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THE NORMAL SCHOOL FOR ONTARIO.

The establishment of a Normal School for the training of teachers, as a necessary part of a national system of education, engaged attention in Upper Canada in 1836. But no detailed plan, by which that object could be accomplished, was recommended to the Legislature until the presentation, in 1846, of a *Report on a system of Public Elementary Instruction for Upper Canada*, by the Chief Superintendent of Education. Practical effect was immediately given to those recommendations by the passing of a School Law—embodying the general features of the system detailed in that report—appropriating \$6,000 for furnishing suitable buildings, and an annual grant of \$6,000 for the support of the Normal School, and placing it under the management of a Board of Education and the Chief Superintendent of Education.

The first attention of the Board, on its appointment in July, 1846, was directed to procuring suitable premises for the Institution; and application was made to the Government for permission to occupy the Government House of the late Province of Upper Canada, at Toronto, until proper buildings could be erected. The application was granted; and after the necessary arrangements had been completed, the Normal School for Upper Canada was opened on the 1st of November, 1847, in the presence of a large number of gentlemen from different parts of the Province.

The removal of the seat of Government from Montreal to Toronto, 1849, in consequence of the burning of the Parliament House on the passing of the "Rebellion Losses Bill," necessitated the removal of the Normal School to some other premises, and the adoption of measures for the immediate erection of

buildings for the Institution. Accordingly the Legislature at its session in 1850 appropriated \$60,000 for the purchase of a site and erection of buildings, and an additional \$40,000 in 1852—making in all \$100,000. The corner stone of the new buildings was laid on the 2nd July, 1851, by His Excellency the Earl of Elgin and Kincardine, K.T., Governor-General, in the presence of the members of the Legislature and the citizens of Toronto, and the premises were formally opened by a public meeting in the theatre of the Institution on the 24th November, 1852. On the 15th of May, 1858, the Normal School was removed into the new building on Gerrard Street, and the old apartments were applied to the purposes of an Educational Museum, and a projected School of Art and Design for Upper Canada, since formed into an Educational Museum.

The Institution consists of a Normal School and two Model Schools; the former, the school of instruction by lecture; the latter, the school of instruction by practice. The students in the former are teachers-in-training, whose ages vary from 17 to 30, while the pupils in the latter are children between the ages of 5 and 18 or 20 years. In the Normal School the teachers-in-training are instructed in the principles of education and the best methods of communicating knowledge to the youth placed under their care—are "taught how to teach;" in the Model Schools they are taught to give practical effect to those instructions, under the direction of teachers previously trained in the Normal School. The Model Schools for Boys and Girls are designed, by both the system of instruction pursued and general arrangements, to be the *model* for all the Public Schools of the Province.

The Institution is designed to train Public School Teachers, so as to fit them for the more efficient discharge of their varied and important duties. Though essentially a *training school*, rather than a mere school of instruction, in the ordinary sense of the term, the majority of those received as students-in-training, are so deficient in scholastic attainments, that it is found necessary to include in its course of instruction, not merely discussions on the principles of education and methods of teaching, but also the actual teaching of most, or all, the branches of Public School study. It is conceded by all who have devoted any attention to the subject, that "to teach well one must be possessed of adequate knowledge; in a word, must be well informed;" and as more than nine-tenths of those who apply for admission to the Normal School do not possess anything like that amount of information and general knowledge which the advanc-

ing spirit of the age very properly demands on the part of those who would become educators of youth, the Normal School Masters are compelled to supplement, by lectures on the different branches of study embraced in an ordinary English Education, the early training or want of training of those who enter its walls. Every lecture, therefore, given in the Normal School is delivered with a two-fold object:—

- 1st. To convey to the class of students-in-training a certain amount of information on the subject on which it treats; and
- 2nd. To give this information in such a manner, that making the necessary allowance for differences of age and attainments, it may serve as a *model* of the method in which the same subject is to be discussed before a class of children.

**GENERAL REGULATIONS IN REGARD TO
THE NORMAL SCHOOL FOR THE PROVINCE OF ONTARIO,
AND THE COURSE OF STUDY THEREIN.**

(Adopted by the Council of Public Instruction.)

I. The sole object of the Normal School for Ontario is to prepare students for the profession of Teacher. In addition to the course of lectures on the subjects required for First and Second Class Provincial Certificates, students have the advantage of practice in the Model School under the direct supervision of the Principal and Masters of the Normal School, and the teachers of the various divisions.

II. The semi-annual sessions of the Normal School are as follows: (1) The Winter Session commences on the 8th day of January, and closes on the 15th day of June. (2) The Autumn Session commences on the 8th day of August and closes on the 22nd day of December.

[If the days of opening fall on Sunday, the Session will begin on Monday.]

III. A Normal School course—varying in length according to ability of students—with requisite practice in the Model School, and a certificate of attendance and aptitude to teach, enables a student to present himself before the Board of Examiners as a candidate for a First or Second Class Certificate, without spending in the one case *five* years, in the other *three* years in the actual teaching of a school.

IV. Applicants for admission to the Normal School, if females, must be seventeen years of age; if males, eighteen years.

V. Applications for admission accompanied with certificate of moral character, dated within three months of its presentation, signed by a clergyman or member of the religious persuasion with which the applicant is connected, must be made at the Department of Education, on the 8th day of January and of August in each year. No applications will be received, if made after the ninth day of these months.

VI. Candidates must pass the prescribed entrance examination, sign a declaration of their intention to devote themselves to the profession of school teaching, and state that their object in coming to the Normal School is to qualify themselves better for the important duties of that profession.

VII. The students are arranged in two divisions—the first and the second. The latter of these is subdivided into a junior and a senior section.

VIII. The classification in each division is based upon the entrance examination, and continued according to the result of monthly examinations, which determine the status of the students.

IX. Those students only shall be eligible to compete for First or Second Class Provincial Certificates, who shall have successfully passed a terminal examination in the subjects prescribed in the programme, and received a Normal School Certificate.

X. Upon these conditions, candidates are admitted to the advantages of the Institution without any charge, either for tuition or the use of the Library. The books which they may be required to use in the School are supplied at a reduced rate.

XI. The Teachers-in-training must lodge and board in the city, in such houses and under such regulations as are approved of by the Council of Public Instruction. The cost of board ranges from \$2 to \$3 per week.

**STAFF OF TEACHERS.
NORMAL AND MODEL SCHOOLS FOR ONTARIO.
NORMAL SCHOOL.**

- THE REV. H. W. DAVIES, D.D.,..... PRINCIPAL.
- J. CARLYLE, ESQ., M.D.,..... MATHEMATICAL MASTER.
- T. KIRKLAND, ESQ., M.A.,..... SCIENCE-MASTER.
- J. GEORGE HODGINS, ESQ., LL.D.,..... SCHOOL-LAW LECTURER.
- W. ARMSTRONG, ESQ., C.E.,..... DRAWING-MASTER.
- MR. H. F. SEFTON,..... MUSIC-MASTER.
- MR. S. CLARE,..... WRITING MASTER.

MODEL SCHOOL.

- MRS. CULLEN,..... HEAD-MISTRESS.
- MISS JONES,..... TEACHER OF 2nd DIV.
- MISS ADAMS,..... " 3rd "
- MR. HUGHES,..... HEAD-MASTER.
- MR. SCOTT,..... TEACHER OF 2nd DIV.
- MR. MCPHEDRAIN,..... " 3rd "
- MAJOR GOODWIN,..... TEACHER OF GYMNASTICS
AND CALISTHENICS.

I.—ENTRANCE EXAMINATION FOR SECOND DIVISION.

- SUBJECTS. The applicant must—
- READING..... Read with ease any ordinary prose passage.
 - SPELLING..... Spell correctly. The written examination papers will be read with special regard to spelling.
 - WRITING..... Write legibly and neatly.
 - ETYMOLOGY..... Know the *prefixes* and *affixes*.
 - GRAMMAR..... Know the elements and be able to parse with application of rules any prose sentence.
Be able to analyze any ordinary prose passage from the Readers.
 - COMPOSITION..... Write an ordinary business letter.
 - GEOGRAPHY..... Know the definitions, the outlines of the physical geography of AMERICA and EUROPE; the outlines of political geography generally—that of CANADA, of AMERICA, and of EUROPE more particularly.
 - HISTORY..... Know the outlines of *ancient* and *modern*, and the introductory part of History of CANADA.
 - ARITHMETIC..... Be acquainted with Notation, Numeration, Simple and Compound rules, G. C. M., L. C. M., Fractions and Proportion.
 - MENSURATION..... Be familiar with the mensuration of the Square, Rectangle and Triangle.
 - ALGEBRA..... Be acquainted with authorized text book to page 43.

II.—COURSE OF STUDY IN JUNIOR SECTION OF SECOND DIVISION.

- SUBJECTS.
- READING..... In Fourth Book.
 - SPELLING..... Dictation and oral.
 - WRITING..... Under supervision of Writing-master.
 - ETYMOLOGY..... Prefixes, Affixes, and principal root words.
 - GRAMMAR..... The Introductory Grammar.
 - COMPOSITION..... Writing official and business letters and elementary composition.
 - GEOGRAPHY..... Mathematical, physical and political.
 - HISTORY..... Outlines of General History.
 - ARITHMETIC..... To Proportion inclusive, together with Mental Arithmetic.
 - MENSURATION..... Square, rectangle and triangle.
 - ALGEBRA..... To simple equations.
 - NAT. PHILOSOPHY... The properties of matter. Elements of Statics.
 - PHYSIOLOGY..... General view.
 - EUCLID..... Book I.
 - EDUCATION..... Attendance at lectures.
 - DRAWING..... Elementary.
 - MUSIC..... Practice in Vocal Music.

SCHOOL-LAW	With reference to Public School Teachers.
BOOK-KEEPING	By double entry.
CHEMISTRY	Elements as contained in "First Lessons in Agriculture."

III.—COURSE OF STUDY IN SENIOR SECTION OF SECOND DIVISION.

SUBJECTS.

READING	In Fifth Book.
SPELLING	As in Junior Section.
WRITING	Under supervision of Writing-master.
ETYMOLOGY	Of the more difficult words in Reading Book.
GRAMMAR	The advanced Grammar, with special reference to analysis.
COMPOSITION	On any prescribed subject.
GEOGRAPHY	Commercial geography. Elements of Meteorology.
HISTORY	British and Canadian.
ARITHMETIC	From Proportion to end of book, with practice in Mental Arithmetic.
MENSURATION	Of surfaces.
ALGEBRA	From simple equations to page 129 of authorized text-book.
NAT. PHILOSOPHY	Statics, Hydrostatics and Pneumatics.
PHYSIOLOGY	As contained in authorized text-book.
EUCLID	Book II., with problems on Books I. and II.
EDUCATION	Attendance at lectures.
DRAWING	Advanced, including construction of maps.
MUSIC	Practice in vocal, with instruction in theory.
SCHOOL-LAW	With reference to Public School Trustees.
BOOK-KEEPING	By double entry.
CHEMISTRY	As in "First Lessons in Agriculture," and its application to Agriculture.
CHEMICAL PHYSICS	Heat.
NAT. HISTORY	General view of Animal kingdom.
BOTANY	As in "First Lessons in Agriculture." Elements of Vegetable Physiology.

IV.—ENTRANCE EXAMINATION FOR FIRST DIVISION.

SUBJECTS.

READING	As for entrance into second division.
SPELLING	" " " "
ETYMOLOGY	" " " " together with a knowledge of the principal Latin and Greek roots, and a fair ability to analyze etymologically.
GRAMMAR	Thorough acquaintance with definitions and forms; and ability to parse etymologically and syntactically, and to analyze any ordinary piece of English.
COMPOSITION	A letter or a composition upon any given subject.
WRITING	Neat and legible.
GEOGRAPHY	Mathematical, physical, political and commercial, including the forms of Government, Religion, &c., of the principal countries in the world.
HISTORY	General, English and Canadian.
ARITHMETIC	Authorized text-book in theory and practice.
MENSURATION	Of surfaces.
ALGEBRA	As far as page 129 in authorized text-book.
EUCLID	Books I. and II., with problems.
NAT. PHILOSOPHY	Statics, Hydrostatics, and Pneumatics.
CHEMISTRY	As in "First Lessons in Agriculture," and its application to Agriculture.
BOTANY	As in "First Lessons in Agriculture," and elements of Vegetable Physiology.

V.—COURSE OF STUDY IN FIRST DIVISION.

SUBJECTS.

READING	Sixth Book—prose and verse.
SPELLING	To dictation.

WRITING	Under supervision of Writing-master.
ETYMOLOGY	More fully pursued than in 2nd division.
GRAMMAR	Advanced Grammar, with special reference to analysis, figures, and comparative grammar.
COMPOSITION	As in 2nd division Senior section.
ENG. LITERATURE	Authorized text-book.
GEOGRAPHY	Previous course reviewed. Elements of Geology.
HISTORY	Philosophy of History.
EDUCATION	Attendance at lectures.
SCHOOL-LAW	With reference to Municipal Councils and Public School Inspectors.
MUSIC	Theory and practice.
DRAWING	Perspective and outline in books and on blackboard.
BOOK-KEEPING	By double entry.
ARITHMETIC	General.
MENSURATION	Surfaces and solids.
ALGEBRA	General.
EUCLID	Books III., IV., VI., with definitions of V. and problems.
NAT. PHILOSOPHY	Statics and Dynamics, treated mathematically, Hydrodynamics and Acoustics.
CHEMICAL PHYSICS	Light and Electricity.
CHEMISTRY	General principles of chemical philosophy; chemistry of Metalloids; chemistry applied to agriculture and the arts.
PHYSIOLOGY	As in text-book.
NAT. HISTORY	General view of the animal kingdom; character of the principal orders, classes and genera.
BOTANY	Previous course reviewed. Systematic Botany; flowering plants of Canada.

