

# THE EDUCATIONAL REVIEW.

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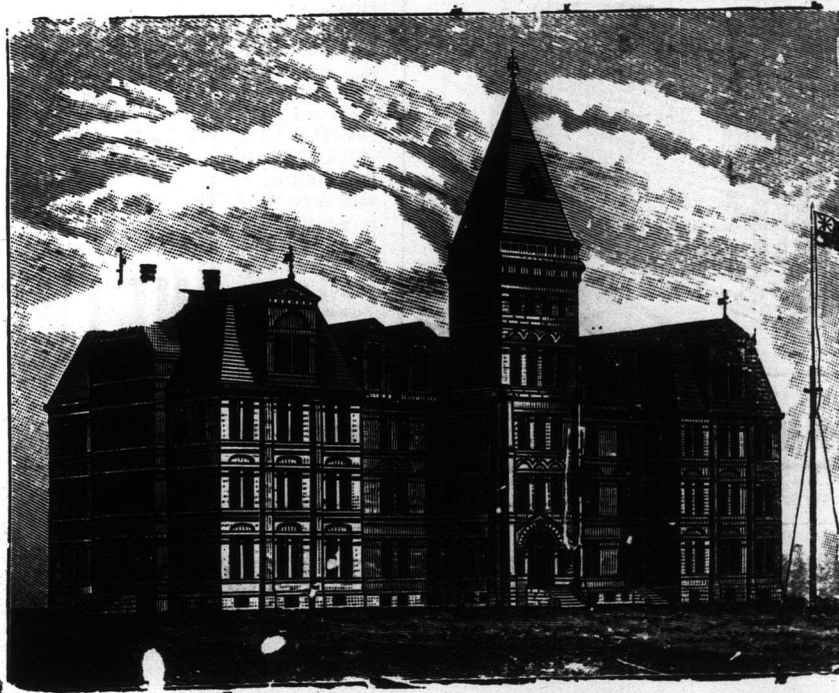
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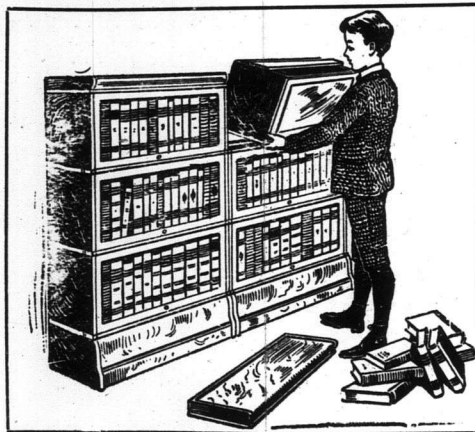
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# The Educational Review.

Devoted to Advanced Methods of Education and General Culture.

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G. U. HAY,  
Editor for New Brunswick.

A. McKAY,  
Editor for Nova Scotia.

## THE EDUCATIONAL REVIEW.

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### Always Read this Notice.

*THE EDUCATIONAL REVIEW* is published about the 10th of every month. If not received within a week after that date, write to the office.

*THE REVIEW* is sent regularly to subscribers until notification is received to discontinue and all arrearages paid.

When you change your address, notify us at once, giving the old as well as the new address. This will save time and correspondence.

The number on your address tells to what whole number of the *REVIEW* the subscription is paid.

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*EDUCATIONAL REVIEW,*  
St. John, N. B.

AN index of contents of the past year's numbers of the *REVIEW* is published herewith. Preserve it for binding.

OUR advertising columns contain in this number announcements that are of more than usual interest. Without directing special attention to each, we ask our readers to examine for themselves.

INDICATIONS point to a large attendance at the Summer School at Charlottetown, beginning Tuesday, July 12th. The many attractions that the Island affords and the fine course of study outlined for the school should draw many students.

DURING the past seventeen years the *REVIEW* has published an annual account of the closing exercises of our colleges, making a record of progress that will be valuable for future reference.

THERE will be no issue of the *REVIEW* for July. The next number will appear about the tenth of August, and will be specially devoted to teachers entering upon the work of the new term.

A DAINTY magazine in blue covers and with a variety of original articles in the shape of poems, essays and bright sayings comes to us from Wolfville, N. S. It is the *Acadia Pierian*, and is the product of the students of the seminary.

IN R. R. McLeod's "Markland," thirty pages are devoted to Nova Scotia birds and an interesting history will be found of the colleges of Nova Scotia, including Mt. Allison at Sackville, written by men closely connected with the different institutions. These accounts furnish valuable data for reference and general reading.

CHIEF SUPERINTENDENT DR. INCH wishes all who are interested to take notice that the departmental examinations for the Province of New Brunswick will take place as follows: The closing examinations at the normal school begin on the 14th of June; the high school entrance, June 20th; and the normal school entrance and university matriculation examinations on the 5th of July.

AS MANY of the school books used here are from the establishments of Copp, Clark & Company, and W. J. Gage & Company, Toronto, we are requested to announce that while the warehouses and stocks of these firms were destroyed during the recent disastrous fire in that city, the factories containing plates, sheets and unbound stock were not in the burnt district. School books and supplies will be ready as usual for the opening of the schools in August and September.

A LIST of *one hundred and six* new subscribers to the REVIEW has come in just as Number One, Volume Eighteen, is going to press — a good beginning.

THIS number begins the EIGHTEENTH volume of the REVIEW. There is a temptation to indulge in reminiscences, but it is put aside. Hundreds of teachers have read the REVIEW for the past year who never read it before; hundreds of new readers will see it during the next year. To all—old as well as new readers—there will be the anticipation to find in its pages something bright, helpful, inspiring. Our greatest wish is that this may be fully realized.

REMINDERS are sent out with this number, to which we ask the prompt attention of our subscribers. The necessity of sending out such bills becomes less each year, because our readers are getting more in the habit of paying for the REVIEW in advance—a wise plan, and one which saves the necessity of sending out or receiving bills. Will some of our subscribers form two other habits which will save annoyance and trouble: *that of giving us notice of a change of address when they remove; and also of notifying us if they wish the REVIEW discontinued on the expiration of their subscription.* Attention to these small matters, which only cost a thought and a postal, would make the relations with our subscribers even more pleasant than they have been.

THE earnest attention of our readers is called to the letter on another page of President Estabrooks and Secretary Stuart, of the New Brunswick Teachers' Association. These gentlemen, with other members of the association, have labored persistently, and with some success, in the cause of improving teachers' salaries. Their efforts should be acknowledged, and should receive the sanction and support of all teachers, especially those who occupy prominent positions and who are in receipt of good salaries. What we should like to see is an association including college presidents and professors, inspectors of schools, and the great body of the common school teachers united for the purpose of securing better salaries and a fuller recognition of the teachers' services in these provinces. The influence of such a body would command respect and secure the ends desired. Can we not have such an association?

IN spite of the extra pages added to this number an article by Professor Waddell on examinations has to be left out.

ACADIA COLLEGE has adopted a wise policy in allowing its professors the opportunity to undertake post graduate work. Prof. Jones completed the work of his classes, by special arrangement with the other professors, before January first of this year, and since that time has been pursuing a course at Chicago University. His salary of course was paid for the whole year. Mutual concessions of this kind and the desire for advanced work mark a progressive spirit.

IN THIS, the college number of the REVIEW, the accounts of the closing exercises of the different higher institutions of learning in these provinces will interest our readers, especially parents and teachers. There are many bright boys and girls in the schools who are looking forward to a college course. Give them the opportunity to read these accounts. Encourage their ambition to go to college. Parents cannot make a better investment for their sons and daughters than to give them a good education. Too many young men and women in their haste to be doing something for themselves, go out into the world with their education incomplete. This is a hindrance to their progress which will be felt all through life. The haste to begin to make money early should be wisely restrained. There are some things more important in life than money getting.

IT is hoped that every portion of Canada will be represented at the Dominion Educational Association to be held at Winnipeg, July 26-28. All interested in seeing Canada take a higher position educationally look forward to this meeting with expectation. There is no surer way of eliminating what is narrow, selfish and provincial than for our teachers and school officials to meet face to face in this educational parliament of Canada, and exchange freely and cordially their views. The mere fact that teachers from the historic east and the new west will meet for better acquaintance and for a common inspiration, should influence the determination to be there. Every one who attended the great gathering of the Presbyterian Assembly at St. John a few days ago was impressed. As its leaders from Sydney and Halifax to Vancouver and the Yukon were heard, it was felt what a stimulus that was to a closer kinship among Canadians. Let teachers have this experience, and its influence will soon extend.



An interesting programme of the meeting at Winnipeg is just at hand as the REVIEW goes to press

THE Educational Institute of New Brunswick will hold its biennial meeting in the high school, St. John, from June 28th to 30th. A very interesting programme is given on another page. It was hoped that Dr. Winship, of Boston, would be present and give addresses, but he is obliged to attend the meeting of the National Educational Association at St. Louis. His place on the programme will be taken by an experienced scholar and teacher, Mr. Chas. H. Keyes, whose addresses will be of profit and interest to the institute. He has been for the last six years superintendent of schools at Hartford, Conn. He is secretary of the National Committee on the organization of educational experience; has been for two years president of New England's oldest teaching association, the N. E. Educational Institute; has been treasurer of the National Educational Association, and has filled other responsible positions. He is an effective speaker, and has lectured before educational meetings in the New England States and in the west. A hearty welcome and an attentive hearing await him from the teachers of New Brunswick.

On other pages in this issue will be found an account of the events leading up to the Tercentenary of Champlain's Discovery of the Harbour of St. John. We cannot enter into a description of how that event is to be celebrated. The daily papers will contain the programme. It is sufficient to say here that although there will be much of the spectacular element in the approaching celebration, the permanent features will not be lost sight of. A monument will be erected to Champlain and de Monts by the Dominion government at Annapolis; the people of New Brunswick will erect a memorial tablet in the city of St. John, and the Historical Society of Maine will affix a bronze tablet to a granite boulder on St. Croix (Dochet) Island. The meeting of the Royal Society in the high school building, St. John, on the 21st of June, continuing until the 24th; the assembly of delegates from historical and other societies from various parts of this continent and Europe at Annapolis, St. John and on the St. Croix during the week; the presence of representatives from many nations, and of war ships from England, and perhaps other countries will lend an impressiveness to the celebration.

### Champlain Tercentenary.

G. U. HAY.

In June, 1604, a pair of quaint little French vessels crept slowly round the rugged coast of western Nova Scotia and entered the Bay of Fundy. On board were the leaders of the expedition that was to plant the first French colony in the new world—de Monts and Champlain; and with them were gallant gentlemen from the court of Henry IV, black-robed priests and Huguenot ministers, and a motley throng of artisans and laborers, soldiers and sailors. The restless tides surged to and fro, lapping the weather-beaten rocks and the edges of the frowning cliffs. But the eyes of the Atlantic-tossed voyageurs were gladdened with the fresh-born tints of deciduous trees; and the fragrance of pine and spruce from interminable sweeps of evergreen forests bore to their grateful nostrils the delights of a new found physical world.

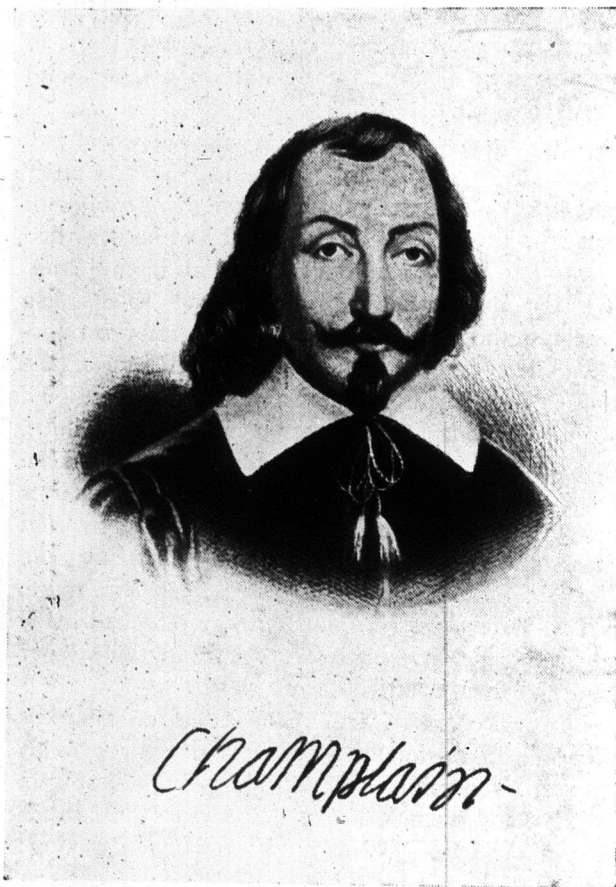
Three hundred years ago the modern world had begun. The voyages of Columbus, Cabot, Cartier and a host of others had stirred the imaginations of men, the breath of a virgin world had been wafted across the Atlantic and had created an intense craving for things new. Many daring spirits had explored the unknown expanses of American forests. The accomplished Raleigh had told of the "sweet-smelling timber trees," and luscious fruits of North Carolina; the brave Sir Humphrey Gilbert had perished in an attempt to plant a colony on the bleak shores of Newfoundland; Jesuit missionaries were planning to carry the message of the cross to those who had never felt its gentle influence; the Puritans of England and the Huguenots of France, weary of the massacre and outrage that had made Christianity a mere name, were scanning with eager hope the horizon of the distant west.

It was no meagre strip of the American continent that had been granted to the Sieur de Monts by his generous sovereign—full four hundred miles from the extreme bounds of Cape Breton to the latitude of Philadelphia. It was a gift worthy of a king; but to colonize, Christianize, build towns, make war and peace, and "to do generally whatsoever may make for the conquest, peopling, inhabiting and preservation of the said land of Acadie," was a great undertaking; and de Monts in the end realized the truth of the adage, that *Qui étrecint trop n'embrasse rien*. The brawn and sinew so necessary to build up colonies were lacking in de Monts' followers and their successors. Hirelings and adventurers, careless of the welfare of the country, came and went,

and after the lapse of a century and more it began to dawn on the minds of men that the success of a colony depended on tilling the soil. But the lesson came too late.

Spain grew rich by the plunder of her American possessions and won a name hateful for greed and cruelty; France had good plans (on paper) for founding colonies, but she lost her hold on the new world from a lack of the colonizing spirit and through the intolerance, neglect and rapacity of officials; and it took England a long time to learn that colonies did not exist merely for the benefit of the mother country.

Except the leader and a few others, the only man in that heterogeneous crew of 1604 who possessed



the true spirit of a colonizer was Champlain. While others trifled and spent their time in hunting and seeking for gold; he made drawings, maps, soundings, explored the wonders of land and sea, wrote faithful accounts of what he saw and "delighted marvellously in these enterprises." Scarcely yet thirty-five years of age, confident in himself, wise, prudent, moderate and of steadfast courage, he was the type of the chivalrous gentleman and sturdy

mariner. The Atlantic had no terrors for one who had been bred amid the boisterous waters of the Bay of Biscay, and who had been familiar with the sea from childhood. Visions of French colonies, where the Indians would be treated humanely and converted to the Catholic religion, had floated in his mind from the time he saw the cruelties and intolerance of the Spaniards, described in quaint language in his "Brief Narrative of the Most Remarkable Things which Samuel Champlain of Brouage met in the West Indies on the Voyage which he made there in the years 1599 and 1601."

