

THE EDUCATIONAL REVIEW.

FOR THE ATLANTIC PROVINCES OF CANADA.

Vol. III.

SAINT JOHN, N. B., OCTOBER, 1889.

No. 5.

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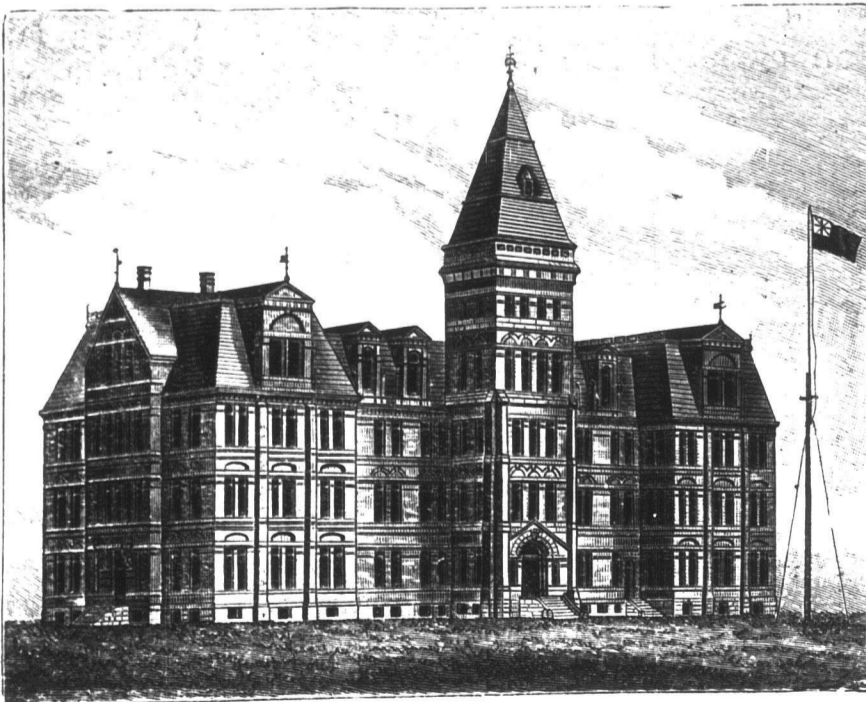
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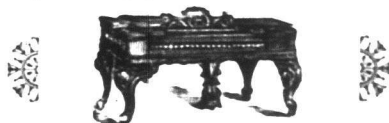
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The Educational Review.

Devoted to Advanced Methods of Education and General Culture.

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ST. JOHN, N. B., OCTOBER, 1889.

VOL. III. No. 5

A. H. MacKAY, B. A., B. Sc.,
Editor for Nova Scotia.

ALEX. ANDERSON, LL.D.,
Editor for P. E. Island.

G. U. HAY, Ph. B.,
Editor for New Brunswick.

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Notice of Change of Address should be promptly sent to EDUCATIONAL REVIEW, St. John, N. B. The former as well as the new address should be given.

EDITORIAL NOTES.

AFTER the 1st of November the Nova Scotian headquarters of the EDUCATIONAL REVIEW will have been transferred from Pictou to Halifax.

At a recent meeting in the kindergarten room in Truro a Mother's Circle was formed, the object of which is to bring about a closer sympathy and co-operation between the family and the kindergarten. Mrs. Condon presided and explained the object of the meeting and was followed by Miss Twichell, Principal of the Truro Kindergarten, whose interesting address was listened to with great attention.

WE are glad to learn that Mr. W. F. Ganong, of Harvard, is about to publish a work on the Economic Mollusca of the Atlantic Provinces. From proof-sheets which we have seen, we can recommend it to every teacher and every family on the long coast line of our three provinces. He gives figures which will enable any one to identify the common and useful shell-fish in the waters around us; and shows to what extent they have been used as food, or for the benefit of man. The book is extremely popular and will be a revelation to the multitude.

THE Nova Scotia Normal School, at Truro, will open on the 6th November. The Tonic Sol-fa system of music will be taught in it, we observe, as will also the kindergarten system.

LECTURES began at the N. B. University this week. There were fourteen students who matriculated for the full course, four of whom are young ladies. The leader of the Freshman class and winner of the Wilmot scholarship is Mr. Harry Porter, of Fredericton, closely followed by Miss Frances Everett.

WE are in the midst of the season of local educational institutes. Brief outlines of the proceedings at some of these conventions will be found in another column. So far as we have been able to gather from published reports and from persons attending them the proceedings were of great practical importance to the teachers assembled. This could not be otherwise when all classes of educational workers from the superintendent to the primary teachers meet at these conventions. Every phase of work may be examined and commented upon, difficulties solved, differences of method compared and the best methods emphasized. We do not see how it is possible for teachers to attend these institutes and not receive and confer great practical benefits.

SEVERAL New Brunswick teachers attended the Science School at Parrsboro, N. S., last summer. Dr. Burwash, a New Brunswick professor, has been appointed to the staff of instructors for next year. Parrsboro, the place of meeting next summer, is rather central. Would not a more complete union of Nova Scotia, New Brunswick and Prince Edward Island in a Summer School of Science be desirable? We don't know, but we moot the question.

WE invite the attention of our readers to the articles on Modelling in Clay which are to be found in this number. A careful perusal will be of benefit to those who have just begun this work in their schools.

SUBSCRIBERS in arrears to the REVIEW will confer a favor by remitting before the first of November.

LOCAL EDUCATIONAL INSTITUTES.

Since our last number was published teachers' institutes have been held in St. John, Charlotte, Gloucester, Kings, Northumberland, Kent and Albert Counties, in New Brunswick. These institutes have been well attended, the papers and discussions, so far as can be gathered from the reports, were stimulating and helpful, and excellent practical results in the schools should follow. At nearly all the institutes public educational meetings were held. The Superintendent of Education was present at most of the gatherings and gave instructive addresses. The district inspectors by their presence and co-operation rendered good service to the teachers assembled.

ST. JOHN COUNTY.

Over 150 teachers were enrolled at this Institute, which met in the hall of the Victoria School, St. John, on Thursday and Friday, Sept. 19th and 20th. Miss Orr's illustrative lesson on Modelling in Clay was an excellent feature of the proceedings. With a class of about a dozen from her kindergarten school she showed how pleasure and instruction could be combined. While moulding the sphere and cube teacher and pupil worked, talked and sung in unison, every word and motion being directed to the work in hand. Superintendent Hayes' address on Tardiness provoked considerable discussion. Points of agreement in dealing with tardy pupils were suggested which it is hoped may become general. Our readers will find the subject discussed elsewhere. Edward Manning, M. A., of the Grammar School, read a paper on How to Influence the General Reading of Pupils. The paper was a very complete and admirable summing up of the factors that should enter into this important subject, and Mr. Manning, it is hoped, will give the readers of the REVIEW the results of his experience and wide reading. Mr. M. D. Brown opened a discussion on "How to Obtain Accuracy and Rapidity in Primary Arithmetic" by giving some excellent ideas on the best method of teaching it. The public meeting on Thursday evening was presided over by Senator Boyd, Chairman of the St. John Board of School Trustees. Addresses were delivered by Chief Supt. Crocket, G. U. Hay and John March.

CHARLOTTE COUNTY.

There were over fifty teachers in attendance at this Institute, which was held at St. George on Thursday and Friday, Sept. 26th and 27th. Papers were read by Mr. Walker Moore on Geometry; by Miss Richardson on Moral Teaching, by the president, Mr. J. Vroom, on Plant Life, by Miss Lyle on Teaching

Reading in Primary Grades, and by Mr. Adams on Temperance Teaching in our Schools. A public educational meeting was held on Thursday evening at which addresses were delivered by Supt. Crocket, Inspector Carter, A. H. Gilmour, M. P., Rev. Mr. Pince, Mr. Hibbard, M. P. P., and Mr. Charles Johnston, Secretary of School Trustees. During Thursday afternoon the members of the Institute visited places of interest about St. George.

GLoucester COUNTY.

The Gloucester County Teachers' Institute met in Petit Rocher, Thursday, Sept. 26, with an attendance of nearly sixty. Inspector Mersereau was chosen president, ex-Inspector Boudreau vice-president, Mr. J. E. Lantaigne secretary, and Miss Meahan and Mr. Jos. Comeau additional members of committee of management. Instructive papers were read, and an interesting public meeting held on Thursday evening. Among the subjects discussed at this Institute were portions of Rousseau's Emile and Payne's Lectures on Education, and it was resolved that a sum of money not exceeding ten dollars be appropriated from the funds of the Institute for prizes to teachers residing in the county, and holding licenses not in advance of second class, for the best three essays on the third chapter of "Payne's Science and Art of Education."

KINGS COUNTY.

The Kings County Institute was held at Hampton on Thursday and Friday, Oct. 3rd and 4th. About fifty teachers enrolled. Among those present were Chief Supt. Crocket, Inspectors Wetmore and Carter and John March, Esq. The following officers were elected:

President, J. C. Robertson, principal at Collina; Vice-President, C. E. Black, Springfield; Secretary Treasurer, W. S. W. Raymond, principal of Superior School, Springfield Corner. Committee of Management, Miss Beatrice E. Duke and F. E. Whelpley, Superior School, Hampton.