TEXT-BOOKS.

FOR USE IN THE NORMAL SCHOOL OF ONTARIO.

(Prescribed by the Council of Public Instruction, and supplied to Students at half price.)

1. ENGLISH.

The Canadian National Series of Reading Books. (Authorized edition.)
 The Spelling Book, A Companion to the Readers. (Authorized edition.)
 Miller's Analytical and Practical English Grammar. (Authorized edition.)
 An English Grammar for Junior Classes. By the Rev. H. W. Davies, D.D. (Authorized edition.)
 A History of English Literature, in a Series of Biographical Sketches. By William Francis Collier, LL.D.

II. ARITHMETIC AND MATHEMATICS.

Advanced Arithmetic for Canadian Schools. By Barnard Smith, M.A., and Archibald McMurchy, M.A. (Authorized edition.)
 Elementary Arithmetic for Canadian Schools. By Barnard Smith, M.A., and Archibald McMurchy, M.A. (Authorized edition.)
 Algebra for High Schools. By I. Todhunter, M.A., F.R.
 Elements of Algebra. By J. H. Sangster, M.A., M.D.
 Euclid's Elements of Geometry. By R. Potts, M.A., or Todhunter, M. A.

III. GEOGRAPHY AND HISTORY.

Lovell's General Geography. By J. George Hodgins, L.L.D. Barrister-at-Law. (Authorized edition.)
 Geography Generalized. By Robert Sullivan, L.L.D., Barrister-at-Law.
 A History of Canada and of the other British Provinces of North America. By J. George Hodgins, LL.D., Barrister-at-Law.
 Outlines of General History. By William Francis Collier, LL.D.

School History of British Empire. By William Francis Collier, L.L.D.

IV. PHYSICAL SCIENCE.

Lessons in Elementary Chemistry. By H. E. Roscoe, B.A., F.R.S.

Galbraith and Haughton's Manual of Mechanics. For First Division.

Rudimentary Mechanics. By Charles Tomlinson.

Ganot's Natural Philosophy. Ed. by Peck.

The Animal Kingdom. By Ellis A. Davidson.

How Plants grow. By Asa Gray, M.D.

V. MISCELLANEOUS.

First Lessons in Agriculture. By Rev. Dr. Ryerson.

Easy Lessons on Reasoning. By Archbishop Whately.

First Lessons on Christian Morals. By Rev. Dr. Ryerson.

First Book on Anatomy. By Calvin Cutter, M.D.

Three-Part Songs. By H. F. Sefton.

Manual of Vocal Music. By H. F. Sefton.

Mensuration. By J. H. Sangster, M.A., M.D.

Book-keeping. By W. R. Orr.

THE SCHOOL SYSTEM OF ONTARIO AND THE CHURCH OF ENGLAND BISHOPS.

From the Address to the Synod of the Diocese of Toronto, by the Right Reverend Bishop Bethune, June, 1872.

Speaking of the increasing spread of evil, and of the duty of the Church, under her Divine Master, to cope with it, the Bishop remarked:

"Her work is, confessedly, to lead fallen man to the true source of pardon, and to teach him to aim at the recovery of the moral image in which he was at first created. If the passions, and prejudices, and divisions of professing Christians themselves are a distressing hindrance to the attainment of this noble and dutiful aspiration, we have much in the condition of the world around us to warn and rouse us to a vigorous and united effort to arrest the increasing tide of sin and crime. The developments of a grossly evil spirit at the present day fill us with horror and alarm; the profligacy and wanton cruelty of which we hear so many instances, make us tremble for our social peace and safety.

"It is but right to enquire to what all this enormity of wickedness is traceable, that we may come if possible to the remedy. That is largely to be ascribed, as all must be persuaded, to the neglect of religious instruction in early life; to the contentment of peoples and Governments to afford a shallow secular education, without the learning of religious truth, or the moral obligations that it teaches. The child taught and trained for this world's vocations only, without a deep inculcation of the love and fear of God, and the penalty hereafter of an irreligious and wicked life, will have but one leading idea—self-aggrandizement and self-indulgence, and will be checked by no restraint of conscience in the way and means of securing them. Gigantic frauds will be perpetrated, if riches can thus be acquired; atrocious murders will be committed, if these will remove the barrier to unholly and polluting connections, or cast out of sight the objects of jealousy and hatred.

"I have no disposition to reprobate this defect in the system of education, prevailing with the authority and support of Government among ourselves. I know the difficulty, the almost impossibility, of securing the temporal boon with the addition of the spiritual; how hard it must prove in a divided religious community to introduce among the secular lessons which are meant for usefulness and advancement in this world, that lofty and holy teaching which trains the soul for heaven. The irreverent and fierce assaults recently made upon a praiseworthy effort of the Superintendent of Education in this Province to introduce a special work for moral and religious instruction amongst our common school pupils, testify too plainly the difficulty of supplying that want. (Cheers.)

"I have confidence in the good intentions and righteous efforts of that venerable gentleman to do what he can for the amelioration of the evils which the absence of systematic religious teaching of the young must induce; so that we may have a hope that, from his tried zeal and unquestionable ability, a way may be devised by which such essential instruction shall be imparted, and the terrible evils we deplore to some extent corrected." (Cheers.)

In response to this portion of his address, the Rev. Dr. Ryerson addressed the following note to the Bishop. The note and the Bishop's reply are published with the consent of the writers:—

Toronto, July 1st, 1872.

MY DEAR LORD BISHOP:—

I feel it my bounden, and at the same time most pleasurable duty, to thank you with all my heart for your more than kind reference to myself in your official charge at the opening of the recent Synod of the Diocese of Toronto; and especially do I feel grateful and gratified for your formal and hearty recognition of the Christian character of our Public School System, and of the efforts which have been made to render that character a practical reality, and not a mere dead and heartless form.

It has also been peculiarly gratifying to me to learn that your lordship's allusions to myself and the school system were very generally and cordially cheered by the members of the Synod.

My own humble efforts to invest our school system with a Christian character and spirit have been seconded from the beginning by the cordial and unanimous co-operation of the Council of Public Instruction; and without that co-operation my own individual efforts would have availed but little.

Since the settlement of the common relationship of all religious persuasions to the State, there is a common patriotic ground for the exertions of all, without the slightest reasonable pretext for political jealousy or hostility on the part of any. On such ground of comprehensiveness, and of avowed Christian principles, I have endeavoured to construct our Public School System; such, and such only has been my aim in the teachings of my little book on Christian Morals; and such only was the aim and spirit of the Council of Public Instruction in the recommendation of it,—a recommendation to which the Council inflexibly adheres, and which it has cordially and decidedly vindicated.

I have the honour to be
Your Lordship's humble and obliged servant,

E. RYERSON.

To the Right Reverend Dr. Bethune,
Lord Bishop of Toronto.

TORONTO, July 3, 1872.

MY DEAR DR. RYERSON,—I have to thank you for your letter of the 1st instant, received last evening, and to express my gratification that I had the opportunity to bear my humble testimony to your zealous and righteous efforts to promote the sound education of the youth of this Province.

I believe that in the endeavours to give this a moral and religious direction, you have done all that, in the circumstances of the country, it was in your power to accomplish. I was glad, too, to give utterance to my protest against the shameless endeavours to hold up to public scorn the valuable little work by which you desired to give a moral and religious tone to the instruction communicated in our Common Schools. If more can be done in this direction, I feel assured you would assume any reasonable amount of responsibility in the endeavour to effect it.

Wishing you many years of health and usefulness, I remain, dear Dr. Ryerson, very faithfully yours,

A. N. Toronto.

Rev. Dr. Ryerson, D. D.

NOTE.—This correspondence affords a striking instance of the fact that the very earnest discussions between the writers of these notes in past years, have not diminished in any way the personal respect and kindly feeling which happily exists between them. And it was so with the late venerable Bishop Strachan, with whom Dr. Ryerson more than once measured swords in days gone by. Among his very latest utterances on the Separate School Question in the Synod in 1856 he thus referred to the Head of the Education Department and his labours:—

"One new feature, which I consider of great value, and for which I believe we are altogether indebted to the able Superintendent, deserves special notice: it is the introduction of daily prayers. We find that 454 [3,246 in 1870!] schools open and close with prayer. This is an important step in the right direction, and only requires a reasonable extension to render the system in its interior, as it is already in its exterior, nearly complete. But till it receives this necessary extension, the whole system, in a religious and spiritual view, may be considered almost entirely dead. [The increase from 454 in 1856 to 3,246 in 1870, would have gratified the venerable prelate had he lived.]

I do not say that this is the opinion of the Rev. Dr. Ryerson, who no doubt believes his system very nearly perfect; and so far as he is concerned, I am one of those who appreciate very highly his exertions, his unwearied assiduity, and his administrative capacity. I am also most willing to admit that he has carried out the meagre provisions of the several enactments that have any leaning to religion, as far as seems consistent with a just interpretation of the law. *Charge of 1856, pp. 15, 16.*

DR. RYERSON AND THE SCHOOL SYSTEM OF ONTARIO.

Dr. Ryerson was appointed Superintendent of Education for Ontario in 1844, and for twenty-eight years in succession he has held that office, labouring faithfully and efficiently in the cause of public education in that province. The gratifying results that have been reached there are largely due to his untiring efforts. The last legislature abolished the rate-bills, and the public schools are to be henceforth free to all residents between the ages of 5 and 21 years. The entire school population between the ages of 5 and 16 years is 483,966, and the number of pupils between those ages attending school is 420,488, or nearly 87 per cent. This speaks well for the efficiency of the system. The salaries of teachers are low, but there is a fund from which those who wear themselves out in the service may obtain assistance. The average yearly salary of male teachers in counties is \$260, of female teachers, \$187; in cities, of male teachers, \$597, of female teachers, \$231. We notice some excellent provisions of the law relating to school accommodations: as, that the site for the school-house shall be not less than half an acre in extent, and that the walls of the school-house shall not be less than ten feet high in the clear, and shall contain not less than nine square feet on the floor for each child in attendance, and shall be sufficiently warmed and ventilated, and the premises properly drained. The public money may be withheld from those districts failing to comply with these regulations. Free public libraries also constitute a valuable feature in their system. The total number of these libraries in Ontario is 3,968, containing 759,358 volumes.—The school system of Ontario, as set forth in the report of Dr. Ryerson, from which the above items have been gleaned, has much that is worthy of approval and imitation.—*Illinois Teacher.*

CIRCULAR TO THE BOARDS OF TRUSTEES OF HIGH SCHOOLS, AND INSPECTORS OF PUBLIC SCHOOLS, IN THE PROVINCE OF ONTARIO.

EDUCATION OFFICE, Toronto, 3rd August, 1872.

GENTLEMEN: In my circular of the 13th of August of last year, which I addressed to Boards of High School, I called attention to the provisions of the new Law in regard to the admission of pupils to the High Schools, as follows:—

"Hitherto the Grammar Schools have been considered as almost exclusively Classical Schools, and the programme of studies for them was chiefly formed with that view; but under the new Act, it is especially provided that they shall be High English Schools as well as Elementary Classical Schools, and for girls as well as for boys. When it is provided in the Act that in each High School, provision shall be made for teaching to both male and female pupils the higher branches of an English and Commercial Education, including the Natural Sciences, with special reference to Agriculture, it was clearly intended that the lower or elementary branches of an English Education should not be taught in the High Schools, but in the Public Schools. It was also intended that all pupils to be eligible for admission to the High Schools for the study of classics, as well as for higher English, must first be grounded in the elements of a sound education in their own native language, as strongly urged by the latest Royal and Parliamentary Commissions on Education in England, but strangely overlooked hitherto, as little boys six and seven years of age have been put to the study of ancient and foreign languages, and left to grow up to manhood without ever having been formally taught their native tongue, or the essential elements of a practical English education. This anomaly is provided against by the new Act in the future education of Canadian youth, at least so far as the Public High Schools are concerned." Accordingly the 38th Section of the new Act, which became law on the 15th of last February, provided as follows:—

ADMISSION OF PUPILS TO HIGH SCHOOLS.—"38. The County, City or Town Inspector of Schools, the Chairman of the High School Board and the head master of the High School shall constitute a Board of Examiners for the admission of pupils to the High School according to the regulations and programme of examination provided according to law; and it shall be the duty of the Inspector of High Schools to see that such regulations are duly observed in the admission of pupils to the High Schools; Provided nevertheless, that the pupils already admitted as Grammar School pupils according to law, shall be held eligible without further examination for admission as pupils of the High Schools; And provided furthermore, that pupils from any part of the county in which a High School is or may be established shall be admitted to such school on the same terms as pupils within the town or village of such school."

In accordance with this provision of the Act, the Council of

Public Instruction has prescribed, that 'the subjects of examinations for admission to the High Schools shall be the same as those prescribed for the first four classes of the Public Schools.' The examinations for admission to the High School must be on paper, and the examination papers with the answers are to be preserved for the examination of the High School Inspector, that he may not depend wholly on the individual examination of pupils as to whether the regulations have been duly observed in the examination and admission of pupils."