In the year 1602 we find him at Paris, the king, an attentive listener to his plans; and the following year he stood on the broad current of the St. Lawrence which he thought might be that "Great river of the West," through which was to flow into Europe the fabulous wealth of the Indies. But the discovery of this long sought passage was not Champlain's chief object. He had the larger aims of planting colonies, improving the condition of the Indians, and exploring that great wilderness into which in after years penetrated those daring spirits, Marquette, Jolliet, La Salle, Tonty, the discoverers of the Mississippi and the middle west.

To return to the voyageurs on the Bay of Fundy (*La Baye Françoise* of de Monts). They beheld with wonder its swift flowing tides now washing the base of some tall cliff and then receding far out to leave bare the kelp-covered rocks. Entering a narrow passage on the south side of the bay, between two opposing spurs of the North Mountains they found themselves in a smooth and spacious basin, to which Champlain gave the name of Port Royal. The quiet beauty of the scene and the security of the harbor charmed, as it has many since, the beholders who were glad to escape for a season from the tides and billows of the Bay of Fundy. The noble forests that covered its slopes, the streams murmuring through gorges in the distant hills and luxuriant meadows of wild grass called up visions of a French Acadie, where they fondly imagined peace and prosperity would reign in the coming years.

To one especially the scene had peculiar charms—Jean de Biencourt, baron Poutrincourt, a nobleman who accompanied de Monts. He asked for a grant of Port Royal which his leader readily gave. The place chosen for the little colony, to be planted the following year, was a fertile meadow, sheltered from wintry winds by the North Mountains, and about six miles west from the present site of Annapolis Royal. Here in security dwelt for a few years a band of happy Frenchmen, on good terms with

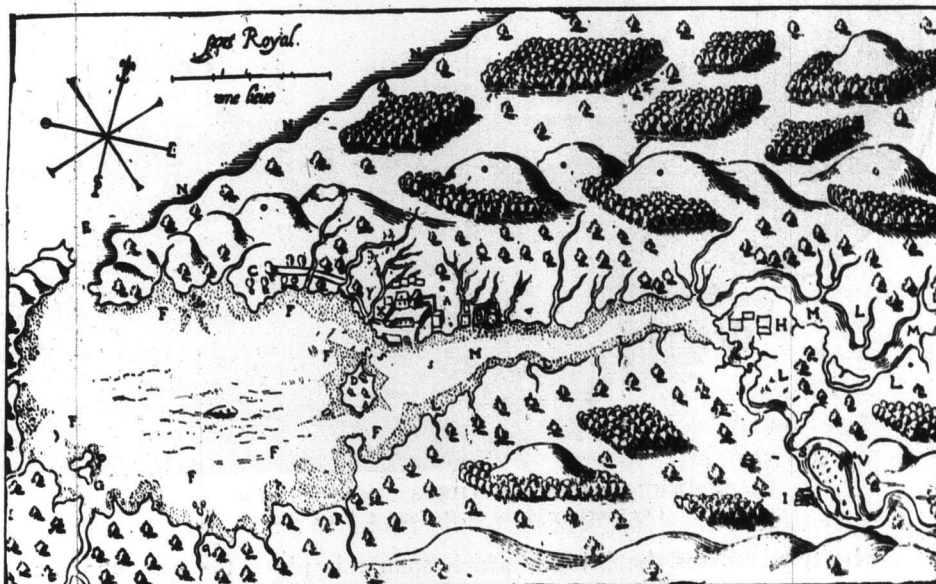
themselves and the Micmac aborigines. The fertile soil and surrounding sea and forests yielded them abundance of food. They spent the long days of summer in the care of their gardens, roaming the adjacent forests with their Micmac guides in quest of game, or fishing in the streams or on the broad basin of Port Royal. In their rude but comfortable log dwellings they defied the icy blasts of winter. The Order of the Good Time was instituted by the brilliant Marc L'Escarbot, an advocate of Paris, whose genius and fertility of resource made life pleasant, even luxurious, in those Acadian wilds. Fifteen gentlemen composed the Order, each of whom was grand master in turn and was responsible for the banquets and amusements for a day. As the flames

roared through the huge chimney, jest and laughter, song and story, mingled with the feast and whetted the appetites for fresh attacks on venison and the choice dainties that attested the catering skill of the grand master. Toasts to the king and far off friends were drunk in the rarest wines of *La Belle France*. Indians squatted on the rude floor eager for the remnants of the delicious wilderness fare. Though they could not understand the jokes, their faces were radiant with the general content that pre-

vailed. Small wonder that old Membertou, the centenarian chief of the Micmacs, loved the light-hearted Frenchmen who brought such cheer to his declining years, and that he readily listened to the priests and renounced the devil whom we are told "he had faithfully served for a hundred and ten years."

But evil days came upon the colony. Dissensions at court, priestly interference, and the attacks of the hated English conspired to disturb the dream of Acadian simplicity. The Knights of the Order of Good Time were scattered. Among the French who remained were a few of the forefathers of those Acadian farmers over whose sad fate the New England poet has woven a halo of romance. Let us follow de Monts and Champlain to further discoveries and to their ill-fated winter home on the lonely island of St. Croix,

After leaving Port Royal Champlain explored the eastern part of the Bay of Fundy, and watched at the entrance of the narrow basins of Chignecto Bay and Cumberland Basin those marvellous tides that rush onward tumultuously to deposit their rich sediment of mud on the marshes beyond. Little did he dream that his own countrymen of Saintonge, where dykers had fought for centuries the breakers that roll in from the Atlantic and Bay of Biscay, would help to reclaim those Acadian marshes in the centuries to come, and teach a lesson of skilful and patient industry to another race, speaking another tongue. Turning westward and skirting the wall of rock that forms the northern side of the Bay of Fundy, Champlain on the 24th of June came to a river "the largest and deepest we had yet seen, which we



THE SETTLEMENT AT PORT ROYAL—1605.  
(From Champlain's description.)

named the River St. John, because it was on this Saint's day that we arrived there."

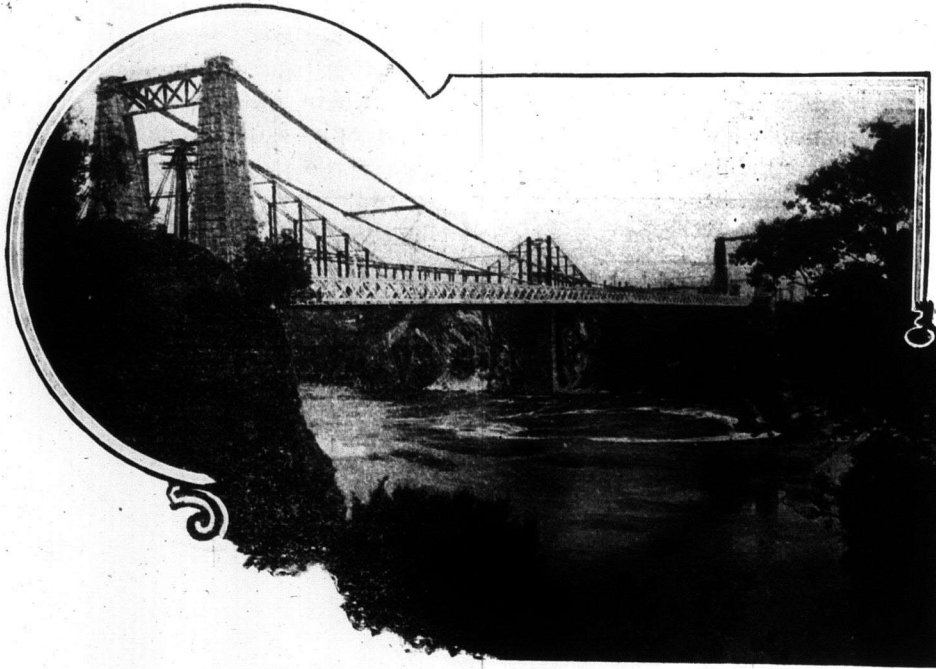
On an island at the head of the harbor was a fortified cabin of the Indians, whose chief, a man of noble presence and great influence gave the French an impressive welcome. The hills of limestone on which today is built the prosperous city of St. John, were covered with a thick growth of cedar and spruce. Behind these coverts skulked little groups of Indians who gazed on the ship of the pale faces and watched with curious wonder the occupants as they disembarked to plant the flag of France on the edge of that wilderness which was no longer to be the hunting ground of savages. In the narrow gorge which formed the mouth of the river were the wonderful reversing falls, where twice a day for thousands of years the river has struggled for mas-

tery with the tides of ocean. In the long ago, according to quaint Indian tradition, a huge beaver built a dam across the mouth of the river, forcing the waters backward, inundating the country beyond. The cries of his children brought Glooscap, the protecting deity of the Indians, to the spot. With one blow of his ponderous club he broke the dam, a part of which was carried out to sea and became the island at the entrance to the harbor. The traveller

their food and in the keen winds. After ten summers and winters of varying fortune Champlain sees, from his vantage-point of rocks, the dawn of a fair Easter morning. The heroic Lady la Tour in the absence of her husband is encouraging her soldiers to resist a final attack of the enemy. A lull in the tide of battle shows D'Aunay offering life and liberty to the brave lady and her garrison, the terms of surrender broken by her infamous assailant, and,

last scene of all, the execution of the devoted band, and the heart-broken wife with a halter round her neck forced to witness the wretched sight.

But looking into the future of nearly a century and a half later a still stranger sight would meet Champlain's gaze. On a May morning a band of three thousand loyalists from the shores of New England are entering the harbor. His own little vessel is lost to view amid the white sails of the transport fleet. From the rude fort on the pinnacle of rock where he stands the cannon are booming a noisy welcome, drowning



THE MOUTH OF THE ST. JOHN RIVER.  
(By courtesy of the N. B. Tourist Association.)

who now crosses the bridges which span this picturesque gorge, and looks down on the foaming waters beneath, may see a rock round which the tides chafe and struggle continually. This is Glooscap's club.

We can imagine Champlain looking into the future and witnessing a tragedy in which the actors were his own countrymen. Gazing down from those rocky heights with the restless river throbbing in and out through Glooscap's gorge he sees the fair prospect before him marred by the deadly struggle for supremacy between the Chevalier D'Aunay and Charles de la Tour. To his wondering vision there appears the form of the devoted Lady la Tour bravely defending her husband's fortress, ships of war sailing into the harbor while the encircling hills resound with the roar of cannon; the strong current as it sweeps by bearing on its bosom canoes laden with peltry from the northern wilderness; the white-winged gulls rising on the crested waves of the incoming tide and rejoicing in

the war whoop of savages or the clang of defiance of rival French and English, the echoes of which had long lingered in these solitudes.

The years had brought little change. The tides rush to and fro. The full flood still laps the fringe of evergreen forest; at ebb the feet of gulls pat the shoals or swim in the pools between half hidden rocks. The verdure, kindled by the warm rays of the May sun, gives a touch of life to the ramparts of the ruined fort where the hopes of the LaTours lay buried. A cluster of houses dot the slope near the water's edge where a band of New England pilgrims have already planted a settlement. On the hillsides are the same lichen-covered rocks and forest trees; but the flag of France, the long cabin of the Indians, the groups of warriors, the wild beasts, quaintly portrayed in the mediæval map of Champlain, have disappeared.

In this pilgrim band of resolute men and women are the germs of a colony that shall hew those rocky barriers into streets, rear a city in this rugged wil-

derness and cultivate the fertile valleys and woodlands that lie behind the frowning cliffs of the Bay of Fundy. Here will come the products of the world, and ships in ever increasing numbers follow the track of the pioneer French vessel. In the struggle to subdue rough nature and in the keen competition of a later civilization Champlain and his pioneer band are forgotten.

But while he gazes in admiration on the results of his discovery, reflecting sadly over the lost opportunities of his own countrymen, a glance still further into the future reveals another June morning three centuries later. He sees a mimic representation of his own little vessel entering the harbor, hears the salvoes of artillery which greet his arrival, while citizens and distinguished men from every part of that Canada, whose turbulent infancy he had watched over with such solicitude, are assembled to do tardy honor to his memory.

Late in June, 1604, de Monts and Champlain left the harbor of St. John and sailed westward along the rock-bound coast of southern New Brunswick. Passing into a bay studded with innumerable islands they came to a river which they called the River of the Etchemins, from the name of the savages who lived there. Sailing up this river a distance of a league or two they came to a small island which they named St Croix (now known as Dochet Island, territorially a part of the State of Maine). On this lonely island, exposed to the blasts which swept down upon them from a wilderness of snow and ice, the band of Frenchmen passed the winter in hastily constructed buildings which ill protected them from the cold, suffering from the lack of proper food and from disease, and dreaming of the sunny skies of France which many of them would never see again. With numbers reduced nearly one-half, the survivors, during the following summer, sought the friendly shelter of the hills around Port Royal, after a vain attempt to find a suitable place for their colony on the coasts of Maine and Massachusetts farther south. The trials and sufferings endured in the ill-chosen settlement of St. Croix were sufficient to deter all but the hardiest from passing another winter in Acadie. But the arrival of Poutrincourt and L'Escarbot with a fresh band of colonists, followed by a genial summer, made them forget the sufferings of the past. In the more favored situation of Port Royal and among savages of whose friendship they were now assured, they dwelt for a brief season in peace and security, their dreams undisturbed by the rude visions of future tumult and

disaster, the lot of those who were to dwell "in Acadie, home of the happy."

For the REVIEW.]

### Burg or Burgh.

There is no more common mistake than the comparison of these two terminations. "Burg" is a German ending, meaning town, and is to be distinguished from the German "Berg," meaning hill. "Burgh" is a Scottish abbreviation of Borough, and a half-sister of "boro" and "bury."

Edinburgh is pronounced like Edinboro. Edinburg is a base hybrid with a Scottish front and a German back. Always add "h" to the Scottish word, and omit it from the German. Thus Lunenburg, in Nova Scotia, is true to its German parentage. It scorns the "h," and is pronounced as spelt. Not so the Scottish names Dryburgh, Jedburgh, Roxburgh. Honour "burgh" with two syllables as you would honour "bury," in Canterbury, Salisbury and Roxbury. The only "bergs" east of Montreal are icebergs; though in the west the German immigrants have a Josephberg. Apparently the hero worshipper, in his zeal and ignorance, would see no objection in giving in marriage the German "burg" to his French hero. There is a Davisburg. Why should there not be a Teufelsdröckburg somewhere near Ecclefechanville?

But this is dangerous ground. Our place-names are in a fair way to become as mixed as our people.

If Stahlberg and Linson (in honour of Lauchlin and Wilson) be thought fairer names than Sydney Mines, there is no good reason why Ecum-secumville and Plumweseepolis should not settle down comfortably beside Donaldchow and Joneskopje, or Alexieffsport and Kurokibasin contend in generous rivalry for the summer port.

SKRYBLOFF OF SCHOENBRAE.

The right use of books is one of the chief lessons which the school should inculcate. The preparation of lessons should teach pupils how to use their books, how to get knowledge from the printed page, and how to fix that knowledge for future use. To teach the pupils the art of study is far more important than the hearing of recitations and the repression of bad conduct. The troubles of the school diminish rapidly when children acquire correct habits of study and find pleasure in learning their lessons.

I have found no journal so helpful as the REVIEW.

C.

### Teachers' Salaries.

TO THE EDITOR OF THE EDUCATIONAL REVIEW:

*Dear Sir*—In attempting to address ourselves to this important topic we find that we are repeating very much of what every teacher has probably read in the recent school report. Yet we cannot refrain from calling attention to some of the things mentioned there. If any have neglected to study that report carefully we should like to ask their attention to certain parts of it. Read what the various inspectors have said concerning the scarcity of teachers; inspect the table of average salaries and take to heart what the Chief Superintendent of Education has to say on the subject of "Salaries of Teachers." All of these go to show that something must be done, and done speedily, to prevent our schools from falling into the hands of untrained teachers. And surely nothing more detrimental could befall the great cause in which we are laboring. Apparently the only salvation is a generous increase in teachers' salaries so that the members of the profession who have been successful may be induced to remain in it.