A public meeting was held on Thursday evening, at which several interesting addresses were delivered by prominent educationists attending the institute and others. Papers were read by Miss Beatrice E. Duke on Methods of Teaching the Language and Literature of the Text-books; S. L. T. McKnight on The Teacher's Calling; and by Inspector Wetmore on Astronomy. The latter held that every teacher should be able to explain the theory of the tides, eclipses, etc., the differences of time, and the reason of the changeable positions of the moon toward the north and the south, and the phenomena. The study could be made intensely interesting to the pupils.

The annual meeting of the Carleton County Teachers' Institute will be held at Woodstock on Thursday and Friday, Oct. 17th and 18th. There will be an exhibition of manual work from the schools of the county. Teachers and trustees attending the meeting can get a return ticket at one fare on the N. B. R. on the 16th and 17th, good to return up to and on the 21st.

Annapolis County, N. S., Teachers' Association.

The tenth session of the Teachers' Association for Inspectoral District No. 4, Nova Scotia, was held in the Annapolis Academy on the 19th and 20th Sept. The officers elected for the ensuing year in addition to Inspector L. S. Morse, A. B., President *ex-officio*, were as follows: Jas. W. Armstrong, Vice-Pres.; M. H. Clarke, Sec.-Treas.; A. D. Brown, W. M. MacVicar, Miss R. N. Blackburn, Miss Carrie Davis, Executive Committee. W. C. Parker read a capital paper on "Proper Incentives to Study." First, school surroundings should be made as attractive as possible. Second, prizes, reward cards and monthly reports are generally useful. Third, lessons on natural science or history, revealing the wonders of nature around them, may be made incentives to high and profitable efforts in study and observation. C. W. Shafner, J. W. Armstrong, A. D. Brown, M. H. Clark, W. M. MacVicar, Miss Belle Wiswell, Miss J. A. Hamilton and Miss S. R. Jackson took part in the discussion, differing from the essayist generally in not favoring prize giving. M. H. Clark read a valuable paper on "The Bodies of our Pupils," showing first what should be avoided, and secondly what should be done—gymnastic exercises, playground sports under the eye of the teacher, better hygienic conditions in the school-room. Miss S. R. Jackson, teacher Elementary Department, Annapolis Academy, gave an interesting model lesson on the rocks of the province to pupils of Grades III. and IV. A. D. Brown emphasized teaching the natural features of our *own* country. J. H. Balcolm claimed that more time might be found for oral lessons on nature in miscellaneous schools. O. H. Cogswell, of the Summer School of Science, gave a sketch of the practical training in this department given at Parrsboro last summer. Rev. J. J. Ritchie gave an eloquent address in which he laid special stress on the elevating influences of the study of nature, and paid a well merited compliment to the educational progress of the province. Miss Belle Wiswell read an important paper on "The Moral Influence of the Teacher." John A. Smith read a practical paper entitled "The Best Method of Reading and Teaching History." Miss Jennie A. Hamilton, teacher of the Primary Depart-

ment of the Annapolis Academy, gave a kindergarten lesson to pupils of Grades I. and II. This exercise was one of the most interesting of the session. Miss R. N. Blackburn read a paper on industrial drawing illustrated by a blackboard lesson.

A communication from the Women's Christian Temperance Union of Annapolis Royal was read; and on the motion of A. D. Brown, seconded by O. O. Lyons, a resolution in sympathy with temperance teaching in the schools was passed unanimously. Miss Francis Harrington, organist, received a hearty vote of thanks for the musical entertainment of the Association; and the Academic staff for the tasteful and elegant adornment of the building in which they held their session. The work of the Association was not dependent on any outside aid; and can be said, therefore, to be more than usually successful.

P. E. I. Teachers' Convention.

The tenth annual meeting of the Provincial Teachers' Institute of P. E. I. was held at Charlottetown on the 3rd and 4th of October. These gatherings have always been popular with the teachers of P. E. I.; they meet their friends and former associates, exchange experiences, mingle in a society brighter and more exhilarating than that of their school district, and when they return to their labors they do so stimulated and encouraged by what they have seen and heard and the scenes in which they have acted their part. On the present occasion there was a good attendance of teachers and the interest in the proceedings was well maintained throughout.

The President, Mr. Lemuel Miller, took the chair on Thursday morning, but after the transaction of some routine business the meeting adjourned till the afternoon out of respect to the memory of Professor T. A. LePage, whose death that morning had just been announced to the convention.

When business was resumed papers on "Temperance Instruction in our Schools" and "Drawbacks in our School System" were read, the former by Mr. James H. McLeod, the latter by Miss Lynch. An address was also delivered by Mr. John McSwain, Principal of the Model School, on the Teaching of Drawing to Young Children, and thereafter Mr. J. M. Duncan gave to a class of boys a lesson on the drawing of straight lines and curves. The papers, address and lesson were much commended by the meeting.

The usual public meeting took place in the evening. Several gentlemen addressed the audience after a few very appropriate and well chosen introductory remarks by the President. Rev. Mr. Read spoke strongly and eloquently on the indispensableness of

high moral training in our schools, and the danger of education, at the present time, lapsing into an exercise in those subjects which can most readily be converted into money. Dr. James McLeod selected the brain for his theme, and, in an excellent address on the structure and functions of that organ, he not only imparted much valuable knowledge but emphasized its practical importance to the teacher as knowledge of the delicate instrument which it is his duty to endeavour to understand how to manage wisely and well. Senator Howlan and Rev. Mr. Lloyd addressed words of encouragement to the teachers, but the latter also impressed upon them the great value of musical study. A class of girls was also present, and at intervals, under the direction of Miss Barr, Principal of the Upper Prince Street School, contributed selections of music which were highly appreciated.

On Friday morning the committee which had been appointed to draft a resolution in regard to the death of Mr. LePage presented the following, which was unanimously adopted by the convention:

Resolved. That we put on record our very deep sense of the loss sustained by this Institute and by the whole Province in the death of Prof. T. A. LePage, an honored and valued member of this Association.

Further Resolved. That the Secretary be requested to send a copy of this resolution to the brothers and sister of the deceased, and to convey to them the deepest sympathies of this Association in their sorrow.

During this and the afternoon session essays were read by Miss Barr on "Our Girls," and by Mr. Neil McLeod, Summerside, on "Chemistry," while Miss McKinlay read a communication from Mrs. Condon on kindergarten work. These papers met with the hearty approval of the Institute.

The proposal was made and cordially adopted to appoint a committee to confer with the Education Department respecting the formation of a Teachers' Library, and to empower them to expend \$100 towards that purpose for the present year should the scheme be found practicable.

The undermentioned members of the Association were appointed officers for the ensuing year, after which the convention adjourned:

President, Mr. John Arbuckle, Inspector for the W. district.
Vice Presidents, Prof. D. J. McLeod, Prince of Wales College; Elden Stewart, Principal of Georgetown School; Miss Janetta McPhail, Summerside.

Secretary-Treasurer, Mr. John Wickham, Principal Queen Square School.

Committee, Mr. C. W. Kielly, Stanley; Mr. John McSwain, Principal Model School; Mr. William Thomson, Little York; Miss E. McKinnon, Charlottetown; Miss Ullia McDonald.

PROF. T. A. LePAGE.

On Thursday morning, 3rd inst., there died at Charlottetown Mr. Thomas A. LePage, one of the Professors in the Prince of Wales College. He had been in delicate health during the past two years, but continued to perform the duties of his office till last February when rest became actually necessary. Retirement, however, did not bring the much needed strength, for he continued to languish until the end came at the early age of thirty-two.

Born at and residing in Charlottetown he became, when only twelve years of age, connected with the Prince of Wales College by joining the preparatory school connected with that institution. Two years subsequently he entered the College, and during a course of four years prosecuted his studies with remarkable assiduity, ability and success. At a time (anterior to the amalgamation of the College and Normal School) when the quality of the students was particularly high in proportion to the number in attendance, when the study of the subjects of an academic course was carried much farther than is possible under present circumstances, and when for years the College reached a standard of excellence unattainable by the combined institution, Mr. LePage graduated with highest honors, and rightfully assumed his place among the few whom the College gladly acknowledges the worthiest of her offspring.

Mr. LePage passed one session with great distinction at Dalhousie College, and as this was the only connection which he had with any other of our higher educational institutions, he may justly be claimed by the Prince of Wales College as peculiarly her own. Nor was she slow to acknowledge his merit. In 1876, a vacancy having occurred, he was invited to supply it for one year, and two years later he was appointed to a permanent position upon the staff.

Eleven years of sound, faithful and intelligent work cannot have been without good and permanent results on the education of the Province, and we are certain that many of the students who came within the range of his influence not only felt it but was greatly benefited by the contact. And, as this period is almost co-extensive with the existence of the Prince of Wales College and Normal School in its present form, nearly all the students who have passed into the country are among the number. Hence the widespread regret and sorrow so prevalent among members of the profession, and the pain of many of them who in Mr. LePage have lost a kind and thoughtful friend.

UNIVERSITY OF DALHOUSIE.

Professor MacMechan, Ph. D., (Johns Hopkins) delivered the inaugural at the opening of Dalhousie University last month. His subject was "Concerning the Earliest English Literature," which he treated in a striking, thorough, yet popular manner. He justified the use of the term Old English as preferable to Anglo-Saxon, and fully illustrated the relation of Old English to general German literature. English literature is not one of shreds and patches but an organic whole.