3. As it has been found on experience that great diversity exists, not only in the mode of examination, but in the standard to be reached by the candidates for admission, the Council of Public Instruction has thought it desirable, in order to remedy these defects, to request the High School Inspectors to prepare a series of printed questions to be answered by the candidates for admission to each High School.

4. The accompanying General Regulations for conducting the examination of candidates for admission to the High Schools, fully explain the manner in which these examinations shall be conducted. I therefore refer you to them.

I would conclude this circular by reminding you again of the province of High Schools as a part of our system of Public Instruction; and I cannot better do so than in the words employed by the Council of Public Instruction, in the explanatory memorandum, prefatory to the programme of the course of studies for the High Schools.

"The fundamental principle of our system of Public Instruction is, that every youth before proceeding to the subjects of a higher English or of a classical education, shall first be grounded in the elementary subjects of a Public School education. No candidates are, therefore, eligible for admission to the High Schools except those who have manifested proficiency in the subjects of the first four classes of the Public School programme, by passing a satisfactory examination.

"The objects and duties of the High School are two fold:

"First, commencing with pupils who (whether educated in either a public or private school) are qualified as above, the High Schools are intended to complete a good English education, by educating pupils not only for commercial, manufacturing and agricultural pursuits, but for fulfilling with efficiency, honour and usefulness, the duties of Municipal Councillors, Legislators, and various public offices in the service of the country.

"The Second object and duty of the High Schools (commencing also with pupils qualified as above,) is to teach the languages of Greece and Rome, of Germany and France, the Mathematics, &c., so far as to prepare youth for certain professions, and especially for the Universities, where will be completed the education of men for the learned professions, and for Professorships in the Colleges, and Masterships in the Collegiate Institutes and High Schools."

Instructions as to the time at which it is desirable to hold the examination will be shortly issued.

I have the honour to be,
Gentlemen,
Your obedient servant and fellow-labourer,
E. RYERSON.

REGULATIONS FOR THE ADMISSION OF PUPILS TO HIGH SCHOOLS AND COLLEGIATE INSTITUTES.

1. *Admission of Pupils.*—The School Law of 1871, sect. 38 provides that "The County, City or Town Inspector of Schools, the Chairman of the High School Board and the head master of the High School shall constitute a Board of Examiners for the admission of pupils to the High School according to the regulations and programme of examination provided according to law; and it shall be the duty of the Inspector of High Schools to see that such regulations are duly observed in the admission of pupils to the High Schools; Provided nevertheless, that the pupils already admitted as Grammar School pupils according to law, shall be held eligible without further examination for admission as pupils of the High Schools; And provided furthermore, that pupils from any part of the county in which a High School is or may be established shall be admitted to such school on the same terms as pupils within the town or village of such school."

2. *Duties of Inspectors.*—The Inspector shall receive and be responsible for the safe keeping, unopened, of the examination papers, until the day of examination. He shall also, at the close of the examination of candidates for admission, submit the answers of candidates to the Board for examination and report; but under no circumstances shall a certificate of admission be awarded to any candidate until the report on his answers shall have been considered and approved by a majority of the Board, including the Inspector.

3. *Viva voce and Special Examinations in Reading.*—The Board of Examiners shall subject the candidates to *viva voce* examination in reading, of the result of which a record shall be made.

4. Each Examiner, by his acceptance of office, binds himself in honour to give no information to candidates, directly or indirectly, by which the examination of that candidate might be affected.

5. *Time and place of each Examination.*—The examination of candidates for admission to the High School, or Collegiate Institute, shall be held in such place as may be agreed upon by the Examiners.

6. *Proceedings at each Examination.*—The Inspector shall preside at the opening of the examination; and, at nine o'clock on the morning of the first day, in the presence of such of his colleagues as may be there, and of the candidates, he shall break the seal of the package of examination papers received for that examination, from the Education Department. He shall also break open the seal of each additional packet of examination papers as required in the presence of a co-examiner and of the candidates. He shall further see that at least one examiner is present during the whole time of the examination, in each room occupied by the candidates. He shall, if desirable, appoint one or more of his co-examiners (1) to preside at the examination in any of the subjects named in the programme: (2) to read and report upon the answers as they are received.

7. The examination, except in reading, shall be conducted wholly on paper;

8. The candidates, in preparing their answers, will write only on one page of each sheet. They will also write their names on each sheet, and, having arranged their papers in the order of the questions, will fold them once across and write on the outside sheet their names. After the papers are once handed in, the Examiners will not allow any alteration thereof, and the presiding Inspector is responsible for the subsequent safe-keeping of the same, until he has handed them to the High School Inspector.

9. The presiding Inspector or Examiner must be punctual to the moment in distributing the papers, and in directing the candidates to sign their papers at the close of the allotted time. No writing, other than the signature, should be permitted after the order to sign is given. The candidates are required to be in their allotted places in the room before the hour appointed for the commencement of the examination. If a candidate be not present till after the commencement of the examinations, he cannot be allowed any additional time on account of such absence.

10. In examining the answers of candidates, it is desirable that at least two Examiners should look over each paper.

11. The Department will, on the margin of the questions, assign numerical values to each question or part of a question, according to their judgment of its relative importance. The local Examiners will give marks for the answers to any question in correspondence with the number assigned to the question, and the completeness and accuracy of the answers.

12. In order that a candidate may obtain admission to the High School, or Collegiate Institute, the sum of his marks must amount to at least seventy-five per cent. of the assigned value of the answers given in margin of the examination questions.

13. The names of successful candidates shall be arranged alphabetically.

14. In the event of a candidate copying from another, or allowing another to copy from him, or taking into the room any book, notes, or anything from which he might derive assistance in the examination, it shall be the duty of the presiding Examiner, if he obtain clear evidence of the fact at the time of its occurrence, to cause such candidate at once to leave the room; neither shall such candidate be permitted to enter during the remaining part of the examination, and his name shall be struck off the list. If, however, the evidence of such case be not clear at the time, or be obtained after the conclusion of the examination, the Examiners shall report the case at a general meeting of the Examiners, who shall reject the candidate if they deem the evidence conclusive.

15. The subjects of examination for admission to the High Schools, or Collegiate Institutes, shall be the same as those prescribed for the first four classes of the Public Schools, and the examination papers on those subjects shall be prepared by the High School Inspectors. The examinations for admission to the High School must be on paper, and the examination papers with the answers are to be preserved for the examination of the High School Inspector, that he may not depend wholly on the individual examination of pupils as to whether the regulations have been duly observed in the examination and admission of pupils.

16. Although pupils are eligible for promotion from the Public to the High Schools, after passing a satisfactory examination in the first four classes of the former, it is quite at the option of the parents or guardians of pupils, whether they shall enter the High

School or not before they complete the whole programme of studies in the Public Schools, when they can then enter an advanced class in the High School.

17. All candidates passing a satisfactory examination before the local Board, shall receive from it a certificate of eligibility for admission, and shall be temporarily admitted by the Head Master. But their attendance will not be credited to the school should the Inspector of High Schools disapprove of their admission.

18. The High School Board will provide the stationery required for conducting the examinations.—(See page 96.)

I. Biographical Sketches.

HON. JOHN SANDFIELD MACDONALD, M.P.

Descended from an old Scottish Highland family settled there for half-a-century or more, Mr. Macdonald was born in the County of Glengarry, on the 12th of December, 1812. He was, consequently, in his 60th year at the time of his death. His younger days possessed a spice of romance. Early chafing under the restraints of paternal control he made several ineffectual attempts to escape from home. A brief experience of store life in the country sickened him of that calling, and he readily yielded to the solicitations of a resident lawyer to give more attention to study and become a member of the same profession as himself. At the age of 20 he went to school with the well-known teacher Dr. Urquhart. Two years after he was admitted a member of the Law Society of Upper Canada, studying successively with Mr. (afterwards Judge) McLean and Mr. (now President of the Court of Appeal) Draper. In June of the year 1840 he was called to the Bar, and immediately obtained a large practice in the town of Cornwall and the surrounding country. His connexion with his law business he never closed; and unlike many lawyers who have become members of Parliament he amassed a considerable fortune; in no small degree obtained from the mercantile community of Montreal, who had the utmost confidence in him throughout his life—a confidence which was never betrayed, but which, on the contrary, was the means of cementing friendships of the strongest possible kind.

When he died, he was the oldest member of the Canadian Parliament, having been first elected in 1841. Since he entered on his public career, he had seen a total change in the system of government, the attempt to rule the country by instructions from Downing Street abandoned; a Legislative union of the two Canadas formed, and superseded by a federal union, embracing all British territory on the continent. When he first became a member of the Legislature, Lord Sydenham was governor during the first session in which Mr. Macdonald held a seat in the Legislature, a vigorous protest was made against this system of governing by instructions from Downing Street. The Legislature, in formal resolutions, claimed the right to exercise a constitutional influence over the executive on all questions of internal government; also that the advisers of the Sovereign's representative should preserve the confidence of the representatives of the people. The initiative of these resolutions came from Mr. Baldwin, and the principles they avowed, accepted reluctantly by Lord Sydenham; and the resolutions were modified by a member of the Government so as to take the shape indicated. In this school Mr. Macdonald received his first practical lessons in constitutional government. The position he occupied in the first session when he sat in the Legislature was no bad illustration of that independent character which marks his whole public career. He had been elected as an opposition member; elected by a constituency (Glengarry) that was conservative from its entire adherence to the crown during the recent rebellion, when every thing had been reduced to a question of loyalty; he sympathized with the French on account of the violence which had been used against some of them at the elections, and their exclusion from Lord Sydenham's united government. The Upper Canada Conservatives coalesced with the Lower Canada French; and Mr. Macdonald as an opposition member, was known among them, but he entered into no confidence with them; attended no party meetings; merely did what he conceived to be his duty in the House, voting as he thought right and proper. Two years later, the principle of responsible government was not yet so fully established as to be beyond successful assault. Lord Sydenham had succumbed to over-work and disease; Sir Charles Bagot, his successor, had gone to the grave; and Sir Charles Metcalf, who had come from a bad school, provoked the administration, at the head of which were Lafontaine and Baldwin, to resign; which event took place in November 1843. Mr. Macdonald unhesitatingly embraced the cause of the late ministers; on that issue, he appealed to the electors of Glengarry, and was returned by an

increased majority. Continuing to sit for his old constituency, Mr. Macdonald became Solicitor general in 1849; having for chiefs of administration, Mr. Louis H. Lefontaine and Mr. Robert Baldwin, whom the current of public opinion had again carried into power in 1848. In 1851 Mr. Baldwin resigned office; and the premiership fell into the hands of Mr. Hincks, by whom Mr. Macdonald was offered the position of the Crown Lands. He declined the offer, being resolved to take no office out of his profession. His aim was the Attorney-generalship; and that, too, he was destined to receive in good time. The year after he had refused the Crown Lands he was elected Speaker, in which position he continued till the dissolution 1854. The dissolution resulted from a defeat of the Government on the Address, and as Parliament had only been called on the last day allowed by law, it was dissolved without passing any Act. Mr. Macdonald, as Speaker, presented an address to the Governor-General, calling attention to this fact, and stating that unless an Act were passed it was no session, and that the dissolution prevented the Legislature from complying with the law. Mr. Macdonald was probably right as to the law; but necessity has no law, and a dissolution was deemed necessary.

In 1858, he was Attorney-General for a few days in the Brown-Dorion Government. He afterwards separated from the chief of that Government on a question of fact relating to a subject of important public policy, the Seigneurial Tenure abolition. There was a truce for a while, after Mr. Macdonald had become Premier and Attorney-General in May, 1862. He was able to hold office on the strength of a very slender majority, till March, 1864, nearly two years. He attained office on a question connected with the Militia organization; opposing the measure of the Ministry of the day, chiefly on the ground of the expense it would entail.

When the future historian of Canada comes to the Confederation era of political change he will admit that the choice of Mr. Macdonald as the first Premier of Ontario was a wise one, and that he amply justified the preference given to him on that occasion. Party strife had been hushed in 1864; there was every reason why it should not be renewed in 1867. Only the foundation of Confederacy had been laid; it was for wise master-builders to rear the superstructure. Mr. Macdonald, fully appreciating the situation, refused to yield to the persuasions and pressure brought to bear upon him to make his Cabinet a strictly party one. Confederation, he contended, had been brought about by a fusion of parties; a fusion of parties he would continue. Carrying out this design he called two Conservatives to his Cabinet, and thereby incurred displeasures which were intensified into bitter animosities that were not once relaxed during his four years of administration.

The history of his government, however severely criticized at the time for partizan effect, is one of which any public man might feel proud. Every encouragement was given to settle the waste lands of the Province. Immigration received an impetus which largely increased the influx of the surplus population of the Old World. Improvements were made in the machinery of the law. Legitimate railway enterprises were encouraged by generous subventions from the public purse. In truth, it may be safely said, there was no wrong which was not righted; no want which was not supplied. A large majority enabled the Government to carry measures which will have a lasting effect in the Province.

