. Recueillies et publiées avec Annotations, &c., par Ernest Gagnon. Québec: Bureaux du "Foyer Canadien."*

In this neat little volume will be found set to music, a varied collection of the popular songs of our fellow-citizens of French descent, among which their admired national airs have deservedly a foremost place.

DE LAUNAY.—*Voyage de l'Atlantique au Pacifique, à travers le Canada, les montagnes Rocheuses et la Colombie anglaise, par le vicomte Milton et le Dr. W. B. Cheadle; traduit de l'anglais par M. J. Belin de Launay, et contenant 22 vignettes et 8 cartes. 1 vol., Royal 8vo. Paris: L. Hachette et Cie.*

A translation of Viscount Milton and Dr. W. B. Cheadle's travels. It is embellished with eight maps and twenty-two vignettes.

MANGIN.—*Voyages et Découvertes d'Outremer, au dix-neuvième siècle. Par Arthur Mangin. Illustrations par Durand-Brager. 1 vol. Royal 8vo.*

The author does not offer this as a scientific treatise; it is simply a narrative, written in a clear and effective style. The work is illustrated with twenty-four fine woodcuts and a frontispiece.

McGill University.

Extract from the annual Report of the McGill University, to His Excellency, Lieut. General Sir John Michel, Bart, K. C. B., Administrator of the Government, &c., &c.—visitor of the University:

The Corporation of McGill University beg leave to lay before your Excellency, as Visitor of this University their customary annual report as to its condition and progress.

The number of students in the several Faculties of McGill College in the present session is as follows:

Students in Law.....	53
“ in Medicine.....	181
“ in Arts.....	65
Total	299

From this number should be deducted 4 entered in more than one faculty, leaving the number of persons 295.

Students of affiliated colleges, viz: Morrin College, Quebec; and St. Francis College, Richmond; are not included in the above numbers.

The number of pupils in the High School of McGill College is 255.

The number of teachers in training in the McGill Normal School is 75.

The number of pupils in the Model Schools of McGill Normal School is 324.

The total number of persons receiving instruction in connection with the University, in Montreal, is thus 949, of whom 235 are persons not resident in the city, but resorting to the University from other places in Canada or beyond its limits.

At the annual meeting of Convocation in May last, the following degrees in course, previously granted by the Corporation, were publicly conferred :

Doctors of Medicine and Masters of Surgery.....	32
Masters of Arts.....	3
Bachelors of Civil Law.....	11
Bachelors of Arts.....	20
Total.....	66

Among those who took the degree of B. A. were five candidates from Morrin College; and the graduating class in Arts was the most numerous as yet sent forth from this University.

The honorary degree of Doctor of Laws was conferred on Henry Miles, M. A., Professor of Mathematics in Bishop's College, Lennoxville, and that of Master of Arts on Daniel Wilkie Esq., of the High School of Quebec.

At the close of the Session of the McGill Normal School, the following diplomas were granted to teachers-in-training, by the Superintendent of Education :

For Academies.....	3
" Model Schools.....	8
" Elementary Schools.....	30
Total.....	41

Under the regulations for School Examinations, the school certificate of the University was given to nine pupils of the High School of McGill College. It is to be regretted that other schools have not availed themselves of this advantage in the past year.

The most important donation to the Library during the past year was a very valuable and well selected collection of historical works, chiefly relating to English history to the number of 544 volumes, presented by Peter Redpath, Esq., of Montreal. These works, with the previous donations of Mr. Redpath, have been separately arranged in the University Library, under the designation of the "Redpath Historical Collection."

The most valuable donation to the Museum is that of a First Series of the Riegen Collection of Mazatlan Shells presented by Dr. P. P. Carpenter, and arranged by him, the expense of the mounting and cabinets being defrayed by the liberality of Mrs. G. Frothingham, of this city.

Under the head of donations to the College may also be mentioned the sums, amounting to nearly \$2,000, collected by the Secretary of the University, for the erection of a porter's lodge and gates, and for the laying out of the College grounds. These desirable improvements are now in progress, and will be completed altogether by the liberality of friends of the University, and without any charge on its funds. They will contribute not only to the more creditable appearance of the grounds, but also to their usefulness to the College and to the public.

In the past year the regulations of the University have been carefully revised and consolidated, by a Committee of the Corporation, and have been printed along with the amended statutes.

In the examinations for the Governor General's Scholarships, offered for competition in the Matriculation examinations of the current Session of the Faculty of Arts, the only successful competitor was Mr. Duncan H. McLellan, of Lancaster, C. W.

The attention of the Corporation has been called by the Faculty of Arts to the necessity which exists for the provision of exhibitions or bursaries in aid of deserving students in that Faculty. The want of such stimuli and aids in this University is at present one of the most serious hindrances to the increase of the number and proficiency of its students, and places our Faculty of Arts in a position of disadvantage, not only in comparison with the colleges of the mother country, so richly endowed in this respect, but also in comparison with some of those in these colonies. The Corporation desires, as early as possible, to appeal to the wealthy friends of the higher education in Montreal on this subject, with a view to the remedy of the deficiency thus severely felt.

Extracts from Minutes of Annual Meeting of the St. Francis District Teachers' Association.

AFTERNOON SESSION, FRIDAY, DEC. 28. 1866.

The Association met in the Academy building at Compton Centre, with a very good attendance; and came to order with the President, Principal J. H. Graham, M. A., in the Chair.

By request of the Chairman, Rev. A. Duff offered prayer. Extracts were then read from the Minutes of the meetings of the Association at the Semi-Annual Session, in May last, at Sherbrooke, and these minutes were confirmed.

The Secretary Treasurer presented his report and financial statement for the past year, which are as follow :—

Report of the Secretary-Treasurer of the St F. Dist. Teachers' Association.

Mr. President, and members of the Association :

Little has been done during the past year by the Secretary in work specially connected with the Association, beyond the necessary summoning of Committees, advertising meetings, and publishing reports.

Some expense was incurred by the presentation in person, by a Committee of the Association, of the memorial to His Excellency the Governor General, on the Council of Public Instruction, which expense ought to be borne or shared by the Association. Not a little difficulty has been experienced in making preparation for this meeting, because of the amount of correspondence necessary to provide well for reading of papers and conducting discussions. It might be well to make arrangements for partial provision, at least, at each Meeting for that next to follow. It would be well also to compose the Executive Committee of members living within a short distance of one another, and near the place of next Meeting. Thanks are due for the valuable assistance of one of our Members in Martinville, in the preparation for this Meeting.

It is much to be desired, that the Teachers in all parts of the District be brought to use the Association as a means of intercourse and improvement both in our several schools and in the public feeling on Educational matters.

Direct individual effort is needed among the members, and also, no doubt, better work, and more wide dissemination of accounts of proceedings, by the Association.

Subjoined is a condensed statement of the Income and expenditure for the year :

INCOME — By annual subscription of 32 Members,	\$8 00
EXPENDITURE,	6 99
	<hr/>
Balance on hand,	\$1 01
Signed, ARCH'D. DUFF, JR., B. A., Sec'y-Treas. S. F. D. T. A.	

