The Educational Review.

Devoted to Advanced Methods of Education and General Culture.

PUBLISHED MONTHLY. ST. JOHN, N. B., AUGUST, 1887. VOL. I. No. 3.

A. H. MacKAY, B. A., B. Sc., Editor for Nova Scotia.
PRINCIPAL ANDERSON, Editor for P. E. Island.
G. U. HAY, Ph. B., Editor for New Brunswick.

SUBSCRIPTION PRICE:

Twelve Numbers, - - - - - - - - - - - $1.00
Single Copies, - - - - - - - - - - - 10 cents

Subscriptions payable in advance. Send money by money order, or by bank bill in a registered letter. All remittances acknowledged by postal card. Address all business communications and send subscriptions to EDUCATIONAL REVIEW, St. John, N. B.

The REVIEW is issued from the office of Barnes & Co., St. John.

CONTENTS:

THE FOLLOWING persons have consented to act as Agents for the REVIEW, and are authorized to receive subscriptions. Others will be appointed as soon as arrangements can be completed:

J. & A. McMILLAN, St. John.
JAS. McLEAN, Pictou, N. S.
J. F. CHISHOLM, St. John's, Nfld.

THE SUCCESS that has attended the publication of the REVIEW so far is most gratifying. Every mail brings a number of subscriptions, many of these accompanied by the warmest expressions of commendation of its appearance and contents. Our Superintendents of Education, the Inspectors of Schools, and other prominent educationists have warmly endorsed it, and have been unanimous in declaring that we have made a most excellent start. Our July number was declared by many to be even better than the initial number. The REVIEW for August is full of good things, although its editors feel the need, in common with other teachers, of a little relaxation. Our number for September may be looked forward to with interest as containing many excellent features. Our aim is to make the REVIEW second to no educational periodical published in Canada; and to do this we expect the hearty co-operation of every live teacher in the Atlantic Provinces. Support your local educational paper. It is the best.

NOVA SCOTIAN CONVENTION.

The annual convention of the Educational Association was held in the Normal school building, Truro, on the 13th and 14th of June. The presence of the President, Dr. Allison, who was attending the American Educational Convention at Chicago, was greatly missed by the large assemblage of teachers (about 450) present. The proceedings, however, were never more interesting or harmoniously conducted. The convention was called to order by Inspector Roscoe, and on motion the Vice-President, Principal Calkin, of the Normal School, took the chair. Supervisor McKay, of Halifax, then read the report of the executive, which was unanimously approved. On motion, Supervisor McKay was elected Secretary, and W. E. Thompson, Halifax, Assistant Secretary. W. T. Kennedy, Principal of Albro Street School, Halifax, then read a very superior paper on "The Teacher's Out-of-School Work." The leading thought was the very great impulse which would be given to all educational interests by the teacher making of himself an intelligent and active citizen in every sense of the word, in keeping abreast, if not in advance, of modern progress in all its popular phases. The paper was well spoken to by W. E. Thompson, Halifax; Principal Burbidge, Morris Street School, Halifax; and L. A. McKenna, of St. Mary's School. Rev. Professor Anderson next addressed the convention on the superior advantages of the "Tonic Sal-Fa" notation over the staff system for the schools and for popular musical instruction in general. He illustrated the system by chart and examples.

The afternoon session opened with a very able paper from Miss Jackson, of Kings, on the "Relation of Skilled to Unskilled Labor." Principal MacKay, Pictou Academy, and Principal Hutton, of the Deaf and Dumb Institution, Halifax, followed, speaking in high terms of the manner in which the subject had been presented in the paper.

Professor Mullin, of the New Brunswick Normal School, who was sitting on the platform, was at this stage introduced by the Chairman. In a very pleasing address he expressed the pleasure it gave him to meet his fellow educationists of Nova Scotia, intimating that he was one of a committee appointed by the Educational Association of New Brunswick to bring the matter of an interprovincial convention of the teachers of the three maritime provinces before this Association. He hoped the proposition would be looked upon favorably by the three provinces, and that they might experience great benefit from such association with each other.

Prof. Burwash, of Mount Allison College, read a very well illustrated address on "Elocution as a Study for Teachers." To his fame as one of our ablest scientific instructors, he has thereby added the reputation of being a most skilful and accomplished elocutionist. A complimentary and interesting discussion on the subject was engaged in by Principal Calkin, Professor Denton, of the Halifax Academy, Mr. Andrews, of Margaret's Bay, Principals Kennedy and Burbidge.

In the evening a public meeting was held, presided over by Sir Adams G. Archibald. Mayor Muir, in a short address, welcomed the convention to Truro, and was responded to by Principal MacKay, who also referred to the important subject of industrial art education, on which the lecturer of the evening, Mrs. Leonowens, was about to address the meeting. Mrs. Leonowens spoke for nearly an hour in a most fluent and effective manner, detailing some points of her experience in Burmah, which illustrated most powerfully the possibilities of a proper school of art. It is saying very little of what might be said when we say that scarcely ever had we seen a platform speaker so completely charm an audience as did the beautifully eloquent speaker on this occasion. Short and appropriate addresses following were made by President Sawyer of Acadia College, Principal Hutton, and Mrs. Condon, of Halifax. Never was a public meeting better enjoyed, to judge from the remarks going out, as well as by the department inside.

On Thursday morning Principal MacKay was called on to report for the committee managing the Summer School of Science. After this report he moved that "this Association approve of an interprovincial convention of teachers for Nova Scotia, New Brunswick and P. E. Island; the executive to make such arrangements as may be necessary to carry the same into effect." Seconded by Professor Eaton of the Normal School. and spoken to by Messrs. Kennedy, Denton, Burbidge, and Brown, and passed unanimously. Principal O'Hearn, Halifax, read a most practical and valuable paper on "Economy in Education," which was followed up by short speeches from Principal Kennedy, Principal MacKay, and Professor Denton. Principal Burbidge made a good point in showing how economy in education could be effected by making our grammar for the English language itself instead of following the models of the classical grammars.

President Sawyer, of Acadia College, followed with a powerful address, showing in what respects the prescribed register was and was not a correct index of the work of the teacher. In a comparatively short compass a great many important points were given the teacher. President Forrest, of Dalhousie College, who was on the platform, was then introduced by the Chairman. In an eloquent speech he referred to what had been done towards the advancement of education during the past few years, gave practical advice for the present, and congratulated the teachers on having such a paper as the EDUCATIONAL REVIEW, which he just saw on the Chairman's desk. Principal Calkin, the Chairman, said that President Forrest had anticipated him in speaking of the EDUCATIONAL REVIEW. The paper was worthy of the support of the profession, and he hoped every teacher in the province would get it. The balloting for the Executive Committee for the ensuing year, which now took place, resulted in the election of Principal MacKay, Principal Cameron (Yarmouth Academy), Principal Kennedy, Miss Taylor, Inspector Roscoe, and Inspector MacDonald.

Thursday afternoon's session was opened by an address from Professor Denton, after which he introduced a motion, recommending the Executive to arrange to have one session for the discussion of any subject of which a teacher might give notice. The motion passed. E. M. Chesley, of Boston, then read a paper entitled, "Idealism or Spiritual Science." The paper showed extensive reading, and a masterly grasp of the problems of mental philosophy and an especial appreciation of the idealistic schools. This paper drew out the university scholars. Professor H. Mellish of the Pictou Academy, and Principal Ebenezer MacKay of the New Glasgow High School, made very felicitous speeches. President Sawyer concluded the discussion in his own masterly fashion. The paper of Professor Roberts on "The Teaching

of English" was read by R. J. Wilson, Esq., of Halifax. This paper was one of the most important read at the Convention. The teachers were much disappointed in not seeing Professor Roberts present. A motion by Inspector Roscoe, seconded by Inspector Condon, and unanimously passed, recommended the EDUCATIONAL REVIEW to the teachers of Nova Scotia. After a vote of thanks to railway authorities, etc., for reduced fare, the Convention adjourned.