In making a demand for larger salaries we are actuated, not by self-interest alone, but by a desire for the general welfare and advancement of our province. The only way we see in which we can act with any hope of success is to stand unitedly together. For this purpose some organization is necessary, and the New Brunswick Teachers' Association was brought into existence for this express purpose and is open to all qualified teachers. It is the best those who organized it could devise. If it is imperfect, come into it and help us make it what it should be. It has met with very generous support and has accomplished more in the two years of its existence than we could have hoped for it to do in a much longer period. We have every reason to feel gratified at its success, but we shall not be satisfied until it embraces the entire profession.

Two objections have been raised to the association, or rather to the schedule of minimum salaries adopted by the association. The first is that the schedule is too low. But this is not a schedule fixed for all time but only adopted as a starting point until our numbers are large enough to enable us to raise these figures. Besides each county association is at liberty to increase the figures within its jurisdiction.

In the second place some say the schedule is unfair to the lady teachers—that their salaries should be as high as those of the men. But as they

constitute more than four-fifths of the profession, the remedy lies with themselves, and the men will loyally support them in their demands.

At their institute, on the 20th of last month, subordinate associations of the N. B. Teachers' Association were formed by the teachers of York Co. and by those of Sunbury-Queens. We have now an organization in every county but Charlotte, Madawaska, Restigouche and Gloucester. And all this since September, 1902.

A convention of the N. B. T. A. will be held in St. John during the time of the Provincial Institute, to which convention all county associations will send delegates—one delegate for each association, and one additional delegate for each 25 members or major fraction thereof over and above twenty-five members. The revision of the present constitution will come up for consideration. We will thankfully receive any suggestions offered concerning this matter.

In conclusion, we wish to say that we have met with every courtesy from the teachers, the people, and the press, during the time we have been engaged in the work of this order. The populace seem to recognize the teacher's rights; and it now only remains for the teachers themselves to stand shoulder to shoulder for better salaries, better conditions and better schools.

R. ERNEST ESTABROOKS, *Pres. N. B. T. A.*

HENRY HARVEY STEWART, *Sec.-Trea. N.B.T.A.*  
Hopewell Hill, N. B., June 3, 1904.

### God Save the King.

BENJAMIN SULTE.

(Adapted to the National Air, and sung at the French-Canadian Institute, Ottawa, February 3, 1901.)

Dieu protège le roi,  
En lui nous avons foi,  
Vive le roi!  
Qu'il soit victorieux  
Et que son peuple heureux  
Le comble de ses vœux :  
Vive le roi!

Qu'il règne de long jours,  
Que son nom soit toujours  
Notre secours.  
Protecteur de la loi  
Et défenseur du droit,  
Notre espoir est en toi :  
Vive le roi!

**Evolution of Birds from Reptilian Ancestry.**

R. R. McLEOD.

During many thousand years in the Mesozoic Age there were signs of the coming bird in the structures of reptilian life that then stood at the head of creation. One hundred and fifty species of this class have been identified by their fossil remains. The first bird will be known by its feathers, no matter if it differs widely in other respects from birds as we now know them. From the time when the first rudimentary feather appeared on a reptile, till the fore limbs were quilled for flight, must have been a period to be reckoned in millions of years.

Reptiles and birds have very much in common in their structures. In fact the relationship is so close that Huxley placed these two classes in a series (sauropsida) that is bounded on one side by fishes, frogs, toads and salamanders (Ichthyopsida), on the other by the Mammalia.

The similarities that warrant this classification are too numerous to mention in a brief paper of this kind that only aims to excite curiosity enough to seek for the fuller proofs. Said Lord Bacon, "Wonder is the seed of knowledge." If I can generate in some measure that mental attitude in my readers, much will be gained.

It might well be urged that however many are the organic resemblances of birds to reptiles still a great structural gulf is fixed between them, not only in the existence of scales instead of feathers, but in teeth set in sockets, in toes and claws on the fore legs, in the ball-and-socket joints of the backbone, in the long tail, and jaws instead of bill, that all belong to the reptile.

Reckoning time after the manner of geologists, until recently England and Scotland did not exist as an island. Men of the stone age walked on dry ground from the continent where now is the North Sea and the Straits of Dover. The evidence of this is conclusive, when it is once set forth. In like manner the group of animals known as birds has been isolated, the connecting bridge has been swept away by the flood of years.

It is a well established fact that the embryonic development of all animals is a more or less definite repetition of the ancestral forms. The growth of a chick in the shell is strikingly reptilian, and only in the latest stage does it strongly diverge from the older stock and take on certain bird-like aspects.

By these and many other signs we may well have a suspicion that a bird-lizard once existed. It should have had a long vertebrated tail, the back-bone

should have been either a bi-concave or a ball-and-socket arrangement, teeth should still linger in the jaws, the fore leg used as a wing might well retain some of its toes and claws, and portions of the body could well be yet covered with scales. Such a creature as that would belong to life of the world many million years ago in the Mesozoic era. The bodily remains of one of them could only be preserved as a fossil if it fell into the waters of a shallow sea-shore or large lake, where the bottom was fine mud, and still receiving contributions of the same material from the shores. If it could be buried deep beneath this material that in the course of time became dry land and solid rock, then the imprint of its feathers and its petrified bones and teeth would be preserved while the rocks endured. It is very evident that such a fate could not often befall a carcass, and that human eyes should find one is still more improbable. However, it is the "unexpected that happens." Said Galileo, there is a courtesy of nature when she seems to aid us over a great difficulty.

In Solenhofen, Bavaria, is a quarry of exceedingly fine lithographic stones, in the Jurassic formation, Mesozoic era. Forty-two years ago there was taken from that quarry a fossil lizard-bird, about the dimensions of a crow; two years later a smaller specimen of the same kind and in a better state of preservation was discovered in the same locality. The former is now in the British Museum, the latter in the Berlin Museum. They are the most precious and valuable fossils ever discovered. The two specimens have enabled competent specialists like Owen and Marsh to fully describe the creature. Here follows its leading characteristics, and you will note how nearly they agree with what might have been expected.

The tail is nine inches in length and consists of twenty joints, and to these are attached a pair of quills, one pair to each joint, the largest quills being at the outer end. This is a reptilian tail provided with feathers. The back-bone is a bi-concave structure like we may see in fishes and is also found in the great fossil fish-lizard (Ichthyosorus). Three fingers on the wing are free and armed with claws, and reptilian teeth are set into the jaws, as no living bird can show. The creature was evidently of reptilian derivation.

Since the discovery of these noted fossils, many others have been found in America by Prof. Marsh that are not of the same genus or species, but exhibiting many marked reptilian characteristics. They are of a later geological horizon, and therefore in the main are more like true birds in outward aspect.

They have no longer the peculiar quilled tail and clawed wings, but the teeth are either set in grooves or in sockets, the back-bones are either bi-concave or the vertebra arranged in ball-and-socket fashion like reptiles. Some of these birds could fly. Others like the ostrich and some other living birds were unable to fly. This is noticed by the breast-bone lacking a keel, a feature common to flightless kinds. The keel serves as an anchorage attachment for the large muscles used for the down or propelling stroke of the wings.

Such a clumsy arrangement as the long tail of the Bavarian specimens (*Archaeopteryx macrura*) was sure to disappear in the struggle for existence that everywhere exists. The separate vertebra shortened until they are now piled up in a heap like little coins, one upon another, from which the tail quills radiate in the fashion of a fan. The thumb is represented by a short primary quill in most modern birds. In some species a claw remains, and in the hoatzin of South America three claws remain on the wing, and the fore finger is free. This arrangement is in use for climbing about the thick foliage of tropical trees where it altogether resides.

We may be fortunate enough to come upon a fossil-feathered ancestor of the Solenhofen (*Archaeopteryx*) wherein feathers are not yet sufficient for flight. I have merely touched upon an interesting theme in this article, but it is enough to whet an appetite in one who has a natural inclination in this direction.

Recent statistics show that the average annual salary of the public school teachers of the United States is a little less than \$300. This compares most unfavourably with almost every other occupation. In Chicago, where the teacher's salary is comparatively large, a carpenter earns more than twice as much. In Colorado, where the average income of the teacher is almost double the average for the whole country, out of thirty-two occupations the only ones that receive less pay than teachers are clerks, waiters, gravel-roofers and laborers. In some places the janitor of the school is paid more than the principal, while a garbage man in some of the cities receives more than double the average teacher's hire. The peaceable "strike" inaugurated by the teachers is therefore likely to bear fruit, and the committee of seven experts, under the leadership of the Hon. Carroll D. Wright, who have been allowed \$3,000 for thoroughly investigating the matter, hope to effect a decided improvement in the situation.

### Notes on Preserving Insects.

J. M. SWAYNE, ANTIGONISH, N. S.

Insects intended for the collection should be taken from the killing-jars, cleaned, and mounted, as soon as possible. Different orders need different treatment. Coleoptera (beetles) and Hemiptera (bugs) are taken from the alcohol in which they were killed and pinned at once. Butterflies and moths need to be dried with the wings spread in a horizontal position, and for this a spreading-board is needed.

*Pinning.*—The insects are fastened in boxes by means of pins. Ordinary pins, if slender, may be



*Bug, showing point for insertion of pin.*

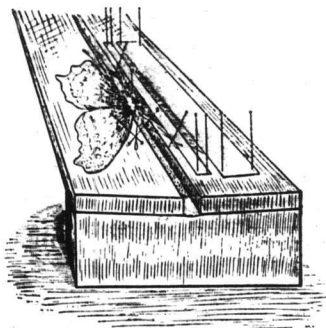


*Beetle, showing point for insertion of pin.*

used for this purpose, but they are not at all satisfactory. They are all too clumsy and are soon covered with verdigris. Proper insect pins may be obtained from any dealer in entomological supplies for a few cents per hundred. Insects should generally be pinned through the middle portion of the body (thorax). Beetles, however, should be pinned through the right wing-cover, and bugs through the scutellum, the triangular piece at the base of the outer wings. Care must be taken that the pin passes vertically through the body, issuing below between the middle and hind pairs of legs. Insects too small to pin may be glued to a fine cardboard point and this pinned in the collection. Two small, neat labels should be pinned with each insect, one bearing the name and sex, the other the locality and date of collection. To allow room for the labels the insect needs to be well up on the pin, about seven-eighths of an inch above the point. All the specimens should be at exactly the same height.

*Spreading Lepidoptera.*—A spreading-board for butterflies and moths may be made by fastening two thin strips of soft pine together by braces at the ends, having the braces about two inches high. The strips must be left far enough apart to admit the body of a butterfly, and should be wide enough to carry the wings when spread. Strips of cork for holding the pins may then be glued below so as to cover the intervening space. The outer edges of the strips





Spreading-board

should be slightly raised. Two strips of sheet cork, glued along a soft pine board, leaving room for the body of the butterfly, will serve the same purpose. The butterfly is pinned in the opening so that the under surface of the wings just touches the board.

The wings are then properly spread with setting-needles and are held in place by strips of paper pinned across them. The hind margins of the fore wings should make a straight line. The antennae should be fastened on a level with the wings by means of crossed pins, and if the abdomen sags it may be supported in the same way. Specimens must be left on the board for a week or more until they are thoroughly dry. Setting-needles are useful in spreading, and are made by pushing a needle, eye foremost, into a handle of soft pine.

If the specimens have become dry, they will need to be relaxed before spreading. This may be done as follows: Fill a pickle-jar one-quarter full of moist sand, over which a little carbolic acid has been poured. Cover the sand with two or three sheets of paper, and place the insects to be relaxed carefully inside. Cork the bottle tightly, and in from twenty to forty-eight hours the specimens may be spread.

Flies, wasps, dragon-flies, and others may be pinned first to sheet cork or soft pine and allowed to dry, the wings and legs being held in proper position by crossed pins; or the insects may be pinned at once in the case and so arranged there.

Larvae of all kinds are usually preserved in small vials of alcohol, or formalin solution. Large caterpillars are best preserved by inflation. The caterpillar is killed and placed on blotting-paper. The caudal extremity is carefully cut off with scissors, and the contents of the larval skin removed by carefully rolling a pencil from head to caudal end several times. A straw is then inserted in the opening, and a pin pushed through all to hold the skin in place. Inflate the skin with the breath or by means of a small inflated rubber bag, to the natural size, and hold over an alcohol lamp, high enough up to guard against burning, until thoroughly dried.

*Boxes.*—To be preserved for any length of time,

insects must be kept in tight, dry cases. For temporary use cigar boxes lined with cork do very well. It is useless, however, to attempt keeping a collection of insects permanently in other than tight, dry cases. The most dangerous enemies are beetles belonging to the genera *Anthrenus* and *Dermestes*, and mites. Mice sometimes do great damage if the boxes are for any reason left open. The beetles above mentioned commit their ravages in the larval stage, and may usually be detected by the fine dust beneath the specimens attacked. If the pests are noticed, pour a few drops of carbon-bisulphide in the box and close it. There will usually be no trouble if naphthalene-cones (moth-balls will do) or pieces of camphor are kept in the box. The permanent case may be made with or without a glass top. Butterflies and moths should be kept away from the light. The case must be made of light, well-seasoned wood. The bottom and sides should be dove-tailed, and must be absolutely air-tight. The cover may be made to fit properly by a tongue and groove; the tongue around the sides, and the groove in the cover. The bottom should be lined with sheet-cork or cork linoleum for holding the pins. Bottle-corks or the pith of corn-stalks may be cut up and used for the same purpose. Over the cork should be placed a sheet of cross-ruled white paper to add to the appearance and facilitate neat pinning. A depth of two and a quarter inches between top and bottom will be sufficient.

There is room for originality in the arrangement of the specimens. Sexes and varieties, with the eggs, larvæ and pupæ, should of course go together, and the species should be arranged according to genera.

A great deal of valuable work can be done in studying habits and life-histories of insects. The life-histories of many of our common insects are almost entirely unknown to science. By making a careful study of the life-history of one of our common ants, for example, and at the same time collecting as many as possible of the insects of the locality, valuable original work will be done. We beginners must not expect to be able to name every insect we meet, even with the best books published. Save all varieties. If you can't name them send them to someone who can.

These notes are of course far from complete, but they are written with the hope that they may help some beginner.

The best all-round work for the beginner is "Comstock's Manual for the Study of Insects." Holland's "Butterfly Book," and Howard's "Insects," published in Canada by William Briggs, Toronto, are splendid works.

The guide-books on butterflies, beetles, and moths, published by Bradlee Whidden, 18 Arch St., Boston, are of some use.

Insect pins may be obtained from Mr. G. O. Fulton, Truro, N. S.