These were referred by motion to a committee to be audited, and for reports on the suggestions made, committee to consist of Messrs Annable, Jordan, and the Secretary.

The Chairman appointed as Committee on business and nominations, Rev'd. Messrs. Duff and Mallory, and Mr. W. R. Doak.

Mr. W. E. Jordan consented to act as Assistant Minute Secretary. Messrs Mayo and Carr were requested to receive the names of members for the coming year, and the names of fourteen ladies and gentlemen were put on the roll.

The President also made a statement concerning the offer of prizes by J. H. Pope, Esq., M.P.P., for Compton, for Essays by Teachers on "The Greatness of Little Things." Only one essay, and that a very short one, had been sent into the Committee of adjudication, perhaps on account of the peculiarity of the subject. No prize would be given, but new arrangements would probably be made.

The President also made explanation of the reasons for the appointment of these days for meeting. He also gave some account of the course which had been pursued, with reference to the Book order of the Council of Public Instruction, and of the result in the postponement of its enforcement.

The Committee on nominations presented their report, to wit, that the officers of last year be re-elected, with the exception of the Executive Committee, this committee to be appointed after the place of next meeting be chosen.

Rev'd. A. Duff, Chairman of the Committee on Nominations, moved, and Mr. W. R. Doak seconded, and it was carried unanimously, that this report be adopted.

The officers for 1867, are: President—Principal J. H. Graham, M. A.; Vice-Presidents—Prof. H. H. Niles, L. L. D., and S. H.

Shonyo, Esq., M. A.; Secretary-Treasurer, Prof. Archibald Duff, Jr., B. A.

The Business Committee reported the Annual Address of the President as the first order of business.

The President accordingly proceeded to address the Association on "A Graded system of Schools for the Province," referring in the course of remark to the need of the establishment of model schools and of the encouragement of Canadian School Books.

The Inspector of Schools for the District, H. Hubbard, Esq., M. A., was then asked to give some account of his work, and the state of Education in the District. The increase during the past year had been as favorable as at any time. Some serious disadvantages were found still to exist in the poorer districts.

The verse beginning, "Be Thou, O God, exalted high," was sung by the Meeting, standing. After announcement that Mr. H. C. Wilson would probably soon be present to enliven the exercises with music; and also that a few remaining copies of the "Galt" Prize Essay, on "Common School Education" were on the table for distribution, Mr. A. Duff, Jr. read a paper on "Teaching Arithmetic." After the reading of the paper, Inspector Hubba made some remarks thereupon, and on other matters connected with the subject; as—the amount of help the teacher should give to his Scholars, and textbooks other than those mentioned by the essayist.

Rev'd. A. Duff addressed the meeting, expressing desire for common schools in which youth might receive a thorough education for the duties of life, and hoping that we might have among our Teachers more men, men willing to devote their lives to the work. The Association then adjourned, to reassemble at 7 p. m.

EVENING SESSION

The evening session was opened shortly after 7 p. m., by prayer by Rev. C. P. Mallory. A piece of Music was sung by several members of the Association, directed by Mr. H. C. Wilson. The minutes of the afternoon session were read and confirmed.

The Committee on the Secretary-Treasurer's Report brought in their report. On motion of Mr. Doak it was received, and the resolutions therein suggested were adopted with some amendments.

The Report, with the amended resolutions is as follows.

"The Committee appointed to audit the accounts of the Treasurer and report to the Association, would state.—"That the accounts are found correct as reported. The Committee beg leave to suggest the following resolutions:

Resolved.—That the expense incurred by the Committee appointed by the Association at Huntingville, to present to the Governor-General its views in regard to the School-Book order, be shared by the Association, and that the matter be referred to the Executive Committee.

Resolved.—That at each meeting of the Association, the place be selected for the next meeting, and also that as far as practicable, the Executive Committee should consist of persons residing within short distance of each other, and near the place of next meeting.

On recommendation of the Business Committee the subject "Instruction in Arithmetic" was again taken up, and in the discussion of it, Mr. Inspector Hubbard, the President, Mr. Shonyo, Principal of Hatley Academy, and the Secretary took part. Special attention was called in the course of remark, to the nature of the examples given in some books as not sufficiently connected with the principles taught, and the method of using such examples was spoken of. The difficulty of publishing Canadian Text Books, and the need of such as would suit all the Provinces; the use of the blackboard by both Scholars and teachers, for showing the working of examples and for explanations, were touched upon, as were also the care to be exercised in giving to Scholars work in copying; the great need of accurate committal to memory; and the duty of training the scholar to do his own work and to think for himself; also the importance of doing work in the class so thoroughly that a second study of the same book should hardly be needed.

Mr. H. C. Wilson, with the aid of an instrument, and the voices of several of the members varied the exercises very pleasantly by giving some excellent music in the interval of discussion.

The items of business to be taken up next day, were read. Mr. H. C. Wilson called attention to the importance of the instruction of children in music, and asked fifteen minutes of next session to speak of this.

After some remarks on this subject, the request was made that Teachers would make known any subjects on which they desired discussion, and that some would volunteer model lessons on any subject.

The Association, led by Mr. H. C. Wilson, then sang the Doxology, and the Meeting was adjourned to 9 a. m. of the next day.

SECOND DAY.—MORNING SESSION.

At the opening of this session, The President offered prayer. After

music by the choir, the minutes of the preceding session were read and confirmed.

The Business Committee reported for discussion the question.—"Should the higher branches of mathematics be taught in Common Schools?" Short addresses were made by Inspector Hubbard, the Pres. Rev. A. Duff, Mr. Shonyo, Mr. A. Duff, Jr., and Mr. Doak. It was considered that these branches ought not in general to be so introduced, but that this rule need not be invariable.

Mr. Doak introduced by an address the question.—"Should we endeavor to elevate our class of Teachers to a professional rank on a level with the clergy, physicians, and lawyers?" The President and Rev. A. Duff followed, supporting Mr. Doak in the affirmative.

Mr. Wilson brought forward the question.—"Should the science of Music be studied in Common Schools?" He added much interest to his treatment of the question by giving a model lesson in music, such as he thought might be given in our schools. The President, Mr. Hubbard, and Mr. Doak, followed with short remarks.

The subject, "A Text book on Geography," was brought forward and some remarks made thereon, by Mr. Wells, a Common School Teacher. Mr. Hubbard gave some valuable information respecting the textbooks in use in the District. Colton's & Fitch's Geography is much used, and Cornell's primary work is found to be excellent. Mr. Shonyo spoke on the subject, referring to some of the good qualities of Lovell's Geography, and also said that a work intermediate to Lovell's primary and his larger book was needed. The President made some remarks, saying that the maps of our own country ought to be on a larger scale than those of others, and that much credit was due to Mr. Lovell for his endeavors under very great difficulties to supply the want of a Canadian Geography. He advised that the best advantage should be taken of the multiplicity of textbooks among us by the use of a question book for which answers might be found in almost any Atlas or Text-book. A resolution was passed expressing a desire for an intermediate text-book such as had been referred to.