Want of space forbids us to give more than a brief outline of the papers read. There were many important points brought out in the papers and discussions to which we shall refer in the next and following numbers of the REVIEW.

N. S. SUMMER SCIENCE SCHOOL.

The Nova Scotian Summer Science School has been a success far beyond the anticipation of its projectors. First, it has been demonstrated that a very considerable amount of practical scientific work can be done in the two weeks of its session. Secondly, and perhaps more unexpectedly, it has been shown that the object and method of the school have the cordial—more, the enthusiastic endorsation of the leaders of thought and action, as exemplified in such educational and industrial centres as Windsor, Kentville, and Wolfville — the communities which have had an opportunity of expressing themselves on the subject.

The first session was held in the Convocation Hall of Acadia College, Wolfville, and was open to the public. On the platform with the Faculty of the Science School, were President Sawyer of Acadia College, Professor Kierstead, and Revs. Dr. Higgins and Jas. Anderson. The President, Principal MacKay, of Pictou, in his opening address reviewed the rise and progress of the scientific element in the public school system of the Province. In 1850 the present Sir J. W. Dawson was made first Superintendent of Education, and in every quarter of the country he commenced to breathe the first promethean spark into the dead clay. But a dark day soon came for Nova Scotia, when its scientific light was transferred to Montreal to irradiate Quebec. In 1855 Dr. Forrester, of immortal memory, succeeded, and although without the transcendent genius which made his predecessor a cosmopolitan scientific prince, he still did much for science in his Normal School course. But the seeds planted by Dawson and nourished by the summer zephyrs of the nineteenth century, had been growing. The good English and mathematical curricula of Rand and Allison were beginning to show signs of well rounded maturity by the intussusception of natural science. Acadia College and its Alumni did noble service in this cause. He referred to the valuable efforts of the Acadia Science Club in arousing the attention of the Province to this phase of education, and complimented its President, Professor Caldwell, and its energetic Secretary, A. J. Pineo, A. B., on the good accomplished. For this reason alone Wolfville was a most appropriate location for the first meeting of this school. It was also the centre of a portion of country rich in natural history treasures, and the poetic associations of historical romance. He then referred in detail to the object of the school, and the great necessity for the education of the perceptive faculties of the young, and the moral, æsthetic and industrial advantages likely to result therefrom. President Sawyer, Professor Kierstead, and Rev. Dr. Higgins followed in short, but forcible and genial speeches, welcoming the school to their midst. Short speeches were also made by Rev. Jas. Anderson and several of the faculty of the school.

Lectures commenced at 8 o'clock every morning, one hour for each subject, closing for the forenoon at 12. The afternoon was also generally filled in from 2 to 6 p. m., and the evening from 8 to 10 p. m. Excursions, of course, interrupted this order, when they occurred. But no time was lost. Prof. F. H. Eaton, Normal School, Truro, lectured on Chemistry the first week, and on Physics the second week. The very first day he set them to work in sections in the laboratory, making their own apparatus—such as extemporized alcohol lamps, the heading of glass tubing, and the performing of fundamental chemical operations. The same plan was pursued in Physics.

Prof. A. E. Caldwell, M. A., of Acadia College, lectured on the constellations, and gave sky demonstrations from 9 to 10 p. m. The fine telescope in the observatory was brought to bear on many celestial objects; the quarter-moon, and Jupiter, with its satellites, being most popular. A. J. Pineo, A. B., also set his class to work with the blowpipe, in Mineralogy, and as it was too large to be accommodated in one room when at laboratory work, the class was for this purpose divided into sections. Principal A. H. MacKay, of Pictou Academy, conducted directions of a few typical zoological forms in full class, the students being all seated around tables with their dissecting parapharnalia. E. J. Lay, A. B., Inspector of Schools, analyzed plants in full class, lectured on some interesting points, and assisted his students in general to become practical botanists. Dr. Sinclair, of Dartmouth, gave two lectures on the anatomy of man, illustrated by a skeleton, charts, and the dissection of the hearts of oxen and sheep by the class.

Dr. Reid, of Dartmouth, gave two lectures on human physiology. The object of all the instruction was to enable the student to do practical work. This could be seen from the armament of an excursion party. There was the tin vasculum for plants, hammers and coldchisels for the geologist and mineralogist, nets, cyanide bottles, and boxes for the entomologist.

The first excursion was by train to Hantsport, where Dr. Honeyman, Provincial Geologist, introduced the School to the transported pebbles and boulders of granite, gneiss, greenstone, diorite, amygdaloid, jaspers, agate, etc., found in the railway cuttings through the drift gravel banks, and demonstrated the direction of their transportation. Then the shore and the railway divided the attention of the geologists and botanists until Horton Bluff was reached on their way homeward. Here magnificent illustrations of the dynamics of geology were seen, and some very interesting carboniferous fossils found. The second excursion started by steamer on Friday morning, 29th July, from Wolfville, spent three or four hours at Amethyst Cove, Blomidon, where some very fine specimens of tropean minerals were collected, and on the cliff above some rare plants. The steamer next proceeded to Partridge Island on the other side of the basin, where very good specimens of the zeolites were obtained. This excursion was a magnificent success in every respect. Another excursion was made to Kentville; at the train the School was received by the leading citizens in carriages and driven around all the various places of interest, and finally to the Court House, where Warden King gave an address of welcome. Here, also, were displayed a fine collection of Nova Scotian birds, mounted by Mr. Bishop, a skilful taxidermist and a very promising naturalist. After the study of this collection the excursion returned to Wolfville. The kindly disposition of the good people of Wolfville was next illustrated, by a drive given the whole School, along the picturesque valley of the Gaspereaux, a region interesting also on account of its natural history. Add to this the conversazione given in the College to the School at the farewell meeting: First, a splendid programme of music, vocal and instrumental, with exhibitions of elocutionary art; then a collation, rich and bountiful, for the School and some two hundred invited guests; and, thirdly and lastly, a symposium of wit, wisdom, and eloquence, in short speeches from the Rev. President Sawyer, Professors Higgins, Jones and Caldwell, Inspectors Condon and Roscoe, Prof. J. B. Hall, Ph. D., of Truro, and A. J. Pineo, A.B. The thanks of the School were tendered the Faculty of the College and the people of Wolfville, by President MacKay. On the closing day an excursion was made to the classic region of Windsor. Arrived at the station the School was spirited away as at Kentville, by the leading citizens in fine carriages. Localities of interest in the neighborhood were visited, the objective point in particular being the great gypsum quarries at Wentworth—said to be the greatest in the world. Professors Kennedy and Roberts, of more than continental fame, were also present, extending with the finger of instruction the open hand of hospitality. Here the School loaded up with splendid selenite, and unlimited quantities of anhydrite, fibrous gypsum, etc. Then the drive returned to the fine Museum building, where the genial and learned President of King's College, Canon Brock, introduced the excursionists to its interesting treasures of science and art. But that was not all. It was now approaching the evening, and the scientists with appetites wheted by a well spent afternoon under the blue sky, were invited to a collation both substantial and luxurious in the dining-hall of the College. President MacKay, seconded by Professor Caldwell, tendered the best thanks of the Summer School to the Faculty of King's College and the people of Windsor for this royal expression of their sympathy with the efforts inaugurated to advance the practical study of the works of nature. Rev. President Brock replied in a short but eloquent address, in which he expressed the belief that the closer study of the works of God would not only tend to advance the industrial interests of our country, to extend mental culture, but also to produce in its moral and religious results the same effect as the study of the Word of God. From the College to the train, and the Summer School for 1887 is over. There was hard, continuous, but deeply interesting work. There were also many occasions of exhilerating enjoyment, and of pleasant, social intercourse. President Sawyer, Professors Tufts and Caldwell, Inspector Roscoe, C. D. Randall, Esq., and others, gave receptions and paid many kind attentions to the School.