Failing to receive the support he expected in the new House elected in the spring of 1871, he retired from office and virtually from public life, on the installation of the new Government. Socially, Mr. Macdonald had not many like him in the political world of Canada. Possessed of a ready wit, a most retentive memory, and a keen appreciation of the ludicrous, he was always a chief spirit in every gathering not essentially of a public kind. He was fond of society—not fashionable society, merely—although with an outward air of seeming carelessness, he had strong aristocratic leanings—but of society which added a relish to the more serious duties of life. His private means enabled him to entertain largely, and he did so in a generous manner, as one who took real pleasure in seeing his friends around him. Distinguished in private life by the largest-hearted hospitality, Mr. Macdonald counted his personal friends by hundreds. Whether it was that the military were quartered at Cornwall, as at the time of the Fenian Raid, or a gunboat was anchored in the stream, or Assizes were going on in the town, Ivy Hall was open house. One of the last remarks he made was to remind his family that his friends Mr. George Stephen, Sir Hugh Allan, Mr. E. H. King and Mr. Donald McInnes were expected that day to visit the manufacturing establishment about to be erected at Cornwall, and must be invited to luncheon. His friends were there, but only to learn the mournful news that Mr. Macdonald's life was fast flickering out. He died very quietly, being perfectly clear and conscious to the end.—*Mail*.

MR. ROBERT MACFARLANE, M. P.

Was born at Williamstown, Glengarry, in 1835, and after receiving his education in Perth and Toronto, was called to the Bar of Upper Canada in Michaelmas term, 1857. He sat for Perth in the Canadian Assembly from the general election in 1863 until the Union, after unsuccessfully contesting the seat in 1862. Mr. Macfarlane was a popular man in the House, although he never took a prominent part in debate.—*Mail*.

OLD SCHOOL REMEMBRANCES OF BROCKVILLE.

The following interesting notice was sent us by an old resident of Brockville, now a resident of the United States, on the renewal of his subscription:—I like to see the *Recorder*, as it brings to mind some of the old times when I was a boy and fished in St. Lawrence's clear, beautiful pure water.

I was born in Brockville about one year after the first Sabbath school was organized.

I have a sharp recollection of attending school there when I was about 14 years of age, and of a tingling sensation to the ends of my fingers when I think of the *Master*. He was a true representative of the Irish Hedge School-master. His name was Rossington Elms, and although forty-five years or more have come and gone since then, still I remember many of the boys that were boys at that time and attended school with me. I have not been in Brockville since 1827, I crossed the lake from Brockville to Rochester in the steamer *Ontario* in about 4 days, which was then considered rather fast travelling. We had to cross from Brockville to Morristown in the ferry boat, as no steam boat stopped at Brockville, from this side, to take passengers.

Perhaps it may be interesting to you to know the boys that got thrashed in that school.

Ormond Stewart, Hoyle Jones, Wm. and Stephen Richards, Wm. O. Buell, Louis Charlien, Robert Hamilton, Billa Flint, Henry Easton, Johnny Ross, Geo. Provost, Isaac Read, James Reid, P. Glassford, James Gray, Tommy Scott, Cris. Leggo, Hubbell boys, E. Dunham, Wells, Landon and many others. A. S. B.

To the Editor of the Recorder.

The "old resident of Brockville" who sent you the interesting notice published in your last paper is mistaken as to some of the parties who attended the Johnstown District Grammar School, and he is equally mistaken as to its master, the late Rev. Rossington Elms. An Irish hedge school master, as I understand the class, was a man with the social habits, manners and dress of the peasantry, had their brogue in ordinary conversation, and used their language. But he had an admirable appreciation of the beauty of the classics, and frequently attained such critical and exact knowledge of them as would put to shame the graduates of universities.

Mr. Elms had no brogue, spoke English correctly, and no one could detect his being an Irishman from his language or appearance, and he had the dress, manners and social habits of an educated gentleman. Whether he received his education in Ireland or in this country, I am unable to say, but Judge Steele, your present County Judge, who, I think, was connected in some way with the Elms family, will know. He may have completed his education under Dr. Strachan at the York Grammar School. He certainly was usher there for some time before he was appointed master of the Johnstown District School. Though somewhat severe as a disciplinarian, and using the rod without stint, if boys neglected to learn their lessons, he was an admirable teacher, and the system of teaching practised by him was well calculated to make his pupils apt and intelligent scholars. A good test of his capacity as a teacher, judging from results, was that no boy who went up from the District or Johnstown Grammar School, whilst he was the master, to pass the Law Society, was plucked. After leaving Canada, he resumed his profession as a teacher in the State of Indiana, and died there within the last ten or twelve years. Shortly after his death, his pupils there met and passed highly eulogistic resolutions as to his acquirements as a scholar and skill as a teacher.

The names of the three brothers he first refers to were in the order of their ages, Stewart, Okill, and Ormond Jones. The eldest became a barrister-at-law, and died many years ago at London, in Upper Canada. Okill had the Furnace Falls mills and property, which he managed for some few years, and died in Brockville, I think at his brother Ormond's house. Ormond, your readers know, is still living, and is the Registrar for the County of Leeds. The present Chief Justice Richards was for several years a pupil of the school, and continued to attend it until Mr. Elms resigned the situation. He was succeeded for a short time by the Rev. Mr. Padfield, who I believe is now living at Burford. Hon. Stephen Richards, Q. C., did not attend the Grammar School whilst Mr. Elms was

master of it. William O. Buell certainly did not, but Adiel S. Buell, nephew of the Sheriff, after whom he was called, and son of the late William Buell, of Rochester, did attend for a short time.

Billa Flint, Henry Easton, George Provost and Isaac Read, were never, I think, pupils of *Master Elms*, Louis Charland, nephew of David and Sir Daniel Jones was the most promising boy in the school, and he was never flogged to my recollection. He died young, about the year 1832, I should say, of consumption. If he had lived he would have taken a prominent part in the affairs of this country. Even in 1830, when quite young, he was very active in supporting the late James Grey, as a candidate for Brockville, against the late Henry Jones, Esq., who was the first member elected to serve in the Provincial Parliament for the Town of Brockville. It was said his health was undermined by his close attention to the business of the Registry office; his uncle, the late Sir Daniel Jones, having made him Deputy Registrar. John Ross, you knew, he was the Hon. John Ross, who died a year ago last winter in Toronto. James Read was the son of the late J. L. Read, of Merrickville, he died many years ago at Chatham, Upper Canada. The Glassford he refers to was George Glassford, the present Deputy Registrar of the County of Leeds. The Gray mentioned was Frank Gray, step-son of the late James Gray, he died in this town somewhere about the year 1850. Tommy Scott, should have been James Scott, he died a few years ago at Port Hope, where he was a practising lawyer. Christopher Leggo is Dr. Leggo of the city of Ottawa. E. Dunham should be Dr. George Dunham of Newboro'. The Hubbell boys were James Hubbell, Esq., now living at Hubbell's Falls, near Pakenham, and his elder brother Jones Hubbell, who died many years ago. Wells is the present Judge Wells, of Chatham, Ont. Landon was, I believe, a son of the late Heman Landon, Esq., of Augusta, he is now dead.

Amongst other pupils at the old Grammar School, were the present Archdeacon Patton, now of Belleville, Judge Sherwood, of Belleville, the late Judge Smart of the same place, the late Judge Friel, of L'Orignal, the late John Bogart, who died about 1843 or 1844. There were many others, also, whose names I do not at present recall. Robert Hamilton was, I think, a son of a gentleman of the same name who resided at Queenstown, and was interested in the steamers *Queenstown* and *Frontenac*.

I remember the old steamer *Ontario*, to which your correspondent refers. She was at one time owned by the late Eri Lusber, who kept a tavern in Ogdensburg, and towards the close of his life in Brockville, he died here shortly after the rebellion. The *Ontario* was advertised to make a trip for the head of the lake once a fortnight, wind and weather permitting. The old *Charlotte*, owned by Captain Gildersleeve, of Kingston, who died in 1850, used to make the trip to the Carrying Place once a week, wind and weather permitting. The *Sir James Kempt* succeeded the old *Charlotte* on the same route, and was a great improvement on her predecessor in speed. The *Dalhousie*, a small boat, ran from Kingston to Prescott, carrying the mail. She went up one day and returned the following day, Sundays excepted. The *Queenstown* made a trip once a week from Prescott to Queenstown. She was commanded by the late Captain Whitney, known to many of your older readers. The *Great Britain* was built at Prescott, and it was said that the earnings of the *Queenstown* on her weekly trip paid off the men who worked on the *Great Britain* every week. The *William the Fourth* was built in Gananoque, in 1831 and 1832. She was an improvement on the other boats for speed. After she and the *Great Britain* were built under the treaty between *Great Britain* and the United States, our steamers and vessels were at liberty to carry freight and passengers from a British to an American port, so long as they did not coast, and the American ships had the same privileges in our ports. The *Great Britain* and *William the Fourth* in their trips touched at Oswego, and went to Niagara as well as to Hamilton. They made weekly trips.

A few years after that, a superior class of vessels was constructed, such as the *City of Toronto*, the *Princess Royal*, and the *Sovereign*. These vessels formed a daily line from Kingston to Toronto, and did not cross the lake. Three of them formed a daily line between these places, and sometimes two boats would keep up the line. This was thought to be a wonderful advance from one trip a week, but now we go to Toronto by rail in ten hours and grumble if we are ten minutes behind time in arriving there.

Soon we shall be able to take a railway carriage and go, without change of car, to Halifax, on the East or to Vancouver Island on the West. This is a world of progress, and Canada advances, notwithstanding our neighbours think we are slow and unenterprising. Your correspondent ought to come down and see the progress that has been made in his native town. He can find

"The school boy spot
We ne'er forgot though there we are forgot."

but the Gaol Yard covers part of the spot where the old school house stood, yet on enquiry he will find the old building itself converted into a small dwelling at the corner of Home and Water streets.

AN OLD GRAMMAR SCHOOL BOY.

Brockville, July 19, 1872.

ELLIS A. DAVIDSON'S ANIMAL KINGDOM.

AUTHORIZED TEXT BOOK IN ONTARIO.

(To the Editor of the *Globe*.)

SIR,—In *The Globe* of the 22nd ult., there appears an article, purporting to be a review of the text book on the "Animal Kingdom," recently adopted by the Council of Public Instruction, on which I beg to be allowed to make some remarks. I desire, however, to give replies in detail to some of the statements of the reviewer, (and these I select merely as specimens) not on my own authority—my statements are already put forth in the book—but by quotations selected from the highest authorities in Europe, which I trust will satisfy the Canadian public as to the truth of all the instruction conveyed in my little book.

The reviewer says:—"On page 35, the Spermaceti Whale is credited with a head the length of which equals the rest of the body,—the real fact being that the head is somewhat less than a third of the length. On page 36, implicit credence is given to the old belief that the spouting of the whale consists in blowing out through the nostrils a quantity of water which had entered at the mouth. On page 38, our author, diving into geology, informs us that there were two species of elephants formerly in existence, (one of which was a *Mastodon*); and on page 43, we hear that fossil remains of the Hippopotamus are found in the London clay. We recommend the speedy publication of the latter fact in particular before some learned society."

In answer to this I quote the following:—

"The act of respiration is facilitated by the position of the nostrils, which are situated nearly at the highest point of the head, so that the animal can breathe as soon as the head comes to the surface of the water.

"The whales have the power of forcing out water through these passages by means of a peculiar apparatus with which they are provided. This consists of two pouches or reservoirs situated beneath the nostrils and communicating with the back of the mouth by the usual nasal passage, which is furnished with a valve.

"When the animal wishes to eject water contained in his mouth, it moves its tongue and jaws as if about to swallow it: but by closing the pharynx it compels the water to ascend through the nasal passage—whose valve it forces open—and to distend the reservoirs.

"There it may be retained until the animal desires to spout, and this is effected by the forcible compression of the pouches, which compels the water to escape by the nostrils or blow holes, its return to the mouth being prevented by the valve just mentioned."—*Carpenter's Zoology*, sec. 209.

"When the whales breathe they are forced to rise to the surface of the sea, and there make a number of huge respirations which are technically termed *spoutings*, because a column of mixed vapour and water is ejected from the nostrils or blow-holes, and spouts upwards to a great height, sometimes as much as twenty feet. In order to enable the animal to respire without exposing itself unnecessarily, the blow-holes are placed in the upper part of the head, so that when a whale is reposing itself on the surface of the sea, there is very little of its huge carcass visible, except the upper portion of the head and a part of the back. The *spoutings* are made with exceeding violence, and can be heard at some distance."—*Rev. J. G. Wood's Illustrated Natural History*.

"Professor Owen, in his work on the fossil mammalia of Britain, gives descriptions and illustrative figures of the remains of the mammoth, of a large hippopotamus, two species of rhinoceros, and one of a mastodon, an animal equal in bulk to the elephant, and like it furnished with tusks and a flexible proboscis. These mighty quadrupeds, once ranged over tracts which are now occupied by the busy towns, the verdant plains, and the stately homes of England, their bones too are sometimes full fathoms five in the seas that encircle her shores, and the trawling-net of the fishermen, when it encounters their heavy mass, has been known to break under its burden. Such occurrences recall to mind the adventures of the fisherman narrated in the Arabian Nights; but the fancy of the Eastern romancer falls short of the reality of this hauling up in British seas of elephants more stupendous than those of Africa or Ceylon."—*Patterson's Zoology for Schools*, p. 410.

"The hippopotamus has for years been extinct in Europe, but the fossil remains of the animal are found abundantly in the London

clay, showing that in some remote age the hippopotamus must have traversed the plains of England and wallowed in its rivers."—*Rev. J. G. Wood's Illustrated Natural History*, p. 766.

"Nearly allied to the elephants is an extinct genus termed mastodon, which was characterized by the form of its molar teeth." * * * "Several other species of mastodon, however, have been distinguished by their remains—of these some were natives of the old world, and probably even of Britain."—*Carpenter's Zoology*, sec. 209.