On motion from the Business Committee, the President left the chair, and it was taken by Mr. Shonyo. Mr. Doak moved that the thanks of the association be tendered to the President for his excellent addresses, to the Secretary for his paper on "Instruction in Arithmetic," and to Inspector Hubbard for the information given by him concerning the state of Education in the District. This was seconded and carried. It was then moved, seconded and carried that the thanks of the association be given to the Office Bearers of the past year for their earnestness in carrying on the business of the Association.

A hearty vote of thanks was given to the Local Committee of arrangements, and to the friends, inhabitants of the village of Compton, for the hospitable entertainment of the members present. Mr. Doak replied in the name of the Committee.

Mr. Doak addressed the Association briefly, on the necessity of making our school-rooms more comfortable and attractive. He said that in some places the grounds surrounding the schoolroom were finely laid out, the interior of the building beautified with first-class maps, engravings, &c., and abundant provision made for the pleasure of the scholars.

Rev. A. Duff called attention to the great importance of training children to habits of total abstinence from intoxicating drinks, and recommended that they be brought up to abstain entirely also from the use of tobacco.—Mr. Wilson made a brief remark on the subject. A resolution was passed urging Teachers to encourage those under their charge to abstain entirely from the use of intoxicating drinks and tobacco. The President said that difference of opinion could hardly exist on this question. Rev. Mr. Kemp fully concurred in what had been said. Rev. Mr. Wells followed expressing the same feeling.

It was then moved by the Secretary, seconded by Mr. Wells, and carried, "that the thanks of the Association are hereby tendered to the Editors of the various papers in the District for their liberal aid in advertising and noticing our meetings."

After some discussion, East Hatley was fixed as the place of next semi-annual meeting, to be held in the coming summer. The Committee on nominations reported for election as Executive Committee, Dr. Gilbert, Mr. Lebaron and Dr. Burland, all of East Hatley, and Rev. Mr. Lee, of Stanstead as Vice President in place of Dr. Miles, should the latter resign. These gentlemen were duly elected.

Several names were added to the roll of membership. A vote of thanks was tendered to Mr. H. C. Wilson, for his assistance in rendering the meetings pleasant.

The Doxology was sung, and Rev. Mr. Kemp pronounced the Benediction, after which the Association, adjourned to meet in East Hatley.

ARCHIBALD DUFF, JR., B. A.
Sec.-Treas., S. F. D. T. A.

Extracts from the School Inspectors' Reports.

Extracts from Mr. PAINCHAUD's Reports for 1862 and 1863.

As the extracts from the School Inspectors' Reports for 1862 had been printed when Mr. Painchaud's reports for that year were received, we give the following extracts with those from his reports for 1863.

From these reports it would appear that the schools of the Magdalen Islands had made little progress generally, which was due partly to the incapacity of the persons charged with the management of the school affairs, and partly to the division existing between local parties, especially in Havre-Aubert. The conduct of certain teachers had been unsatisfactory and had contributed to bring the schools into discredit. Parents had in consequence neglected to send their children to school; and indifference had been added to the want of respect felt for the teachers—especially for those addicted to intemperate habits.

To remove these evils Mr. Painchaud suggested that only those persons holding diplomas, and who were in every other respect fit and proper for the work, should be engaged, a suggestion in perfect harmony with the regulation of the Department, which requires that no teacher—whether male or female—who is not provided with a diploma, shall be employed in the Public Schools, and that no certificates other than the regular diploma shall be received or shall justify the Commissioners in hiring teachers.

The salaries paid in the Magdalen Islands, according to the report, were sufficient to secure the services of qualified persons. It was not owing to the want of a proper disposition on the part of the rate-payers that the schools had not been prosperous, as, everywhere in the Islands, the amount collected had exceeded the amount of the grant; thus in the Municipality of Havre-Aubert the Commissioners had collected from the inhabitants, the sum of \$412, while the grant obtained from Government was but \$108.

Extracts from Mr. PAINCHAUD's Report for 1863.

THE MAGDALEN ISLANDS IN THE DISTRICT OF GASPÉ.

The state of education in the Magdalen Islands is far from satisfactory. It has been a matter of great difficulty to introduce the new law; the great majority of the inhabitants were opposed to the system of taxation. In the first instance, the plan was introduced under unfavorable circumstances, and subsequently every objection was made to the establishment of the school-tax. The validity of the valuation-roll is first contested, then the legality of the election is questioned, while the competency of teachers who do not possess diplomas is also questioned, &c. The whole population seem to hold to the system of independent schools. I have heard several persons say: "We prefer being without the pecuniary grant, and enjoy the privilege of organizing our voluntary schools." I was compelled during last summer, to visit the extreme portion of the islands to settle a difficulty that originated in opposition to the school-tax. On that occasion, I did everything in my power to prove to the tax-payers that a tax legally imposed is more equitably distributed than a voluntary contribution, and is by far more advantageous to the poor man. Each person being allowed to exercise his own generosity, we frequently find rich men giving a contribution comparatively small, while, if the tax were levied according to the means of the rate-payers, poor men would profit by the tax which would consequently weigh heavier on the rich. These opinions seemed to produce some effect on the most enlightened minds of the community. The Commissioners, in the first instance, gave orders to have all the schools closed, in accordance with the terms of the law; this lasted for some time, but they were subsequently re-opened and remained so until the teachers had passed their examination, or new teachers provided with diplomas came to take their place. Mr. Philippe Tériault, one of the teachers, passed a good examination in English and French at Gaspé. Mr. Ducloux and other teachers do not consider themselves equal to the examination and they continue to keep independent schools. At Aubert all the schools are closed, with the exception of one placed under the management of Mr. Marin.

Mr. Tériault has started a school under official control, which, under his attentive care, is prospering.

The municipality of Magdeleine has always held the first rank among the school municipalities of this division. As proof of this, I beg to refer to the statistics.

I shall not here repeat the thousand-and-one complaints daily heard, owing to the incapacity of the teachers. A number of these gentlemen, fearing the loss of their situations, intrigued with the habitants, obtained their sympathy, and are thus the principal promoters of the opposition to the law, the difficulties that continually arise in the path of those who are appointed to execute that law, and the trouble in

the way of the school inspector in the performance of his duty. If the Commissioners were men of energy these difficulties would soon disappear. I am happy to report that I rely upon Mr. Giovanni Fontana, a commissioner elected at the last election, who is a firm and enlightened man, for much assistance.

In the municipality of Aubert all the schools are closed, the teachers having refused to obey the law. We have written to Montreal and Quebec to obtain teachers, and I hope that these schools will soon be re-opened. The Commissioners are disposed to pay \$200 per annum to each teacher, besides lodging and fuel, and I may remark that, as living is cheap here, a salary of \$200 at this station is fully equal to \$300 at Quebec or Montreal.

I may mention that there is a dissentient school at Grosse Isle, attended by 22 Protestant pupils.

Extracts from Mr. MEAGHER's Reports.

In his report for 1863 Mr. Meagher's statements are to the effect that nearly every teacher employed in the District of Bonaventure held a diploma.

Port Daniel.—This municipality had been under the necessity of closing its schools for want of funds.

Hope.—There were two good schools in this municipality, in charge of teachers holding diplomas.

Paspébiac.—Only one school existed here, but a second was to have been opened soon.