In addition to the scientific work, Rev. James Anderson gave lectures on the Tonic Sol-Fa system, with which he has had so much success in Halifax. Professor Shaw also gave two very valuable lectures on elocution.

The spirit shown by the students was a remarkably plain evidence of the fact that we have in this day and generation, men and women as devotedly sacrificing their energies for the public weal, as in the most palmy days of missionary effort and martyrdom.

Among the two thousand and odd teachers and educational officers in Nova Scotia, there are some whose intense longing to do some permanent good for the rising manhood and womanhood of their

country would, we were going to say, receive canonization were their devotion fully known. And yet they are likely but imperfectly appreciated, and perhaps wholly misunderstood, sometimes, by the mercenary motived masses for whom they delight to spend and be spent. Some such are included within the list of students at the Science School, who, though enrolled as students, have done more for the general success of the work than the most brilliant lecturer in the faculty of instruction. The lecturers were deeply interested, apparently, in studying the different methods of each, and attended the various classes as far as possible with those enrolled as students. The list of those latter, as furnished by the Secretary, is as follows:

Inspector Roscoe, Wolfville; Inspector Condon, Halifax; Supervisor McKay, Halifax; Professor Hall, Truro; Professor Denton, Halifax; Principal Congdon, Dartmouth; Principal McRae, Annapolis; Principal McLeod, Kentville; Principal Sprague, Liverpool; Principal Burbidge, Halifax; Rev. James Anderson, Musquodoboit; L. A. McKenna, Halifax; W. E. Thompson, Halifax; J. W. H. King, Hantsport; Miss N. A. Burgoyne, Windsor; Miss B. McClatchy, Windsor; Miss E. Stewart, Pictou; Miss J. C. Fullerton, Pictou; Miss M. Anderson, Musquodoboit; Miss R. Marshall, Yarmouth; Miss C. Mumford, Hantsport; Miss H. Rouse, Wolfville; Miss S. A. Hamilton, Wolfville; Miss L. J. Benjamin, Wolfville; Miss F. Evans, Wolfville; Miss I. M. Creighton, Halifax; Miss A. J. Mitchell, Halifax; Miss A. M. Cunningham, Halifax; Miss I. M. Wiswell, Halifax; Miss H. L. Flowers, Halifax; Miss M. Reynolds, Halifax; Miss M. J. McPhee, Guysboro Co.; Miss E. Ellis, Elmsdale; Miss M. Kirkpatrick, Halifax; Miss S. A. Hirtle, Lunenburg; Miss Crosby, Yarmouth; O. F. Best, Canso; B. F. Porter, Yarmouth; C. E. Williams, Chester; H. Dill, Lunenburg; H. K. Marsters, New York.

Dr. Allison, Superintendent of Education, came down from Halifax for a day, to inspect the working of the School. We regret that our space does not admit of a fuller account of the proceedings. In our next we shall intimate the arrangements made by the Executive for 1888, and discuss a proposed outline of practical work to be done by students competing for a certificate from the School.

A clock whose dial is to be fifty feet in diameter, and which is claimed as the biggest in the world, is in course of construction in New York, and is to be placed at Manhattan Beach.

TEACHERS IN CONVENTION.

PRINCE COUNTY TEACHERS' ASSOCIATION.

The annual convention of the teachers of Prince County, P. E. Island, was held at Alberton on the 28th and 29th of June. About sixty teachers were present—a very respectable attendance, compared with other meetings, but surely small enough from a section of country which contains about one hundred and sixty. Papers were read by Miss MacPhail of Summerside, and Mr. Daniel Fraser of Alberton. Both were exceptionably good, and afforded the Convention abundant matter for discussion. The subject of Miss MacPhail's paper was "The Culture of the Brain." She showed that activity and labour are essential to the development of that organ. The right kind of culture is that which gives attention to mind and body. All our efforts towards physical or mental culture are to aim at the development of the moral nature of the pupil. But the medium in which the work can best prosper is an atmosphere of love—love in the home—love in the school-room—love in the play-ground.

Mr. Fraser's paper on "Teaching" was eclectic in character, but it was not on that account less interesting or instructive to his audience. The central idea of the paper was the necessity of teaching details before attempting generalization. He disapproved of the introduction of grammar at too early a stage in the course of studies, because pupils in the primary grades are not able to grasp abstractions. On the same principle he condemned the use of the unitry method in arithmetic, as involving more complicated reasoning than the simple and much shorter method of proportion. The paper elicited a lively discussion.

Mr. Landrigan, Tignish, introduced a discussion on the teaching of history. While it was in progress, Mr. Agnew, Glasgow, Scotland, was invited to address the Convention. He spoke at length, expounding his views on the teaching of history with great force and clearness.

A resolution was introduced by Mr. West, Centreville, strongly disapproving of the amendments to the Education Act, proposed at the last meeting of the Local Legislature, and expressing satisfaction at their rejection by the Legislative Council. The resolution was passed with but one dissentient voice.

A public entertainment was given on the evening of Tuesday, consisting of recitations, vocal and instrumental music, and an address by Mr. Montgomery, Chief Superintendent of Education.

WESTMORLAND COUNTY TEACHERS' INSTITUTE

Will hold its next annual meeting at Moncton, N. B., on the 15th and 16th September. Among the subjects to be discussed are "Practical Education," "Industrial Education," "The Teacher out of School," and others of importance. With such subjects as these, discussed by an intelligent body of teachers, just after school work has been recommenced, and body and mind refreshed, the very best results ought to result from the meeting. In addition to the above, specimens of scholars' work will be exhibited, and teachers are invited to add to the interest by exhibiting specimens of natural history objects.

PROF. HUXLEY ON SCIENTIFIC TRAINING.

There is great misconception respecting Professor Huxley's views of the position which science ought to hold in an academic course of instruction. Many mistake his persistent and strenuous advocacy of the claims of science, and assume that it arises from a conviction of its exclusive pre-eminence as a branch of human knowledge and an instrument of culture. To such we would recommend the perusal of the following passage which we take from *Science* of July 15th:

At the recent Royal Academy banquet, Professor Huxley concluded his speech thus: "Art and literature and science are one; and the foundation of every sound education, and preparation for active life in which a special education is necessary, should be some efficient training in all three. At the present time, those who look at our present systems of education, so far as they are within reach of any but the wealthiest and most leisured class of the community, will see that we ignore art altogether, that we substitute less profitable subjects for literature, and that the observation of inductive science is utterly ignored. I sincerely trust, that, pondering upon these matters, understanding that which you so freely recognize here, that the three branches of art and science and literature are essential to the making of a man, to the development of something better than the mere specialist in any one of the departments. I sincerely trust that that spirit may in course of time permeate the mass of the people; that we may at length have for our young people an education which will train them in all three branches, which will enable them to understand the beauties of art, to comprehend the literature, at any rate, of their own country, and to take such interest, not in the mere acquisition of science, but in the methods of inductive logic and scientific inquiry, as will make them equally fit, whatever specialized pursuit they may afterwards take up. I see great changes: I see science acquiring a position which it was almost hopeless to think she could acquire. I am perfectly easy as to the future fate of scientific knowledge and scientific training: what I do fear is, that it may be possible that we should neglect those other sides of the human mind, and that the tendency to inroads which is already marked may become increased by the lack of the general training of early youth to which I have referred."