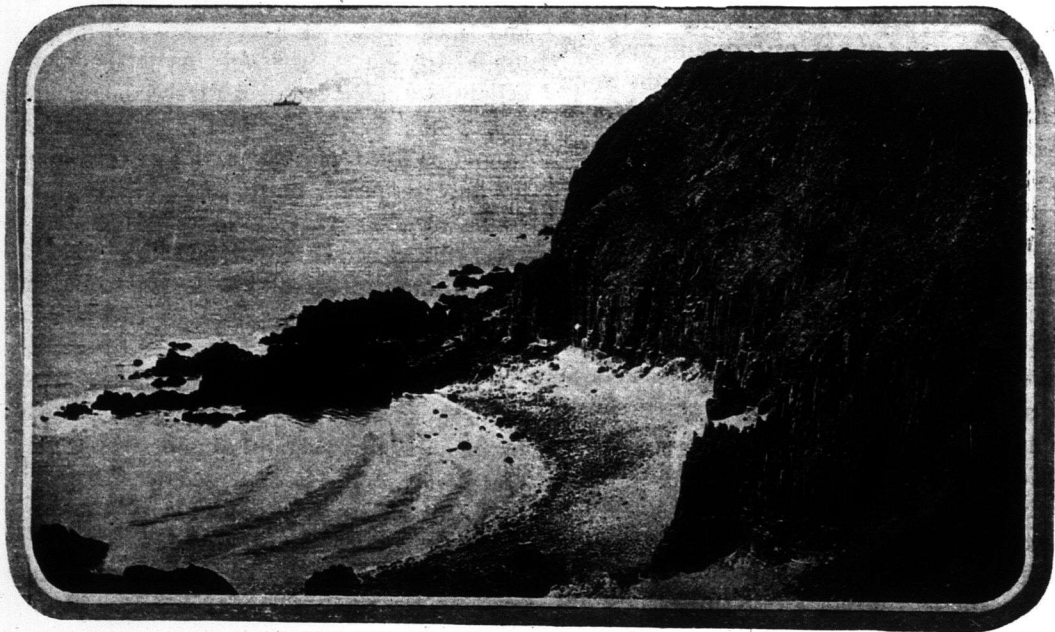
If education be a preparation for life, then should every child, from the beginning, have raily experience of that fact.—*Herbert Spencer.*

### Shore-Line Development.— No. II.

L. A. DEWOLFE, NORTH SYDNEY, N. S.

In my last article I explained the effects of land depression. This leaves a very uneven shore-line which old ocean diligently endeavors to straighten. It attacks the more exposed points first. Soon a little

so there would be no along shore movement of material; but with the prevailing wind obliquely to the shore, pebbles will sometimes move at the rate of half a mile a day. The large boulders will be moved only a short distance to leeward of the cliff. Others wash against them and round partly behind them so that a straight line begins to form continuous with the cliff base across the mouth of a bay. Finer material packs against these boulders; some is washed over the top; and sand blows over until a bar of considerable size and length has formed. Thus, material moves both ways from every exposed point, and is deposited as bars in the more sheltered coves. These bars will grow more rapidly in the direction of the prevailing wind, and their position relative to the cove will depend upon the size of the



CLIFF AND SHORE LINE AT GRAND MANAN.  
(By the courtesy of the N. B. Tourist Association.)

cliff or "nip" only a foot or two high is formed, and at the same time the undertow wears away the buried earth, carrying it off as far as waves can carry it. In time the underwater part is borne seaward and the ocean begins rapidly to eat into the land until finally a high cliff is formed. (Illustration I). When the waves can carry no more off-shore, transportation along shore begins. In the illustration, much coarse material has recently fallen, but the water is not yet shallow enough for such shore transportation. Material from the exposed capes is carried into the sheltered bays where the waves lose their force and consequently deposit their load. It seldom happens that waves strike the shore at right angles. If they always did

bays and the amount of exposure. They may form across the mouth of the bay, nearer the middle, or even at the head. When these bars once form, the bay sooner or later fills up either by land-wash filling in behind, or sea sand built on in front, or both. It is easy to find examples of any particular stage of filling. The bay-bar may grow wholly from one direction or from both directions, meeting near the centre. In either case one often finds it not quite complete,—an opening near the centre or at one side still remaining. Sometimes we find this opening at the critical stage, where a violent storm or a prolonged calm must decide the question of its existence.

It often happens that the bar never reaches

across the bay, but is deflected inland at right angles or nearly so to its original course. (See illustration II.) The cause of this is that waves with their load of material lose their carrying force as the distance increases. The bar, then unable to grow farther lengthwise, allows the material to be carried round its outer point toward land again. Upon examining these forelands, one finds near their base coarse material which becomes finer and finer until at last it is almost wholly sand.

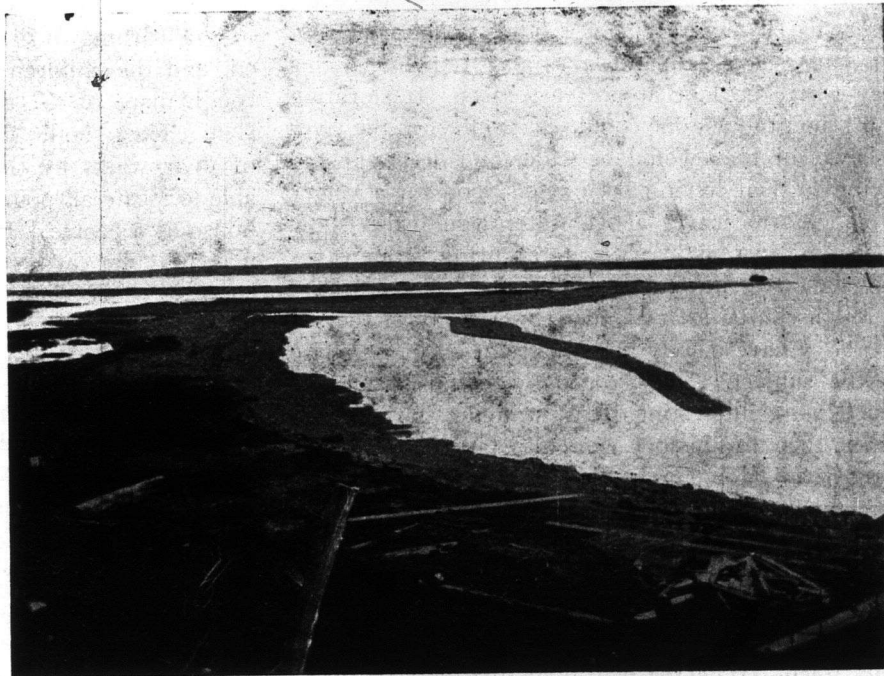
Everyone can readily recall examples of these forelands and bay-bars. Here in Sydney harbor alone, counting its two arms, are seven of the former and ten of the latter, while no one who has travelled in Cape Breton by train could fail to notice the many

peculiar sand hooks and bars in the Bras d'Or waters. Their abundance here is partly shown on the map by the frequent occurrence of the name *Barachois*, a name applied to shore ponds shut off from the sea. But they are by no means peculiar to Cape Breton. Every part of our coast will furnish examples in some stage of growth. These bars sometimes deflect river-mouths or even block them altogether, compelling the river water to reach the sea by percolation through the porous material washed up. This will be river *debris*, first deposited as a delta. The shape and fate of the delta will depend upon the ratio between sea and river activities.

But the forelands and bay-bars are not the only interesting phenomena of shore development. The formation and distribution of islands is an equally instructive study. A portion of the mainland becomes separated. The newly formed island wears away until it may totally disappear, or may surround itself with sand-bars that will protect it. Islands may be tied together by these bars, or tied to the mainland. Of course once joined does not mean always joined; but we like to know the cause of each phenomenon as we see it, and this is one of the stages readily seen in Nova Scotia and elsewhere. Tides

often prevent or modify this growth. They also tend to prevent the filling of harbors with *debris*, for material can move out at ebb better than in at flow, since, as a rule, gravity can act better in this direction.

Vegetation also largely influences shore growth. Though we have not the mangrove swamps of the south, we have the mud flats which grow good crops of eel grass. At high water, when the tide stops its onward flow, the mud settles and is held by the grass; thus the marsh is slowly built up. When it reaches a level above that of low water, other plants get a footing, until, in time the sea is completely shut out. Shore ponds, too, are often filled with organic matter by the alternate admission of fresh and salt



KELLY'S BEACH, NORTH SYDNEY.

the preceding period. Salt water, moreover, has a precipitating effect upon mud brought in by the rivers. Evidently, then, many agencies are to be considered in the life history of a given shore-line.

A modifying influence upon the shore growth is the uneven erosion owing to rocks of different resistance. The harder rocks tend to stand out as capes while the softer portions wear away. But this difference is not so great as one would think, for as soon as a headland is formed it catches the full energy of the waves, while the softer rock of the coves is protected. If the land slowly but steadily sank, continually exposing new portions of rock, the coast would become crooked through uneven erosion;

water, which will kill plants that got a start during but if it remain for a long time at the same level, the shore straightens and wears back somewhat uniformly. An irregular coast, therefore, is oftener due to sinking than to difference in erosion. Cliff erosion is hastened by the presence of caves, since, when waves close the mouth of a cave they condense the enclosed air, thus causing internal pressure upon the rock.

Besides studying the changes going on upon our present shore, one may at some time be where elevation has taken place, and can study the ancient shore-line, which is now inland. Cliffs and terraces would suggest a shore-line. See if they follow any particular level. Wave-worn pebbles would give added proof. They can be easily recognized by their somewhat ovate form, since other pebbles are not the same shape. Inland lakes are often traced this way where no lake at present exists. If elevation had been gradual, one could see its effect in the river valleys, for they would be wider and deeper inland owing to their having been acted upon for a longer time. Marine caves above water would also show elevation, just as fresh water flowing from caves under the sea shows depression.

Much can be learned, then, by a study of the sea shore. I have merely hinted here at only one phase of the subject. The geography lessons would be much more interesting if, in studying harbors and capes, their life history were also taught. Why are they here? How might they change? Harbors are sometimes in the craters of extinct volcanoes, sometimes between rows of glacial debris, often between mountain ranges or behind sand bars or coral reefs, and very often in drowned river-valleys or glacial fiords. These harbors tend to fill with sand and land-wash. Wharves help hold this material. The economic value of harbors, the expense of dredging them, of building breakwaters, and other kindred subjects will afford texts for your geography lessons when you return to school. Above all, avoid the drudgery of long lists of coast waters from the book. Study the map. Connect cause and effect. Make physical geography the basis of all geography, and it will be found an easy and pleasant study.

An Ottawa paper notices two "wanted" advertisements which appeared in its columns. One offers \$20 per month for a "woman for general housework," the other \$8 per month for a "teacher with or without diploma."

I have taken the REVIEW for several years and have found it very instructive and interesting. G.B.

### The Country Teacher.

The teacher in the country has so many opportunities for out-of-door work that it is hardly necessary to point them out. Yet how few of them take advantage of these opportunities. Indeed, it often seems that the better the appliances of the school, the more the means of study offered by its surroundings are neglected. The geography lessons are often formal tasks when the face of nature is simply teeming with the most delightful of lessons. Its hills and valleys, meadows and woodland, brooks and rivers, its trees and birds and animals are far more interesting than any globe of text-book, and the teacher in the country has a special responsibility in regard to them.

The learning of direction should be easily mastered, and the children gain some power in making rough maps of the districts covered in each excursion. They should learn to determine the direction of their walks by the position of the sun, and be able to locate all points with reference to the school-house as a centre. For this work the children may make circular cards such as are used in the mariner's compass. If these are placed on any stationary object and so adjusted that the N points north, the direction of each feature of the landscape may be easily determined.

Whatever the particular method pursued, however, the work should all be done with a definite object in view, or the results will be neither so good as those obtained by careful study of the text-book nor by vigorous play in the open air.—*Popular Educator*.

That the teacher who cannot secure order without resort to the birch rod is not fit to be in school, is a very fine theory, but the fact remains that one unruly boy may demoralize a whole class while the teacher is searching for some tender spot in his moral mechanism. It is a pity, but it is a fact, that a birch rod carries more of a moral lesson to some children than the most beautiful appeal to their sentiments or intellect. We may deplore the conditions which make such a state of things possible, we may seek strenuously to modify them, but meanwhile it is a false sympathy that restrains us from using the one restoring influence in our power. A burnt child fears the fire, and it is desirable to keep him out of the fire at all costs, even if we cannot make him understand the philosophy of the situation.—*Ex.*

Every issue of the REVIEW is helpful and stimulating.  
A. M. M.

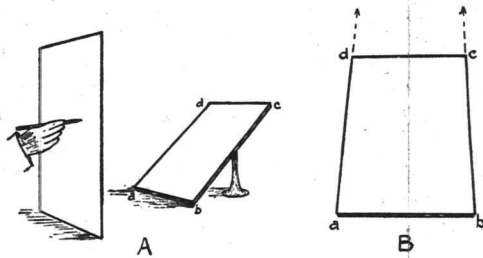
**Drawing — No. VIII.**

F. G. MATTHEWS, TRURO, N. S.

**SLOPING PLANES.**

Up to the present we have only met with horizontal or perpendicular planes, but it is evident that planes may occur in objects placed at any angle. Before proceeding to more difficult exercises, it will be well for the student to practise with a single rectangular plane. Take a drawing board and place it in a sloping position, with the lower edge resting on the table and parallel to the tracing plane (Fig. 39A). Now on the tracing plane fix the four corners *a, b, c, d*. Join these points on the tracing and we shall see that *a b*, which is nearer

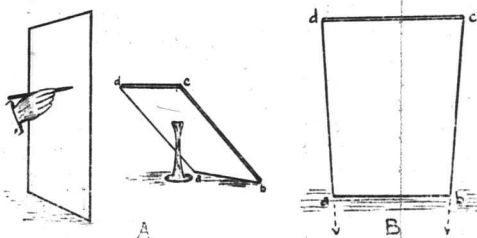
Fig. 39



than *c d*, will appear longer than *c d*, so that if *b c* and *a d* were produced they would ultimately meet (Fig. 39B), but the meeting point would be *above* the eye-level, and not on it. By varying the amount of slope, the student will notice that the nearer the board is to the horizontal, the nearer the vanishing point will be to the eye-level, while the nearer the board is to the perpendicular, the farther above the eye-level will be the vanishing point.

Next place the board with one edge on the table and parallel to the tracing plane, but sloping in the opposite direction (Fig. 40A). The line *c d* is now

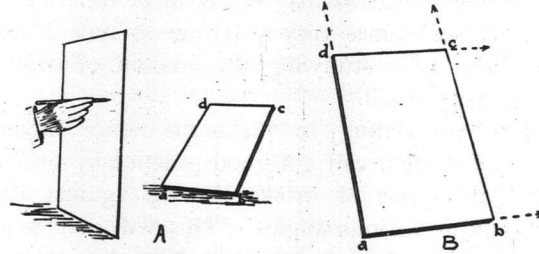
Fig. 40



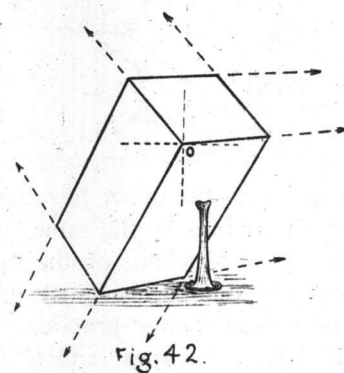
nearer than *a b*, and will therefore appear the longer, so that the sides *d, a* and *c, b* will vanish, but this time *below* the eye-level (Fig. 40B). The same rule as before holds good, but, of course, in

a contrary direction. Next, turn the board slightly, so that the upper and lower edges form an angle with the tracing plane (Fig. 41A). Now *b, a* and

Fig. 41.