Cox.—Two well kept and well managed schools.

Hamilton.—Two schools in charge of teachers having diplomas.

New Richmond.—There were no schools under the control of the Commissioners. The dissentients had three good schools.

Maria.—The examination of the two schools here showed very satisfactory results.

Carleton.—Two schools were in operation in this municipality, one in charge of Mr. Lucier, the other in charge of Mr. Lindsay, both being in a prosperous condition.

Nouvelle.—There was but one school in this municipality, conducted by Mr. Richard Séramen; the progress made was satisfactory.

Shoobred.—The difficulty existing between the School Commissioners and the Secretary-Treasurer of this municipality had been the cause of the schools continuing closed for eight months; but the difficulty was in a fair way of being settled; it was intended to open two schools shortly.

Mann.—There was one good school in this municipality, conducted by Mr. Gauthier.

The Indian school was attended by 60 to 80 pupils.

Ristigouche.—There were two schools in this place, well managed and numerously attended.

The Acadians established here showed much zeal in the cause of education, and deserved to be aided by Government.

Aubert.—All the schools of this municipality were closed on account of the teachers refusing to comply with the law. But application had been made in Quebec and Montreal for other teachers, and the schools would probably soon be re-opened. The Commissioners offered salaries of \$200, with lodging and fuel besides. Mr. Meagher says that the cost of living was not high and that \$200 in that place were equivalent to \$300 in Quebec or Montreal.

Grosse Isle.—A dissentient school was in operation here, attended by 22 Protestant pupils.

Extracts from Mr. MEAGHER's Report for 1864.

COUNTY OF BONAVENTURE.

I have the honor to transmit the following report of the state of education in this county for the first six months of 1864. I visited all the schools in the county during the months of February, April, May and June, and am now happy to state that, only with two exceptions, all the school municipalities are provided with teachers holding diplomas.

In this report I will, as usual, give a statement of the state of education in the different municipalities, in the same order as they stand in my last report, commencing at the eastern boundary of my district of inspection.

Township of Port Daniel.—In this municipality I am sorry to say there has been no schools in operation for the last three months; the teachers of Nos. 2 and 3, finding the salary too small, and the mode of payment not suitable, abandoned the schools; the teacher of No. 1 was discharged by the Commissioners for misconduct. I saw the

President and Secretary-Treasurer last month; they informed me that they had advertised for two teachers and expected to have schools in operation early this fall.

Township of Hope.—In this municipality a considerable interest is taken in the cause of education. There are two excellent schools in operation, with excellent teachers holding first-class diplomas. The examinations were very satisfactory.

Little Nouvelle.—There is one Catholic school kept by a young lady, very competent. At the time of my visit, on the 23rd June, there were 56 children in attendance. The Rev. Mr. Tournier was present at the examination, which was very satisfactory. The inhabitants are finishing a very neat schoolhouse, which will be in operation by the first of next month.

Township of Paspébiac.—Only one school district in this municipality at present; the school is in full operation; 62 pupils in attendance; the teacher, Mr. Joseph Dorais, a gentleman holding a diploma from the Normal School, and well qualified. I regret to say that he intends leaving the school on the last of this month, July, owing to difficulties existing between the rate-payers and school commissioners, which difficulties, I now trust, are all arranged.

Township of Cox.—There are three school districts in this municipality, two of which are in operation; kept by male teachers provided with diplomas. These teachers have only been engaged since May last. They are both very young men, and have not yet acquired the art of teaching. I was attended on my visit to school No. 2 by Judge Winter, the sheriff, and several other gentlemen, and I was sorry to find the schoolhouse in a very dirty state and the teacher having no control over the pupils; he was severely reprimanded by me, and also by the Judge. I regret to say that very little interest is taken in the cause of education in this municipality by the majority of the rate-payers. When I visited that place last week I found that an election of the school commissioners was going on; the friends of education had proposed four gentlemen who, if elected, would have done much to improve the state of education in the township, but, unfortunately, they were opposed by another party, who proposed four others; the election lasted two days and the friends of education were defeated. I attended at the election and advised the people, but to no purpose.

Township of Hamilton.—There are five school districts in this municipality; two in operation: one kept by Mr. Picard, holding a first-class diploma, an excellent teacher; the school well attended; the pupils improving rapidly; examination very satisfactory. The other school, kept by a Mr. Raiche, was very inferior; his engagement expired on the 1st instant, and the commissioners are about engaging a more efficient teacher.

Township of New Richmond.—There are nine school districts in the municipality, six under control of school commissioners and three under dissent. Of the former there is at present only one school in operation, kept by a female, an excellent teacher. The school is well attended. Examination very satisfactory. There is much difficulty in procuring qualified teachers; the commissioners are expecting two from Quebec shortly. There are two schools in operation under the dissent; one male and one female teacher. Both schools were well attended, and examination satisfactory.

Township of Maria.—Six school districts in this municipality; four at present in operation. Two male and two female teachers, all efficient. Teachers holding diplomas. All the schools were well attended, and satisfactory.

Township of Carleton.—There are two school districts in this municipality. One Model School kept by Mr. Lucier, holding a diploma. The school is regularly attended by from 75 to 85 scholars. All the examinations have proved very satisfactory.

Township of Nouvelle.—Four school districts in this municipality.

Township of Shookbred.—Six school districts in this municipality. Only two at present in operation, kept by male teachers. Both schools are well attended, and examination satisfactory. The commissioners are endeavoring to engage other teachers for the vacant schools.

Township of Mann.—Two school districts; one in operation. This school is very inferior. The school has very poor attendance, considering the number of children in this municipality of the age to attend. The examination was not satisfactory.

Indian Mission.—This school has been kept for the last two years by one of the French Acadians, and attended regularly by from 75 to 80 young Indians, who have made wonderful progress. The Rev. Mr. Saucier visits the school very often, and takes interest in the improvement of the children.

Township of Ristigouche.—Two school districts in this municipality. The commissioners had engaged two teachers for the schools, but

they not being provided with diplomas, I advised them to appear before the Board of Examiners in May last. They attended but failed in obtaining diplomas. Both schools are at present vacant, but the late teachers are to appear before the Board of Examiners at its next sitting, to undergo the required examination and obtain diplomas.

Township of Metapédia.—One school in operation, kept by a male teacher holding a diploma.

New Rustico.—There are two school districts in this municipality, and two schools at present in operation, one kept by the former teacher of the Indian Mission School, and the other by a young Acadian settler, both very well qualified for the requirements of the children of the municipality. Neither being provided with diplomas, I have advised them to appear before the Board of Examiners at its sitting in August. These poor Acadians deserve encouragement, as they are using every exertion to promote education in their little colony.

(To be continued.)

MONTHLY SUMMARY.

EDUCATIONAL INTELLIGENCE.