"Mastodon.—A genus of extinct quadrupeds allied to the elephant."—*Agassiz and Gould's Comparative Physiology (glossary)*.

"The other cetacea have the head so large that it constitutes one-third or even one-half of their length."—*Rymer Jones*.

But the writer of the article is evidently largely gifted with the organ of wonder, for he says:—"Our author on p. 101 develops some still more remarkable views as to the habits and structure of the wood-pecker. His beak, he says, is straight and sharp, and he pecks into the bark of trees till he has made a deep hole. Into this he extends his tongue, which is armed with barbs at the end, like the teeth of a saw. These turn backwards towards the birds' head; and as the tongue is fixed inside of the back of the head, it works by a sort of spring, and so deepens the hole and brings out the insects or their eggs which form the food of this hard-working bird. So the wood-peckers bore holes in trees with their tongues, these remarkable organs being fixed inside the back of the head. No one, we venture to say, but a very close observer of nature would ever have discovered these facts."

In reply, I quote as follows:—

"The wood-pecker is furnished with a singular apparatus, for enabling it to dart out with great velocity its long and pointed tongue, and transfix the insects on which it principally feeds; and these motions are performed so quickly that the eye can scarcely follow them.

"The tongue itself is a slender, sharp-pointed horny cylinder, having its extremity beset with barbs of which the points are directed backwards; it is supposed on a slender *oshyoides* or lingual bone to the posterior end of which the extremities of two very long and narrow cartilaginous processes are articulated.

"The two cartilages form at a junction with the tongue a very acute angle, slightly diverging as they proceed backwards, until bending downwards, they pass obliquely round the sides of the neck, connected by a membrane, then being inflected upwards, they converge towards the back of the head where they meet, &c. A long and slender muscle is attached to the inner margin of each of these cartilages, and their actions conspire to raise the lower and most bent parts of the cartilages, so that their curvature is diminished, and the tongue protruded to a considerable distance for the purposes of catching insects. As soon as this has been accomplished, the muscles being suddenly relaxed, another set of fibres passing in front of the anterior portion of the cartilages, nearly paralled to them are thrown into action, and as suddenly retract the tongue into the mouth with the insect adhering to the barbed extremity. Whilst the bird is in the tree, it repeats those motions almost incessantly, boring holes in the bark, and picking up the minutest insect with the utmost celerity and precision."—*"Rogee" Bridgewater Treatise on Animal Physiology*.

An account of this mechanism, is given by Mr. Waller in the *Phil. Trans.*, for 1716, p. 509. I may add that in almost every good natural history or encyclopædia there is to be found an engraving of a section of the head of the wood-pecker, showing that the action and wonderful construction alluded to have been examined and delineated. But, then, naturalists ought to be, and are "close observers."

The reviewer then says:—"For the benefit of non-scientific readers, we may state that the crustaceans derive the lime for their shells from the sea-water, whence it passes into the blood, and that the 'crabs'-eyes' of Mr. Davidson have as much to do in the production of the shell as they have in determining the price of wheat."

I subjoin the following on the authority of Dr. Carpenter and Professor Rymer Jones:—

"The mode in which the crustacea, whose calcareous shell is periodically thrown off, are able to renew it with rapidity, is very curious. There is laid up in the walls of their stomachs a considerable supply of calcareous matter, in little concretions which are commonly known as crabs'-eyes; when the shell is cast this matter is taken up by the blood and is thrown out from the surface mingled with animal matter.

"This hardens in a day or two, and the new covering is complete. The concretions in the stomach are then found to have disappeared, but they are gradually replaced, before the supply of lime they

contain is again required."—*Carpenter's Animal Physiology*, sec. 170.

"The pressure of the old shell being removed, the animal suddenly increases in bulk, the new skin, as yet soft and flexible, allowing at first of great expansion, but it rapidly hardens, a stock of shelly matter having been for some time accumulating in its stomach in the form of two hard balls commonly called 'crabs'-eyes."

"This substance is supposed to be taken up and distributed to the surface, so that when the new crust has again acquired consistence, these concretions are no longer found. The whole process occupies from one to three days."—*Professor Rymer Jones' Animal Creation*, p. 203.

I do not feel justified in trespassing further on your space, or on the patience of the public, but I am prepared to send you if you can find room for their insertion, replies as complete as those now submitted to every single accusation of the so called "errors."

I may add that a copy of the book is in the possession of almost every teacher of the subject in England, and that it is largely used as a text-book in several of our highest schools, so that the Canadian Educational authorities in making choice of this work did not select an unknown work as your reviewer would seem to imagine, but one which had already an established reputation as a school-book in England.

I have the honour to be, Sir,

Yours very truly,

ELLIS A. DAVIDSON,

Author of "The Animal Kingdom."

II. Mathematical Department.

To the Editor of the Journal of Education.

SIR,—A majority of those employed in public instruction would hail with pleasure the event of the *Journal of Education* becoming a medium for the diffusion of mathematical as well as literary knowledge. A Mathematical Department would become practically useful to teachers, and interesting to your general readers. Our spare time could be profitably and honourably employed by pleasant and friendly competition in science and literature; and though widely separated by space, we could form a school of mutual instruction, and make the *Journal of Education* really pleasing, attractive, and useful to the teachers of Ontario. Under these considerations, I humbly send the following problems as the result of my first effort to begin a mathematical column. I do not claim originality for all; but in their choice, I have endeavoured to avoid extreme difficulties and to aim at practical usefulness.

1. In what time could \$2.500 yield the same amount, if placed at 6 per cent. simple, and 3 per cent. compound interest? To be solved by arithmetic.

2. $\sqrt{n_3} - \sqrt{n_2} = 4.962x$; find the value of x .

3. The principal, time, rate, and gain, at compound interest, are all equal; required the time.

4. $x^3 + y^3 = 23$; find x, y , and z .

5. A bar of wrought iron, 150 feet long and 1-5th square inch in section, lengthens .289 inch under a certain strain, what must be the additional strain necessary to produce rupture?

6. The base of a triangle is 80, and sides containing the vertical angle are 65 and 55 perches, respectively; required the length of a line drawn from a point without the triangle, 8-53 perches from the side (55), so as to cut off 5-7ths of the area.

7. An iron wedge whose vertical angle is 14° , is driven into a mass of oak by a force of 125 lbs.; what force is necessary to extract it?

8. A beam of oak 1 foot square has its end firmly embedded in masonry from which it projects 9 feet; to what height could a wall of brickwork 2 feet thick and resting on the beam, be carried without producing rupture?

9. In a given triangle, the base $AC = 100$; $AB = 70$; $BC = 90$. (I) What is the length of a line parallel to the base? (II) perpendicular to the base? (III) inclined at a given angle to the base (15°), so as to cut off 7-11ths of the area? (IV) Bisect the triangle by a line whose length is 49-32.

10. The rafters of a house are each 18 feet long, and tied by a wrought-iron rod 30 feet long and section $\frac{1}{4}$ square inch; what weight must be suspended from the vertical angle so as to break the rod?

11. What must be the length of a bar of wrought-iron, which, if suspended vertically, would break by its own weight?

12. If into a hollow cylinder, the inner diameter of whose base is 3 inches, and length 18 feet, we put as many wires of 1-14th inch in diameter and same length as the cylinder, as it can contain, how much water could be afterwards poured into the vessel?

13. Solve the following equation without completing the square :

$$\frac{x^2}{y^2} + \frac{y^2}{x^2} + \frac{x}{y} + \frac{y}{x} = 6\frac{1}{2}; \text{ and } x - y = 2.$$

14. The sum of four numbers in geometrical progression is 45, and sum of their squares 765; what are they ?

15. A hollow sphere, whose inner diameter is 3 feet, is filled with water; what is the ratio between the pressure on the internal surface of the sphere and the weight of the water ?

I am, Sir,

Hamilton, July, 1872. Your obedient Servant,
A. DOYLE.

PUBLIC SCHOOL EXAMINATIONS.

To the Editor of the Journal of Education.

SIR,—I send you, for publication in the *Journal*, solutions of the questions in Natural Philosophy and Algebra proposed to candidates for first-class certificates at the recent examination of Public School Teachers. In your next number I may perhaps make some remarks of a general kind on the result of the examination.

I have the honour to be, Sir,

Your obedient servant,

GEORGE PAXTON YOUNG.

TORONTO, 1st August, 1872.

NATURAL PHILOSOPHY.

1. A considerable number of students have still very vague ideas of what a uniformly accelerating force is, and how it is measured. I therefore crave attention to the following statements by the late Dr. Whewell, of Cambridge: "The magnitude of forces is measured by their effects; and the effect of forces which we consider in Dynamics is velocity. Accelerating force is force measured by the velocity which, in a given time, it would add to the motion of a body. If the velocity added be equal in equal times, the force is said to be uniform."

Let x be the time which the particle P takes to reach A. In that time it goes over a space $20x$ in virtue of the velocity already acquired; and over an additional space of $16x^2$ due to the accelerating force to which it is subject. Therefore

$$16x^2 + 20x = 6 \therefore x = \frac{1}{4}.$$

Similarly, if y be the time in which Q reaches A, we have

$$20y^2 + 20y = 6 \therefore y = \frac{1}{4}.$$

Therefore the particles reach A in the same time.

2. The ascending particle has, at A, a velocity of 8 feet a second. To destroy this velocity $\frac{1}{4}$ of a second is necessary. Another $\frac{1}{4}$ of a second is expended in the return of the particle from rest to A. Therefore the descending particle takes $\frac{1}{2}$ a second to reach the ground from A. In that time it goes through 4 feet in virtue of the velocity already acquired; and 4 feet besides, due to the action of the force of gravity. Therefore

$$m = 8.$$

3. As this question has been satisfactorily treated by very few of the candidates, I give two solutions.

The forces represented by P A and P B have, as their resultant, a force acting in the direction of the diagonal of the parallelogram of which A P and B P are adjacent sides. But these forces, by supposition, keep the lever at rest. Therefore their resultant must pass through the fulcrum; for if it struck the lever on either side of the fulcrum, it would turn the lever. Hence C is the point of intersection of the diagonals of a parallelogram, and therefore A C = B C.

Another solution: Draw C D perpendicular to A P, and C E to B P. Then, since the lever is at rest, the force at A multiplied by C D is equal to the force at B multiplied by C E. That is,

$$P A \times C D = P B \times C E.$$

Therefore, triangle A C P = triangle B C P.

$$\therefore A C = B C.$$

4. This question, with the preceding, appears to have been felt to be more difficult than any others in the paper. This shows, I think, that the candidates generally have no firm grasp of the principles of the resolution of forces. I will therefore give the solution of the question somewhat fully.

A force represented in magnitude and direction by A D can be resolved into two others; one in the direction A B, and represented in magnitude by A B; the other in a direction perpendicular to A B, and represented in magnitude by B D. This is a direct consequence of the principle of the parallelogram of forces, as may be

seen by completing the parallelogram A B D E, and observing that the force represented in magnitude and direction by A D is a resultant of the forces represented in magnitude and direction by A B and A E respectively. Therefore a force $\sqrt{2}$ in direction D A, has for its resolved part in direction B A a force less than $\sqrt{2}$ in the proportion of B A to A D, or $\frac{B A \sqrt{2}}{A D}$ that is one.

In like manner, if the given force of 2 feet in the direction A C be resolved in the direction A B, and in that at right angles to A B, we shall find the former resolved part to be 1. But these forces, uniting in the direction B A, and uniting in the direction A B, counterbalance one another, leaving only forces the direction of whose action is at right angles to A B.

5. No note on this question seems necessary.

6. The pressure of 1 lb. sinks the cube one-sixth part. Therefore one-sixth part of a cube of water, of the same size as the given cube, weighs 1 lb., and the whole of such a cube of water weighs 6 lbs. But the given cube has only one-third of the specific gravity of water. Therefore its weight is 2 lbs.

The content of the sphere is $\frac{32\pi}{3}$; that of the cylinder is $\frac{28\pi}{3}$

Let h be the height of the barometric column. Then

$$28 : 32 = 7 : 8 = h + t : h + 5\frac{1}{2} \\ \therefore h = 30.$$

8. Bookwork.

9. The volume of the instrument is V ; that of the part not immersed in the first fluid kd ; therefore that of the part immersed is $V - kd$. Hence the weight of the fluid displaced is $S_1(V - kd_1)$. But this represents the weight of the instrument. In like manner $S_2(V - kd_2)$ represents the weight of the instrument. Therefore the quantities

$S_1(V - kd_1)$ and $S_2(V - kd_2)$ are equal to one another, and

$$\frac{S_2}{S_1} = \frac{V - kd_1}{V - kd_2}$$

[In the examination paper, the expression $\frac{S_2}{S_1}$ was, by an error of the press made $\frac{S_1}{S_2}$.]

10. Here f , in the formula, $s = \frac{1}{2}ft^2$, is less than 32 in the proportion of 1 to 11. Therefore $8 = \frac{16t^2}{11}$, and $t = \sqrt{5\frac{1}{2}}$.

ALGEBRA.

1. Let x be the number of minute spaces gone over by the minute hand since 3 o'clock. Then $x - 30$ is the number gone over by the hour hand. Therefore

$$12x - 360 = x, \text{ and } x = 32\frac{8}{11}.$$

2. Let m and n be the quantities. Then

$$x = \frac{m + n}{2}$$

$$y = \frac{2mn}{m + n}$$

Therefore $xy = mn$, the geometrical mean between m^2 and n^2 .