Attorney General Longley followed in an interesting speech in which he took the occasion to denounce the pressing of the study of the ancient classics upon students. The courses of studies insisted upon should be such as to develop the ability to deal with the industrial potentialities of our country.

President Forrest in opening alluded to the continued remarkable success of Dalhousie students during the past year. A lady graduate, Miss Richey, had been made a Ph. D. of Cornell. James Creighton was appointed an instructor; and Gordon Laird won a Fellowship at the same institution also. Alex. Fraser received a Fellowship at Harvard, D. A. Murray won a Fellowship at Johns Hopkins, and Mr. Trueman, a graduate of two years standing, had been appointed a professor in the Alleghany University.

MUNRO EXHIBITIONS AND BURSARIES.

At the matriculation examinations of the University the following proved to be the fortunate competitors:

Junior Exhibitions.

- First, \$300, J. W. Logan, Colchester, N. S., (Pictou Academy).
- Second, \$300, T. C. McKay, Halifax Academy.
- Third, \$300, E. W. Forbes, Halifax Academy.

Junior Bursaries.

- First, \$200, B. Dodge, Halifax Academy.
- Second, \$200, R. J. Grant, Sunnybræ, (Pictou Academy).
- Third, \$200, Harriet Jamieson, Halifax Academy.
- Fourth, \$200, D. M. Robinson, Sussex, N. B., (Pictou Academy).
- Fifth, \$200, A. S. Barnstead, Halifax Academy.
- Sixth, \$200, James Rankin, New Westminster, B.C.
- Seventh, \$200, J. A. Mackintosh, Halifax Academy.
- Eighth, \$200, Geo. Arthur, Prince of Wales College, P. E. I.
- Ninth, \$200, Lucy C. Murray, Ladies' College, Halifax.

Senior Exhibitions.

- First, \$300, J. B. McLean, Hopewell, N. S.
- Second, \$300, J. W. Brehaut, P. E. I.
- Third, \$300, J. W. Tupper, New Glasgow, N. S.
- Fourth, \$300, C. B. Robinson, Pictou.
- Fifth, \$300, D. D. Hugh, P. E. I.

Senior Bursaries.

- First, \$200, T. F. West, P. E. I.
- Second, \$200, C. L. Moore, New Brunswick.
- Third, \$200, A. O. Macrae, St. John, N. B.
- Fourth, \$200, E. J. Jordan, P. E. I.
- Fifth, \$200, Agnes S. Baxter, Halifax.
- Sixth, \$200, F. A. McMillan, P. E. I.
- Seventh, \$200, W. H. Magee, Digby, N. S.
- Eighth, \$200, C. E. McMillan, Cape Breton.

Astronomical Notes.

The sun souths very fast during September and October, and as a result our days grow shorter very fast. The last date for which the lengths of daylight, twilight and night were given was September 1st. (See July REVIEW.) Here follow the figures for the day of the equinox and for the first days of October and November:

SOUTH OF NOVA SCOTIA.

| | Sept. 22. | Oct. 1. | Nov. 1. |
|----------------|-----------|-----------|-----------|
| Daylight,..... | 12h. 9m. | 11h. 43m. | 10h. 15m. |
| Twilight,..... | 3 13 | 3 11 | 3 14 |
| Night,..... | 8 38 | 9 6 | 10 31 |

NORTH OF NEW BRUNSWICK.

| | Sept. 22. | Oct. 1. | Nov. 1. |
|----------------|-----------|-----------|----------|
| Daylight,..... | 12h. 11m. | 11h. 39m. | 9h. 56m. |
| Twilight,..... | 3 30 | 3 27 | 3 30 |
| Night,..... | 8 19 | 8 54 | 10 34 |

Twilight, it will be observed, is shortest on October 1st, decreasing from the maximum on June 21st to the above figures, and increasing again from these values to another maximum of less amount on December 21st. The minimum really falls, in this latitude, not on October 1st but October 9th, but the difference for these dates is very little. Of course it is "astronomical" twilight that is meant.

Look at the "Equation of Time" column in the almanac, and you will see that this quantity is much greater for October and November than usual—greater from October 17 to November 18 than at any other time during the year. What this means to places where local mean time is kept, you will find explained in the astronomy books. What it means to places where standard time is kept will perhaps surprise some of the opponents of that kind of time—and perhaps some of its friends also. There are still some people in the provinces who kick against standard

time. "Use and wont" are of course at the bottom of their objections, but with many there is a notion that their local time is *true* time. The greater the difference between standard and local, the stronger are the objections and the more persistent the kicking. At Yarmouth the difference is 24½ minutes, and many people even in the town still swear by local time. It would probably surprise these people to be told that from October 7 to November 26 standard time (60° time) is *never* to *true sun time* than their local time is. At Picton, where the difference is about 11 minutes, standard time is truer than local time from September 17 to December 12. This is not put forth as an argument for standard time, but merely to show the falseness of the very common notion that local time is true sun time.

The moon began her October work by occulting Jupiter on the morning of the 1st. That was the ninth time for this year. She will do it again on the evening of the 28th, but not for our benefit. When she rises to us on the 12th she will be passing out of the Hyades, the uppermost star in which (Epsilon Tauri) she will occult to places to the south and east of us. On the night of the 14th she will occult two stars in Gemini — Eta 3½ magnitude and Mu 3 magnitude. The first of these occultations will be visible over all the Atlantic provinces — disappearance a little after 10, reappearance a little after 11. The occultation of Mu will not be visible in the extreme south of Nova Scotia. At Yarmouth there will be a very close shave at 3 a. m. The farther north and west you are from Yarmouth, the better chance you will have of catching this occultation. But 3 a. m. is rather an inconvenient hour, and a small glass will do very little with a third magnitude star when close to the moon. A close shave, however, is a very pretty sight. We had one at Yarmouth early in the morning of March 14th last. It was Saturn, and the shave was so close that the near edge of his ring seemed to all but graze the moon's limb.

The next new moon will be 31 hours old at sunset on October 25. Those who have not yet seen so young a moon will then have an opportunity of trying to do so. On the 28th she will be near Jupiter. If you run your glass that evening about 6° to the left of and above the moon, you will see a pair of fifth magnitude stars (Nu Sagittarii). Next evening they will be a little to the right of her. On November 2 about 8 in the evening she will be south of a pretty triad of fifth magnitude stars (Psi Aquarii).

Venus, Mars and Saturn are still morning stars and may easily be recognized by those who watched their hand-shakings at the end of September, as noted last month. Mercury and Uranus are good-

for-nothing evening stars during the first half of the month. They both pass the sun on the 15th. Uranus will interest us no more until March. Mercury will be on his very best behaviour as morning star during the last week of October, and will be easily visible for a week or more into November.

The only evening star for the month is Jupiter. October will be a good time to watch his motion among the stars. Before August 25th he was moving west. On that day he came to a stand near 4 Sagittarii, a fifth magnitude star now some distance west of him. Since then he has been moving east and will so continue until the end of next May. On October 6th he will be about half a moon-breadth north of a sixth magnitude star which he is now approaching. The star has no name, but the number in the British Association Catalogue of Stars is 6161, and so it is known as B. A. C. 6161. This would be a good chance to see Jupiter attended apparently by five satellites, but unfortunately his four moons will not be all visible to us that evening. On October 20th he will be on the handle of the Milk Dipper — for the third time this year — and nearly half way between Mu and Lambda Sagittarii. From then till November 10th he will be nearing a triangle of small stars (easy in a field glass). One of these stars will be found on close inspection to look less like a star than it did at first. On November 10th Jupiter will be over a moon-breadth north of this curious object. What it is you will likely be able to guess after you see it. It lies half way between Mu and Sigma Sagittarii. It has several names, or numbers rather, the oldest and best known being 22 Messier.

Don't forget to send the REVIEW the date of your latest naked eye observation of Mira. (See September notes.)

C.

A good suggestion is furnished our rulers in the attempt now in progress in New York to establish "a caterpillar" day. The plan is to ask every boy and man to lay aside other business and spend one day in killing these pests. It can easily be seen how valuable such a concerted movement would be. As it is now, through the improvidence or carelessness of some orchard owners these insects are allowed perfect liberty to destroy and multiply, and neighbors as well owners of said orchards have to suffer. If, therefore, on the first appearance of the grub in the spring, the authorities could induce all males throughout the country to take a hand in destroying them, not only would orchards benefit that year but their increase would be much retarded if not altogether stopped.—*Exchange.*

FERNDALE SCHOOL.

No. XXVI.—Order IV. STEGANOPODES.



PHALACROCORAX CARBO (Linn.). A. O. U. 119. (The Cormorant.)

S. Oh what hard names you have put around that Cormorant!

T. They are very easy—easier than common English to remember when you know them. And since the ornithologists use them I thought you would like to know them too; so that if you were talking about birds or reading about them these words would not be meaningless Greek to you.

S. Well, if you can name them plain we would like it better than anything.

T. Well, "*Steganos*" is a Greek word, easier to pronounce than the most of our English words, because it sounds exactly as it spells, and it means *covered, roofed-over, all enclosed*; and "*podes*" means feet. What do *steganopodes* mean, now?

S. Feet roofed-over—feet covered—feet all-enclosed.

T. Very good. *Steganopodes*, you see, is both short and easily pronounced. Some people give this order of birds a Latin name "*Toti-palmate swimmers*." Guess the meaning of this name.