—The fourth report of the Council of Military Education has been issued, the return thereof being brought up to March, 1866. First, that out of a complement of regiments and corps amounting to 177,430 men, there are 21,700 who can neither read nor write, 28,600 who can read but not write, 116,000 who can do both, 11,000 who have received a superior education. The educational advance of our army is considered satisfactory, inasmuch as during the last six years the uneducated men have decreased by from two to eighteen per cent., the cavalry representing the least, and the Military Train the greatest percentages of improvement. There are three classes of children's schools for which all soldiers' children are eligible on payment of a small fee, and 17,463 are so educated at various stations of British troops in the United Kingdom and the Colonies. A list of garrison libraries is given in the report, by which it appears that they contain unitedly 203,700 volumes, an increase of 7,000 over the previous year. Aldershot, Malta, Chatham are conspicuous in the list. The report concludes with an account of measures that have been lately adopted at the suggestion of Sir William Hamilton, for giving definite recreation to troops on long voyages.—*Exchange.*

—Rev. Mr. Brunet, it is said, will succeed the Rev. Mr. Langevin as Principal of the Laval Normal School, and the Rev. Mr. Edmond Langevin, Secretary to His Lordship the Archbishop of Quebec, will, it is believed, be appointed Grand Vicar to his brother, Bishop Langevin.

LITERARY INTELLIGENCE.

—Monday night the officers and men of the Royal Artillery, and a brilliant party of civilian ladies and gentlemen had the pleasure of a literary entertainment at the hands of Lieut-Col. McCrae, Capt. Knox, Lieut. Harvey and an officer of the 30th Regiment. The band of the Artillery was in attendance, varying and enlivening the proceedings at appropriate intervals with very fine music. The Artillery Barracks afforded the place of meeting, the room occupied being gaily dressed off with flags, arms, etc., which created an agreeable effect. Capt. Knox commenced with the reading of some lively poetic selections, and was followed by Lieut. Harvey, who read an animated description of scenes aboard a ship on fire at sea. Col. McCrae read the famous passage from "Martin Chuzzlewit," containing the incidents immediately preceding Mark Tapley's retirement from the "Dragon," and sketching his departure from the village in search of misfortunes to make him "jolly." The humor of the piece was admirably brought out by the reader, whose correct understanding of the characters, and clear and intelligent enunciation were the subject of general remark. All the gentlemen demonstrated the fact that their military duties had not forbade their cultivation of letters, and that their merit as elocutionists was of no mean order. The audience were greatly pleased with their intellectual treat, and we doubt not will be anxious to enjoy the next of the same kind whenever it is given.—*Quebec Chronicle.*

—The Emperor of the French has presented to the Imperial Library the original M.S. of Humboldt's "Cosmos."

—The Faculty of Arts of the Laval University, Quebec, has resolved to offer annually three prizes for competition in poetry. These prizes will consist of medals bearing the arms of the University, the inscription *Prix de poésie*, and the date. The first prize medal will be of gold, the second of silver and the third of bronze. Of the poems intended for competition, two copies will have to be sent in (pre-paid) to the Secretary of the Faculty of Arts before the 30th of May in each year, together with a sealed envelop bearing a motto, and the name and address of the writer,

also a declaration that the piece has never been published; and all pieces sent in will become the property of the University. The poems will be submitted to the decision of a jury chosen by the same Faculty. The following are excluded from competition: Members and officers of the Laval University, pupils of colleges and schools, and any contributor who shall discover himself before the award of the jury shall have been rendered. The first subject chosen by the Faculty of Arts for competition is, *The discovery of Canada*.

— On Wednesday last series of "Penny Readings" was inaugurated in this village (Charenceville, C. E.) under the presidency of the Rev. C. H. Lancaster, assistant minister of the place. The idea was a new one to the people here, but judging from the success which has attended the first endeavour, the scheme is thoroughly appreciated.

The following were the readers and readings on the above occasion:—"The Town Pump," by Hawthorne, Rev. C. H. Lancaster; "The Last Man," Campbell, Mr. Jno. McFie; "The death of Absalom," N. P. Willis, Rev. C. H. Lancaster; Selections from Sam Slick the Clockmaker, J. B. Morrison, Esq., B. A.; "The Tinker and the Glazier," "The Doctor and his Pupil," Rev. C. H. Lancaster; Selections from Picwick, Mr. Jno. McFie; "The Bridge of Sighs," T. Hood, Rev. C. H. Lancaster.

On this occasion the Committee had to avail themselves solely of "native talent," but they trust on future occasions to obtain the assistance of kind friends from Montreal and elsewhere who feel disposed to encourage this effort to cultivate a literary taste, which is so sadly deficient in many of our country districts and villages.—*Exchange*.

— Last evening an interesting lecture was delivered by Professor Andrews at the Normal School, the subject being "The Reading of Poetry." The chair was occupied on the occasion by Principal Dawson, and the lecturer was listened to by a crowded and attentive audience. He commenced by giving an outline of the theory of elocution, and proceeded to dwell upon the importance of the reader understanding what he read, and said without this it is of course impossible that he can efficiently render the meaning of the author to his audience. But it does not follow that because he understands the text himself that he can therefore render it in an intelligible manner. When giving lessons sometime since to a gentleman of more than ordinary culture and intelligence, he was struck with the want of intelligibility in his reading of some passages from one of his favorite authors. The words were pronounced carefully enough, although with a monotonous sing-song accompaniment, but meaning there seemed to be none, and of course neither the rhythm of the poetry nor the measure could be distinguished. In thinking over the matter he came to the conclusion that his perception of the sense instead of preceding the reading of the passage, was reflective, and that until the words were uttered the reader made no attempt to arrive at the meaning. Now, in order to read a passage properly, the reader must know perfectly what he is going to express, or it will be impossible to give it the true expression. It is not enough, however, to read rightly—you must read pleasantly as well as correctly, so that your hearers may not only be enabled to understand, but induced to listen. Reading must be pleasant in order to be profitable to others. It will be necessary to consider a most important element in the reading of the English language—accent and rhythm. Every word of more than one syllable has what is called an accent (that is a superior degree of pronunciation, by stress or inflexion), on one of the syllables. Without accent speech would be drawing, monstrous, and unemphatic. Accent ties syllables into words, and enables the ear to comprehend at once the boundaries of each verbal utterance. The succession of the accents in sentences constitutes rhythm—Rhythm, good or bad, is an element of all speech. He now spoke of a most important element in correct and expressive reading, viz, the pause. We are all familiar with the old rule laid down about minding our stops. All that was necessary was to count one one at a comma, two at a semicolon, and so on and the matter was done. I need scarcely say that such rules are worse than worthless. In so far then as the pauses for reading are concerned, we must make our own punctuation. The lecturer then explained what is meant by the word emphasis, and concluded a very interesting lecture by urging upon the teachers the necessity for a perfect knowledge of elocution in order to be able to communicate a share of good reading to their pupils. Mr. Andrews illustrated the subject by reading some very fine poems and dialogues, in which he was assisted by three of his pupils, Masters Dawson, Baynes and Cochrane, whose correct and masterly reading, was highly creditable to both the teacher and themselves. Principal Dawson, in a few appropriate remarks, returned thanks to the lecturer. It was then announced that a paper by Professor Howe would be read at an early date, after which the meeting dispersed.—*Montreal Gazette, 9th Feb.*

SCIENTIFIC INTELLIGENCE.