3. Let y and z be the roots. Then

$$y^3 + z^3 = 19, \text{ and } y + z = 1.$$

$$\therefore y = 3, z = -2\frac{1}{2}$$

By the substitution of either of these values in the given equation, we get $p = 6$.

4. The square root of $22 - 12\sqrt{2}$ found by the ordinary method is $2 - 3\sqrt{2}$. Therefore

$$10x + 2\sqrt{2} = (2 - 3\sqrt{2})(5x - 2\sqrt{2}).$$

$$\therefore 5x = 2\sqrt{2} - 2.$$

5. Add 2 to each side. Then

$$\left\{ x + \frac{1}{x} \right\}^2 + \left\{ x + \frac{1}{x} \right\} = \frac{35}{4}$$

Therefore $x + \frac{1}{x}$ can be found, and hence x . [The solution is $x = 2$.

6. Let $y = z x$. Then

$$x^2(1+z+z^2) = \frac{1}{4},$$

$$x^2(4+11z+8z^2) = \frac{1}{4}.$$

Eliminate x , and the rest is plain sailing.

7. Put s for $2x + y$, and d for $2x - y$. Then

$$\frac{1}{sd} + \frac{1}{s^2} = \frac{4}{3},$$

$$\text{and, } d - 2sd + 3 = 0.$$

The equations in this form present no difficulty.

8. Bookwork.

9. Bookwork.

10. Let $2x$ be the distance of P from M, and Zx the distance of distance of r' from N; y the rate of B, and $y + 1$ the rate of A. Then

$$\frac{3x}{y} - \frac{2x}{y+1} = 5,$$

$$\text{and, } \frac{6}{y} + \frac{1}{2y} + \frac{x}{2(y+1)} = \frac{5x}{2(y+1)}.$$

Eliminate x . Then $y = 2$, and $5x = 30$.

MISCELLANEOUS CORRESPONDENCE.

To the Editor of the Journal of Education.

In the January No. of the journal, Mr. J. A. McLellan, solves the problem cited as No. 4, and enunciated "City of Toronto Debentures, 6 per cent, having 6 years to run, are offered for sale; What price should I buy to realize 10 per cent, upon my investment?" Mr. McLellan makes the result to be $100 \times (1.06)^4 \div (1.1)^6$ to which I demur.

A six per cent debenture entitles the holder to receive \$6 00 annually, and \$100 at expiry of term. Consequently the present

value at 10 per cent of one having six years to run is $\frac{6}{(1.1)^4} + \frac{6}{(1.1)^5} + \frac{6}{(1.1)^6} + \frac{100}{(1.1)^6}$ which = $\frac{6}{(1.1)^4} + \frac{6}{(1.1)^5} + \frac{6}{(1.1)^6} + \frac{100}{(1.1)^6}$

as may be proved by actual expansion and collation, and which may be further transformed into $60 + 40 \div (1.1)^6 = \$52.579$.

Mr. McLellan's result is \$50.071.

H. T. SCUDAMORE.

Euphrasia, 19th, July, 1872.

To the Editor of the Journal of Education.

In the April No. of the Journal Mr. Ireland propounds this problem:—"An Indian Reserve is bounded by four straight lines 1, 2, 3, 4 miles. required its maximum area in square miles."

A quadrilateral is a maximum when it can be inscribed in a circle, that is, when it has its opposite angles supplementary to each other. (See geom. max. and min.) and it makes no difference in what order the sides are taken. (Euclid, 3 Book, prop. 10.)

∴ putting a, b, c, d for the sides we have

$$a^2 + b^2 - 2ab \cos \psi = c^2 + d^2 - 2cd \cos (180^\circ - \psi)$$

But $\cos (180^\circ - \psi) = -\cos \psi$ ∴ $\cos \psi = \frac{a^2 + b^2 - c^2 - d^2}{2ab + 2cd}$

And the area of the quadrilateral is

$$\frac{ab \sin \psi + cd \sin (180^\circ - \psi)}{2} \text{ But } \sin \psi = \sin (180^\circ - \psi)$$

$$\text{and } \sin \psi = \sqrt{1 - \cos^2 \psi} = \frac{\sqrt{4(ab + cd)^2 - (a^2 + b^2 - c^2 - d^2)^2}}{2ab + 2cd}$$

Consequently the area is

$$\frac{1}{4} \sqrt{4(ab + cd)^2 - (a^2 + b^2 - c^2 - d^2)^2}.$$

Insering the values of a, b, c, d , viz, 1, 2, 3, we get the area $\sqrt{24}$ miles.

This expression for the area may be reduced by putting $2S = a + b + c + d$ into the form $\sqrt{(s-a)(s-b)(s-c)(s-d)}$.

H. T. SCUDAMORE.

Sutherland's Corners P. O., 18th July, 1872.

To the Editor of the Journal of Education.

SIR,—Having noticed in the April Number of the Journal some answers to the question "A lends B \$1,000, payable in ten annual instalments of \$160 each. What rate per cent. simple interest does B pay for his money?" I give the following remarks and figures thereon. In this agreement the ten payments, = \$1,600, pays principal and interest—consequently each payment pays the interest due at the end of each year, and some of the \$1,000 back each year, leaving the borrower with less and less of the \$1,000 every year. Now if the rate per cent. is $21\frac{2}{3}$, the first payment will not nearly pay the interest due on the \$1,000 B has had the first year will not pay any of the principal. And the rate $10\frac{10}{11}$, as some seem to think it is, is on the assumption that B pays \$100 of the principal off each year, which only leaves \$60 interest equal to 6 per cent. first year, while for the last year B is made to pay 60 per cent. I have no very satisfactory solution to the question, but find the rate to be 9'007 nearly, and give the following table of payments as proofs of its correctness:—

	Interest.	Principal.	Back.
First year B has \$1,000, for which he pays	\$60.07	+	63.93 = 160
2nd	93.07	"	"
3rd	86.99	"	"
4th	78.18	"	"
5th	704.99	"	"
6th	612.71	"	"
7th	511.57	"	"
8th	400.71	"	"
9th	279.19	"	"
10th year B had	146.00	"	"
	\$6,246 42	\$600.00	\$1,000

From the above it will be seen that B has \$6,246.42 equal to one year, for which he pays \$600 interest; which makes it to the lender if he sets the repayment, on the same terms, out again as soon as he has paid, the same as lending money at 9'607 per cent. per annum compound interest.

Yours,

T. B. WHITE.

Collingwood, July 26, 1872.

To the Editor of the Journal of Education.

The April No. of the Journal, contains an elegant and very elaborate article upon Interest, by Mr. Cameron. I have perused the article with much pleasure and profit, and, in venturing to criticize it, do so with all due deference.

I have not at present sufficient leisure to make more than one remark. It is in reference to the principle whereby Mr. C. computes the rate of interest on the protested money-lending case. My remark takes the form of a problem.

A. lends B. \$100, payable in 41 annual instalments of \$5 each. What rate per cent., simple interest, does B. pay for his money?

By Mr. Cameron's mode of computation we learn:—

Interest for 1st year = 100 r.

" 2nd " = (100 - 5) r.

" 3rd " = (100 - 2 x 5) r.

" 4th " = (100 - 3 x 5) r, &c., &c.

for 41 terms, the last of which is

Interest for 41st year (100 - 40 x 5) r.

Summing, we obtain $(41 + 100 - \frac{41 + 40 + 5}{2}) r = 41 + 5 - 100$

whence $r = \text{infinity}$.

Such a fearful rate of interest as this would soon land a borrower in the Bankruptcy Court.

I think the fallacy lies deeper than a mere diversity between Mr. C.'s mode and that of the text books, and is inherent in the very idea of there being any such thing as simple interest in contradistinction to compound interest. I should like to see the subject discussed in your columns, and should opportunity permit may address you again on the subject.

HENRY THOS. SCUDAMORE.

Euphemia, 19th July, 1872.

III. Miscellaneous.

RAIN IN SUMMER.

How beautiful is the rain,
 A-tor the dust and heat
 In the broad and fiery street—
 How beautiful is the rain!

How it clatters along the roofs,
Like the tramp of hoofs!
How it gushes and struggles out,
From the throat of the overflowing spout!
Across the window pane!
It pours and pours!
And swift and wide,
With a muddy tide,
Like a river down the gutter roars
The rain, the welcome rain!

The sick man from his chamber looks
At the twisted brooks;
He can feel the cool
Breath of each little pool;
His fevered brain
Grows calm again,
And he breathes a blessing on the rain.

From the neighbouring school
Come the boys,
With their wonted noise
And commotion,
And down the wet streets
Sail their mimic fleets,
Till the treacherous pool
Ingulfs them in its whirling
And turbulent ocean,

In the country on every side,
Where far and wide
Like a leopard's tawny and spotted hide,
Stretches the plain,
To the dry grass and the drier grain,
How welcome is the rain!

ILLEGALITY OF KILLING BIRDS.

The wanton or selfish destruction of our insectivorous birds is a disgrace to our civilization. Sundays and holidays are the favourite days, during which a certain class leave the city to prowl about the country, shooting the birds while nestling or hatching their young. Some destroy them from sheer love of mischief; others in order to dispose of the heads and wings to dealers in ladies' hats. Those who frequent our markets may see our small birds exposed for sale, minus heads and wings; the latter find their way into the hands of dealers, who work them up into ornaments for ladies' hats. There is a law imposing a penalty of \$10 on any person proved to have killed an insectivorous bird; but there are difficulties in the way of enforcing the penalty. The short remedy would be to make the party in possession of a dead bird liable for the penalty, unless he could prove that it was not killed purposely. The farmers induced the legislature to enact a law protecting small birds, convinced that their destruction exposed their crops to the ravages of insects, and that law, if not sufficiently repressive, should be amended. In England the same subject has been brought before the Commons by Mr. A. Herbert, and the evidences of the advantages of protecting insectivorous birds is as applicable to Canada as to England. Mr. Herbert said:—"As the House was aware great harm was done to plants, trees and fruits by insects of various descriptions. There was a specie of beetle which destroyed whole acres of forests; but while we have an army of destruction, we had also an army of protection. Birds may be called the police or soldiery of Nature, although they had, of course, many allies, such as the bat, the mole and the hedge-hog. The reason why the swallows came over in such numbers to this country, was to feed on the immense multitude of insects which they found here, and which at particular seasons they could not find in their own country. The extent to which birds, he might add, feed on the insect life was hardly credible. Mr. Ware, whose benevolent views with respect to animals were well known, took the trouble to get up in the middle of the night, and to count how many times some birds feed on their young. He found that the thrush worked even beyond Parliamentary hours, because he began at 2.30 in the morning, and worked till 9.30 in the evening, or 19 hours, during which time he fed his young 206 times. The black-bird worked 17 hours, and fed his young 44 times, and the female 55 times, while titmice fed their young the marvellous number of 417 times in the day, as Mr. Ware believed on caterpillars. We had also such birds as the swallow, the swift, the martin, the wagtail, the cuckoo, and the white owl, the use of which, he was sorry to say, was but very little appreciated, but he would pass from them to other birds, whose characters were rather of a more doubtful description. He would first mention the sparrow, which did a

great amount of good, and about the mode of conducting whose operations a very curious story was told. He was seen fluttering about a rose-bush and flapping it with his wings, just as a game-keeper would beat a preserve, and was soon after found to be engaged in picking up all the caterpillars which had dropped from the bush. There was also an historical anecdote with respect to the sparrow which was, he believed, perfectly trustworthy. Frederick the Great was very fond of cherries, and he discovered that the sparrows had a similar liking. The consequence was that in his desire to preserve the cherries he put a price on every sparrow's head, but at the end of two years he found it expedient not only to take off the tax, but to import sparrows at some expense into his dominions. Then there was the chaffinch, who was a great favourite with Mr. Waterton, who was of opinion that he did a great amount of good. The only bird, as far as he knew, which did not feed its young on insects and destroy a certain number of them in the year was the wood pigeon, but even he was of value. Lady Coutts had written to *The Times* a short time ago to say, that she could not keep even a nightingale in her garden, owing to the prevalence of netting. Swallows were netted in the same way and placed in cages, in which not one-twentieth part of them could live. A friend of his happened to be fishing the other day a little below Monkey Island, on the Thames, and he saw the bodies of several swallows and swifts, which had been shot by some, one floating by him. There were institutions called sparrow clubs, but the members of those clubs did not, he believe, really know the effect of that which they did. Their conduct was compared by Mr. Wood to the act of shooting our own soldiers at the moment of invasion by an enemy. He ventured, therefore, to plead on behalf of the constituency which had no votes, and which could not plead for itself, that no exception should be made in the case of the birds to be protected by legislation."