CULTURE vs. TRAINING.

In one of the speeches recently delivered at Edinburgh by Mr. Andrew Carnegie, on the occasion of his laying the foundation-stone of the Free Library, he mentions the following incident: The shop of a baker who had signalized himself by his opposition to the adoption of the Public Library Acts being pointed out to him, he remarked, "I would like to cross over to tell him that man shall not live by bread alone." By this apposite expression, Mr. Carnegie meant to convey to his audience his conviction that there is more to be thought of than the provision which has to be made for one's daily wants—that man has a higher nature to cultivate, and that it is his duty to provide spiritual and intellectual food suited to its necessities. He emphasized this utterance when on another occasion he said, "I lay the foundation of this Free Library, rejoicing that it is soon to be the privilege of every man, of every woman, and of every child, to obtain access to the most precious treasures which this earth contains. These treasures are stored up in books which give to us in impartial form, the products of the highest minds and the noblest natures, the most accurate knowledge, the very highest imaginings, and the most precious wisdom." And yet in another speech, wishing it to be clearly understood that to his panegyric on literature there were limitations, he expressed himself in rather contemptuous terms of such acquisitions as Latin and Greek in comparison with the skill which is required to manage a lathe or drive a locomotive. Now this is a mistake of very common occurrence with those who, ignorant of those languages themselves, eagerly catch up the condemnatory expressions of those who are opposed to a training too exclusively classical, and denounce as absolutely useless an education of which they cannot understand the utility. It is true that

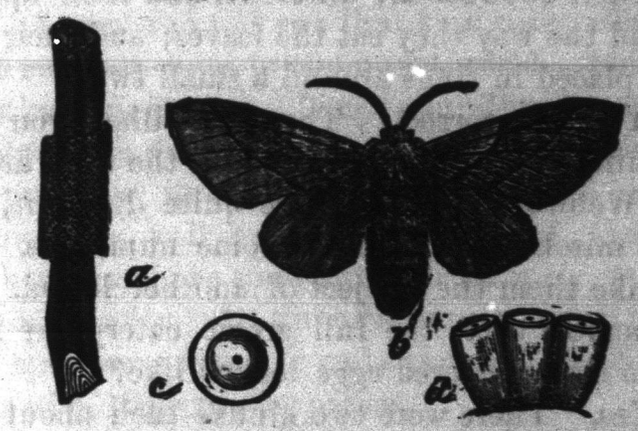
many mechanical operations can be satisfactorily performed by uneducated men, but it is allowed by all that a man whose intelligence has been cultivated, either in school or out of it, becomes a more reliable and more skilful mechanic. And how the possession of a certain knowledge of the Greek and Latin languages should incapacitate a man for the discharge of the active duties of life, or bar his way to preferment, we fail to perceive. He has passed through a complete gradation of mental discipline, his faculty of observation has been called into constant exercise, habits of accuracy and generalization have been acquired, and a greater mastery of the English language attained. And should he prosecute the study of these languages beyond the elementary stage, his mind is furnished with food for thought, his taste is correctly tutored, and his heart and intellect brought into most intimate contact with what is best in humanity.

We have long entertained the opinion that it does not so much matter what subjects are studied in school or college, as *how* they are studied. If the only method of instruction is that of a dull, mechanical routine, and the only faculty appealed to—memory—the results will be very much the same, and as melancholy, whatever the subjects may be. But if there be the living presence of an accomplished, sympathetic, and inspiring teacher, the thought kindles itself at the fire of living thought, and the spirit grows by the mysterious contact of spirit. Linguistic, historical and scientific subjects become animate, because there is constant appeal to the reflective or imaginative powers; languages called dead live anew; the great and good of past ages are again instinct with life and passion; and even formula, which in other hands would only bewilder and puzzle, have their meaning and force made clear as noon-day. And what is of even greater moment to the community, a man of high ideas himself, his greatest ambition is to inspire with lofty principle, to inculcate clear and transparent conduct, truthfulness, honesty, unselfishness, modesty; an abomination of envy, hatred, malice, and all uncharitableness, and an indignation at every form of wrong and injustice.

In estimating results by examination papers it may, perhaps, be possible to ascertain the extent and intimacy of one's acquaintance with the subjects of study; but what means have been suggested by which we may gauge, and by what system of marking appraise the moral influence of the teacher? Perhaps it is this tendency, most prevalent at the present day, to value everything by the standard of utility, which aroused the indignation of Carlyle, and still moves Ruskin to utter words of bitter scorn against those who chant peans in honor of mechanical inventors. More than ever, when pressure and competition are so great, when men push and jostle each other in the struggle for existence, and so many are asking "how are we to get a living"? is it incumbent upon all who have to do with the training of youths to endeavor to answer the question—"How are we to live"? And surely, as a practical question, there is none more momentous. It is, we believe, in the school-room and the college that the conditions are to be provided for the true solution of the great issues which are being fought ont between the various sections of the community. Social questions, the relations between capital and labor, and others, can never be set at rest so long as people grow to manhood with such crude and really false notions respecting the rights and obligations of man. And hence we would unhesitatingly affirm that the education which in too many cases is provided for the youth of the present day, practical it is called, and the constant cry is for more of it, is at best a very imperfect instrument of intellectual training. The children cry for bread and they get only a stone.

FERNDALE SCHOOL.

No. 3. CLISIOCAMPA.



Eggs and Moth of the Forest Clisiocampa.

TEACHER. I promised to give you a lesson some time on the little rings on the twigs of the apple trees which you brought to the school near the beginning of the term. We have several of these twigs here, and I have drawn two kinds enlarged on the board, which I wish you to copy. Point out the drawings and see if they are pretty correct.

SCHOLAR. Yes. One kind at *a* in the first picture, and the other kind at *c* in the last picture.

T. Very good. These little rings you know already are clusters of eggs neatly arranged and cemented together by a moth. Please count the number of eggs in each ring.

S. 205 in mine—240 in mine—256 in mine.

T. Between 200 and 300 in each of your specimens.

S. Yes; and they are all in even, slant rows going right around the twig.

T. I shall break one of these rings and let you look at the eggs under this magnifying glass, and you must try to draw on the blackboard what they look like under the glass. As soon as each one has looked through the glass he will go to the board and draw an outline of the shape he has seen. (End views and side views something like *c* and *d* in Figure 1. are drawn.)

S. The inside of a broken egg looked as if it were all covered over with a pearly lining.

T. You are quite right. The interior is as beautiful as a shell lined with mother of pearl. But you have noticed what came out of some of those little eggs in the warm days of May.

S. Yes; ugly little caterpillars. But those that were hatched in the school-room died, while those that were hatched on the trees grew larger and spun a cobweb and eat the leaves of the trees.