— The following is an abstract of the third lecture of the Sommerville course, delivered by Dr. T. Sterry Hunt on Thursday evening, at the rooms of the Natural History Society—the subject being the "Origin of Continents":

The lecturer commenced by giving a few statements with respect to the general features of the earth. Its shape is that of an oblate spheroid, such as mathematicians have supposed would be the case with a sphere of fluid or semi-fluid matter acted upon by the opposing forces of the laws of gravity and of centrifugal force. Four-fifths, or, more correctly, eight-

elevenths of the surface of our planet are covered with water, the greater portion of which lies in the Southern hemisphere. There are two great series of Continents, N. and S. America forming one, and Europe, Africa and Asia constituting another. The Eastern hemisphere, however, properly speaking, includes two, joined together, but separated by a barrier of land. Thus Europe, with Africa, forms one, while Asia properly should rank as another. The various mountain chains were briefly enunciated, and after this the general outline of the submerged land. It was stated that the deepest water is near the S. Pole, and that the mean depth of the N. Pacific is about 13,000 feet. The average height of the land North of the Equator is 3 times as high as to the South of it. Portions of the interior of continents, such as the Caspian and Dead Seas, are lower than the general ocean level. According to Humboldt, the mean elevation of the land in the globe above the sea level is about 1,000 feet, while the mean depth of the submerged portions is 10,000. If a model of the earth were made, 80 feet in diameter, with the mountains and ocean abysses of a size to correspond, the inequalities of the surface would seem very trifling. A continent was defined as being a body of land so large as to have the true basin shape, that is, mountain borders about a low interior. In describing the mountain chains in N. America, it was stated that the N. American mountains have a greater antiquity on the whole than most of those in Europe. In N. and S. America the mountains run N. and S., but in Asia and Europe their direction is E. and W. On the whole, the bulk of the land above the level of the sea is about one-fortieth that of the ocean.

Attention was then called to the original condition of our planet, and this was described as being a liquid or molten mass undergoing a gradual cooling process. It was stated that under some conditions when bodies are intensely heated they absorb gases, which are again given off when the body cools. A ball of silver, upon being heated and afterwards allowed to cool, presents an appearance, caused by the escape of bubbles of gaseous matter, of little miniature volcanoes. Attention was called to the fact that the moon presents a not very dissimilar appearance, of course on a much larger scale, but possibly due to the same cause. It was stated that Phillips has estimated the height of some of the mountains of the moon at from 10 to 20 miles, and the lecturer remarked that this luminary had no atmosphere, and probably almost no water on her surface. The idea was thrown out that the moon is now undergoing a change, similar to what obtained in our earth in one of the earlier stages of her existence.

The great agents in the formation of sediment are water and air; first occurs chemical change and then waste. It is the transportation of sediment caused by erosion, that makes continents. There is a constant mutation in the existing order of things, our present continents, according to the lecturer, are formed from others which have long disappeared. The agents of denudation are frost, the waves, ocean currents, aerial currents, &c. forces which as Tennyson says, "Sow the dust of continents to be." The principal ocean currents were then described, and the course of the Gulf Stream minutely detailed. It was shown that the rotation of the earth on its axis causes a deflection of these currents, which must be taken into account. A number of instances was given to shew the way in which sediments are deposited along certain lines, and that the mass of accumulated sediment causes flexures of the comparatively plastic material upon which it rests. The mountains, however, are not wholly raised by these flexures, but often by subsequent erosion of these ridges and subsequent redeposition. After the formation of these mountains, denudation gives them their present form and contour. A diagram was shown exhibiting a section of the Adirondacks (which are of Laurentian age), of the Green Mountains (which are Silurian), and of Mount Washington, which respectively belong to different formations, and were formed at different periods of deposition. Many other illustrations of the way in which sediment goes to build up mountains were given, which our space forbids us to detail. Playfair has said that upon surveying the present order of things he could see no evidence of a beginning nor any sign of an end. This planet has undergone many changes, ranging over a time of enormous duration, but the end, the lecturer thought, might be speculated upon. Assuming that the exterior of the earth was cooling in a definite ratio, the thickness of the cooled portion would increase. This cooling might induce porosity in the earth's crust, sufficient, if carried on through ages and gradually increasing, to absorb all the water on the surface of the earth, without which element, life would be impossible. Still this view, if correct, would require a very much greater time to elapse before such a result, than it has taken to evolve the present order of things, and the lecturer stated his belief that we are

"Yet in the very morning of the times."

It was announced that the fourth lecture of the course would be delivered on Feb. 14th, by Principal Dawson, the title of the lecture being "On the Anatomy of the Common Sea Urchin," and that the fifth annual Conversation of the Society would be held on the 18th of February next.—*Montreal Gazette, 9th Feb.*

An Active Volcano in the Moon.—A volcano in the moon is said to be in an active state. The crater called Linne on the Mare Serenitatis, was noticed by an astronomer at Athens, a Mr. Schmidt, during the months of October and November, to be obscured. English photographs taken during the same time show the crater very faintly marked. The same darkness was observed on this spot by the eminent astronomer Schroeter in November, 1788. The London *Spectator* says: "The impression is that an

eruption is going on, but if so, must not the moon have an atmosphere? Could combustion take place without oxygen? Would the smoke—the carbonic acid and gas—rise without some heavier gas, like atmospheric air, to rise in?”

—In the Grisons a fall of red snow, to the depth of three inches, has taken place. The fall lasted about two hours, and was succeeded by white to double that depth. The phenomenon is not uncommon, and is due to the presence of a microscopic mushroom, the *protococcus nivalis*.

—At one season the earth parts with its warmth by radiation to an open sky—receives, at another, an immoderate heat from the unobstructed rays of the sun. Hence the climate becomes excessive, and the soil is alternately parched by the rigors of winter. Bleak winds sweep unresisted over its surface, drift away the snow that sheltered it from the frost, and dry up its scanty moisture. The precipitation becomes as irregular as the temperature. The melting snows and vernal rains, no longer absorbed by a loose and bibulous and vegetable mold, rush over the frozen surface and pour down the valleys seaward, instead of filling a retentive bed of absorbent earth, and storing up a supply of moisture to feed perennial springs. The soil is bared of its covering of leaves, broken and loosened by the plow, deprived of the fibrous rootlets which held it together, dried and pulverised by sun and wind, and at last exhausted by new combinations. The face of the earth is no longer a sponge, but a dust heap, and the floods which the waters of the sky pour over it hurry swiftly along its slopes, carrying in suspension vast quantities of earthy particles, which increase the abrading power and mechanical force of the current, and augmented by the sand and gravel of falling banks, fill the beds of the streams, divert them into new channels, and obstruct their outlets. The rivulets, wanting their former regularity of supply, and deprived of the protecting shade of the woods, are heated, evaporated, and thus reduced in their summer currents, but swollen to raging torrents in autumn and in spring. From these causes there is a constant degradation of the uplands, and consequent elevation of the beds of water courses and of lakes by the deposition of the mineral and vegetable matter carried down by the waters. The channels of great rivers become unnavigable, their estuaries are choked up, and harbors which once sheltered large navies are shoaled by dangerous sandbars. The earth, stripped of its vegetable glebe, grows less and less productive, and consequently less able to protect itself by weaving a new network of roots to bind its particles together, a new carpeting of turf to shield it from wind and sun and scouring rain. Gradually it becomes altogether barren. The washing of the soil from the mountains leaves bare ridges of sterile rock, and the rich organic mold which covered them, now swept down into the dark low grounds, promotes a luxuriance of aquatic vegetation that breeds fever, and more insidious forms of mortal disease by its decay, and thus the earth is rendered no longer fit for the habitation of man—*Scientific American*.