III. Educational Intelligence.

VICTORIA UNIVERSITY—CONVOCAION WEEK.—At the closing Exercises in connection with Victoria University, the Baccalaureate Discourse was delivered by the Rev. Principal Dr. Nelles on Sunday evening. On Monday afternoon the Alumni Association met in their Hall. The members were entertained to a dinner by the local committee. The following officers were elected for the ensuing year: *President*—Mr. J. H. Dumble, M. A., LL.B., Cobourg. *Vice-Presidents*—Rev. Hugh Johnston, M. A., and Eli J. Barrick, M. D., &c., Toronto. *Secretary*—Mr. Henry Hough, M. A., Cobourg. *Treasurer*—Mr. J. W. Kerr, M. A., Cobourg. *Committee*—The graduates residing in Cobourg. On Monday evening Rev. W. M. Punshon delivered his lecture on "Mayflower Memories," in which he gracefully and powerfully told the story of the Plymouth Rock Puritans from the inception of their movement for freedom to their achievement of it in the forests in the New World. The Annual Convocation was held on Tuesday. After prayer by the Rev. Mr. Jones, Mr. Dingwall delivered in a creditable manner his "Valedictory Oration," taking as his subject "War." The following were then admitted to their degrees:

B. A.—Shepley, George F., *Gold Medallist*; Haggart, Alex., Switzer, P. A., *Silver Medallists*; Dingwall, Kenneth, *Valedictorian*; Carpenter, W. J.; Clark, John R.; Hare, Chas. J.; Harper, Cecil; Hawkins, Chas. W.; Holman, Chas. J.; Mallett, Richard; Pearen, James; Peterson, An. M.; Ross, John R., (*ad eundem.*) Young, Rich. W.

M. A.—Burwash, John, B. A.; Bristol, Coleman, B. A.; Hayden, F. J., B. A.; Janes, Simeon H., B. A.; Macpherson, M., B. A.; Meacham, Geo. M., B. A.; Moore, John, B. A.; McNaughton, T., B. A., (Toronto Univ.); Payne, Wm. L., B. A.; Raveill, John W., B. A.

M. D.—Beaupre, Louis; Carriere, Phileas; Cartier, Paul; Coulombe, Ch. Jer.; Dagenais, Adolphe; Demers, Fred.; Desmarteau, N. B.; Desrosiers, L. J. P.; Dufort, Tancrede; Dupries, Julien; Fafard, Ch.; Filiatrault, Ch. M.; Gabourg, Ulric; Gagnon, Jos.; Gosselin, Vinc't.; Heroux, Horace; Laporte, J. B.; Larne, Omer; Larocque, Henri; Laurin, Victor; Macdonnell, J. R. D.; Matthieu, Arthur; Meunier, Paul; Miglault, Zoel; Paquet, —; Patoel, Francois; Rouleau, Zeph; Roy, L. M. A.; Simard, Alfred; Trudel, I.; Abbott, J. T.; Barelay, T. S.;

Boyle, W. S.; Brent, H.; Campbell, M. C.; Carter, Robert; Ferguson, J. P.; Freel, S.; Law, T.; McCollum, J. S., *Gold Medallist*; Nichol, A., *Silver Medallist*; Shepherd, H. E.; Washington, Nelson.

LL.B. — William L. Payne, M. A.

LL.D. — John Wilson, M. A.; Rev. Wm. M. Punshon, M. A.; Rev. S. S. Nelles, D. D.

The Presentation of Medals, Scholarships, and Prizes, was then proceeded with,—the following gentlemen being the successful competitors: Prince of Wales Gold Medal—George F. Shepley. Prince of Wales Silver Medal—Alex. Haggart, P. A. Switzer. Scholarship (founded by class of 1871)—George Beavers. Ryerson Prize, First in Scripture History—James S. Ross. Mills Prize, First in Classics for Freshman Year—David Kane. Wallbridge Prize, First in Greek Testament—David Kane. Freshman Prize, First in Hebrew—J. J. Hare. Second Prize in Hebrew—David Kane. Webster Prize, First English Essay—J. L. Whiting. Punshon Prize, First in Elocution and Composition—Kenth Dingwall. Senior Greek Testament Prize—George F. Shepley. Gold Medal, Medical Faculty, Toronto—J. S. McCollum. Silver Medal, Medical Faculty, Toronto—Angus Nichol. Literary Association Prizes, First English Essay—G. W. Hawkins; first in Elocution—Benjamin Longley; second in Elocution—C. C. Workman, Thomas Manning. For students in Theology, Cooley Prize, First in Metaphysics, J. J. Hare. First Brethour Prize, work of the year in the Undergraduate Course—J. J. Hare. Second Brethour Prize—Benjamin Longley. First Brethour Prize, in Theology—W. W. Edwards. Second Brethour Prize, in Theology—T. J. Admison. In presenting the "Webster Prize" for the "First English Essay," the American Consul, Mr. Lawrence, said that: As the representative of an English speaking nation he naturally took an interest in the study of English literature—in the literature of the England of Oliver Cromwell, who was so jealous of her honour, that he went to war with Holland for carrying a broom at the mast head of her vessels, and so careful of the lives of British citizens that he executed the brother of the Portuguese ambassador for killing a man in a duel in London. That England which expelled the House of Stuart for despotism, and founded with the House of Brunswick a system of constitutional liberty analogous to their own. Though separated from her by thousands of miles they (the people of the U. S.) were not unfamiliar with her best authors. They had read the Counterblast to Tobacco by James I., the Eikon Basilike by Charles I., the Eikonoclastes by Milton, the Paradise Lost, the Hind and Panther, Clarendon's Rebellion in England, Bolingbroke's writings, edited by his friend Mallet, and they were convinced by study that Sir Philip Francis was the author of Junius. If they were sometimes charged with adding unusual words to the mother tongue, did not Horace say that Plautus and Ennius had coined so many words that it was lawful for him to make one impressed with the current stamp? Would it be denied to Mark Twain, and Artemus Ward, and Brete Harte under a republic to do what the Brundisian bard could do under the empire? To be again selected to deliver to a student a prize from this institution was an honour to his country which might perhaps excuse a reference to American efforts to maintain the purity of the English language as it was spoken in its Augustan age. Dr. Johnson has remarked that no one could call a river deep or a mountain high if he had not tested the depths of other rivers and measured the height of other mountains—that we would not consider Homer as the matchless bard we now hold him to be if nation after nation had not vainly striven to rival or excel him. It was by the study of the best classical authors that they obtained a mastery over their own language and acquired a substantial fame, whilst self-taught genius sank into obscurity, unless like Shakespeare, he lived in an age when the learning of good society was at so high a standard that he could borrow from all around him and correct his own ignorance by the good natured aid of the frequenters of the green room. That Shakespeare owed much to the we of the day, and much to Queen Elizabeth

herself, is what none could deny who saw in his writings a classical knowledge the bard had no chance to acquire, and who remembered the ripe learning of the fair pupil of Roger Ascham. When they considered the long line of British Secretaries of State, from Milton to Gladstone, who were distinguished as authors,—when they reflected that two of them translated Homer,—when they remembered that Benjamin Franklin, who aided in founding their republic, and Horace Greeley, who was now a candidate for its highest honours, were both literary men, they would see that like the French soldier they carried in their knapsack a Marshal's baton, and that if they belonged to the army of literary men they might in this age of progress outstrip those of the oldest blood and acquire for themselves a rank amongst the illustrious great and a grave in Westminster Abbey. (Long continued applause.)

Rev. Dr. NELLES, in speaking of the success of Victoria University during the past year, alluded to the Arts department in Cobourg and the almost unprecedented prosperity of the Medical Branch in Montreal. Several circumstances had operated against the Toronto Branch; among others the death of Dr. Rolph, long at the head of his profession in this country and as a lecturer unsurpassed on the whole American Continent. Also the great distance of the College from the city hospital. He was happy to say that efforts that promised to be successful had been made, and that ere long the Toronto Branch would be as flourishing as ever. A most tangible proof of the healthy working of the Arts department was evident from the fact that the graduating class of this year without any suggestion either directly or indirectly on the part of the Faculty or any member thereof, had founded a scholarship, in perpetuity of the annual value of \$72. He was glad to see them following the noble example of the class of '71, who had established a scholarship of \$71, and if the class of '73 founded one of \$73 and so on to the end of the century and to the end of all the centuries, surely no one need fear that Victoria College would want for scholarships. Besides being an honour, a scholarship was a great benefit to students, most of whom had to struggle with difficulty through their course, for \$71 came not far short of the actual necessary expenses of a College session. He thought this was good evidence for Victoria College, for none had more opportunities or were more critical and prying than students, and when they were found at the end of their course acting thus, no higher tokens of appreciation could be desired. But some of the elder graduates had not forgotten their *Alma Mater*. Mr. Mills of the Collegiate Institute had established a prize in classics, and the Rev. Mr. Brethour three valuable prizes in Theology. Mr. McNaughton, who had that day received the degree of M. A., had established a prize of the value of \$20 to be awarded to the one who in taking the degree of M. A., produced the best essay on "The harmony of Science and Religion." The College has been greatly embarrassed by the withdrawal of the annual grant of \$5,000 by the State, but it had not despaired, but trusted to skilful management guided by Providence. They proposed to raise the sum of \$100,000 as an Endowment Fund. \$60,000 of this had been raised and invested in public securities, while \$90,000 had already been subscribed, so that they had no fears of getting the \$100,000. But though this amply compensated for the loss of \$5,000 grant from the State, it was not adequate to the support of a well equipped college, even in Cobourg where one could be sustained more economically than in Montreal or Toronto. The ministers of the church with which they were more immediately connected had decided to pay out of their own private purses, which were by no means heavy, the debt of \$11,000 which had accumulated on the withdrawal of the state aid. He had been much struck with a remark made by Prof. Goldwin Smith at the late Convocation of McGill College, and the statements of a gentleman so learned in such matters might be received with implicit credence. In speaking of the position of McGill, which draws but little, if any, state support, Mr. Smith said that the histories of Universities throughout the world showed that those the most successful were not the ones endowed with princely state grants, but those supported by the benefaction and enter-

prise of private individuals. Some of the most flourishing American Colleges, that now rivalled the proudest and best in Europe, had to struggle through a long series of difficulties, but honoured by their alumni they were endowed by the wealthy among them, and so thoroughly equipped that they are at once the envy and the admiration of the world. The alumni would never regret the sacrifice so made, and if those of Victoria followed their example they would raise their *Alma Mater* to the proud position which he and his honoured friend at his left, Judge Boswell,—who a resident of Cobourg for fifty years, and who, though a member of a church different from that with which the University was more immediately connected, had been largely instrumental in obtaining the College charter, no doubt because he saw it would be for the public good, showing thus the nobleness and the breadth of his views,—hoped it would yet attain. He might not live to see it, if he had much longer the care and anxiety of mind he had borne of late he would not live many years anyhow—but he believed the day was not far distant when it would be considered a high honour to be connected in any way with Victoria College. In his student days he roomed with a poor fellow—two poor boys they were; he (the Rev. Dr.) was poor yet and always would be, the other was rich. This poor room-mate worked his way by ringing the bell, and, as many do here to the increase of their finances and the profit of many in town, by doing some private tuition. He was not of the brightest parts either; he was the *greener* of the two. That was in 1847, and five years ago he gave his *Alma Mater* \$100,000. He referred to Orange Judd, the proprietor of the *American Agriculturist*. There was an example for the Alumni of Victoria. There was the Mayor, Mr. Kerr, a graduate of the University who, ere long, would be endowing it with \$100,000 or, if that was too much, at least \$50,000; and there was Mr. Dumble who had become immensely wealthy, and Dr. Beatty who had grown rich with marvellous rapidity. The country at large had confidence in Victoria, for their graduating class this year was only two or three less than that which would in a few days be admitted to degrees in the great Provincial University with all its endowments. Because it was found difficult to support a College without fixed aid, was no argument against its efficiency. Leave our Common Schools or our Grammar Schools to the charity of private persons and what would they be? They had an instance in Cobourg. They tried to sustain it by private management and it went down flat with the ground. But Victoria College came to the rescue, fixed support was given to the School, and now they had one of the most flourishing Collegiate Institutes in the Province. It was rather difficult to convince a man who had no son at College or perhaps no son at all, that it was his duty to give of his means for the education of other men's sons. However, he believed a sufficient number would be found with broad views, and sympathetic with the cause of progress, to remove any darkness which now might appear in the sky. And by their endowments equip Victoria College with royal magnificence so that it could look down on the waters of glorious old Ontario as the trusted guardian of the moral and spiritual interests of the youth of our young yet noble New Dominion stretching from ocean to ocean and extending to the ends of the earth itself. (Applause.)

Rev. Mr. Stephenson made several very interesting and appropriate remarks. He joined with all in good wishes to the University, and believed that the Rev. Principal in his statements regarding it had but acted as the mouthpiece of the people at large.

Rev. Mr. Wiseman, delegate from the British Conference, thought the reason why he and the Rev. Mr. Stephenson had been called on first was that the people of Canada wanted to show their attachment to the mother country. He would assure them that the feeling was strongly reciprocated. [Loud applause.] He had attended many large popular meetings in England and in nearly all he had heard this great Dominion spoken of as "the land of the free and the home of the brave." He was glad to notice that while the natural resources of this great country were

being developed they did not neglect their intellectual progress. He had wondered, when not long ago, riding through Nebraska and Iowa the "Great West" of which so much had been heard in the old world, if higher education received proper attention. He was pleased to see the great variety of studies in the curriculum here and believed that the rigid discipline of such studies would be of lasting good to them. Nowadays a great outcry is made against the classics. Though not a devotee to dead languages he thought that a knowledge of them led to a more easy understanding of living ones, to say nothing of the mental discipline they furnished. However he thought little of one who would bungle his mother tongue, though master of a dozen dead languages. He hoped they gave due attention to mathematics and the physical sciences and that they would allow none with whom they came in contact to remain in a state of contented ignorance.