*c, d* being horizontal lines, will be found to vanish to the eye-level, while *a, b* and *c, d* will vanish to some place above or below it as before. Having noted the above effects, the student should take a solid, say the square prism, and substitute for the drawing board. Place the prism as in Fig. 42, and look at it through the tracing plane. It will be noticed that neither face of the solid is parallel to the plane. On being sketched on the plane the lines will appear to vanish in the direction of the arrows, and it will be noted that there are three distinct points towards which the lines converge. Of these only one will be on the eye-level, viz., that to the right, and a moment's consideration will show the reason of this



to be because the three lines vanishing in this direction are all horizontal, as the lowest one is resting on the table and the others are parallel to it. Of the other two vanishing points, one will be above the eye-level and the other below it. On looking at the point O, the nearer point of the prism, it will be seen that the three lines from it show the direction of the vanishing points. It is therefore evident that in the drawing of such a solid, it is very important to get these three first lines accurate. To do this, hold the pencil first vertically, then horizontally, between the eye and the point O, and the angles formed by the three lines can then be easily determined. Next mark off the relative lengths of these three lines, and complete the drawing by adding the other edges to vanish according to the lines from the point O,

with which they are really parallel. A word of caution may here be given. It is a common error to make the perspective too violent, or, in other words, to make the vanishing points too near. In large masses, such as may occur in pictures, these points are sometimes very near, but in such a solid as we have been studying, the amount of convergence is very small.

Before proceeding to make the more difficult solids, the student can get good practice by making groups of books, or bricks leaning against each other, and at various angles. This will give readiness in seeing changes of shape brought about by changes of position.

The hexagonal prism differs in drawing from the square prism, only with regard to the hexagonal faces. As before, fix three lines from the nearest point O, remembering that the dotted line OA is one of them, as it is really at right angles to the other two, which are OB and OC, edges of the prism. After cutting off their respective lengths, draw the hexagonal face exactly as in Article VI. The dotted lines in Fig. 43 show the method of

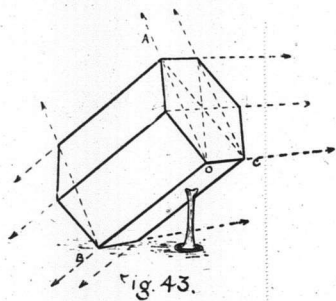


Fig. 43.

construction. When the hexagonal face is completed, the edges of the prism may be drawn from the angles all vanishing in the same direction. The lower points are obtained in a similar manner to the upper hexagonal face. With regard to the pyramids, the same rules should be followed as in the drawing of the cone, only the pyramids will be found to be much more difficult, and therefore much better practice. The chief difficulty is to locate the apex, and at the same time get the correct slope of the base. In addition to the methods adopted in the cone, a good plan is to imagine the solid to be enclosed by rectangular horizontal and perpendicular lines (Fig. 44). These may be supplied by holding the pencil in those

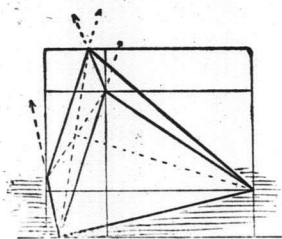


Fig. 44.

positions, when the relative distances of the various points of the solid from the horizontal or vertical may easily be compared. This plan is also very useful when groups of solids are to be drawn. When the stu-

dent has sufficiently grasped the principles underlying the various single solids, groups of two or more should be attempted. At first the results may be somewhat disappointing, but by a judicious use of the tracing plane for comparing results, improvement will come rapidly.

### Notes on Mathematics—No. VI.

R. G. D. RICHARDSON, B.A.

So many eminent men have proclaimed so loudly against written examinations, that we hesitate to say a word in defence. In mathematics, however, it seems to us that much can be said in favor of a written test. In general the questions set by government in the provinces are admirable tests both of the pupil's mathematical knowledge and his mathematical skill. An examination, too, renders necessary a review, which sets forth the relations between the different parts of the subject and gives a grasp of the whole.

The suggestions here given are intended especially for those who have had little practice in preparing scholars for examination. They are methods employed by some of the best teachers.

One great fault is that not enough written work is given by the teacher throughout the year. Cut loose from all aid, and with time limited, even a good student will do poor work unless he has worked under similar conditions before. An examination each day for two or three weeks previous to examination is excellent practice for the candidate. The test set by government in previous years, which are readily accessible in the Journals, make the best paper to give the scholar. After the hour is expired, the teacher should go over each paper with the pupils, noting wherein the form and development are astray. The next day the same questions may be given and perfection insisted upon.

In review, the text should come in for a large share of the attention. The method of development of the mechanical rules should be thoroughly instilled. In a subject like algebra, it is wise to make a careful list of typical questions, one from each kind of problem, not the hardest nor the easiest from the lists. The candidate may easily acquire complete knowledge of the solution of this typical problem, and will be able to solve questions like it. If the whole subject cannot be revised *carefully*, it would be better to pick out the more important chapters and give them careful attention.

In a topic like geometry, the teacher's time may be greatly saved by adopting some method by which

the class is to a certain extent independent of him. Assign three or four propositions to be written out. Then let the pupils criticize, correct and mark each other's work or their own. This will confer a double benefit, if proper care is given.

This series of articles has been very fragmentary. It has not covered any topic thoroughly, nor was that the aim. To throw out a few hints that might stimulate thought in the mind of the teacher and reach the pupil through the medium of the added inspiration was the ideal in view. I wish to thank those who have sent words of personal appreciation of the notes, and to thank the editor for his kindly approval as well as for his space.

Yale University, June 1st, 1904. ,

### The Waiting Moment.

MARY E. KNOWLTON, ST. JOHN, N. B.

Next year, we say, may chance to do  
This thing that seems so dear, so true;  
Or, some day we shall surely see  
That fairest spot where we would be;  
Or else we fear to lose some grace  
Of health or wealth or lofty place.

Yet, when I plan, there comes to me,  
Behind the gloom, beyond the glee,  
What is not hope, and is not fear,  
But certitude most strong and dear  
That there is waiting down life's ways,  
Somewhere amidst the years or days,

A white-winged moment sweet and still  
That shall not ask me what I will,  
Lest I mistake; but I shall know  
That that still moment bids me go,  
That all life's tumult-days are done,  
And shadowless new life begun.

At a concert held at a certain town a soldier of the Black Watch occupied a seat in front of a private of an Irish regiment and his sweetheart. The latter was very much interested in the Highlander's uniform, and scanned the regimental badge on his cap and collar particularly. This badge is the figure and cross of St. Andrew with the motto, "Nemo me impune lacessit." (No one annoys me with impunity).

"Phwat does that writin' mane, Patsy?" asked the girl.

"Phy," replied Pat, "it's Latin, but I've forgotten the English of it. But in good ould Oirish it manes, "Thread on the tail av me coat if ye dare!"

The REVIEW is steadily increasing in interest.

A. F.

## College Convocations.

### DALHOUSIE CONVOCATION.

The most notable event in the past session was the successful completion of the organization of the School of Mines. Dr. Woodman is a most enthusiastic geologist and Professor Sexton is not only a well trained mining engineer, but he is also a successful teacher and a great worker. His course at the Massachusetts Institute of Technology was a good one. After graduation he was appointed assistant in mining and metallurgy. Another year he spent in the electrical works at Schenectady. These professors are assisted by seven lecturers on mining subjects as well as the regular staff of science professors.

The watchword of the new school is thoroughness. The staff is most anxious that the mining interests of the province shall not suffer from the mistakes of incompetent men who have been employed because they bear the university degree.

The Macdonald Memorial Library is progressing. Architects are preparing plans. It is expected the building will be opened in 1905.

The canvass for the School of Mines is progressing and meeting with gratifying generosity. The Macdonald Memorial Fund needs about \$1,000 more to bring the subscription up to the desired \$25,000. The Governors stated that they would begin to build when \$8,000 in cash has been received. All but \$100 or \$200 of that amount has been received.

At the Convocation, twenty-nine (including six women) received the degree of B. A.; one the degree of B. Sc.; sixteen LL.B.; fifteen (including four women) the M. D.; five the degree of M. A., and one M. Sc. Two honorary LL. D.'s were conferred. Previously two M. D.'s had been conferred. Total, seventy-one.

The honorary degree of LL. D. was conferred upon Dr. Sawyer, the venerable professor and former president of Acadia University, and Principal Gordon of Queen's University.

The following scholarships were announced:

JUNIOR ENTRANCE.—*Mackenzie* (\$200) J. E. Read. *Professors* (\$120) F. C. Knight. *Professors* (\$120) J. H. Hamilton. *Sir Wm. Young* (\$100) W. C. Ross.

SENIOR ENTRANCE.—*Professors* (\$90) A. Moxon. *Professors* (\$90) E. W. Nichols. *Young* (\$75) Anna E. McLeod.

SPECIAL PRIZES.—*Johnson* (Mathem.) C. L. Blois. *Waverley* (Mathem.) C. T. Sullivan. *North British* (General Proficiency) A. Moxon. *Lindsay* (Primary M. D.) G. A. Dunn. *Simson* (Chem. Mat. Med.) J. A. Proudfoot. *Avery* (Graduate General Proficiency) E. Florence Blackwood.

Medals were granted as follows:

UNIVERSITY.—(Greek and English) L. Brehaut. (English and History) W. K. Power. (Philosophy) E. B. Ross. *Medical Faculty* (Final M. D.) A. R. Cunningham.

Diplomas of honor and distinction were granted to the following on graduation:

CLASSICS.—*High Honors*, A. C. Johnson.

LATIN AND ENGLISH.—*Honors*, W. M. Corbett.

GREEK AND ENGLISH.—*High Honors*, L. Brehaut.

ENGLISH AND HISTORY.—*High Honors*, W. K. Power.

PHILOSOPHY.—*High Honors*, E. B. Ross. *Honors*, C. J. Crowdis.

General distinction in the ordinary course, E. Florence Blackwood, H. D. Brunt.

The blue ribbon prizes of the year were the Rhodes scholarship and the 1851 exhibition science research scholarship worth £150 a year for two and possibly three years.

The Rhodes scholarship went to Gilbert S. Stairs, as was announced in the May REVIEW. His fellow students, through a representative committee, preferred him to all the other candidates.

The 1851 exhibition research scholarship was awarded to W. H. Ross, a graduate in science of last year, with high honors in chemistry and chemical physics. The award was based on a very valuable research recently published in the Transactions of the N. S. Institute of Science. The subject of investigation was "Hydroxylamine and its Salts." Mr. Ross purposes going to Johns Hopkins to study.

Mr. James Barnes, B.A., who won this scholarship four years ago, and who received an exceptional renewal for a third term for unusual promise, has just published a paper in the *Astrophysical Journal* summing up the results of his investigations. Mr. Barnes is a Fellow by courtesy of Johns Hopkins, a Ph. D., and has very recently been appointed an instructor in that university.

#### ST. FRANCIS XAVIER COLLEGE.

(Condensed from New Freeman, St John, May 21.)

Tuesday, May 17th, was the last day of the most successful year in the history of St. Francis Xavier College. Nothing but joy and happiness is reflected in the faces, not only of the younger students of the college course, who are now enjoying a well-earned respite from their labors; not only in the eyes of the graduates of '04, who have at last won that to which they have for several years aspired, and for which they have toiled; not only in the pleased countenance of the sympathetic outsider who reflects in his manner the contagious gladness that fills the heart of every student, but also in the voices and actions of the members of the faculty who have at length attained the end of their unremitting labors, which they now see crowned with success.

Not only is the number of graduates fifteen in all, counting the two young ladies of Mt. St. Bernard's, on whom a St. F. X. degree of B. A. is to

be conferred this evening, greater than any preceding year, but the total average of the whole college is above the ordinary, and eloquently testifies to the good work of both teachers and pupils.

A large number of the clergy of Cape Breton and of Antigonish and Guysboro counties, and others interested in the college, assembled to witness the closing exercises.

first class honors. He will be a civil engineer. Five members of the class, and one post-graduate, who has returned for work in the department of English, were awarded honor certificates in English. Four received honors in natural science, and

The degree of B. A. was conferred on thirteen graduates; the degree of Bachelor of Civil Engineering was conferred for the first time in the history of the college. The honor was earned by three students. Four students received commercial diplomas.

The special cash prize of twenty-five dollars for the best paper on Shakespeare's Julius Cæsar and Merchant of Venice was awarded to M. J. McIntyre; the second prize of twenty dollars to A. G. McKinnon, and the third prize of fifteen dollars to M. M. Coady.

The special cash prize of twenty-five dollars for the best paper on Theory of Equations was awarded to M. M. Coady; the second prize of fifteen dollars to M. Gillis, and the third prize of six dollars equally merited by A. McGillivray and A. G. McKinnon—drawn by A. G. McKinnon.

The Governor General's bronze medal for the highest aggregate of the subjects of the Freshman year was awarded to A. F. McDonald.

The Governor General's silver medal for highest aggregate subjects of Sophomore year, awarded to James Boyle.

Gold medal for the highest aggregate of subjects of Junior year equally merited by M. M. Coady and A. G. McKinnon—drawn by M. M. Coady.

Senator McDonald's gold medal for highest aggregate in subjects of Senior year was awarded to M. J. McIntyre.

At the meeting of the Alumni Association a grant of one hundred dollars was made to encourage the study of advanced English; and a splendid paper was read by Inspector McDonald on Post-Graduate Studies.

#### MOUNT ALLISON INSTITUTIONS.

The closely-crowded days and nights of concerts, festivities and exercises in connection with the final days of another year at Mt. Allison ended with the university convocation on Tuesday evening, May 31st. A large number of visitors was in attendance. A growing interest is especially noticeable among the students of recent years. More and more return at short intervals to keep closely in touch with their *alma mater*. Of last year's graduating class of twenty-one, seventeen became active members of the Alumni Society. These are among the encouraging signs of lively interest in Mt.



Allison affairs, and are of good presage for future growth and development.

In general, the year has been a prosperous one, and likely in the future to be noteworthy, because it has seen the addition of considerable new equipment and the beginning of several new lines of work. The Ladies' College had outgrown its accommodation, and its advance was impeded for lack of space. After the Christmas holidays there was ready for opening a new addition, provided at a cost of \$44,000. This building is of brick, four storeys high, with basement. It contains a large dining-room (to seat over 200), with all appurtenances of the most modern type, a number of students' rooms, hospital, bath-rooms, Y. M. C. A. parlor, etc. The appreciation of the new quarters is shown by the fact that the number of boarders in attendance at once ran up to 136. This large building is directly in the rear of the former building, and connected with it. The hope is that, sometime in the near future, a new brick building may succeed the present front. Meanwhile the hoped-for new Ladies' College begins with the ell. Even on this there is a considerable debt, so that the main building will be delayed for some years unless a generous patron may appear. The former dining-room was a separate building connected with the rear of the main building. This large room has been partitioned off and changed and fitted up as the Massey-Treble School of Domestic Science. The whole outfit, which is very complete and modern in every respect, is the gift of the Toronto lady whose name it bears. The school has made a good beginning under the charge of an experienced teacher, Miss Flagg, of Connecticut, and is intended for the training of teachers as well as practical housekeepers. Its graduates are to be recognized as qualified teachers by the educational department of New Brunswick.

The academy has had good attendance. Four took commercial diplomas, nine or ten graduated in shorthand and typewriting, and an equal number expect to enter the university in the autumn. Geo. J. Trueman, '02, who spent the year after his graduation in studying in Berlin and Heidelberg, was a teacher in the academy during the past year, and gave an interesting and instructive series of lectures on Forestry in connection with the university. This is probably the first school treatment of forestry in New Brunswick. Considerable interest was aroused among local lumbermen, and as the result of meetings held by them here, some provincial legislation looking toward the conservation of our forests was passed at the last session of the House of Assembly.