T. Do you see caterpillars with a cobwebby covering on the trees now in August?

S. Yes.

T. Have you examined them closely to see if they are the same?

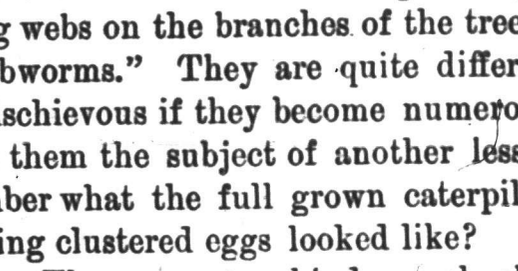
S. Their cobwebs are different, and their appearance, and the way they eat the leaves; and their eggs are not placed in rings around a small twig.

T. You are correct. The caterpillars you now see forming webs on the branches of the trees are the "Fall Webworms." They are quite different, but quite as mischievous if they become numerous. We shall make them the subject of another lesson. Do you remember what the full grown caterpillar from the little ring clustered eggs looked like?

S. Yes. There were two kinds—each about two inches long. You told us to put one of each of them in a small vial which you filled with alcohol to preserve the specimens.

T. What is the principal difference between the two kinds?

S. One kind has a whitish line all along its back, while the other has only a row of white spots nearly making a line along its back. Here is the figure of the latter kind—

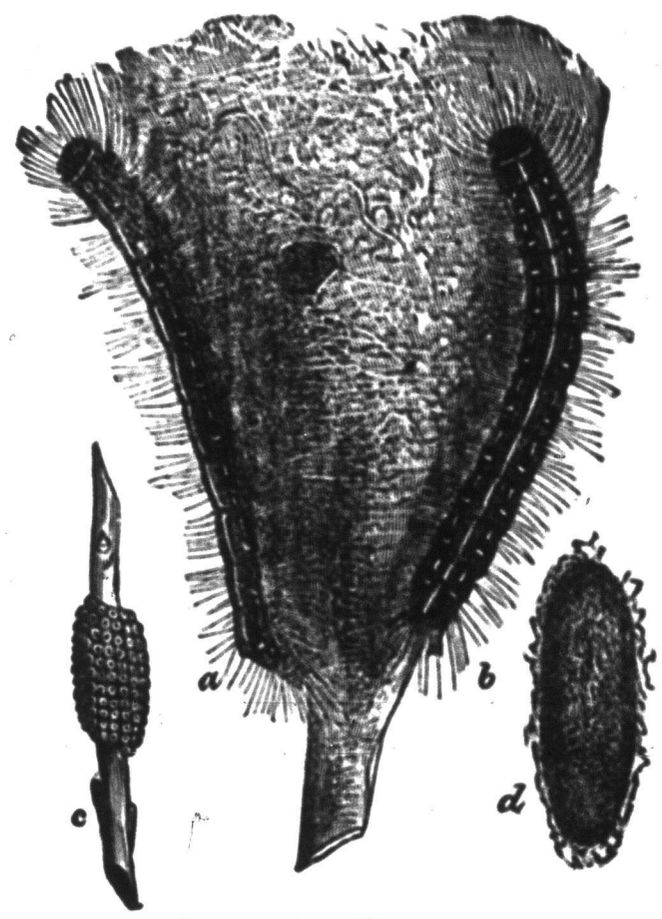


Larva of the Forest Clisiodha.

and the former is figured *a* and *b* in the last picture,

T. You are correct. These two species of caterpillar are very much alike in appearance, and in their habits, but they are distinct. The one in our first two pictures has been called the "Forest Tent Caterpillar," or *Clisiocampa sylvatica*. *Sylvatica* means belonging to the forest. *Sylva* is the Latin for forest. What is the meaning of sylvan shade in this line which I find in a piece of poetry? "Delightful sylvan shade when the summer sun is burning."

CHORUS. Forest shade.



The American Clisiocampa.

T. The other caterpillar is called *Clisiocampa Americana*, which is the Latin for "American Clisiocampa." It is sometimes called the "American Tent Caterpillar," or "The Lackey Worm." Here we have a sketch of its egg cluster at *c*, the larvae at *a* and *b*, and the cocoon of the pupa at *d*.

S. The caterpillars eat nearly all the leaves of our trees. Sometimes they collect in great clusters on portions of the trees, and hundreds can be crushed to death by rubbing them with a handful of coarse leaves.

T. What do you think would be the easiest way of getting rid of them?

S. By breaking off the twigs bearing their egg clusters in winter or early spring. Every twig pinched off would mean two or three hundred caterpillars destroyed.

T. Supposing you picked off all the egg clusters in your own orchard, but your neighbor didn't pick them off his trees, would your neighbor's caterpillars injure you in any way?

S. Yes. For when they grow large they wander off in every direction for something more to eat.

ANOTHER S. John Jack says that in 1883 the forest clisiocampa stripped all the hardwood trees in the woods of a large portion of Pictou County. Hundreds of acres of forest looked in June as bleak as in January—nearly as leafless as if fire had swept over the country. And when they had eaten all the leaves on one side of a railroad track, they crossed it, lying in some places several inches deep on the dry, dusty roadway. And on one occasion they covered the rails on an up grade so that the train stopped until the rails were sanded.

T. John's story is quite correct. In 1868 these caterpillars did tremendous damage in Ontario. But afterwards nearly disappeared until 1877 when they again appeared in great abundance. In 1883 they did great damage in Nova Scotia as has been described.

S. Isn't it the "army worm"?

T. Some people call it the army worm, and it often does crawl in great armies; but it is not the "army worm" of the United States; nor is it the "arm worm" which has of late been so destructive to the hay crops in New Brunswick, and Cumberland, Nova Scotia.

S. How is it sometimes so abundant and then becomes suddenly scarce?

T. Suppose the moth of the Clisiocampa to be just so abundant this year as barely not to be noticed as injurious. You know how many eggs each one of these can deposit?

S. Yes. About 200 or 300.

T. Well, next spring the summer comes in warm and favorable, and suppose no insects prey on the Clisiocampa, how much more numerous will they be on the trees with their tender opening leaves than they were the previous spring?

S. Why about 200 or 300 times as numerous.

T. But suppose the sun warmed up the trees in April so that they nearly commenced to bud; what effect would it have on the millions of eggs placed on the trees?

S. They would be hatched by the warmth.

T. And if a cold spell should succeed—how would the young caterpillars fare?

S. They would all have to die for lack of food, I suppose.

T. I have another question to ask. If you had your orchard so walled that none of these caterpillars could crawl in from your neighbor's orchard, would his neglect be injurious to you?

S. I suppose so. Because if he left only one cluster or nest to grow undisturbed, when the larva changed to the pupa, and then to the perfect moth, whetre ould be from 200 to 300 moths flying about all over the neighborhood, affixing their eggs to the twigs of the trees.

T. Where have you noticed these cocoons of pale yellow silk, with this powdery, sulphur-like dust, which I can shake out of them?

S. In the crevices of bark—under bits of board and chips—sheltered under the shingling or clapboards of the house—in corners about posts—in sheltered niches of the fence.

T. How long did the fresh cocoon which you brought here lie in our hatching box before the perfect moth came forth?

S. Two weeks—two weeks and a half—three weeks.

T. The Forest Clisiocampa Moth which we have figured above is of a pale reddish or yellowish brown, with two dark bands across its wings. Measure the specimen you have pinned in our colleetion.

S. It is about an inch and a half from tip to tip of its wings.

T. How does it compare with the American Clisiocampa Moth?

S. It is nearly of the same size and color, only the bands across the fore wings are whitish in color instead of dark.

T. I may also tell you that this caterpillar has a great many enemies in the insect world. Its eggs are sometimes destroyed. The caterpillar is sometimes infected with deadly, small parasites, and sometimes the pupa in its cocoon. The number of these enemies, as well as the character of the spring weather, may have something to do with its abundance or scarcity. In the meantime we shall put back your specimens into our collection and we shall label them with their proper names.