JACK. *Toti* will be from the same word as *total*, I suppose. *Palmate* will be from the same word as *palm* of the hand, I guess. I make it "full-palmed swimmers."

T. Very correct. What was the English name we gave this fourth order of birds, in a previous lesson?

S. Full web-toed swimmers.

T. Then the Greek-derived word *steganopodes*—refers to *all* the toes being enclosed in the web—or covered—or roofed over with the web.

JACK. But ducks and geese are web-footed too?

T. Is every toe of the duck or goose connected with a web?

S. No. The hind toe is not.

T. Correct. Every bird which has its hind toe as well as the others connected by the membrane we call a web, belongs to this order. Make a rough drawing of the foot of the Cormorant on the board so that we see the character of the *toti-palmate* foot.

S. Here it is.

T. Will some other one of you draw a rough sketch of the ordinary palmate foot of swimming birds belonging to *other* orders.

S. Here is one.

T. You now see the difference between the feet of *Steganopodes* or *toti-palmate* swimmers and all other swimming birds. How many different birds of this order have been seen in the Atlantic Provinces?

S. Seven, you told us before. As there are only seven I think we could remember the names of them if you wrote them down.

T. Here they are then.

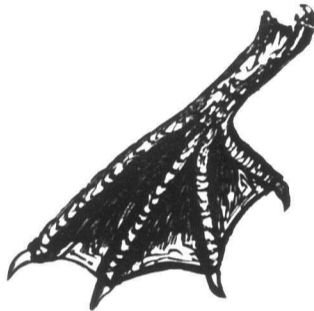
1. The Yellow-billed Tropic Bird (Rare in N. S.)
2. The Gannet (very common in N. S. and N. B.)
3. The Cormorant (common in N. S. and N. B.)
4. The Double Crested Cormorant (rare in N. S. and N. B.)
5. The American White Pelican (rare in N. B.)
6. The Brown Pelican (rare, taken at Pictou, N.S.)
7. The Man O' War Frigate Bird (rare in N. S.)

JACK. If we saw one of these *seven* we could nearly guess its name. Any bird having full web-toed feet would, nearly for certain, be one of them.

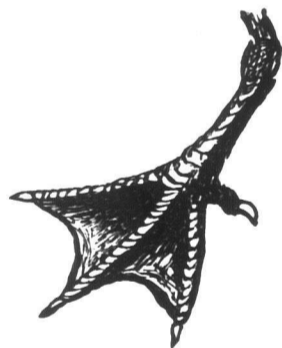
T. Correct. If its nostrils are quite distinctly visible it will be the Tropic Bird. If the nostrils are not perceptible even on close examination it is one of the other six.

S. Then we have only *six* to distinguish between?

T. Yes; and if its bill is *not* hooked it is the Gannet.



TOTI-PALMATE FOOT.



PALMATE FOOT.

S. Now we have only five species to learn.

T. Correct: but only three genera all with the upper mandible of the bill hooked downward as in the cormorant. If the *tarsus*—the shank—is very short, hardly as long as the hind toe, it is the Frigate Bird.

S. Now we have only to distinguish between cormorants and pelicans.

T. Very good. If the bill is shorter than the middle toe, the throat pouch small, and the outer toe much longer than the middle one, it is a cormorant.

JACK. Then, if the bill is longer than the middle toe, the pouch large, and the outer toe shorter than the middle one it must be a pelican?

T. Exactly. The big pouch and long bill of the pelicans make them look top-heavy.

JACK. I guess the crests of the cormorants and the colors of the pelicans will tell which of the two species we might come across.

T. Correct again. But let me explain the scientific name of the cormorant. The generic name has been taken exactly by the Romans from the Greek. "*Phalacro*" means *bald*, and "*Corax*," *raven*. *Phalacrocorax*, then, means "bald crow." Cormorant is likely from "*Corvus*," Latin for *Crow*, and "*marinus*," *marine*; and therefore means "Sea Crow." The specific name "*Carbo*" means *coal*. Why should this name be given?

S. Because it is coal black.

JACK. *Phalacrocorax Carbo*, then, means "Bald Crow Black." But it has nothing like the crow about it except the blackness. Isn't it sometimes called the *Shag*?

T. It is. Describe its color. Plumage generally—

S. Glossy, greenish black.

T. Feathers of back and wing coverts—

S. Bronzy-gray, black-edged.

T. Quills and tail—

S. Grayish-black.

T. Feet—

S. Black.

T. Length—

S. About three feet.

T. Tarsus—

S. Over two inches.

T. Bill—

S. Three or four inches. What are its eggs like?

T. Eggs three; sometimes four; bluish green, coated with white chalky substance, and about $2\frac{1}{2}$ by $1\frac{1}{2}$ inches, in a nest of sticks, grass, moss and seaweed, which is usually very filthy and offensive.

S. Where do they live?

T. Along our coast from Greenland as far south as

New Jersey in winter time, in Europe and portions of the coast of Asia and Africa.

S. What do they live upon?

T. Fish, which they dart down upon from a great height, then toss into the air and catch it as it descends head foremost into their throats.

They are said to have been trained both in China and in the days of falconry in England to catch fish. A ring or thong was tied below their pouch to prevent them from swallowing their catch.

They are popularly looked upon as ugly, most greedily and filthy plunderers; although when mounted in the museum they make very good-looking objects. Milton, in his *Paradise Lost*, Book IV., 194-198, makes Satan personate the Cormorant while he surveys in malicious mood the happy Paradise.

"Thence up he flew, and on the tree of life,
The middle tree and highest there that grew,
Sat like a Cormorant; yet not true life
Thereby regained; but sat devising death
To them who lived."

Shakespeare was no more complimentary to our bird than Milton:

"He tires betimes, that spins too fast betimes;
With eager feeding food doth choke the feeder:
Light vanity, swift-gliding time,
Consuming means, soon preys upon itself."

Romeo and Juliet, Act II., Sc. 1

THE SCHOOL ROOM.

CLAY MODELLING IN THE PRIMARY GRADES

Potter's clay or home made clay (as described in a former number) should be kept in a glazed earthen jar with a lid. "Foot squares" of stout oil-cloth should be piled neatly by on a shelf, one for each scholar. Each scholar should have a napkin or special handkerchief for wiping the clay off the hands at the end of the lesson.

TEACHER CLAY MODELLING. James, pass around the oil-cloth squares to the first row of seats; John to the second row, Dodd to the third, and Clarie to the fourth row.

The four boys having quickly performed the work are standing "at attention" before the teacher.

T. Put a lump of clay as big as that (a cubic inch) on each square.

In a minute this is done, and the four boys are told to supply themselves.

T. (Taking a rounded lump between her two hands the teacher rolls the ball between them to make it a sphere.) Keep your fingers as straight as you can and roll the clay to make it as round as a big marble.

It is being done.

T. All ready. Stop and place the ball on your square. Those whose balls are quite round—hands.

Many hands are up.

T. Pick them up between your thumb and finger, and show me them.

The hands are extended, with many imperfect spheres.

T. Try again. Roll between your palms. Now show. Better. Some are not quite round. (Shows an ovoid form.) Is this round? No. (Shows a sphere with a hollow or protuberance.) Is this round? No.

At last all have been successful in making good spheres.

T. These are spheres. Do you know any thing else that is a sphere? Is this pear?

S. No.

T. Is this egg?

S. No.

T. Is this gooseberry?

S. Yes.

T. Name other things.

S. Cherries—marbles—some apples—currants—rubber balls—drops of water sometimes.

T. Any big spheres?

S. Pumpkins—the moon—the sun—the world.

T. Suppose you cut the sphere in two halves, what will you have then?

S. Two half spheres.

T. Here, I do it, and I call the half sphere a hemisphere. How many hemispheres are in your sphere?

S. Two.

T. Well, roll your spheres to make them perfect, and John will give a knife to the scholars in each of the back seats to divide their spheres. Do it quickly and pass the knife to the seat ahead of you. Just two minutes.

T. What part of your hemispheres are on the cloth?

S. The flat part.

T. Turn up the flat part and look at it. What is the shape of it?

S. Round.

T. Put it on a dry part of your square, and see what the shape of the moist mark it makes will be.

S. Round.

T. Stick a pin straight in the middle of the flat side so that it will not be nearer one side than another.

S. (Do so.)

T. Show. Very good. Which edge of the flat is the pin nearest?

S. It is the same distance from every side.

T. The round flat surface you can call a circle. The round moist mark is a circle, also, and your pin mark is in the centre. Which edge is the centre nearest?

S. The centre is the same distance from the edge all round.

T. Very good. Make a pin mark in the centre of the circle on the other hemisphere.

Done.

T. Now make a small sphere bigger than the head of a pin and put it in the pinmark and put the other hemisphere exactly over it to make a whole sphere. What is in the centre of your sphere now?

S. A small sphere or round grain.

T. Which side of the largest sphere is it nearest?

S. It is right in the middle, no nearer one side than the other.

T. Correct. The outside of the sphere we call its surface. The point in the middle the same distance from every part of the surface we call—

S. The centre.

T. The centre of the—

S. Sphere.

T. How far will you have to stick a pin into your sphere so as to reach the centre?

S. About half an inch.

T. If you stick the pin in anywhere will it be the same distance to the centre?

S. Yes.

T. That distance is called the radius of the sphere. Can the radius of a sphere be in some places longer and in others shorter?