This year is marked in the university by the opening of the McClelan School of Industrial Arts. The building used formerly as a dormitory, known to Allisonians as the "Old Lodge," has been raised and transformed inside into a series of five lecture-rooms and workshops. W. J. Sweetser, a graduate of Massachusetts Institute of Technology, has been installed as professor of engineering. It is

not the intention at present to offer degrees in science, but to fit men for pursuing courses in various branches of engineering at such schools as McGill and the Massachusetts School of Technology. Students will be able to take the first two years of their course and enter on their third year. This will mean a considerable saving, since the expense of living and fees at Mt. Allison are not more than half those at, for instance, McGill. Many Mt. Allison men go to McGill for medicine, and these will henceforth, by taking special scientific work here during the arts course, be able to save a year on their professional course.

Degrees were conferred at the convocation on thirty-two persons: twenty-two graduates, B. A.; four, M. A.; one, B. D.; two received *ad eundem* degrees; D. C. L. was conferred on George Johnson, of Ottawa, the Dominions statistician, who is an old Mt. Allison student; and the degree of D. D. was given to Rev. Jabez Rogers, of Fredericton, and Rev. Wm. Young Chapman, of Buffalo, N. Y. Dr. Chapman was a graduate of Mt. Allison in the class of '83, and is now pastor of a prominent Presbyterian church in Buffalo. In his church the General Assembly of the Presbyterian church of the United States was recently held, and by that body he was elected the delegate to the General Assembly of Canada, now convened in St. John. The Baccalaureate sermon was preached by the Rev. Mark Guy Pearse, who also gave addresses at the alumni banquet and at the university convocation. The presence of this distinguished clergyman added to the general interest of the exercises. The alumni honors' man was Mr. Winthrop P. Bell, of Halifax, N. S., who has had a distinguished course. He was the leader of the Mt. Allison men who won the intercollegiate debate last winter, and is especially gifted in mathematics, in which subject he took one in logic and philosophy. Taken, then, all in all, the class of '04 is a very good one, and contains some members from whom we expect to hear in the future. The class showed its interest in Mt. Allison by offering a scholarship of \$25 a year for a series of years to encourage those entering on the work of the new scientific course. Two important endowed scholarships were established during the year. One was given by R. S. Pridham, Esq., of Sackville, the sum of \$12 a year for certain work in English essays. The other is a splendid endowment yielding \$120 a year, in memory of the late Fred. Tyler, of Hants Co., N. S., who was Freshman in 1902-3. This was divided during the past year into two scholarships, which were gained by two members of the Sophomore class. Next year the two similar scholarships will be given to the Junior class, and in the year succeeding to the Senior class, since, according to the terms of the gift, they are to be awarded to Mr. Tyler's class during its various years. After his class graduates, the scholarships will revert to successive Freshman classes in perpetuity. This is a noble monument to a boy whose death was a great loss to his *alma mater*.

## UNIVERSITY OF NEW BRUNSWICK.

On Tuesday, the second of June, the University of New Brunswick ended the one hundred and fourth year of its history. On that day graduated the largest class that ever left its walls. Twenty-seven received a Bachelor's degree either in arts or in engineering. Of the twenty receiving the degree of B. A., seven were girls. Of the seven receiving the degree of B. A. L., five took civil engineering, two electrical engineering.

The Encœnia of 1903 saw the university with one hundred and twenty students in attendance. The enrolment during 1903-4 has been one hundred and thirty-five. Consequently the past year has shown the most remarkable growth in attendance in the history of the institution.

The two students who graduated in electrical engineering were the first to complete that course of study. The same modest beginning marked the inception of the course in civil engineering. This latter now has over fifty attending its classes, and no doubt within a few years we shall see a marked growth in the numbers taking the degree in electrical engineering.

A new departure was made in the establishment of a psychological laboratory, the second in Canada. About \$300 was raised, chiefly by subscription, for the purchase of apparatus for this work. Here practical tests were made of the varying swiftness and accuracy with which men's mental faculties and senses perform their work, and results of interest and value to the persons tested were secured. Only the need of more and more expensive apparatus prevented the obtaining of results of wider scientific value.

The fund for the building of the new gymnasium has reached the sum of \$3,000 in subscriptions, and we are promised that work will soon be begun. The question of the location of the building has caused much debate, some advocating a site on the athletic field of the university, others a place not far from the other college buildings. The cost of maintenance and protection is likely to decide for the latter.

The university has also gratefully received from an anonymous donor the sum of \$1,000 to constitute a fund, the interest of which is to be devoted to the maintenance of the departments of civil and electrical engineering. This is the largest gift ever made to the institution by a private individual.

The residence for students, which has always been run at a financial loss, has been abolished, and the rooms assigned as a residence to Professor Scott and Professor Brydone-Jack.

The aims and ambitions of the friends of the university for the immediate future are the increasing of the salaries of existing professorships, the strengthening of the arts and engineering courses by the addition of new professorships, and the establishment of a chair in forestry, or in forestry and agriculture.

Many of the friends of the university will regret to hear that Dr. Davidson, on account of ill-health,

has found it necessary to resign his position as professor. The resignation, however, has not been accepted, and the hope is cherished that his health, which has improved recently, will enable him to return to his duties at no distant day.

## ACADIA UNIVERSITY.

The closing exercises of the educational institutions at Wolfville—Acadia University, Acadia Ladies' Seminary and Horton Collegiate Academy—took place May 29th to June 1st, and included a most interesting series of events. Large numbers of visitors were in attendance from all parts of the provinces, and the interest and enthusiasm were never greater. The country was looking its loveliest and the weather was perfect. The year just closed has been a highly successful one, and prophetic of greater things to come.

The aggregate registration of students at the three institutions for the year has reached nearly four hundred. The Seminary, under the principalship of Rev. H. T. DeWolfe, has had an unprecedentedly large attendance. Its musical department has received a great impetus under the able directorship of Professor George Pratt Maxim, while its literary course was never stronger or better patronized. Horton Academy has had a good year, and will send an unusually large class of matriculants into the college next October. Principal Horace L. Brittain has resigned his position to enter upon post-graduate studies at Clark University. He has proved himself a born teacher, and something of a genius in handling boys. With the additional advantage of the course he is proposing to take in psychology and pedagogy, he is bound to become a skilled educator, whose services will be sought after.

The attendance at the university this year has numbered 117. Thirty-two degrees were granted at the recent commencement: B. A. degrees, thirty-two; M. A. degrees in course, seven; *ad eundem* M. A. degree, one; and two honorary degrees; that of D. D. to the Rev. J. A. Gordon, of Montreal, and that of D. C. L. to the Hon. H. R. Emmerson. Mr. Emmerson's son was among the graduates, and the Minister of Railways was present with a company of relatives and friends whom he brought as guests in his private car.

The work in the university was never better done than during the past year. This was due in some measure to the increased comforts and facilities furnished by the governors during the last summer vacation. The handsome sum of \$15,000.00 was expended at that time in providing for the college building a hot-water heating system, class-room chairs with writing-desk attachments, and improvements for the chemical and physical laboratories; also in providing a hot-water heating system, and new furnishings throughout, for Chipman Hall, the college residence.

Professor C. C. Jones, Ph.D., professor of mathematics, has been absent since Christmas, taking

advanced studies at the University of Chicago. His salary is continued during his absence; and from this time on it will be the policy of Acadia to grant successively to her professors extended leave of absence, that they may renew themselves by study and travel, and keep thoroughly abreast of the thought, movements and educational methods of the times.

The second forward movement is being pushed with energy and success. This movement means the increase of the financial resources of the university by the handsome sum of \$200,000.00. Mr. Rockefeller has pledged \$100,000.00 on the condition that the friends of the institution contribute \$100,000.00. The private efforts of the president, Dr. Trotter, have already secured in pledges \$54,000.00; and that the full amount desired will be forthcoming is no longer doubted. The private canvass among the well-to-do will be continued until next autumn, when the pledge list will probably have grown to \$65,000.00. The remaining \$35,000.00 needed will then be obtained by a general canvass of the membership of the Baptist churches of the three provinces. This amount, following upon the first forward movement, which secured for the institutions \$75,000.00, will put Acadia upon a solid financial basis, and greatly increase her yearly income and efficiency.

As indicating the vitality and progressive spirit of the university, it deserves to be recorded that the Senate and Board, at its recent meetings, decided, upon the recommendation of the faculty, to inaugurate two new courses: (1) A general four years' course leading to the degree of Bachelor of Science. This course will be co-ordinate with and will embody much of the B. A. course; it will, however, include shop-work in wood and iron, free-hand and mechanical drawing, descriptive geometry, and a large amount of mathematics and pure science. The splendid manual training plant will be articulated with this course, and the student taking it will at the same time obtain a broad liberal culture, and a magnificent preparation for any of the courses in applied science at such an institution as McGill. (2) An abbreviated science course has also been inaugurated, extending over two or three years. The students taking this course will confine their attention chiefly to the mathematics, science, drawing, descriptive geometry, and shop-work of the B. Sc. course.

The view entertained at Acadia is that advanced work in applied science can be done efficiently only where a large teaching staff and expensive appliances are at command. McGill University offers by far the best opportunities available for Canadian students. Relations have, therefore, been consummated with the corporation of McGill University, by which any student of Acadia, who has completed either of the above courses, may be admitted to the third year of any of the courses in applied science at that university. Detailed information respecting the new courses may be obtained from the president, Dr. Trotter.

### Teachers' Institute of Annapolis and Digby.

The teachers of Annapolis and Digby, with many from Lunenburg and Kings, met in the annual session of the Institute of the first mentioned counties, at Middleton, on the 26th and 27th of May. The session was one of peculiar interest, because it gave opportunity to observe the equipment and working of the MacDonalld consolidated school. A public meeting was held on the evening of Wednesday, the 25th, which was addressed by Prof. Robertson and prominent provincial and local educationists. Opportunity was also given next day for observing the practical workings of the school so that the institute was not regularly called to order by the president, Inspector Morse, until 11.30, Thursday morning. At the beginning of the afternoon session work was actually begun, and lessons by Miss Kinney of Bridgetown, and principals Smith of Annapolis, and Morse of Mahone Bay, together with a paper on School Room Ethics, by Miss Primrose Elliott, were heard and discussed by the teachers present. The first was a lesson in reading to a class of beginners, and an instructive one to teachers. Principal Smith's lesson on the Princess was highly commended as showing keen insight and skill in developing the feeling of the poem, and was rendered particularly attractive by the singing of several of the songs, one as a chorus and others as solos, by members of the class.

On Thursday evening a second public meeting was held, addressed by the chairman, Dr. MacKay, Prof. Robertson and others. The addresses dealt with education in general and the future of the consolidated schools in particular.

On Friday morning the paper of Principal Layton of Digby, with reference to the teaching of chemistry and one upon Nature Study in Schools, by Miss Marchant, both practical, helpful and carefully written, were received with marked attention. Great interest was given to Professor Brittain's lesson on Respiration in Plants and Animals. With a few bottles, some splinters of pine wood, a pint of lime water, some plants gathered by the road-side, bits of bread and potato, and a couple of receivers of oxygen, he taught a lesson which as an exhibition of skill in presenting a subject, ease of manner, and the faculty of using common things, was worth the time and expense incurred in attendance upon all the meetings. In the afternoon session Principal Foster taught a lesson on the fishing industry of Nova Scotia, which was highly creditable to a young teacher, showed an appreciation on his part of the fact that *geography begins at home*, and was an example of what a thoughtful teacher may do toward establishing a reasonable and understanding patriotism in the minds of his pupils.

As a whole the meeting was eminently satisfactory. The enrolment of one hundred and seventy-five surpassed anything in the previous history of this institute, which, in holding its twenty-fifth consecutive annual session, it is believed leads the institutes of the province in point of longevity.

L.

### York County Teachers' Institute.

The Teachers' Institute, representing York, Queens and Sunbury counties, met at Fredericton on the 19th and 20th of May, Principal B. C. Foster presiding. There were 125 teachers present. Addresses were delivered at the opening session by the president, by Superintendent Dr. Inch and Inspector Bridges.

An interesting paper on Bird Study and the Teacher's Opportunities was read by Mr. F. A. Good, of the Fredericton high school.

Mr. H. H. Hagerman, of the Normal School, gave an excellent talk on Drawing. He thought that too little time is given to it, and that teachers are responsible for poor results. He gave many suggestions, with illustrations, of how to draw and of his pupils' work.

On Friday morning the Institute divided into two sections for a discussion of the methods of teaching composition. Misses Everitt and Currie contributing papers for the primary section, and Miss Black and Mr. J. E. Page papers for the advanced section. An interesting discussion followed.

Inspector Bridges gave a valuable address on the conditions influencing success and failure in schools.

The following officers were elected for the ensuing year: President, F. A. Good; Vice-president, Miss Lillian Burt; Secretary-treasurer, Miss Ella Thorne. Three other members of Executive—Miss Agnes Alward, W. T. Day, E. L. Weyman.

Miss C. Martin, of the St. John public library, has designed a beautiful and appropriate postal card commemorative of the Tercentenary of Champlain's discovery of the St. John river. In the upper left hand corner is a sun (emblem of the birth of the day) shedding its rays upon a scroll borne by a dove, on the vessel of Champlain and on the wilderness shores in the distance. There is also a picture of Champlain and of modern St. John, and, in addition, space for writing on both sides of the card.

For years the teachers of New York and many other cities have resigned when married, accepting a rule of the school board as law and gospel. Kate S. Murphy desired a husband and a school at the same time, or else he desired both Kate and her income. Possibly she did not dare to try the matrimonial venture without an income-anchor to windward, or possibly he did not wish Kate without her income. We are not conversant with the facts, probably no one knows outside the family circle. But whatever the cause, Kate proposed to have both a man and an income of her own. She has shown what fools women have been in all these years, and what bluffers school boards have been. The court says that the school board has no right to dismiss a woman any more than a man simply because she marries. This was always common sense, and now it is a good law.—*N. Y. Journal of Education.*

### Manual Training.

Those manual training teachers who have not sent in their applications for space at the Provincial Exhibition, Halifax, are requested to do so as soon as possible. Sufficient applications have been sent in to demonstrate that the manual training exhibit will be a success. Exhibition prize lists have been sent to all manual training teachers. The Council of Public Instruction, at a meeting held the 24th of May, decided definitely to abolish the office of supervisor of manual training in Nova Scotia, and to place the supervision of the manual training schools in the hands of the inspectors of the common schools of the province. While there may be a difference of opinion as to the wisdom of the change, there is but one opinion in regard to Mr. Kidner's work in Nova Scotia for the past four years. When he came there were three manual training schools in the province. He leaves more than twenty additional schools in operation. These schools are conducted on strictly educational principles, and, without exception, are well established in the school systems of the towns in which they are found. Rarely indeed is a teacher able to impart to his pupils his enthusiasm as Mr. Kidner has to the teachers whom he trained. His advice has been sought by them year after his pupils have graduated. As an organizer, it would be difficult to surpass him, and some other province will soon be showing the same qualifying progress in manual training that has attended his work here. The teachers under his supervision are reluctant to part with him, and their best wishes will follow him in a new field of work.

There is some talk of an extension of manual training in several of the schools of the province by its introduction in metal work. Several teachers are expecting to take summer courses in metal work and other forms of manual training in the coming vacation. The difficulty of securing teachers for the departments needed will be thus overcome, the one teacher necessary being capable of instructing in both woodwork and metal work. There is no question that in industrial centres metal work is no less important than woodwork. It need not replace woodwork, it can follow it. The MacDonald Institute at Guelph will offer next term a course in metal working.