The miners of Swansea, Wales, have presented to Mr. Gladstone an address, engraved on a silver set lump of coal. This will give a new meaning to the phrase "burning words."

The London *Times* announces that a copy of one of its issues has made the circuit of the globe in sixty-nine days, its journey was made *via* the Suez Canal route to Yokohama, and thence to London *via* the Canadian Pacific line and Atlantic connections. This is the shortest time in which the circuit has been made under the British flag. Influential metropolitan and provincial journals continue to urge the importance of the recognition of the Canadian route to the East. The press is practically unanimous in favor of a subsidy to the Canadian service.

EDITORIAL NOTES.

THE "Praying Mantis," a very interesting and rare orthopter, has been taken near Windsor, N. S., by Professor Roberts, of Kings College.

WHILE 450 teachers were present at the Educational Association of Nova Scotia, only *three* Inspectors were present this year.

BEFORE our next issue many of the Nova Scotian County Academies will proceed to finish the remaining two months of the summer term with only one-third of the usual attendance. Would not the alteration of term limits and making the term annual obviate this evil?

THE St. John Board of School Trustees, at its last meeting, raised the salary of Mrs. Carr, Principal of the Victoria School, to $1,000. This decision of the Board will commend itself to all who are desirous of seeing this excellent school maintain the reputation which Mrs. Carr has so well earned for it. Mrs. Carr has signified her willingness to remain—a decision which her friends in St. John, and they are many, will hear with the greatest satisfaction.

REV. M. HARVEY, F. R. G. S., St. John's, Nfld., has successfully guided the United States fish commission schooner *Grampus* to the Funk Islands in search of skeletons of the Great Auk, which has been extinct for more than half a century. A perfect skeleton of the Great Auk would bring from $100 to $150 at one of the great museums. The *Grampus* was successful in getting specimens of everything on the island.

THE EDUCATIONAL CONVENTION at Chicago in July, was attended by over 15,000 teachers, and was one of the most remarkable gatherings ever held on this continent. A gentleman who attended from these provinces and who is interested in every phase of educational development has promised the readers of the REVIEW for September some impressions of this great convention. They will be looked forward to with interest.

THE Educational Associations of New Brunswick and Nova Scotia have unanimously agreed to recommend an interprovincial convention for the three provinces. P. E. I., through Superintendent Montgomery was the first to suggest it. An interprovincial convention once every three years might prove to be a very beneficial institution. We trust the committees entrusted with the matter will make arrangements without any delay. The earlier these arrangements are known the better.

OUR Ferndale Series will for some time be devoted to lessons on insects affecting our agricultural and horticultural interest, for the double reason: because such instruction is required to be given in Grades VII. and VIII. of the Provincial Course of Study for the Schools of Nova Scotia, and there is no text book in existence adapted for such work to the conditions of Nova Scotia, New Brunswick, and Prince Edward Island. We regret that Nos. 1 and 2 of the series are already exhausted; but a summary may be given in future if generally desired.

WE ARE indebted to William Saunders, F.R.S.C., for his interest in assisting us to obtain some of the cuts which we use in illustrating our Ferndale Series. Mr. Saunders is President of the Entomological Society of Ontario, is the author of that excellent work which every fruit grower should own,—"Insects Injurious to Fruits," and has for many years been identified with the scientific promotion of agriculture and horticulture. As Director of the Dominion Experimental Agricultural Station he paid the Lower Provinces a visit this summer.

PERSONAL NOTES.

Inspector Boudreau is at present inspecting the schools of Victoria and Madawaska Counties.

Miss Mary Fleming has charge of the Debec day school, which opened on the 1st inst.

John Stewart, M. B., Edin., of Pictou, has been elected lecturer on Physiology in the Summer School of Science.

Inspector A. G. MacDonald, M. A., of Antigonish, has been elected lecturer on Physics in the Summer School of Science.

Mr. Sprague of Liverpool, N. S., has been elected Assistant Secretary of the Summer Science School, N. S.

Professor J. B. Hall, Ph. D., of the Normal School, has been elected Secretary of the Summer Science School which meets in Pictou in 1888.

C. D. Robinson, Principal of the Berwick Schools, has won a higher provincial reputation for his school than many of our county academies. *Semper floreat.*

Mr. Mason R. Benn, has retired from the Lower Woodstock school, and has been succeeded by Mr. Frank A. Good.

Mr. William M. Tweedie, has returned to New Brunswick after five years' student life as a Gilchrist scholar in England, and on the continent.

Miss Almeda Black has been engaged as teacher of

the school in the Beaconsfield District, Charlotte County, for the coming term.

Mr. W. F. Cawley takes charge of the Lower Southampton, York Co., School, for the present term, having succeeded Mr. Frank Brown.

Miss Christina Copeland of Pictou Academy, has for some years been the successful principal of the Canadian Mission School at San Fernando, Trinidad.

Mr. S. S. Taylor, a graduate of Mt. Allison University, has taken the degree of LL. B. at Michigan University.

Miss Cunningham has resigned her position as teacher in the public schools at Halifax, and has gone to Japan as a missionary.

Neil F. McKay, B. A., a Nova Scotia teacher, is Principal in the magnificent school building which graces Rat Portage, N. W. T.

John March, Esq., the hard working and efficient secretary of the St. John School Board, has lately been confined to his house by serious illness, but has so far recovered as to be at his post again.

Prof. J. G. Schurman, recently of Acadia College, now Professor of Mental Philosophy in Cornell University, is spending a few weeks of his vacation in the Maritime Provinces.

Mr. Frank P. Carvell, the Superior School teacher at Centreville, Carleton County, became a benedict during vacation and received many congratulations on the step he has taken.

Mr. D. W. Ross, formerly of Kintore, is in charge of the superior school at Grand Falls, N. B., and Miss Bertha Truswell, of Andover, will teach the primary department this term.

Mr. W. B. Jonah, A. B., Principal of the Elgin School, Albert County, N. B., visited New York during his vacation, and since his return has been the recipient of numerous congratulations, in which we desire most heartily to join.

Mr. W. F. Watson, formerly of Jacksontown, N. B., a graduate of Colby University, has been elected Professor of Chemistry and Physics in Furman University, Greenville, S. C., at a very liberal salary.

Mr. F. W. Nicholson of Windsor, N. S., a graduate of Mt. Allison, has graduated with honors in Classics at Harvard, standing third on the honor list. Mr. Nicholson wins a valuable scholarship.

Mr. S. J. Miller, takes charge of the Canterbury, N. B., school during the present term. The trustees, owing to the warm weather, about the first of August agreed to extend the holidays for another two weeks.

James Fletcher, F. R. S. C., Dominion Entomologist has been visiting Nova Scotia, and has been disseminating information at the Fruit Grower's Association, and elsewhere. His reports already are worth many thousands of dollars to Canada.

A new school-house has just been completed on the opposite side of the river in Upper Southampton, N. B. Miss Josephine Downey takes the school which has been closed for several years, the former school-house having been burned.—*Carleton Sentinel.*

Ralph Colpitts, A. B., a graduate of Mt. Allison University, has been engaged to teach the advanced department of the Harvey, Albert Co., School, and Miss Daley of Riverside, is in charge of the primary department of the same school. Both are teachers of experience, and will, no doubt, do excellent work.