S. No, it would not then be round—it would not be a sphere.

T. Roll your sphere quite round now, and stick a pin in one part of it. What fruit is it like?

S. Like a peach—like a round plum—like a small orange.

T. See who can make it look like a little apple. What must we do to make it like an apple? (An apple shown.)

S. We must make a little hollow where the stem is and a mark at the other end.

T. Well, see who can make most like this apple. Will it be a perfect sphere then?

S. No.

When enough time is given for this trial, and the results are examined by the teacher, the pins or sticks are ordered to be taken out; and the four boys first pick up the clay pellets and place them in the jar, then take up the oil-cloth squares, while the children wipe their fingers on their napkins.

For the REVIEW.]

Notes for Teaching Music by the Tonic Sol-fa Notation.

SECOND PAPER.

To the timid teacher, who fears he cannot teach his class music, let me say. If you can in any way gain the power to sing correctly *soh* and *me* to any given *doh* with patience and perseverance no further difficulty will be able to keep you back. Ask some musical friend to help you thus far, and then, if you can get no more assistance, go on unaided.

Caution. Do not sing with the pupils at any time. When the teacher sings let the class listen, and when the class sing let the teacher look to see that each pupil is standing or sitting correctly, and has the mouth open—not singing through the closed or almost closed teeth—and listen carefully that all are singing in tune and giving pure, musical sounds. This is enough for the teacher to do.

Teach the class to sing softly, and especially a class of boys. There will be no difficulty in teaching to sing strong. Get the boys to use the thin register; *i. e.*, to sing with their sweet voice, like the girl's voice. This can only be secured by singing softly until accustomed to use this voice. In music, even more than in other branches, frequent revision from the first step is necessary; and the singing of these three notes of the scale should be used to tune the voices at the beginning of each music lesson. Further, the class should give the *doh* of any piece before attempting to sing it, in order to put the ears and voices in tune, thus $d\ m\ s\ d^1\ d^1\ s\ m\ d$, or if the key is above E, $d\ m\ s\ m\ d\ s_1\ d$.

Begin the lesson with breathing exercises, and then the singing of a given tone, to find out whether all the pupils can sing in tune and give pure musical sounds, and if they have acquired the power of producing any given tone easily within the range of their voices.

Give similar exercises to those in first paper on your black-board modulator from the manual signs, and written as exercises on the black board. Finish each exercise by singing it to the syllable *to*; but in doing so point to the note sign, and be sure that the pupils are not singing from ear and memory of the tune, but actually from the notes. Carefully develop this power of singing from *note*, and not by ear from memory of the tune. Your success will greatly depend upon this. Ask out a pupil to point any of these exercises on the modulator from memory, and tell the class to sing to the pointing. As soon as possible get individual pupils to point on the modulator and sing easy exercises. This cultivates the memory of tune and accustoms the pupil to his own voice, and

so gives confidence. It also indicates what progress each pupil has actually made. Further, the class will learn much from the pupil's individual singing that would not be learned from the teacher. Next, give ear exercises, as indicated in the last lesson. Then vary the exercises thus: Let the teacher sing such phrases as the following to the syllable *to*: $d\ s\ s$, $s\ s\ d$, $d\ s\ d$, $d\ d\ s$, $s\ m\ d$, $d\ s\ m$, $m\ d\ s$, and the class repeat the phrase, and then sing the phrase a second time to the notes, the teacher and the class making the manual signs to the last singing. The pupils will come to make the manual signs with the singing independent of the teacher. In this way many pupils will come to answer, who otherwise would not attempt to answer in the ear exercises. Before they are aware they will find they can do ear exercises. In the ear exercises it is well to change the key from time to time.

Accent and time. First draw the attention of the pupils to the accent in speaking or in reading prose, and the regular accent in verse.

Lo' the blithe' some lark' is soar'ing.
Hum'ble is my lit'tle cot'tage.

We have regular accent in music. The strong notes are sung to the down beat, and weak to the up beat. Let the teacher sing the following with strong accent on the first, third, fifth and seventh notes:

|| || || ||

Let the class repeat. Then tell them that this strong accent is indicated by the bar line before the note put in these lines:

|| || || || ||

The double line tells that you have come to the end of the piece. The unaccented notes, or those with the weak accent, are shown by two dots in front, thus:

|| || || || ||

Get this exercise sung to *d*, to *m*, to *s*, and to d^1 . This is two-pulse measure, when the accent is on every second pulse or beat. But in two-pulse measure we may have the weak accent first and the strong second, thus:

d || d || d || d ||

Let the pupils sing this to the different notes of the *doh* chord.

When the note is to be prolonged to occupy the time of two beats we write it thus: || l: l.

The pupils may write time exercises on the model of the following, using the three notes learned, and then these may be sung from the black board.

Be particular to get the strong and weak accent in the singing, and establish the habit, so that the pupils may come to sing always with accent which does so much to give character to music:

1. | d :- | m : m | s : m | d :- ||
2. | d :- | m : s | m :- | d :- ||
3. : s | m : s | s :- | m : s | d^1 :- | s ||
4. | d : m | s : m | s :- | m : s | s : m | d :- ||

For the REVIEW.]

In Paris.

I shall never forget my first view of the Eiffel Tower. A clear moonlight evening, a drive through the gay streets of this magnificent city, it suddenly burst on my view from the cab window. Rising a thousand feet it seemed to touch the sky, with the full moon on one side and the planet Jupiter on the other. The great electric light revolving on its summit flashed down upon the Arc de Triomphe, the palace of the Trocadero, the thronging boulevard, and a hundred other points of interest with a brilliancy that was indescribable, making the moon and big planet grow pale with envy. And in the eyes of Parisians, Paris and its great tower do outshine everything else. I could understand why Parisians so tardily seek their couches at two or three o'clock in the morning.

The cleanliness of the streets is wonderful. If cleanliness is next to godliness then republican Paris makes some amends for its alleged lack of reverence. In the early hours of morning, and at different times throughout the day, the dirt is swept to the sides of the streets, whence running streams of water carry it to the sewers.

What strikes a stranger in Paris, apart from its gaiety and splendor, is the absence of commercial traffic in its streets. The people seem to have no other thought than pleasure. Streams of omnibuses, street-cars, cabs pass to and fro continually, always full,—the omnibuses usually during the latter part of the day with the significant ticket *complet* stuck outside. These vehicles stop only at regular intervals, and it is amusing to see the crowd (if you are not in it) struggling for any vacant places on the roof—the favorite place—to which you mount by a stairway in the rear.

The people of Paris, more especially the middle and poorer classes, seem to live on the street. On the door steps are seated women, performing household duties that with us are usually performed indoors. Parisians prefer to dine in the streets and in front of the restaurants. Between the hours of five and eight in the evening, the gay crowds lounge over their bread, fruit and wine, with accompaniments of music, laughter and constant but good natured repartee. Occasionally a couple will start up and sedately perform a minuet on the sidewalk to the evident delight of themselves and the on-lookers.

Speaking of bread, I never fully realized, till I saw the Paris article, why it is called the staff of life. The loaf is about three feet long, a little thicker than a stout walking stick, with a very substantial crust and—very little else. I think most of the bread

that tourists find in Paris was baked for their special benefit, when the great Exhibition was first planned.

The churches of Paris—nearly all controlled by government—are usually crowded with sight-seers; and while their magnificence charms the beholder the latter is called upon pretty frequently to contribute to the French Exchequer. G. U. H.

For the REVIEW.]

Primary Department.MODELLING IN GRADE I.

Some months ago, when, at Mr. March's request, we began modelling in clay, my pupils and I entered on the work with a common and almost evenly-balanced stock of ignorance of the subject and goodwill to overcome that ignorance; the results prove that we were fairly successful, and the experience gained will be invaluable in taking up this term's work.

Armed with the knowledge gained by observation of Miss Orr's methods in the Victoria School and from the manual, after a little private practice, I decided on giving the first lesson to my class. We began, of course, with the sphere. From previous lessons in form my pupils were enabled to take up more work in the first lesson than would be advisable with a new class; there were fifty-five boys present. To save time, I had previously cut the clay into small pieces about an inch square; two of those pieces were placed on each slate; after a short conversation about the model I held up we modelled a clay sphere, then some of the children drew the outline on the blackboard, using the movement approved by Prang, beginning at the lower part of the circumference and working from left to right. Then the class told me of objects resembling a sphere, and when I held up an apple they all agreed that they could mould a sphere into an apple. Taking up the second piece of clay they quickly rolled it into shape and with their pencils made two dents, one for the stem, the other for the blossom-end. Having found by private practice that a clay stem was very perishable and not at all inclined to remain in place, I decided to use twigs instead. The children brought in an abundant supply from the Square, and we found by cutting to the desired length the foot-stalks of leaves made very durable, natural-looking stems. The necessity of making their work durable should be strongly impressed on children. We did not try to fill the other dent, but contented ourselves that day with drawing the apples.

The next lesson was an improvement on the first; the spheres were more perfect, and by putting little tufts of whittled wood in the blossom-end and slightly grooving one side the apples assumed a more natural

appearance. By putting two or more spheres together many articles of interest to children can be made. I tried joining two spheres and adding paws and tail—a very presentable cat was the result. The children reproduced the idea and were much pleased. Little dumb-bells, apples, oranges, and marbles are easily made and give practice.