—Whatever dispute there may be as to the origin of coal, there can be no valid question that the composition of peat is mainly vegetable. The evidence of this is of a *prima facie* character; for even those varieties which appear to the unaided eye but masses of smooth, oily muck, show, under the microscope, the remains of minute mosses, which flourished and died through countless generations, and sank below the water which sustained and supported them while living.

On many a plain, on lofty table lands, in gorges and valleys, wherever water gathers, from a thousand sources miniature pools or extensive morasses are formed by the water being held stagnant and imprisoned by the solid clay or hard rock beneath.

On the surface of these silent waters confervæ, so minute as to be visible only as a green scum, appear, live their brief life, and sink to the bottom. Others immediately take their places, live and die, until film after film is deposited. In time this very gradual accumulation becomes a palpable mass; not, indeed, until countless generations of these confervæ have lived and died. Particles of sand and stones gather and are held; the decaying roots of adjacent plants, killed by the sluggishness of these waters of death, help the accretion of the mass. It rises year by year until it affords a foothold for water fowl, which add their qualities of guano, and at last it covers the dark waters and forms a peaty mold extending to the surface.

These changes have been passive; but the water still accumulates, and at length becomes aggressive, breaking through the felt-like mass and destroying the daring vegetation that attempts to procure a foothold over the treacherous slime. Below all is the water; next, the black peat, composed of these almost invisible confervæ; then the closely interwoven mummies of roots, which make the surface turf, or peat.

Vast regions of the globe, called by geographers “solid land,” are covered by these peat bogs, or treacherous morasses. The table

lands of the South American Cordilleras; the immense plains of frozen Siberia; about one-tenth of the island of Ireland; large parts of Scotland, Germany, Jutland, Norway; the gorges and valleys of the Alps, an innumerable localities on this continent, are occupied with these moors. Within the limits of the polar circle and under the burning sun of the tropics they exist and increase. They do not rest. Their quiet is only apparent. The slow but sure progression of the moor is insured by the increase of water and the accumulation of decayed and dying vegetation; so that at times the air and gases, imprisoned beneath the tangled network of roots and fibres and the coat of deceptive turf, assert their right and burst all restraints, sending forth streams of black, liquid mire, which overwhelm or destroy all within their reach.

But the silent and almost unobserved action of these peat marshes is not less remarkable. Quietly, gradually, but irresistibly as fate itself, wherever they exist, they exist but to destroy. They undermine the roots of proud forest trees and sink them, still upright, in their miry depths, beyond the reach of sunlight and air. Or, they cut them down and swallow roots, branches, and foliage beneath their insatiable waters.

Water either in motion or at rest is a great destroyer. Where the solid land or dense vegetation does not offer a bar to its aggressions, it comes in to usurp and reign. We have in our recollection one notable instance. In provincial times a large tract in the little State of Rhode Island was a thick cypress or cedar swamp, the resort of innumerable animals as wild as their habitation. The trees were cut down, the vegetation killed by fire, and the waters came in, and now the tract of salt water, called “Hundred Acre Cove,” covers thousands of acres and affords fine fishing grounds, rendezvous of water fowl, and a magazine of fuel and fencing material by its wealth of stumps and roots.

What are commonly known as salt marshes are now or are becoming beds of peat. The accumulation is very gradual, the growth of one season forming a thin layer to be succeeded by another. The rank grasses, rushes, and other water plants and the shrubbery, which retains a precarious foothold on the surface, add to the mass year by year. In time what was a treacherous morass becomes apparently *terra firma*, and more advanced forms of vegetation take the place of the aquatic growth; a forest rises over a marsh. The marsh, however, is still there, and below the roots of the trees is a spongy bed of peat. The sea itself holds in its relentless grasp vast deposits of this substance, destined perhaps hundreds of thousands of years hence, to furnish fuel and light to other races of man. The sea in many places is making encroachments on the land or rather the land is sinking below the sea level. Where, as in the case of the “Hundred Acre Cove,” the barrier to the sea has been removed by human agencies, the ocean has usurped and held domination.

Even beneath the shade of forests growing on solid ground, peat has formed and is in process of formation. The foliage of the trees, with the countless shrubs that grow in dark luxuriance in the impenetrable shade, decay and form layer after layer of soft, slimy substance which becomes in time concreted into genuine peat. Thinning the forest dries the soil, and in time the peat is a dry, fibrous substance, naturally prepared for the use of fuel.—*Id.*

—During the late prevalence of cholera at Vienna, one Dr. Kolb, a prominent physician of that place, subjected the ice-water discharges of his patients to microscopic examination. He has now published the result of his researches, and they are truly remarkable and well worthy the closest attention and scrutiny of the medical faculty. He says that with the greatest magnifying power he could procure, he discovered in the fluid substance millions upon millions of mushroom-like entomistic excrescences, in which he claims to have found the germ of this fearful epidemic. To detect a remedy capable of destroying these “mushrooms” and preventing their growth, he thinks would be the surest specific against the spread of cholera. He had communicated his discovery to Dr. Max Pettenkofer, of Munich, but this distinguished authority on epidemics and disinfectants has not as yet, to our knowledge, given any opinion upon it.—*Exchange*.

Mr. Rutherford's Celestial Photography.—Dr. Gould, writing in *Astronomische Nachrichten*, states that Mr. Rutherford, with a photographic object-glass of 11½ inches aperture, has carried his process to such perfection that he readily obtains impressions of stars 8½ mag., provided they are not red. It is easy to obtain the image of a region one degree square.

—A *New Glow-worm, with two Fires*, has been found in the Grand Chaco, Argentine Republic. Wm. Perkins, Esq., F. R. G. S., writes from Rosario, October 20, 1866, to Wm. Bollaert, Esq., F. R. G. S.:—“I think I have made a discovery in natural history, and which you may make known to the scientific world. I found the female of the most extraordinary *Elaterride* ever heard of, at least that I know of. It is a most brilliant glow-worm, one inch and a half long, with two-fires. The body emits a most vivid flame of the ordinary greenish phospho-

rescent colour, while the head presents the appearance of a bright glowing red coal of fire. The reflection on a piece of paper is also of the two colours. I never saw anything so beautiful." Mr. Bollert adds. "This is doubtless one of the *Cucuyos* family. One, the *Phyrophorus noctuclus*, is described as the South American *Cucuyo*, or glow-worm. Mr. Bollert has noticed glow-worms in the West Indies, North and South America, but never in such abundance and beauty as in the wilds of Western Texas, still he never observed but one light, the green."—*Intellectual Observer*.

NECROLOGICAL INTELLIGENCE.