Geo. M. Campbell, B. A., formerly tutor in Dalhousie College, and who afterwards took a past graduate course in Johns Hopkins University, and later won high distinction in McGill Medical College, is at present at Ottawa in the employ of the Government.

Among the names of the successful candidates for teacher's license in British Columbia, we notice the following: David Wilson, B. A., University of New Brunswick; Hector M. Stramberg, B. A., Dalhousie University, Halifax; Robert Landells, B. A., Dalhousie University, Halifax; Michael McKinnon, M. A., University of Halifax.

Prof. Drummond, of Glasgow, author of "Natural Law in the Spiritual World," is in the United States, and proposes to visit the Maritime Provinces and address the students of the different colleges. Prof. Drummond has become so widely and favorably known by his great book that his appearance among us will be looked forward to with interest.

Among the recent graduates at the Guelph, (Ont.) Agricultural college is B. Eaton Patterson, son of Sydney B. Patterson of St. John; J. A. Hartt and J. W. Hartt, Bridgetown, N. S.; W. J. Gilbert, Dorchester, N. B., and J. C. Donald, Pictou, N. S. These Maritime province young men all graduated with high honor.

Among the twenty-six young gentlemen who have been duly approved for admission as cadets to the Royal Military College of Canada, is: George Burpee McLeod, son of H. D. McLeod of St. John. Mr. McLeod stood second in the obligatory examination, having 3,603 marks, against 3,677 by J. F. E. Johnston of Ottawa, who took first place.

The many friends of R. Landells, B. A., late Principal of the Town High School, will be pleased to learn that he has secured a lucrative appointment as master of an important school at Port Moody, British Columbia. A house and garden go with the position, so that our worthy friend will probably not desire to keep "bach's hall" very long.—*Woodstock Press.*

Mr. R. M. Raymond, a graduate of the N. B. University, is visiting his friends in this province. Mr. Raymond left New Brunswick a few years ago, and went to North Carolina where he was engaged in mining-engineering until a year ago when he entered Columbia College, N. Y. He is one of Columbia's tug-of-war team who have beaten all the colleges they have been matched against.

D. Wilson, B. A., who left New Brunswick a few years ago to assume the principalship of the boys' school, New Westminster, B. C., has been appointed to the Inspectorship of schools for British Columbia. Mr. Wilson's many friends in New Brunswick will be glad to hear of his appointment, by which our western friends have secured the services of such a scholarly and efficient educationist.

The vacation just closing seems to have made alarming inroads in the ranks of bachelordom. On the 10th inst., Mr. Donald Montgomery, Chief Superintendent of P. E. Island, was married at Charlottetown to Miss Mary Isabel McPhail, the Rev. Principal Forrest of Dalhousie College assisting to tie the knot. The happy couple was made the recipient of numerous and warm congratulations. The REVIEW wishes to be numbered among those who hope that Mr. Montgomery and his bride may enjoy a long and prosperous wedded life.

THE SUMMER SCHOOL MOVEMENT.

DEAR REVIEW:

The experiment of a Summer School of Science has been successfully tried both in Nova Scotia and New Brunswick. Teachers who have attended these schools have not only had their interest in natural history awakened and quickened, but have had revealed to them how easy it is to study and to teach elementary science with only such materials and facilities as lie at everybody's hand.

There are other departments which as much need to be opened up to teachers as the natural sciences, and which are as accessible by the methods of the Summer School as they,—for instance, English literature, modern languages, music, elecution and drawing. In two or three weeks much could be done in the way of exciting an interest and giving a start in the study of any of these, and especially in outlining methods of teaching such subjects.

The promoters of the Summer Schools of Science would do well, perhaps, to expand their aims, and affiliate with the Science School a School of Literature or of Art, and thus meet a greater variety of needs and tastes, at the same time subserving very directly the interests of the common schools. For, whatever may be said of the need of more general and a better quality of teaching in the department of science in our common schools, it will hardly be questioned that better teaching of reading, and a more general teaching of drawing, singing and literature are equally a desideratum.

With faith in the adage—*verbum sapientibus sat*—I subscribe myself,

Respectfully,

A NOVA SCOTIA TEACHER.

August 13, 1887.

VIVISECTION.

Of the very many and varied forms of cruelty against which the Society for the Prevention of Cruelty to Animals are operating (particularly in Europe), perhaps the most inhuman and revolting is that of vivisection, which is a new name for a very old thing. In the medical schools of Alexandria, as long as two thousand years ago, there were some physiologists who, under the plea of advancement in science, performed experiments upon human victims. This form of cruelty, however, as practised in these modern days, briefly means cutting into or otherwise operating upon the bodies of living animals, under the professed object of obtaining knowledge of the structure and organs.

Dr. George Wilson, an eminent English physician, in an article recently written against this cruelty practised amongst medical students, says, "Let it be known and understood that all these operations have been admitted to be needless and cruel, experiments performed merely for demonstrating facts already established."

So great was the agitation and the disgust of the British public against vivisection a few years ago, that the question was brought before Parliament and a Royal Commission appointed, which resulted in the disclosure of cruelties perpetrated in scientific retreats in different parts of the world, and in reference to which Dr. C. Bell Taylor (a surgeon of high medical repute), said, "That they were of such a character that no man with a heart in him could contemplate

them for one moment without a thrill of horror;" and in his arguments against the practice, citing his own experience, "He knew that in these experiments animals were baked to death in slow ovens, that others were frozen in ice machines, that they were flayed alive without anæsthetics, and that they were starved to death,—handsome full-grown dogs, having been deprived of food for three weeks together until they perished in agony."

It was also shown that a Dr. Werthein, of Vienna, in experimenting, had been known to kill twenty-five dogs by pouring turpentine over them and then setting fire to it, and that the same eminent physician has been known to partially boil five other dogs, and that several of his victims survived for days in unutterable suffering.

Other statements made at this enquiry went to show that in some of the veterinary schools no less than seven horses a week were sacrificed in the practice of vivisection, sixty-four operations being performed upon the same horse, the eyes were cut out, the ears cut off, the tail docked, the teeth punched out, the stomach opened, and frequently these partially dissected animals were reserved from day to day for further torture, or when all but dead were handed over to the younger students to practice easy experiments upon.

The following is copied from a work recently published, entitled "Vivisection and Experiments on Living Animals," by James Macauley, A. M., M. D., Edinburgh. "During three campaigns," says Dr. Hoggan, "I have witnessed many harsh sights, but I think the saddest sight I ever witnessed was when the dogs were brought up from the cellar to the laboratory for sacrifice. Instead of appearing pleased with the change from darkness to light, they seemed seized with horror as soon as they smelt the air of the place, divining apparently their approaching fate. They would make friendly advances to each of the three or four persons present, and, as far as eyes, ears and tail could make a mute appeal for mercy eloquent; they tried in vain. Even when roughly grasped and thrown on the torture trough a low complaining whine at such treatment would be all the protest made, and they would continue to lick the hand which bound them till their mouths were fixed in the gag, and they could only flap their tail in the trough as their last means of exciting compassion. Often when convulsed by the pain of their torture this would be renewed, and they would be soothed instantly on receiving a few gentle pats. It was all the aid or comfort I could give them, and I gave it often. They seemed to take it as an earnest of fellow-feeling that would cause their torture to come to an end—an end only brought by death."

If the above revelations of cruelty were not removed beyond the possibility of a question, it would be impossible to accept them as having occurred, but they are undoubtedly too true. But it is worthy of remark that in the medical schools of France and Germany these experiments are much more largely practised then in English speaking countries.

IN A GERMAN LABORATORY.