In dealing with the cube I experienced more difficulty, finding it harder to secure uniform movements, and again the objects based on the cube did not interest them so strongly. Several lessons were necessary before we attained satisfactory results, but once the difficulty of making sharp, clear corners was mastered progress was comparatively easy. Then I combined spheres and cubes in the form of birds' nests, following out the cube till it held three or four tiny spheres. Owing to scarcity of models I relied largely on drawing to develop ideas of arrangement and design, and from the children's representations of objects I learned much that their limited command of language failed to make known.

After modelling the sphere and cube we next took up the cylinder. Here again we had trouble; out of sixty specimens only fifteen were at all presentable. Some were rolled till they closely resembled worms; others were flattened into cakes, while not a few were unlike any known object. In modelling the cylinder care must be taken to avoid depressing the plane faces.—the dent once made is difficult to remove. After several efforts the children produced better results in modelling a cylinder, and with that solid we completed the term. There was no time to form objects based on the cylinder, which with slight changes and additions may be turned into a rolling-pin, mallet, lawn-roller, mug, and many other well known articles.

In conclusion, I would like to say that added to the school lessons my pupils had the advantage of an out-door course in modelling. At the time we began work a large mass of clay was banked at the corner of Union and Waterloo streets. This source of discomfort to their elders was to my enthusiastic pupils a grand field of labor. With plenty of material they modelled in season and out of season, sometimes following up the class instructions, again branching off into experiments of their own, but always gaining in skill. From that unsightly mass their nimble fingers evolved spheres, cubes, cylinders, apples, pears, cats, pigs, cups and saucers, and had the paternal appreciation equalled mine clay modelling would have received a strong impetus.

Being of the opinion that by building for himself the child acquires a fuller knowledge of the value of

labor and its products, and consequently subdues his natural tendency to break and destroy, I would prefer having my pupils make their own models rather than have them supplied ready-made. By cutting the clay to a uniform size a very neat set can be turned out, and when thoroughly dried will stand considerable wear.

M. O'SULLIVAN.

FRÉDÉRIC

The Institute of New Brunswick.

ATTENDANCE IN THE FIRST TEN YEARS.

The following statements, taken from a summary of the registered attendance at the Educational Institute of New Brunswick, made in 1888, at the end of the first ten years of its history, may be of interest to many of the members who read the REVIEW.

The Institute was organized in 1877, and there were no meetings in 1884 and 1888. The first four meetings, the sixth and the seventh were held in Fredericton, the other four in St. John; the first three in the month of August, the next four in July, and the last three in June.

The largest membership in any year was 232, in 1887; the smallest was 96, in 1883; the average was 137.4, the total for the ten years being 1394. The whole number of separate individuals registered as members in attendance in the ten years was 724. In the total membership, the several counties were represented as follows: St. John, 488; York, 203; Kings, 133; Charlotte, 96; Westmorland, 77; Carleton, 46; Northumberland, 41; Queens, 36; Albert, 33; Gloucester, 29; Sunbury, 29; Kent, 12; Restigouche, 12; Victoria, 8; Malawaska, 0.

From 1877 to 1883, gentlemen were most numerous; in the last three years, ladies were most numerous.

The want of persistence in attendance is noteworthy. The number of members registered at every meeting is only three—the present Chief Superintendent, the Secretary and Miss Grace Murphy. One other was present at nine meetings, viz.: the late Dr. W. Brydson Jack. Five others were registered at seven meetings, viz.: G. A. Inch, G. W. Mersereau, J. B. Oakes, G. R. Parkin and Geo. Smith. Five others were registered at seven meetings, viz.: Dr. Rand, John March, Eldon Mullin, Wm. Parlee and D. P. Wetmore. Nineteen others were registered at six meetings,—making only thirty-three persons in all who were registered as members at six out of the ten meetings.

The number registered at only five meetings was seventeen; and the number registered at only four meetings was thirty-nine. Thus no more than eighty-nine individuals, or less than one-eighth of the

whole number, were registered in attendance at four meetings. *More than seven-eighths were registered at three, two or only one meeting.* The percentage of new members, registered for the first time, varied from 68 per cent in 1887 to about 31 per cent in 1883 and in 1887.

Having thus stated the facts, I leave it to others to draw inferences therefrom.

HERBERT C. CREED,
Secretary.

For the REVIEW.]

In re School Registers.

There are two or three points touching our school registers and the keeping of them that have often been before my mind and about which I am just now moved to write.

One is the marking of tardiness on the part of pupils. I have known schools in which *unpunctuality* was practically taught. The boys might be five minutes late and it made no difference. But this is not usual, and it is not *the point*. The point just now is that, according to the newspaper report of the recent Teachers' Institute in St. John, the teachers there hold that a pupil is not late if he is in time to answer to his name or number. Is this right? Is it fair? Suppose No. 10 and No. 40 entered the room together, just in time for the latter to answer! They are both late, since the moment for opening school has passed. But according to the practice said to be followed in the city, No. 10 is marked tardy, while No. 40 is marked punctual. It seems to me the only proper rule is to mark everyone tardy who is not present when the roll-call begins. If anyone enters after that moment, but in time to answer to his name, let him say "tardy" instead of "present."

Another point is regarding the record of "school standing." There is no uniformity in the manner of estimating and recording this. The Board of Education should by all means publish a well-considered plan and require all teachers to conform to it. Here is a plan followed in the schools of at least one town in New Brunswick. Regularity, punctuality, deportment and progress, are each of them marked in parts of 10 or 100, and then the four are averaged. This is absurd. A boy who is almost always present, "to have some fun," and who is never late, but who never knows his lessons and behaves very badly, may make the following marks at the end of the month: 100, 95, 40, 33,—with an average of 67, which is set down as his school "standing." Another, who, for good reasons perhaps, is often absent and often late, but studies hard, makes good progress and behaves well, gets 50, 60, 78 and 80, with the same average

and therefore the same "standing." This gives too much weight to the first two elements.

The third point I have to mention is the irregularity—not to say dishonesty—practised by some teachers, in calling the roll and marking the attendance at the beginning of a half holiday. I have known teachers repeatedly to tell their pupils to "come back after dinner to answer to their numbers and then they may go skating." Of course the government then pays for work that is not done. It is needless to point out the evils in this.

AN OLD TEACHER.

For the REVIEW.]

Bands of Mercy.

"The S. P. C. A. may be well enough, but I can see no sense in those Bands of Mercy.

"To instil into the minds of young children such a love for dumb creatures that they will always be ready to protect them is good, but there is so much cruelty that cannot be reached by such a society," &c., &c.

So many remarks of this kind have fallen upon my ears that the utterers of them will pardon me if I use some of them as a text for this paper.

Let me take my readers into a prettily decorated, well lighted room, in which is being held a fair, presided over by some young members of a Band of Mercy, assisted by their senior friends, the object of which is to raise funds to aid in the erection of a drinking fountain.

See the interested faces of the boys and girls who have really worked to bring about this end; and into whose minds is constantly instilled the principle, Earn what you get, work rather than ask aid.

This is not the only instance in which good work has been done in the Bands of Mercy in Saint John, and the S. P. C. A. has on several occasions received substantial assistance from the efforts of the Bands.

Happily this fair was a financial success, and the "fountain fund" was considerably augmented by its instrumentality, but supposing even that the end was not attained and the animal kingdom not immediately benefited, is it not a great matter to band together young people to work for any worthy cause.

The habits of intelligent observation and of unselfish interest which it stimulates has a tendency to develop public spirited citizens, the want of which as a class is sorely felt in the community.

The subtle power of influence for good or ill is incalculable, and the constantly expanding mind of the young offers the best field of labour.

In our efforts to benefit race, let us endeavour to mould rather than reform, to aid the S. P. C. A. by acting on the underlying causes that go to the formation of character, so that some one may see the day when the necessity for such a society will cease.

To be well employed in a good cause, to learn to work without expecting immediate results, to be satisfied to sow, feeling that whoever reaps will reap good fruit, is a lesson we would do well to learn.

AMONG THE SCHOOLS AND COLLEGES.

Henry Martyn MacKay, B. A., late Science Master in the Halifax Academy, has been appointed to the Science mastership in the Pictou Academy, where he succeeds Mr. A. H. MacKay.

We have received from Principal A. McN. Patterson the annual announcement of Acadia Villa Seminary at Horton Landing, Nova Scotia. The site is a delightful one, and under no teacher could we expect to see a boy grow into a better, all-round, well developed man.

Wm. R. Fraser, B. A., late classical master in the Pictou Academy, succeeds Dr. Lees, who has been appointed to a chair in Nebraska University, as Greek Master in the Wright High School, Baltimore, one of the local feeders of the John Hopkins University.

Inspector Robert MacLellan has been appointed classical master in the Pictou Academy, *vice* J. C. Shaw, who becomes the Munro tutor in classics in the University of Dalhousie. He becomes principal from the first of November in place of A. H. MacKay.

Victor Gladstone Frazee, B. A., has been appointed to the mathematical mastership in Pictou Academy in place of R. M. Longille, M. A., who enters on the practice of law Nov. 1st.