— Many of our readers would notice with regret in a Cable despatch a couple of days ago, the death, in England, of Mr. Browne, popularly known as "Artemus Ward." Many have laughed over, and may have derived instruction from his quaint writings, in slightly exaggerated, but keen and at the same time genial Yankee vernacular. He visited this city a short time before he went to England, and delivered some lectures. He displayed in conversation a very modest estimate of his own abilities and writings, and gave it as his opinion that the latter had met with success beyond their merits—and certainly beyond his expectations. He did not feel by any means certain that he should meet with success in England, and in this he has not been altogether disappointed. Many of his writings in *Punch* were amusing, but they were wanting in the point and flavour of his observations on his native soil.—*Montreal Gazette*.

— We learn from England of the death, at the age of nearly ninety-two of Mr. Henry Crabbe Robinson, the friend and champion of Goeth and Schelling, and the associate of the coterie in which were Wordsworth and Southey, Coleridge and Charles Lamb, and their fellows. Mr. Robinson was also an intimate friend of Mr. Walters, and thereby became one of the staff of the earlier *Times*. By profession he was a lawyer—the one whose first brief brought from Lamb the ejaculation, "Thou great first cause, least understood"—but his means were such as to render him independent, and he preferred to surround himself with literary companions, for whom his friendship and his advocacy were so strong that, as *The Spectator* observes, he resented "a depreciation of Lamb as a symptom of moral disease, and ridicule of Wordsworth, even from a lady, as the fruit of natural depravity." Unfortunately, he wrote little of permanent value, though, as we learn from *The Athenaeum*, he left a diary which must be rich in reminiscences of the great men in literature whom he knew so well. Of this, it is to be hoped, the public may have the benefit in some form or other.—*Exchange*.

MISCELLANEOUS INTELLIGENCE.

— In the Alban hills, near Rome, have been found—in excavating below the beds of 'poperino'—remains of houses, swallowed up formerly as Pompeii was. Vases, stone weapons, and hieroglyphical inscriptions fix with certainty the site, hitherto contested, of Alba Louga, and throw a new light on the private life of the ancient inhabitants.

Acclimation of the Camel in Australia.—The introduction of the camel into Australia has been previously announced, and it was effected by the "Société d'Acclimation." We now learn that these animals have adapted themselves to that country, as has been shown by a recent expedition consisting of seventy horses, fourteen camels, and fifteen men. The springs of living water upon which they depended having been dried up, sickness broke up in the camp. The men fell back upon their stores of spirituous liquors, the horses took to flight, while the camels alone remained at their post. It is owing to this circumstance solely that the expedition was reorganized. At last accounts the caravan had arrived at Thompson river.—*Silliman's Journal*.

Acclimation of the Salmon.—The eggs of the salmon which have been introduced into the waters of Australia have hatched and the young fish are prospering. Ice has been used in the transportation of the eggs, which, according to Mr. Youle, retards the phenomena of embryonic evolution. This gentleman has found that the vitality of the eggs may thus be preserved for three or four months. It is in this manner that eggs taken from the Rhine at Huningen in Alsace have been successfully transported to Australia. Sweden and Norway are both occupied in stocking their rivers with salmon, so that the fine example of the Zoological Society of Acclimation will not be lost.—*ib.*

— Dr. Arnold once lost all patience with a dull scholar, when the pupil looked up in his face and said, "Why do you speak angrily, sir? Indeed, I am doing the best I can." Years after the doctor used to tell the story to his own children, and say: "I never felt so ashamed of myself in my life. That look and that speech I have never forgotten."

— *Prince Arthur in search of a Profession.*—The arrangements necessary for the accommodation of Prince Arthur on his admission to the Military Academy at Woolwich are now complete. His Royal Highness, having passed the usual examination before the Council of Military Education at Chelsea, commenced his studies in the capacity of cadet on the 11th. For the present half-year the number of cadets, including the prince, is 185.—*Exchange*.

— We take the following from the London *Canadian News*.—"The Minister of Agriculture, as Canadian Commissioner to Paris, has applied to the Royal Commissioners to obtain an additional space to that first assigned, in order the better to display the Canadian contributions to the Exhibition, and we have reason to believe that his request will be complied with. Sir William Logan, Provincial Geologist, has arrived here en route for Paris."

— The St. Lawrence River carries by Montreal 50,000,000 cubic feet of water per minute, and in the course of a year bears to the sea 143,000,000 tons of solid matter.—*Exchange*.

ADVERTISEMENT.

PUBLICATIONS OF W. & R. CHAMBERS, LONDON AND EDINBURGH.

CHAMBERS'S EDUCATIONAL COURSE,

comprising about TWO HUNDRED AND FIFTY SEPARATE PUBLICATIONS, is the largest, the cheapest and the best Series of Educational Works ever offered to the public of British North America.

CHAMBERS'S

NARRATIVE SERIES OF STANDARD READING BOOKS,

adapted to the SIX STANDARDS of the New Code of Education in England; embracing Reading, Spelling, Writing, and Dictation Exercises, with the Elements of Arithmetic: neatly and strongly bound in cloth.

THE OBJECTS OF THE SERIES.

1. To furnish the means of teaching reading *easily and rapidly*.
2. To *interest* the Pupil in Reading, by the attractiveness of their contents.
3. To be *easy* yet thoroughly consistent with *progress*.
4. To cultivate the Imagination and the Moral and Religious Nature of Children, through Narrative and Poetry of the highest class, in which *sentiment and entertainment* are judiciously blended.

THE CHIEF FEATURES OF THE SERIES.

1. Each book is carefully *graduated*, and comprises one year's work.
2. The books are all *graduated into each other*.
3. The books embrace the Privy Council requirements in Reading, Writing, Writing from Dictation, and Spelling, besides Arithmetic, Etymology, &c.
4. Each book is more or less *illustrated* by Wood Engravings, and the whole are issued at *prices calculated to bring them within the means of every school*.
5. Though specially prepared to meet the requirements of the *Revised Code of Education*, the books in the above series are equally suitable to

SCHOOLS OF EVERY DESCRIPTION.

The Infant-School Primer, 36 pages, 6 Wood-cuts: sewed, 3 cents; cloth limp, 5 cents.

The Infant-School Reading Sheets,—in 14 sheets corresponding with pages 3 to 11 of the Infant-School Primer.—2 cents each.

Standard I, 80 pages, 13 Wood-cuts, 8 cents.

Standard II, 112 pages, 10 Wood-cuts, 12½ cents.

Standard III, 160 pages, 15 Wood-cuts, 17 cents.

Standard IV, 208 pages, 18 Wood-cuts, 25 cents.

Standard V, 272 pages, 17 Wood-cuts, 30 cents.

Standard VI, 320 pages, 20 Wood-cuts, 38 cents.

READINGS IN ENGLISH LITERATURE, chronologically arranged, with Biographical and Explanatory Notes and Introduction.

Printed on fine toned paper; 474 pages.—30 cents.

Priced Catalogues of all W. & R. Chambers's Publications may be had on application to

REID, MACFARLANE & Co.,

Publishers and Paper-Makers' Agents,

153, GREAT ST. JAMES STREET, MONTREAL.