At the recent institute at Middleton, the visiting teachers had the opportunity of seeing the new manual training school in operation. Mr. Messenger, of the Lunenburg Manual Training School, had an exhibition of the work done by his pupils,

which attracted much attention. He exhibited specimens of pyrography, which elicited very favorable comments. Several teachers of manual training are designing courses for their schools, and in Dartmouth the pupils of the higher grades have done some very pretty decorative work in burnt work. It is probable that a pyrographic outfit will soon become the property of every manual training school.

The school board of Lunenburg has shown considerable attention to manual training during the past three years, the result being it occupies a prominent and permanent position in the school system of the town. The latest move, and one that could profitably be followed by other school boards, is the purchase of a library which contains the following books. The list is given as a guide to teachers and school boards about to purchase books on manual training: Timber and Timber Fees, Laslett; Useful Arts and Handicrafts, 3 volumes; Our Native Trees, Keeler; Woodwork, Barter; Drawing, Barter; Bench Work in Wood, Goss; Mind and Hand, Hamm; Woodwork for Schools, Nelson.

H. W. HEWETT,  
Sec'y M. T. T. A. of N. S.  
Dartmouth, N. S.

### Questions Regarding the Earthquake of March 21, 1904.

Our readers in Nova Scotia and New Brunswick are asked to co-operate in answering as many as possible of the following questions of the earthquake of March 21. Proper credit will be given to such answers. The exercise of gaining such information from different sources, the necessity of keeping a record of such events ourselves, and knowing how to arrange them properly will prove useful for future guidance.

1. *Location of the Observer.*—County and location in county; township.

2. *Situation of the Observer.*—(a) Indoors (and on what floor of the house), or in open air, on a wharf or boat, in a mine, and how deep? (b) Position and occupation at the moment of the shock.

3. *Time* at which shock was felt, Eastern Standard Time.

4. *Nature of the Shock.*—(a) Was any tremulous motion felt before the principal disturbance, and for how many seconds? (b) How many principal or prominent disturbances were felt, and for how many seconds did they last? (c) Was any tremulous motion felt after the principal disturbance, and for how many seconds? (d) Did the movement gradually increase in intensity and then die away, or (e) were there two or more maxima of intensity or series of disturbances; and, if so, what was the interval between them and the order of their intensity? (f) Was the principal disturbance strongest near the beginning, the

middle, or the end of the series? (g) Was any vertical motion perceptible, and, if so, was the movement first upward and then downward, or *vice versa*? (h) What was the apparent direction of the movement? (i) In what direction were objects overturned?

5. *Duration of the Shock* in seconds, not including that of the accompanying sound.

6. *Intensity of the Shock.*—Was it strong enough: (a) To make windows, doors, fire-irons, etc., rattle? (b) To cause the chair or bed on which the observer was resting to be perceptibly raised or moved? (c) To make chandeliers, pictures, etc., swing, or to stop clocks? (d) To overthrow ornaments, vases, etc., or cause plaster to fall from the ceilings? (e) To throw down chimneys, or to make cracks in the walls of buildings.

7. *Sound Phenomena.*—(a) Was any unusual rumbling sound heard at the time of the shock, and, if so, what did it resemble? (b) Did the beginning of the sound precede, coincide with, or follow, the beginning of the shock, and by how many seconds? (c) Did the end of the sound precede, coincide with, or follow, the end of the shock, and by how many seconds? (d) Did the sound become gradually louder and then die away? (e) Did the instant when the sound was loudest precede, coincide with, or follow, the instant when the disturbance was strongest, and by how many seconds? (f) Did the sound change in character at or about the time when the disturbance was strongest?

8. *Miscellaneous.*—Note any other phenomena which may be related to the earthquake, such as effects on animals, on springs or streams, any change in the wind (if so, to what direction), permanent displacements of the soil, etc. If the observer was on a wharf or boat, state especially the intensity, apparent direction, etc., of shock and noise.

9. Name and address of observer.

Please answer as many questions as possible, number and letter the answers to correspond with the questions, and forward to

DR. J. EDMUND WOODMAN,  
Dalhousie University, Halifax, N. S.  
(Special Expert in Charge of Earthquake Records  
for the U. S. Geological Survey).

The boy who has passed through the curriculum which includes manual training will make a better carpenter, a better draughtsman, or a better metal-worker than he who has not had the benefit of that training. But it is also true that he will make a better lawyer, a better physician, a better clergyman, a better teacher, a better merchant—should he elect any one of those honorable callings and all for the same reason, namely: that he is better equipped and more thoroughly educated man than his fellow in whose preparation manual training is not included.—*Nicholas Murray Butler.*

The population of the United States is now 80,000,000.

### Arbor Day Results.

Arbor Day was celebrated by the students of the Normal School, Truro, May 16th, in a manner well fitted to show the importance of the occasion. The *News* contains a full account of the proceedings, from which the following account is summarized. A tree was planted on the grounds and the assembly hall was decorated with potted plants and flags. Principal Soloan pointed out that the celebration of Arbor Day was a scholar's exercise, and in order that they should more fully feel the responsibility he called on Mr. MacLeod of the "A" class to preside.

A suitable literary and musical programme was then carried out, one of the useful features of which was a very practical address on the day and its objects by Mr. Herdman, of the "A" class, Pictou. He traced the history of the Arbor Day movement, which was designed to awaken interest in plants, more especially in trees, the preservation and renewing of forests, and the beautifying of school grounds. His hints on the proper observance of the day were excellent. A good scheme should be thought out beforehand; one tree at least should be planted and in such a way as to make this part of the exercise an object lesson; a programme of music, readings, essays, all bearing on the subject, should be carefully prepared; the children as far as possible should have the management of the exercises; and the co-operation of the parents and other visitors should be enlisted in the proceedings.

The REVIEW has only space for the bare outline given above of this excellent observance of Arbor Day, and the impression it must have made on the student teachers who, we hope, will in future carry out the spirit and intention of a wise school regulation. It is difficult to see how a well planned Arbor Day could be barren of results, especially when children can be so easily interested in trees, flowers, birds and the joys and revelations of springtime. But a formal indoor programme, with no outdoor spirit to enliven it, is a dreary affair.

The suggestion that one tree, at least, should be planted, is a good one, as otherwise the significance of the day would be missed. If two can be planted, one may be an evergreen and the other a deciduous tree. On the selection of a well-shaped vigorous young tree, its proper planting and subsequent care, everything depends. If too large a tree is selected the best portion of the roots are left in the ground when digging it up, and the result is easily predicted — a repetition of what one may see today on too many school grounds—dead or scrawny half-starved saplings, only serving, if they receive any notice at all, to arouse pity or contempt for trees in the minds of vigorous growing boys and girls. It is not these "stakes," but strong, healthy, shapely trees in

the school grounds that will inspire respect and love for trees.

To obtain the best results small trees should be chosen not more than from two to four feet high. Select these in the summer when you may pick out a symmetrical, vigorous plant. Place a tag on it, and mark the spot. When taking it up next spring, dig in a circle round the tree so as to include the roots which have already started to grow at the time of Arbor Day, which in most sections was too late this year; and take the earth, if possible, without breaking it away from the roots.

The best results will be obtained from Arbor Day when pupils are taught to raise trees from seeds. They can thus make their own choice of trees, study the growth from the seed, and learn the proper conditions of soil and temperature. The interest that will be aroused from success, and even from failure, will tell most in making future arbor days successful.

The work may begin in summer when the winged fruits containing the seeds of maples are falling from the trees and continued into the fall when other seeds are ripening and falling to the ground. The writer has before him a few healthy shoots of the white walnut or butternut obtained from planting the seeds two years ago, after frequent attempts had been made without success to transplant the young trees. Almost equally good results were obtained from planting beech-nuts, it being a matter of great difficulty to secure young beech trees from the forest and to transplant them with success. The butternut is a valuable timber tree and one that is fast disappearing from our forests and intervalles. The white pine, once one of our greatest sources of wealth, has become a thing of the past. It would be a great object lesson to the country to begin reforestation with these and other valuable timber trees.

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Two Frenchmen have patented a process for making a kind of celluloid that is incombustible.

It will take three years to complete the survey of the boundary line between Canada and Alaska.

After all is said and done, the great thing in educational progress is not the buildings nor the systems used, so much as the teachers. The teachers should have salaries large enough to enable them to lead lives of cultured men and women, and for themselves they should strive to establish a code of ethics which will put their calling in life on the highest plane. Above all, there should be established some scheme to prevent politics from influencing promotions among teachers of the public schools.—*Supt. W. H. Maxwell.*

## MANUAL TRAINING IN NEWFOUNDLAND.

The following extract taken from the St. John's, Nfld., *Telegram* of May 18th, shows how manual training is taking hold of public attention there. It is also interesting as being the impression of one who had never visited a manual training room before—Dr. Lloyd, formerly a teacher in Bishop Field College, St. John's, now editor of the *Telegram*.

"Yesterday afternoon we visited the manual training school, now a branch of the Methodist College. We derived much pleasure from the visit, and had the fortune to discover in the instructor, Mr. C. W. Fairn, an enthusiast in this branch of education. Mr. Fairn was trained in the manual training school, Truro, N. S., where Mr. Samson, of Bishop Field College is at present training. To a schoolmaster it was particularly pleasing to note the ardor and interest which Mr. Fairn was arousing in his pupils. A teacher requires much ability, experience and enthusiasm to acquire this difficult art of stimulating the attention and sustaining the interest of pupils, and the pleasing feature of manual training is that it readily lends itself to this art.

"In the training school here accommodation is provided for training twenty boys at twenty separate benches. Eight classes are held each week, admitting of one hundred and sixty boys being in training in the same term. Every exercise consists in making something with mathematical exactness. The master first draws the object to scale on the blackboard, and then trains the pupils to draw it to scale on a folio. When this is done, the tools to be used are explained, the pupil is shown step by step how to proceed, and he proceeds individually at his own bench, working every step from his plan. Geometry, mensuration and mixed mathematics are taught by the pupil actually measuring and making models with precision. The whole course depends upon training the hands and eyes to co-ordinate with the brain in mental and physical exactness. As a schoolmaster, we feel we cannot too highly commend this movement, and we congratulate the Methodist College on the actual inauguration of the movement, and we hope on Mr. Samson's return to commend Bishop Field College on a similar step. We are decidedly of opinion that the government never made a wiser move than in providing three thousand dollars a year to inaugurate this new education. Both institutions have arranged to train pupil teachers, and before long manual training will be taken up with enthusiasm in our outports."

## CURRENT EVENTS.

In another little battle at Santo Domingo, the government troops have suffered defeat.

In Morocco, where the insurrection is still going on, the pretender's followers have been repulsed with great loss.

Delegates from twenty different countries are in attendance at the International Tuberculosis Congress now in session at Copenhagen.

The revolt of the natives in German Southwest Africa has spread into Southern Nigeria, where a British force has met and defeated the insurgents.

The government has bought and will take possession of a perfectly preserved mastodon recently found in the Yukon region, said to be the best specimen ever secured in any part of the world.

An experiment in curing herring after the Scotch method is being made, under the auspices of the Dominion government. It is expected that Canadian herring cured by this process will bring double the present price in foreign markets.

A state of war exists in Thibet, where the British expedition was for a time cut off from communication with India. On May 26th, the British again defeated the Thibetan forces, driving them from a strong position near the British camp.

The settlement of the boundary dispute between Brazil and Bolivia, in respect to the Acre territory, is not to be the end of the matter. Peru claims and has occupied a part of the region, which is valuable for its rubber trees; and Brazilian troops have been sent there to take forcible possession.

A German traveller reports the country about Lake Tchad as a wealthy region, and surprisingly populous. The wealthy natives grow large crops of the best cotton and tobacco. He has also discovered extensive petroleum fields near the coast of the Cameroons.

The Canadian government has chartered a steamer to proceed to Hudson Bay in July, with supplies for the steamer Neptune, now with the expedition sent to enforce Canadian laws against American whalers; and also to convey stores to the north for the steamer Gauss, in which Capt. Bernier will proceed to the north and annex a number of Arctic islands, and then attempt to reach the North Pole.

Seven wireless telegraph stations are to be erected at points along the St. Lawrence route, to insure the safety of steamers coming into the river. The Marconi system will, of course, be used. The stations will be the property of the Dominion government, and all government messages will pass free. The United States government has, with some secrecy, moved in the establishment of stations along the Atlantic coast, to be operated by another system.

The little war in Somaliland is over, at least for the present. The Mad Mullah has retired into the remoter parts of Italian territory, and the operations against him have been discontinued.

A French explorer has discovered a navigable passage from the Niger, through the little known region of the Suburi marshes, to the Shari, which empties itself into Lake Tchad. By this route, in which the only obstacle is a waterfall on one of the tributaries of the Niger, the journey from the Atlantic to Lake Tchad and return can be made in two months; while it takes about five months to do this by the Congo route.

The death of Henry M. Stanley, the African explorer, recalls the fact that it is but thirty years since the interior of Africa was an unknown land. Stanley, whose boyhood name was John Rowlands, was born in Wales in 1841. He lived for a short time in New Orleans, where, as the adopted son of a merchant of that city, he took the name of Stanley. He owes his fame to his successful search for Dr. Livingstone, in 1871, from whom nothing had been heard then for two years; his discovery of the great lakes Victoria Nyanza and Albert Nyanza, in 1875; his work of organizing the Congo Free State, for the King of the Belgians, in 1884; and his relief of Emin Pasha, and the discovery of the source of the White Nile in 1889.

Port Arthur is situated within six miles of the extremity of the Liao Tung peninsula, and about thirty miles from the isthmus on which was fought the recent battle of Kin Chow. On the same peninsula, and a little to the east of Port Arthur, is Dalny, the wonderful city built by order of the Czar on the seaport of the great Trans-Siberian railway. Streets, drainage, electric lights, parks, gardens, docks, and all the requirements of a modern city were provided in little more than a year. Opened about two years ago to the commerce of the world, the port had become a great shipping port for merchandise and a great thoroughfare for passenger traffic. No less than forty thousand passengers are said to have passed through Dalny in 1903. Now its docks and piers are reported to have been destroyed by the Russians, to prevent or retard the landing of the Japanese; and the city may be abandoned and destroyed by the defenders, as Moscow was in 1812, to prevent its affording shelter to the enemy.

[A subscriber asks for an outline of the events of the war in the east. This will prove an interesting review exercise in current events.]

The war in the east was begun on the 7th of February, by the landing of Japanese troops in Korea; and its history for the four months since that date, has been, with but little interruption, a record of victories for Japan.

On February 8th and 9th, while the harbor of Vladivostok, in which some of the Russian ships had wintered, was still closed by ice, a Japanese fleet attacked Port Arthur, the Russian stronghold in

Manchuria. In this attack seven Russian ships were sunk or disabled. Two others were sunk at the same time at Chemulpo, the Korean port at which the Japanese had begun landing their forces. The two events gave the Japanese at once a naval superiority, enabling them to land in safety at several points along the Korean and Manchurian coasts, and making it impossible for the Russian ships at Vladivostok, when winter was over, to join the remnant of the Port Arthur fleet, or for the latter to venture far from harbor. Thus free to move their transports and supplies, the Japanese soon had full possession of Korea, in a military sense; the Koreans giving their more or less willing consent to the situation. In the meantime the Russians had lost two ships more at Port Arthur, on February 11th and 12th, by accidental contact with their own submarine mines; and on the 22nd four of their torpedo boats were captured by the Japanese at Port Arthur. Another was sunk on the 26th, by the Japanese fleet; which from that time onward made repeated attacks on Port Arthur, with some unsuccessful attempts to block the entrance to the harbor. The Vladivostok squadron attempted to pass around the northern coast of Japan, but was driven back; and the first month of the war ended with a Japanese fleet bombarding Vladivostok.