W. H. Waddell, English master and acting principal in the Halifax Academy, has tendered his resignation to open a private boys school after the end of October. There is room for such an institution under able management, and Mr. Waddell's well proven ability augurs great success. N. C. James, B. A., Modern Language Master succeeds him in the academy as acting principal, and V. G. Frazee, B. A., as English master until the end of October.

Graham Creighton has been appointed temporarily to the principalship of Albion Street School, Halifax.

W. E. MacLellan, LL.B., barrister and journalist, lately head master of the West End Schools of Pictou, has been appointed inspector of District 9 including Pictou County and a portion of Colchester, Nova Scotia. Mr. MacLellan's appointment is a specially good one, as in addition to his practical knowledge of the teacher's work he is one of the ablest American writers, an effective speaker, and a thorough British Canadian. If we mistake not, his influence will ere long be felt in a higher tone of manly citizenship

within the bounds of his inspectorate, and eventually beyond it.

W. T. Kennedy, A. M., has been appointed to a mastership in the Halifax Academy as one of the collegiate staff of six.

Howard Murray, B. A., (London) has been appointed classical master in the Halifax Academy. He was a distinguished undergraduate of the University of Dalhousie for three years when he won a Gilchrist Scholarship and continued his studies abroad. Before going to London (where he graduated, and afterwards pursued a post graduate course in classical literature for nearly six years in all) he held with much success the principalship of the High Schools at Stellarton, Guysboro and New Glasgow, winning his Academic Diploma in 1876. When in London he received an appointment for two years to the Munro Classical Tutorship in Dalhousie, upon the completion of which the Halifax Academy was so fortunate as to secure his services. None of our colleges has an abler scholar in the classical chair or one who has been more popular as a teacher.

J. Arnold Smith, M. A., of Digby Academy, N. S., has been appointed to the principalship of the Hants Academy at Windsor as successor of Dr. Hall. Edward Fulton, B. A., (Dal.) has charge until the end of the present term, Oct. 31st.

Truro has commenced the erection of what promises to be one of the finest academic buildings in the province. W. R. Campbell, B. A., (Dal.) is principal. Academic institutions appear to have captured the goodwill of the Nova Scotian ratepayer, to judge by the rapid extension of the system in every quarter of the province.

J. B. Hall, Ph. D., English master in the Normal School at Truro, has been given leave of absence for a year to study abroad. He proceeds to Germany.

The enlargement of the Assembly room and rooms below in Acadia College cost \$1,365. Measures were adopted at the meetings in November last to give increasing efficiency to the science department of the college. A special grant for apparatus was made and Prof. Caldwell reported as follows: "The addition made last summer to the college building has greatly increased the facilities for work in my department. Twelve tables have been put in for practical work in chemistry, and last winter twenty-six students elected this subject with very satisfactory results."

The Johns Hopkins University has just received a bequest of \$100,000 from the late John W. McCoy.

After the 1st of November the academic staffs in Halifax and Pictou will be as follows:

HALIFAX. A. H. MacKay, F. R. S. C., Florence A. Peters, Katherine Mackintosh, Wm. T. Kennedy, N. C. James, B. A., (Toronto), and Howard Murray, B. A., (London).

PICTOU. Robert McLellan, D. M. Solon, B. A., (Dalhousie), V. G. Frazee, B. A., (Dalhousie), and H. M. MacKay, B. A., (Dalhousie).

The Halifax Ladies' College opened on the 10th September. The new features of the institution are the enlargement of the buildings, the engagement of Miss Howard as the head of the Fine Arts Department, and Miss Edwards of Montreal in the primary department. Music is under the charge of Mr. C. H. Porter.

PERSONAL NOTES.

Principal Calkin, of the Nova Scotia Normal School, is taking a trip through the central provinces of Canada and the United States. He will return before the opening of the school in November.

Rev. James Anderson, M. A., is giving instruction in the Tonic Sol-fa Notation to the teachers of the public school in Pictou and New Glasgow, N. S., and the teachers in attendance at the academy and high school.

Geo. R. Parkin, Esq., who has just completed a very successful tour in Australia, in the interests of imperial federation, was presented with a valuable souvenir on his departure from Melbourne, accompanied with many warm expressions of esteem from leading citizens.

Miss May Kellogg, of Halifax, N. S., and Miss Lucy Murray, of Hampton, N. B., the latter winning a bursary, have matriculated at Dalhousie College. D. M. Robinson, of Sussex, N. B., and James Rankin, of British Columbia, also win bursaries.

Professor Dyde, of the University of New Brunswick, has been appointed to the chair of philosophy in Queens College, Kingston.

QUESTION DEPARTMENT.

S. M. J.—What are these blackish objects about the size of a grain of wheat attached to the leaves of the hop, which have some plant lice on them?

Your specimens are the pupa of the beetle — *Coecimella bipunctata*. Left in the box for a day or two there came out of each one a pretty orange-colored beetle, about the size and shape of a small split pea, and having a black spot on each orange wing cover. It is therefore called the "two-spotted lady bird." Its larva, before shrivelling up into the pupa state, were active in destroying the *hop-aphis* or hop-louse. These "lady bird" beetles are, with scarcely any exception, the useful allies of man.

Elsewhere we give a short illustrated account of this interesting section of the great and general mischievous family of beetles. (Sept. No.)

E. J. L.—Your specimens are the egg cases of a new *Rhizococcus*, and they are infested, fortunately, by a dipterous parasite of the genus *leucopsis*. See note elsewhere (Sept. No.)

A. B. M.—Your specimens are larvæ and cocoons of the Larch Saw-fly. See note elsewhere. (Sept. No.)

B. E. D.—Your specimen is an orchid, namely: *Cypripedium acaule*, the Lady's Slipper.

W. C.—What is the best and cheapest book for a beginner in entomology?

The best one we know to fulfil your conditions is "Entomology for Beginners, for the use of young folks, fruit growers, farmers and gardeners"; by A. S. Packard, M. D., New York; published by Henry Holt & Co., New York. An octavo volume of 367 pages.

Would it be too much to ask the REVIEW to say something on clay modelling?

A couple of short articles are to be found in the December number of the REVIEW, 1888. See other articles in this issue.

THE LAST HARE-BELL.

Pluck the harebell, fading fast,
Little one!
Pluck it, for it blooms the last;
Summer's done.

For the harebell comes in June,
Bright and blue,
Lasts until October's noon,—
Blooms for you.

Graceful harebell, lovely flower,
Though we part,
Come again in Summer's hour,
Cheer my heart.

ELAINE GOODALE.

BOOK REVIEWS.

DOMESTIC ECONOMY, a manual for teachers and house-keepers, compiled by M. Alice Clark, Instructor in the Provincial Normal School of N. B. Price 40 cents. Publishers, J. & A. McMillan, St. John. The subject of domestic economy, plain sewing and knitting having been added to the syllabus of examination for female candidates for school license. Miss Clark has done good service in compiling this little work. The book is not only valuable to teachers but is an excellent household manual, a neat and convenient volume, clearly printed and well bound.

FREE HAND PRIMARY DRAWING BOOKS, four numbers, Langdon Thompson, Supervisor of Drawing, Jersey City, N. Y., D. C. Heath & Co., Boston, New York and Chicago. These four numbers, to perfectly carry out the design, should be used along with Manual Training, No. 1, by the same author. They ably illustrate the truth that drawing is only one part—not the whole of the study of form. Each book has attached colored paper for cutting and pasting, and while a manual to the set is furnished the instructions to the teacher in each number are so apt and sufficient that it may be dispensed with. A careful inspection will show clearly how much child-power we are allowing to go to waste and some of the methods by which it may be utilized. We shall notice the following numbers as they appear.

THE ESSENTIALS OF METHOD, D. C. Heath & Co., Publishers, Boston. This little work, of about 120 pages, is an admirable compendium of theory and practice in teaching. It seeks to find the essential forms of methods of instruction, as determined by the general law of development in the mind of the child. It addresses itself to the task of answering, How we learn, and, consequently, How we must teach.

LES TROIS MOUSQUETAIRES, by Alex. Dumas. Edited and annotated by F. C. Sumichrast, of Harvard University. Published by Ginn & Co., Boston. This is an attempt to offer a condensation of Dumas' famous story for school and college use, leaving untouched the main features of the story, its long descriptions and all objectionable passages.

WENTWORTH'S PRIMARY ARITHMETIC. Published by Ginn & Co., Boston. Mailing price, 45 cents. This is an admirable work for teachers of arithmetic in the first grades. Chapter I. deals with numbers from one to ten; Chapter II., the introduction of figures; Chapter III. numbers from eleven to fifteen; Chapter IV. numbers from fifteen to twenty; Chapter V. numbers from twenty to fifty; Chapter VI. numbers from fifty to one hundred; Chapter VII. decimal fractions; Chapter VIII. percentage. Every page is illustrated with a great variety of pictures and objects for slate work and drawing, with numbers of review exercises.

SCHOOL HYGIENE, by Arthur Newholme, M. D. D. C. Heath & Co., publishers, Boston. The author of this little book, of 140 pages, fills several important positions in educational departments in England. Part I. of the work deals

with the construction, lighting, ventilation, drainage and warming of school buildings. Part II. with mental and physical exercise of children, rest, sleep, dress, bathing, care of eyesight, contagious diseases and accidents. The book is written in the interests of teachers, parents and trustees, and is clear and direct in language.