Rev. Mr. Punshon said he always took an interest in the University, but now more than ever as the connection between himself and it was closer. He hoped the anticipations of the President, regarding the future of the College would be realized. He heard of a London footman who when he remained in indifferent ease when the bell was rung, and was asked if he intended to answer it, replied "p'raps I will if they persewure." So if the friends of the College "presewured," they need not fear about raising the required endowment. He hoped the benefactions of the friends would not be like that of a man who left large sums to this, that and the other institution, but spoiled the whole by a codicil in the will to the effect that he had no money. He had learned since coming to Canada that "subscribing" and "paying" were different things, but he hoped there would be no difference between subscribing and paying in the case of the "endowment fund." He suggested to the wealthy Mayor and the others that to subscribe and pay to the "fund," would be a good way to get rid of their superfluous cash. He desired to say a few words of encouragement to his friends who had that day changed schools. Their education was just beginning. In the school of the world they will find their labours harder, and their liberties fewer, but the rewards for diligence and industry would be greater. The Roman painter took for his motto, "no day without it's line," so they should let no twenty four hours pass over their heads without being able to record something to their temporal or spiritual welfare and the elevating and ennobling of the world itself. In their late school they obtained chiefly knowledge; in the school they were just to enter they would have to get wisdom. One was of little avail without the other. Nothing was greater than knowledge, except to know how to use it aright. "Whatever was worth doing at all was worth doing well." If they studied Law, let them be the best lawyers—the *best* not the *sharpest*, and whether healers of the body or of the mind, let them be the best of their profession. Then should some great revolution, social or political, deluge the world, he could see some brave hearts like Ararat tops raising their heads above the crested waves of turmoil. He would advise them to aim high. Some one had said that he who always aims at the sky will hardly hit the lower level of the trees. Let them develop by practice the faculties God had given them, as the Greeks by their Olympic games, developed to marvellous perfection their physical powers. "Green" had been euphoniously applied that day? he would say that all the visions of youth were surrounded with the *greenness* of summer, a kind of Saturn's ring encircling the objects and aims of life with brilliant coronations. But they should not in their high aims become pedants and prigs, railing at all things venerable, they should not break the bruised reed nor quench the smoking flax, but they should if possible strengthen the reed to the firmness of the oak and gently fan the smoking flax till it burned with a flame of heavenly brilliancy.

The Conversazione and Promenade Concert surpassed the most sanguine anticipations. At one end of the room was the famous Mendelssohn Quintette Club, and at the other the Band of the 4th Battalion, under the leadership of Prof. Chalaupka. At a seasonable hour the company broke up, mightily pleased, and no doubt inspired, delighted, and refined by the treat.—*Cobourg Sentinel*.

V. Monthly Report on Meteorology of the Province of Ontario.

1. ABSTRACT OF MONTHLY METEOROLOGICAL RESULTS, compiled from the Returns of the daily observations at ten High School Stations, for APRIL, 1872.

OBSERVERS:—Pembroke—R. G. Scott, Esq., M.A.; Cornwall—James Smith, Esq., A.M.; Barrie—H. B. Spotton, Esq., M.A.; Peterborough—J. B. Dixon, Esq., M.A.; Belleville—A. Burdon, Esq.; Goderich—Hugh J. Strang, Esq., B.A.; Stratford—C. J. Macgregor, Esq., M.A.; Hamilton—J. M. Buchan, Esq., M.A.; Simcoe—Dion C. Sullivan, Esq., L.L.B.; Windsor—J. Johnston, Esq., B.A.

Table with columns: STATION, North Latitude, West Longitude, BAROMETER AT TEMPERATURE OF 32° FAHRENHEIT, MONTHLY MEANS, RANGE, DAILY RANGE, HIGHEST, LOWEST, WARM-EST DAY, COLDEST DAY, MONTHLY MEANS, TEMPERATURE OF VAPOUR.

Approximation. dOn Lake Simcoe. eNear Lake Ontario on Bay of Quinte. fOn St. Lawrence. gOn Lake Huron. hOn Lake Ontario. iOn the Ottawa River. jClose to Lake Erie. mOn the Detroit River. nInland Towns.

Table with columns: STATION, HUMIDITY OF AIR, WINDS, NUMBER OF OBSERVATIONS, MOTION OF CLOUDS, SURFACE CURRENT, VELOCITY OF WIND, ESTIMATED VELOCITY OF WIND, AMOUNT OF CLOUDINESS, RAIN, SNOW, AURORA B.

Where the clouds have contrary motions, the higher current is entered here. Velocity is estimated, 0 denoting calm or light air; 10 denoting very heavy hurricane. REMARKS:—Pembroke—Wind-storm. 13th. Snow, 13th. Rain, 12th. CORNWALL.—On 3rd, Wild ducks seen. 5th, Robins, 8th, Black-birds and swallows; last sleighing. 15th, Lunar halo. 30th, solar halo. Wind-storms 1st, 13th, 22nd. Snow, 1st, 14th, 16th, 22nd, 24th. Rain, 9th, 10, 13th, 22nd. BARRIE.—On 1st, snowing and blowing with great violence. 3rd, shooting star. 10th, hail. 19th, frogs heard. 16th, lunar halo. 21st, storm of thunder and lightning with heavy rain; sudden fall of temperature.

left harbour for first trip—ice moving out. 30th, ice all gone. 12th, 30th, 31st, lightning and thunder with rain. Wind-storm, 30th. Fog, 24th. Snow, 21st, 23rd. Rain, 2nd, 8th, 9th, 11th, 12th, 20th, 21st, 23rd, 30th.

STRATFORD.—On 6th, wild pigeons seen. 20th, frogs first heard. 14th, mill pond free from ice. 12th and 30th, lightning and thunder with rain. Wind-storms, 12th, 13th, 21st. Fog, 8th. Snow, 10th, 13th, 15th, 22nd, 23rd. Rain, 6th, 7th, 9th, 12th, 21st, 23rd, 30th. Difference of mean temperature for month from average of 11 years :—1°16.

HAMILTON.—On 4th, grass beginning to be green. 5th, garden phlox and wild hepatica above ground; corona (large) around sun visible to the unprotected eye at 1 p.m. 8th, *rumex crispus* above ground. 9th, tulips above ground; pigeon shooting. 10th, flower bud of wild hepatica, planted in garden, ready to open. 11th, *dicentra spectabilis* above ground; ducks have been seen for several days; navigation open; the first silver maple in blossom. 15th, corona 35° in diameter around moon. 17th, hepatica in blossom. 22nd, hepatica in woods, *acer rubrum*, *populus tremuloides* and *alnus incana* in blossom; capsules of *Weisium viridula* developed. 29th, *Salix humilis*, *Corylus rostrata* and *Shepherdia Canadensis* in bloom; also *ulmus americana*. On 9th, a case of complete saturation at 7 a.m., the thermometers when corrected being at 41°. Lightning and thunder with rain, 30th. Wind-storms, 9th, 10th, 13th, 25th. Fogs, 7th, 8th, 24th. Snow, 10th, 14th, 15th, 22nd, 23rd. Rain, 5th, 6th, 9th, 12th, 20th, 21st, 23rd, 30th. A very dry April.

SIMCOE.—Lightning and thunder with rain 30th. Wind-storms, 9th, 10th, 13th, also stiff gales on other days (equinoctial). Fog, 8th. Snow, 15th. Rain, 6th, 13th, 20th, 30th. A fine month, the heat abnormal. Navigation opened earlier this year than usual in consequence of the extraordinary heat of the month of April.

WINDSOR.—On 1st, meteor in Z. towards N. W. 9th, lake open to navigation. River open some time before. Lunar halo on 14th, 16th, 17th, 19th, 20th, 24th. Wind-storms, 1st, 2nd, 8th—10th, 12th, 13th, 15th, 21st, 30th. Fog, 8th. Snow, 15th. Rain, 6th, 7th, 9th, 12th, 18th, 20th, 21st, 27th, 30th. Hail, 15th. Lightning and thunder with rain, 12th, 20th, 30th.

VI. Departmental Notices.

EXAMINATIONS FOR ADMISSION OF PUPILS TO THE HIGH SCHOOLS AND COLLEGIATE INSTITUTES OF ONTARIO.

In accordance with a general wish, as expressed last year and concurred in by the Council of Public Instruction, an examination of pupils for admission to the High Schools and Collegiate Institutes will be held (D. V.) in each High School or Collegiate Institute District, commencing on Thursday, 10th of October, at 9 a.m., and may be continued during the following day. Candidates must notify the City, County or Town Inspector (as the case may be) not later than the 15th September, of their intention to present themselves for examination; and the Inspector will inform the Department not later than the 20th of September, of the number of candidates for admission, as the examination papers cannot be printed off until this information shall have been received from every one of the Inspectors. An omission of one Inspector in this matter, beyond the time specified, may delay the printing and despatch to the Inspectors, of the examination papers.

County Inspectors are members only of Boards of Examiners for admission to the High Schools in villages and townships. City and Town Inspectors are members of the Boards of Examiners for admission to the High Schools in such cities and towns.

For this year, these examinations will be retrospective in their effect as regards pupils who entered for the summer term, whose attendance for that term will be reckoned provided they succeed at the examination, and their papers are approved by the High School Inspector. The Examination Papers will be sent to the Public School Inspector, who will be responsible for the conduct of each examination (according to the regulations). Where a County Inspector is also Town Inspector, he will (with the concurrence of his colleagues) arrange for the examination to be held at each school at the time fixed. The Inspector will, immediately after the meeting of the Board of Examiners, at the close of the examinations, and not later than the 20th of October, transmit to the Department the report of the Board of Examiners, and also the whole of the answers of the candidates,—the latter for the examination and approval of the High School Inspectors. The surplus examination papers are also to be returned for binding up.

EDUCATION DEPARTMENT,
24th August, 1872.

PUBLIC SCHOOLS OF ONTARIO.—PRIZES FOR RURAL SCHOOL-HOUSE PLANS.

With a view to improve the school accommodation in the various rural school sections, and to act as an incentive, as well as to aid trustees in the matter, the Department of Public Instruction will pay to any Inspector, Trustee or Teacher, the following prizes for ground plans of school-houses, and for block plans of school sites which may be found best adapted to rural school sections, viz. :—

I. For the best ground plan of a rural School-house (on the scale of eight feet to an inch).—1. For the best first floor (ground) plan of a rural School-house, with porch, cap and cloak room, map and book presses, teacher's accommodation, etc., capable of accommodating 60 to 75 children, \$15; 2. Ditto, with at least two rooms, 100 to 125 ditto, \$20; 3. Ditto, with at least three rooms, 150 to 175 ditto, \$25.

II. For the best Block Plan of a School Site (on the scale of forty feet to an inch).—1. For the best block plan of a school site, of an acre in extent. Position of school house, wood shed, privies, well, fence, play ground for boys and for girls, shade trees, etc., to be marked on the plan, \$20; 2. Ditto, of half an acre, \$15.

The plans to be neatly prepared in ink and to be accompanied by full written explanations. They are to be marked by some word or motto, the key to which is to be enclosed in an envelope, which will be opened after the prizes shall have been awarded.

Plans, etc., to be addressed to the Rev. Dr. Ryerson, Chief Superintendent of Education, not later than the 15th of November next.

The prize plans will be the property of the Department, and will be required for publication in the JOURNAL OF EDUCATION.

PROVINCIAL FIRST CLASS CERTIFICATES.

Forty teachers competed for first class certificates, at the examinations held in the county towns throughout Ontario, on the 23rd, 24th, 26th and 27th July. The examinations were conducted in the presence of the County Inspectors on papers furnished by the Central Committee. The following candidates were awarded certificates on the 2nd instant, by the Council of Public Instruction:—First class, grade A—Messrs. Wm. J. Carson, Saml. Emerson, Clarke Moses; first class, grade B—Messrs. Isaac J. Birchard, John W. Cooley, John Dixon, Alfred Goodbow, John Macdonald Mackie, W. R. Telford, Miss Phoebe J. Johnston. Of the successful candidates, seven were trained in the Normal School, Toronto.

MEM.—There are three other candidates whose papers came in late, and will be considered by the Committee the first week of September.

IN THE PRESS.

THE ONTARIO SCHOOL LAW,

Relating to County Councils—Township Councils—City, Town and Village Councils—Township Boards—Union School Sections—Arbitrations in regard to School Sites—County, City and Town Public School Inspections, Boards of Examiners, &c., &c., being Part II. of School Law Lectures. By J. GEORGE HODGINS, LL.D., Barrister-at-Law. Price 75 cts.; by Mail, 80 cts.

COPP, CLARK & Co., King Street East.

Toronto, 1872.

MCGILL UNIVERSITY, MONTREAL. SESSION 1872-73.

THE CLASSES IN THE SEVERAL FACULTIES will open as follows:—

FACULTY OF ARTS, September 16th.
FACULTY OF MEDICINE, October 1st.
FACULTY OF LAW, October 1st.

The Department of Practical Science in the Faculty of Arts, including Courses in Engineering, Mining, Practical Chemistry and Assaying, September 16th. The Classes in the McGill Normal School will be open on the 2nd September. In the Examinations in the Faculty of Arts, commencing September 16th, the following Scholarships and Exhibitions will be offered:—First Year, 3 Exhibitions—2 of \$125; 1 of \$100. Second Year, 3 Examinations—2 of \$125; 1 of \$100. Third Year, 4 Scholarships, tenable for two years, of \$100 to \$125 yearly. The Calendar containing details of all the above Courses may be had on application, post paid, to the undersigned.

July 6.

W. C. BAYNES, B.A., Secretary.