The first loss in the Japanese fleet occurred March 9th. Admiral Makaroff, having arrived to take command of the Russian fleet at Port Arthur, made a sortie to meet the enemy, and one Japanese torpedo boat was sunk. The same thing took place on the following day; but in each case a Russian torpedo boat destroyer was lost, and the advantage lay with the Japanese. On the 23rd, another Russian ship was blown up by striking a mine at Port Arthur. The first week of April found the Japanese in complete occupation of Korea, from which the Russian troops had retired as the Japanese advanced; and the Russian fleet practically confined to the harbors of Port Arthur and Vladivostok.

The loss of the Russian battleship *Petropavlovsk*, on April 14th, with most of her officers and crew, including Admiral Makaroff, is the greatest the Russians have yet sustained. The mines placed for the defence of Port Arthur, and the obstructions sunk by the Japanese in their efforts to close the port, had left but a narrow channel for the sorties of the Russian fleet. In this channel the Japanese had secretly placed mines, one of which was the cause of the disaster. Another battleship was injured at the same time; and a torpedo boat destroyer cut off and sunk by the Japanese. To offset these events, the Japanese lost their battleship *Katsuse*, blown up on May 15th by striking a floating mine ten miles off the coast; and on the same day two of their cruisers collided in a thick fog, and one was sunk. Whether these two serious losses were both wholly accidental, or whether the Russians had deliberately placed a mine so far out at sea, is not known. Both fleets have suffered other losses during the last month. Two Japanese vessels were blown up by Russian mines near Dalny, and a



Russian cruiser which ran aground near Vladivostok was destroyed to prevent her being taken by the Japanese. The first serious conflict between the land forces took place on April 26th, at the Yalu, a river which forms the southern part of the boundary line between Manchuria and Korea. The Russians were driven from the river islands which they had occupied. On the last day of April and the first of May, the Japanese crossed the Yalu, defeating the Russians with heavy loss; and, on May 6th, advanced to Feng-Wang-Chong, where they occupied a strong position in the mountains, driving the Russians out. In the meantime they were landing on the western side of the peninsula on which Port Arthur is situated, and preparing to cut it off from communication with the mainland. There is some uncertainty about later events, because of conflicting reports; but there is no doubt that a terrific battle was fought on the 26th, at Kin Chow, on the narrow isthmus north of Port Arthur, in which the Japanese were again victorious, carrying the fortified heights by a desperate charge in which they lost upwards of three thousand men. By this victory the investment of Port Arthur is completed; and by it, too, the Japanese have won recognition for their country as one of the great powers of the world. The storming of Kin Chow will probably go down to history as one of the greatest deeds of modern warfare, and shows that the bayonet charge is not yet a thing of the past.

#### The Summer School at Charlottetown.

Applications for enrolment are being received by the secretary of the Summer School in large numbers. Accommodation can be had at Charlottetown at reasonable rates. Those intending to be present at the session should make early application for board. There is ample hotel accommodation for those who do not apply for board in private houses, but it will, of course, be more expensive. All the railway and steamboat lines have granted the usual reductions. Members, when purchasing their tickets, should be careful to get the "Standard Certificate" from the ticket agent, which, when signed by secretary of the school, entitles to return free.

I find the REVIEW very helpful in my work. May it have a long and prosperous career is my wish.

A. C. L.

#### SCHOOL AND COLLEGE.

Commissioner Lindsay of Porto Rico has made arrangements to bring six hundred of his native teachers to the United States this summer, that they may better understand American ideals and methods in education. A part of these teachers will go to the Cornell Summer Session and the remainder to that of Harvard. At Cornell they will devote their time chiefly, under special teachers, to primary methods, drill in English and nature work.

A few months ago the REVIEW gave some account of a musical experiment in North Sydney, where Mr. C. L. Chisholm has had charge of the singing in the public schools for a year and a half. During that time he has developed in a most surprising degree the musical instincts of the pupils. On the 20th of May an examination was held in the Empire Hall, North Sydney, and four hundred scholars of all grades, from the second upwards, were put to a rigid test in scale drill, staff notation, part singing, harmony, etc., the results being as satisfactory as they were surprising to the large number of delighted and interested auditors who had the opportunity of judging how the human heart could be touched by the voices of children under the baton of a master.

Concerning Mr. Chisholm's methods, the *Sydney Daily Post* says: "The system of staff notation taught by Mr. Chisholm is in use in many of the cities and leading musical institutions of the United States, but he supplements it by a system of harmony which he has marked out for himself. He adopts the a-Capella method and uses only a tuning fork. His method requires a thorough grading from Grade II to the highest. When the pupils hear the name of a chord, their trained knowledge enables them to sing it in any key. Their musical sensibility, so to speak, becomes so acute that they can scarcely make or tolerate a discord. But no system, no matter however perfect, counts for much without a master mind to interpret it, and convey his own knowledge, in part, at least, to others. Mr. Chisholm has had rare opportunities to become master of his profession and great resources of his own knowledge to draw from in adapting his improved system to the capacity of his pupils."

The Board of Education of New Brunswick, on the recommendation of Prof. Robertson, has decided to establish additional school gardens in the province and to contribute \$50 each for the foundation of eight scholarships at the Guelph College in order to allow our teachers to pursue nature studies and derive other advantages from a course at that institution.

The Macdonald School at Kingston, N. B., will be opened for pupils in August. D. W. Hamilton, M.A., is principal, and will be instructor in nature study; C. M. Kelly, B.A., will be instructor in manual training, and will also teach French, German, and mathematics; Miss Ina Mersereau, B.A., will be teacher in language subjects in the high school grades; Miss Margaret A. Stewart has been engaged as primary teacher. There is to be a domestic science teacher who has not yet been appointed.

At the recent insurance examinations held in Toronto, all the candidates who studied with the Canadian Correspondence College were successful. For two years the Canadian Correspondence College of Toronto has passed over 95 per cent of their candidates in all examinations. It is also worth noting that less than two per cent of their students drop their courses.

Mr. J. Vroom, St. Stephen, has been elected to represent the deanery of St. Andrews, N. B., on the board of governors of King's College, Windsor. Mr. Vroom's position as president of the Summer School of Science, and his wide experience and good judgment in educational matters, will prove to be elements of strength to the board.

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### RECENT BOOKS.

**THE LOUISIANA PURCHASE; Its History and Exploration.** By Ripley Hitchcock. Cloth. Pages xxi+349. Illustrated. Mailing price 70 cents. Ginn & Co., Boston. A well written and attractively illustrated book, especially intended for those who wish to know what the St. Louis Exhibition is designed to celebrate.

**Theodore Storm's POLE POPPENSPALER.** Edited with introduction, notes and vocabulary, by Dr. Wilhelm Bernhardt. Cloth. Pages 172. D. C. Heath & Co., Boston. This interesting story of Paul (the) Puppet-player is one of Storm's masterpieces. The text is easy, and the story designed for children.

**THE SHIP OF STATE.** By Those at the Helm. Cloth. 264 pages. Illustrated. Mailing price, 50 cents. Ginn & Co., Boston.

In this book the work of the United States government and its departments is entertainingly told by men who have been influential in the administration of public affairs.

**Gerstacker's GERMELSHAUSEN.** Edited with Introduction, Notes, Exercises, and Vocabulary by Griffin M. Lovelace. Semi-flexible cloth. xiii+107 pages. Mailing price 35 cents. Ginn & Co., Boston.

The book is distinctively German in spirit and presents an excellent example of narrative and conversation. In every way it is suitable for high schools and colleges as a first book after the reader.

**PRACTICAL GEOMETRY FOR BEGINNERS.** By V. Le Neve Foster and F. W. Dobbs, Assistant Masters at Eton College. Cloth. Pages 96. Price 2s. 6d. Macmillan & Co., London.

An attractive presentation in its practical treatment of the subject of geometry, and in the handsome and unique way in which the book is printed and bound.

**Lessing's MINA VON BARNHELM.** Edited, with Introduction, Notes, and Vocabulary, by Richard A. von Minckwitz and Anne Crombie Wilder. Semi-flexible cloth. xviii+202 pages. Portrait. Mailing Price 50 cents. Ginn & Co., Boston.

In addition to the text of this popular play there is a short biography of Lessing, a brief history of his time, and a list of books for reference and reading.

**PRIMARY ARITHMETIC.** Cloth. 264 pages. Illustrated. Mailing price 35 cents. Ginn & Co., Boston.

In the selection of problems, those are given which appeal to the life, the interests, the needs, and the powers of children. The drill work is unexcelled in quality, arrangement and amount.

**Hans Hoffman's DAS GYMNASIUM ZU STOLPENBURG.** Edited with introduction, notes and vocabulary, by Valentin Buehner. Cloth. Pages 145. D. C. Heath & Co., Boston.

Two stories by Hoffman, both artistic and humorous, are given under the above title, and are suited for elementary readers in German.

**ELEMENTS OF PLANE SURVEYING.** By Samuel Marx Barton, Ph.D., Professor of Mathematics in the University of the South. Cloth. Pages 255. List Price, \$1.50. D. C. Heath and Co., Boston.

This is an exceptionally useful book and should prove of great value as a college text for students, who are to make practical applications of their text-book courses. Specially notable are—the map showing the magnetic declination of the needle; the very useful chapter on leveling; the unusually complete set of tables.

**ESSAYS OF CHARLES LAMB.** Selected and edited with introduction and notes by George Armstrong Wauchope, Professor of English in South Carolina College. 16mo. Semi-flexible cloth. xxxvi+413 pages. Mailing price, 60 cents. Ginn & Co., Boston.

While the book is intended especially to appeal to teachers and students, it will be welcomed by all readers. No effort has been spared to furnish a correct text, which is based on a careful collection of the best English editions, thus preserving the author's peculiar orthography, punctuation, and capitalization.

**A MANUAL OF PRONUNCIATION.** By Otis Ashmore, Superintendent of Schools, Savannah, Georgia. Cloth. ix+67 pages. Mailing price 35 cents. Ginn & Co., Boston.

This little manual has been specially prepared for practical use in the class-room, and is also intended for use in homes and offices. It contains only those words most commonly mispronounced in our language, and the plan of the book, original and unique in itself, enables the student to see at a glance the weight of authority for every word given.

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Collections for the above competitions must represent the bona fide work of a scholar, and a statement to this effect from the Principal of his or her school must accompany each of such collections.

Blotters and Entry Forms bearing full particulars of competitions have been sent to the teacher of every school in New Brunswick for distribution among scholars. Please tell your pupils all about it, and ask them to send in their entries through you at earliest. Teachers whose schools may have been overlooked, or who have not received a sufficient number of Blotters and Entry Forms to go round their scholars, will kindly drop a postal card stating what number they require. Closing date for these competitions 5th September next, by which time all collections should be in the hands of the undersigned.

**W. W. HUBBARD, Managing Director,**  
SAINT JOHN, N. B.

JUNIOR COUNTRY READER, No. II. By H. B. M. Buchanan and R. R. Gregory. Cloth. Pages 165. Illustrated. Price 1s. 6d. Macmillan & Co., London.

This book contains a series of animal stories, well told and in simple language.

A SCIENTIFIC GERMAN READER. Revised Edition. By George Theodore Dippold, Professor of Modern Languages in the Massachusetts Institute of Technology. Semi-flexible cloth. liii+274 pages. Mailing price 80 cents. Illustrated. Ginn & Co., Boston.

The book has been intended mainly for students who had taken a thorough theoretical and practical course in German grammar for at least one year, with three or four recitations a week. The recitations have been especially adapted for the use of beginners.

A HISTORY OF CANADA. For High Schools and Academies. By Charles G. D. Roberts. Cloth. Pages 492. Price \$1.00. Toronto: Geo. N. Morang & Co., Limited, 1904.

Our readers will be glad to notice that a Canadian publishing house has brought out Roberts' History of Canada (first published in 1897) in a revised form and at the low price of one dollar. It has been illustrated with maps and a few full-page portraits, has been brought to the present date, and a chapter on government added. These features, with a list of important dates and a new index add to the value of this brightly written Canadian history, which in its revised form is more adapted to the needs of the student.

AN ELEMENTARY AMERICAN HISTORY. By D. H. Montgomery. Cloth. 306+xlii pages. Illustrated. Mailing price, 85 cents. Ginn & Co., Boston.

Mr. Montgomery has prepared this little book to meet the demand for a brief, continuous history of America suited to the wants of elementary pupils. It begins with the earliest accounts of the discovery of America and comes down to the present time.

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for May 21, From Harbin to Mukden, describes interestingly the region which seems likely to be memorable in the present war as witnessing the Russian retreat. In the issue for May 28 there is a timely article on Herbert Spencer's Autobiography, which is just now the chief subject of interest in the philosophic and literary world. Sir Michael Foster's paper on Huxley, in *The Age* for June 4, is an admirable essay in the field of biography and criticism.

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W. A. McINTYRE,  
Secretary

## THE EDUCATIONAL INSTITUTE OF NEW BRUNSWICK

.....WILL HOLD ITS NEXT MEETING IN THE.....

High School Building, St. John, N. B., June 28-30, 1904.

### PROGRAMME

#### Tuesday, June 28.

- 10.30 a. m.—Meeting of Executive Committee.  
2.30 p. m.—Enrolment.  
Report of Executive Committee.  
Election of Secretaries and Nominating Committee.  
Addresses from the Chief Superintendent, the Chancellor of the University, and others.  
8.00 p. m.—Public Meeting.  
Address from the Mayor of St. John, responded to by a member of the Board of Education.  
Address by Mr. CHAS. H. KEYES, Superintendent of Schools, Hartford, Conn.

#### Wednesday, June 29.

- 9.30 a. m.—Short Addresses on New Departures in Education:  
Manual Training, by Mr. E. E. MACCREADY.  
School Gardens and Nature Study, Mr. JOHN BRITTAIN.

- 9.30 a. m.—Consolidated Schools, by D. W. HAMILTON M.A.  
Domestic Science, by a specialist in that subject.  
2.30 p. m.—Election of Executive Committee.  
Address by Superintendent CHARLES H. KEYES, Hartford, Conn.  
An open discussion on preceding topics.  
8.00 p. m.—Social Meeting.

#### Thursday, June 30.

- 9.30 a. m.—“The Function of the Normal School in a System of State Education,” by Dr. Cox.  
“Drawing,” by H. H. HAGERMAN, M.A.  
Papers, by specialists, on Literature and Music or Art, including a Paper on Milton, by PROFESSOR W. H. CLAWSON.  
2.30 p. m.—“Acadian Schools,” by JUDGE LANDRY.  
Election of Representative to Senate of U. N. B.  
General and Unfinished Business.

The usual arrangements for reduced fares will be made with Railway and Steamboat lines. Teachers should ask for a Standard Certificate from the Ticket Agent at Railway Stations. Those who wish for information as to boarding places may write to Miss KATHARINE R. BARTLETT, 115 Car-marthen Street, St. John, N. B. I am instructed by the Chief Superintendent to state that Teachers residing at such a distance from St. John as to render it necessary to leave on Monday, the 27th, in order to be present at the opening of the Institute, may close their schools for the Term on Friday the 24th of June. Any other teachers attending the Institute may hold the closing exercises of the Term on Saturday, the 25th of June instead of Monday, the 27th. The closing teaching day of the Term for all teachers who do not attend the Institute will be Thursday, June 30th.

JOHN BRITTAIN, Secretary