A GENERAL HISTORY for colleges and high schools, by P. V. N. Myers, A. M. Mailing price, \$1.65. Boston, Ginn & Co., publishers. The present volume is based on earlier works, by the same, on ancient, mediæval and modern history. The maps, with which the book is liberally illustrated, are models of clearness and beauty, the arrangement of the text in divisions admirably adapted for study. In addition to these the work is illustrated with pictures of oriental Grecian, Roman and mediæval antiquities, and contains a pronouncing vocabulary and glossary.

OUR WORLD READER, No. 1. Mailing price, 60 cents. Ginn & Co., publishers, Boston. This is a clearly printed and illustrated reader, which will prove of the greatest interest to the young and more instructive than a book of travels.

HIGH SCHOOL ZOOLOGY. An introduction to zoology for the use of high schools, by R. Ramsey Wright, B. A., B. Sc., Professor of Biology in the University of Toronto. (Toronto. The Copp Clark Company, 1889, 341 pp., 75 cents). This volume has been well printed, and is published at a very reasonable price. The name of the author is sufficient guarantee of its accuracy, for Professor Wright is well known as one of the ablest zoological instructors in America. The plan of treatment, we are informed in the preface, is substantially that of the syllabus prescribed by the education department. In this respect the oldest Canadian provinces down here by the sea are not only behind Ontario but behind the distant and younger province of British Columbia on the Pacific. It will not always be this. But at present we find this volume, just published, prescribed for the high schools of Ontario. More than the first half of the book is devoted, and properly, we think, to the vertebrate. The structure of this province is generally exemplified by the anatomy of the catfish, by no means common in many parts of these provinces. But the treatment will be a guide sufficiently suggestive to enable the student to work up any local species. The classification of Canadian fishes, the structure and classification of batrachians, reptiles, birds and mammals, are very neatly outlined. This portion is more fully developed than that relating to the invertebrata, and should be because, firstly, the forms are the most common and conspicuous; secondly, they show homologies so distinctly, and thirdly, their relation to human anatomy throws strong light on all matters connected with human physiology. A very good outline, for a brief one, is given of the invertebrata. We fancy sometimes there is a greater acquaintance, if not preference, shown by the author for European than English or American nomenclature—as shown, for instance, by the use of the generic term *Ephyralita* for *Meibomia*. The book, however, is one we rejoice to see introduced into high schools. Accompanied with dissections of the type forms given in detail, on the part of each student, it will lay a capital foundation for further zoological study, for general information, or for the intelligent understanding of our own valuable organism and the conditions of good health.

SELECTIONS FROM WORDSWORTH, by A. J. George, M. A. Price \$1.35. Boston, D. C. Heath & Co., publishers. Those who have studied the admirable edition of Wordsworth's prelude, by Mr. George, will welcome this companion volume. It contains lyrics, ballads, odes, narrative, reflective and elegiac poems with notes.

ELENE, an old English poem, by Chas. W. Kent, Ph. D., (Leipzig) Professor of English and Modern Languages in the University of Tennessee. Published by Ginn & Co., Boston. This is the re-print of an old Saxon poem, which, with the copious introduction, notes and glossary may be mastered by any one who is interested in early Anglo Saxon literature.

RECEIVED.

AN INTRODUCTION TO ENTOMOLOGY, by Prof. Comstock, Cornell University.

ELEMENTARY PRACTICAL PHYSICS, D. C. Heath & Co., Boston.

COMMON SCHOOL SONG READER and PAGE'S CHOISIES DES MEMOIRES DE DUC SAINT SIMON, Ginn & Co., Boston.

LAW OF CHILDHOOD and other papers, Alice B. Stockham & Co., Chicago, publishers; THE CHILD and CHILD NATURE, C. W. Bardeen, publisher, Syracuse; HAND-BOOK OF GEOLOGY, for the use of Canadian students, by Sir J. W. Dawson, Principal of McGill University, Montreal.

COMPTE RENDU DES SEANCES ET CONCOURS, Congres des Exercices Physiques, Exposition Universelle de, 1889, Paris.

TUBERCULOSIS IN CATTLE AND ITS COMMUNICABILITY TO MAN, Report late committee, House of Commons, Ottawa.

JOHNS HOPKINS UNIVERSITY CIRCULARS, Vol. VIII., No. 74.

A SUMMARY ACCOUNT OF THE WILD BERRIES AND OTHER EDIBLE FRUITS OF NEWFOUNDLAND AND LABRADOR, by the Rev. Arthur C. Waghorne, New Harbor, Newfoundland.

PUBLICATIONS RECEIVED.

In the October *Forum* Prof. Wm. T. Harris, the new United States Commissioner of Education, reviews the system of State Socialism, explained in Edward Bellamy's "Looking Backward." . . . Seven writers—clergymen, college professors and public men, some of them specialists of acknowledged standing—have associated themselves to discuss special questions of social interest and import in the pages of *The Century*. The opening paper will appear in the November number . . . *St. Nicholas*, for October, comes enlarged and with a greater variety of contents and illustrations than usual . . . General O. O. Howard has written an article in the October number of *Wide Awake*, entitled, "How many Indians in the United States?" The number given is 262,620 . . . *Treasure Trove*, for October, has a fine table of contents. Published by E. L. Kellogg & Co., New York. . . . The last number of *Garden and Forest*, New York, has a strong plea against turning Central Park into grounds for the proposed Exposition of 1892. This park, it argues, is one of the most interesting creations of American genius and should not be despoiled even for a world's exposition. . . . The *Microscope* has gone to Trenton, New Jersey, 145 N. Green Street. Dr. Alfred C. Stokes becomes editor. It has always been the best microscopic journal published for its price—\$1.00 . . . *Science* is ever fresh. Its weekly budget of science work and news is most admirable.

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GREEK SUBJECT:

Xenophon, *Anab.* Book IV.

Dalhousie for Munro Exhibitions and Bursaries will require also Xenophon *Anab.* Books V. and VI.

LATIN PROSE COMPOSITION:

Bradley's Arnold, Exercises 1-44.

Dalhousie for Munro Exhibitions and Bursaries will also require *Greek Prose Composition* as in Fletcher and Nicholson (A. Baillie, Kingston, Ont.) Exercises 1-28.

FOR 1891 (TO BE USED 1890-91).

LATIN SUBJECTS:

- (1) *Cæsar de Bell. Gall.* Books IV. and V.
- (2) Virgil, *Æneid*, Book II.

For ordinary matriculation Dalhousie will accept either (1) or (2). In addition to (1) and (2) Acadia will require Cicero, *Pro Archia*.

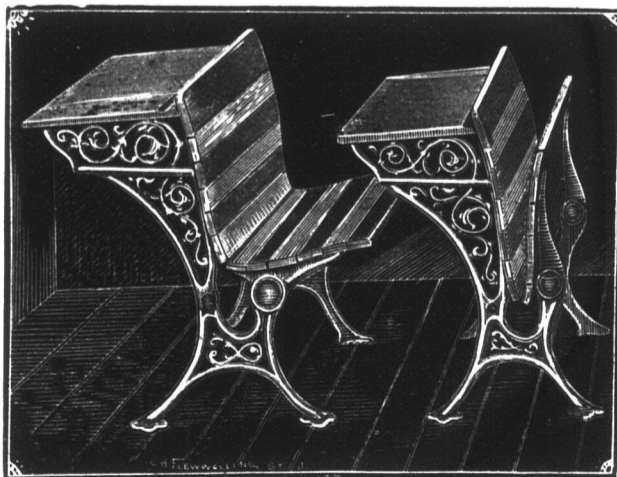
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The Calendar for the Session of 1889-90 contains information respecting conditions of Entrance, Course of Study, Degrees, etc., in the several Faculties and Departments of the University, as follows:—

FACULTY OF ARTS—(Opening Sept. 16th 1889)
DONALDA SPECIAL COURSE FOR WOMEN—(Sept. 16th)
FACULTY OF APPLIED SCIENCE—Civil Engineering, Mechanical Engineering, Mining Engineering, and Practical Chemistry. (Sept. 16th).

(Address McGill College.)

FACULTY OF MEDICINE—(Oct. 1st).
FACULTY OF LAW—(Oct. 1st).
McGILL NORMAL SCHOOL—(Sept. 2nd).

Copies of the Calendar may be obtained on application to the undersigned.

The complete Calendar, with University Lists, Examination Papers, &c., will shortly appear, and may also be had of the undersigned.

J. W. BRAKENRIDGE, B.C.L., Act'g. Secretary.

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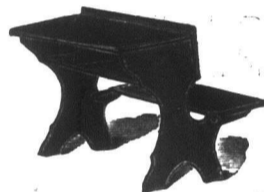
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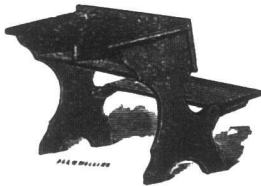
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| 1874 | 21,808 66 | 37,721 00 | 1,634,156 00 | 1,885,311 00 |
| 1876 | 38,794 30 | 87,105 00 | 3,051,885 00 | 5,419,470 00 |
| 1878 | 53,163 63 | 142,619 00 | 5,419,470 00 | 7,716,001 00 |
| 1880 | 82,326 35 | 227,424 00 | 9,603,543 00 | 12,041,914 00 |
| 1882 | 163,370 23 | 427,429 00 | | |
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