A most intelligent dog I took,
Affectionate, full of caressing grace,
With something of human love in his look,
And such a trustful, half-human face.

Had learnt tricks, too—would give you a paw
Where a brother-man would offer a hand,
Right or left, as you ask him; could understand
Your speech—it might almost fill one with awe.

Seeing how near to mankind, yet how far
These dumb and pitiful creatures are;
How all their faith and belief and love
Is centered in Man as a Lord above.

And looking into his eyes for awhile—
For knowledge is precious and gained through pain—
I bound him down with a pitying smile,
And deftly removed the left lobe of his brain.

And then, with all that I had of skill,
I healed it again, so that presently,
Though lame and sick, in his love for me
The creature strove to obey my will.

And when I asked him to give me a paw,
He gave me the left first, but when for the right
I asked, his maimed brain failing him quite,
Gave the left—and I thought I had touched on a Law.

So I persevered, and the brute again,
With a loving, sorrowful look of pain,
Brought the left paw over the helpless right,
And I marked the effort, with deep delight.

And having pushed knowledge so far, again,
I divided the opposite lobe of the brain,
And the poor brute, though willing to offer a paw,
Could no longer obey—and I grasped a Law.

Later on, still athirst for knowledge, once more
I carved the weak brain, as I did before,
Till the poor dumb wretch, as he lay on his side,
With a loving look regarding me, died.

Poor brute! he lies dead for knowledge, and I,
If I grasp not the clue, yet I may by-and-by.
Strange how weak Man is, and infirm of will,
For sometimes I see him and shudder still!

LEWIS MORRIS.

It is a matter of literary gossip that the Poet-Laureate's mantle will shortly fall on the shoulders of Lewis Morris, (the writer of the above lines,) owing to the increasing infirmities of Lord Tennyson.

The highest mountain in the world is said to be Mt. Hercules, in New Guinea, soaring to the altitude of 32,786 feet.

SCHOOL AND COLLEGE.

Attention is directed to the advertisement in another colum of the opening of Kings College, Windsor.

The Collegiate School, Kings College, Windsor, N. S., has made a valuable acquisition to its teaching staff.

The Dalhousie College building is progressing so rapidly, that the lecture rooms for the Law Faculty will be ready by September.

The Board of School Trustees, St. Stephen, decided to extend the holidays one week, and the schools will re-open on Monday, Aug. 22.

At the recent London matriculation examination held in Halifax, there was one candidate, Mr. H. M. McKay. At Charlottetown there were two candidates, Messrs. Hunt and Wright.

The indications are in favor of a large attendance at the various colleges of the Maritime provinces this year. The number of applications for matriculation at some of the institutions is unusually large.

The N. B. University will have about twenty students in the Freshman Class next year. This is the first to enter upon a four years' course. Among the matriculants, it is expected, will be three young ladies.

School of Agriculture. This institution ought to draw. Besides getting a very superior course of agricultural instruction, the students each got a government prize of $50, and some prizes went a-begging for lack of students.

There have been over 160 applicants for admission to the N. B. Normal School for the next session, which opens September 1st., and will be the first of the lengthened sessions for nine months. The buildings have been repaired, and the grounds laid out with much care and taste.

The examination of candidates for entrance to the Prince of Wales College and Normal School, was held on Tuesday and Wednesday, 2nd and 3rd inst., at Charlottetown, Summerside, Montague, Souris and Alberton. There were over 300 candidates. The examination is conducted by written papers in English, arithmetic, geography, history, latin, geometry and algebra, a pass in the first four subjects admits to the Normal School, whilst a satisfactory acquaintance with all the subjects is required of those who desire admission to the Prince of Wales College.

The Church of England Girl's School, St. John's, Nfld, closed July 21st, His Lordship the Bishop in the chair. The state of the school is very satisfactory. A number of prizes were awarded. The visitors and examiners expressed themselves as highly pleased with the work done.

Springdale Street School, at St. John's Nfld., closed July 25th. The examination was conducted by Rev. A. C. F. Wood, M. A., Chairman of the Board, and Rev. W. Pilot, B. D., Supt. of Education. A great number of certificates were presented to the successful pupils in the six classes of the school.

Four new school houses have been built in this parish since the spring opened, and will soon all be ready for occupancy—one at Tweedside, one at York Mills, one at the Swamp, and another at Acton. Little or nothing has been done about the station in the way of building this season.—*Harvey Station Cor., St. Croix Courier.*

Church of England Academy, St. John's, Nfld., closed 14th July, with the presentation of prizes. His excellency, the Administrator, presided, supported by His Lordship the Bishop and the Hon. Sir W. V. Whiteway, K. C. M. G. The Head Master, Rev. A. Currie, gave a very satisfactory account of the work of the institution. Over 100 prizes and medals were presented to those leading in the various classes of the four forms.

Normal School, Truro. This institution closed on the 12th July. Silver Medallist, Miss Joyce, of Shubenacadie; Bronze Medallist, Miss Poole of Paradise, Annapolis Co. The total number in attendance during the year was 176, made up as follows: Gentlemen 36; ladies 140. Of these 63 were from Colchester county; 25 Cumberland; 14 Annapolis; 14 Pictou; 11 Halifax; the remainder from the other counties except Queens, and one from Newfoundland. 82 diplomas as follows: B. 27; C. 55.

It is stated that for the present the Gilchrist trustees have decided to withdraw the scholarship which has for some years past been open triennially to the boys of Nova Scotia, New Brunswick, and Prince Edward Island. They have also decided to withdraw the scholarship applicable to the islands of Jamaica, Trinidad and Barbados. The trustees state that the whole subject will be reconsidered next year, and possibly it may be decided to grant a scholarship open to all the provinces of the Dominion. The acquisition of one of those scholarships usually means the best education England can furnish.

General Protestant Academy, St. John's, Newfoundland, closed July 19th. It is but eighteen months since this institution was started. It embraces a Primary, Intermediate and High School Department. The rooms are very spacious and well equipped; 143 pupils are on the roll. Principal Handcock has given great satisfaction by his tact in the management of this Academy. At the distribution of prizes, Rev. Moses Harvey, F. R. G. S. presided, and complimentary addresses were made by Reverends W. Graham, T. Hodgkinson and W. Pilot; Sir William Whiteway and D. Browning Esq., M. A.

A meeting of the subscribers to the Victoria School of Art and Design, Halifax, was held in July, and attended by a large number of ladies and gentlemen of that city. A fund of nearly $10,000 has already been subscribed towards the school, and the government has voted $800 a year towards its support. Through the efforts of the active and enthusiastic ladies and gentlemen who have been instrumental in securing the great measure of success which so far has attended the movement, and which assures a successful completion, Halifax and the whole province will reap substantial benefit. At the above-named meeting a board of directors were appointed, with A. McKay, Supervisor of Schools, as Secretary.

ALUMNI N. S. NORMAL SCHOOL.—The executive of the Alumni of the Provincial Normal School of Nova Scotia, met in Truro, July 12th, Dr. Hall in the Chair. Secretary H. S. Congdon, of Dartmouth, read the financial report for the year, showing receipts $180.45, expenditure $176.20, balance on hand $4.25. The prize of $25 for the best essay on "Should all Teachers have a Normal School Training," was awarded to Charles Hamilton, of Guysboro Co. Miss Mary Moseley's paper was a good second and received honorable mention.

At the meeting of the Association in the afternoon the prize essay was read. Mrs. Condon, wife of Inspector Condon of Halifax, was then introduced by Dr. Hall and addressed the Association on the subject of the Kindergarten. She illustrated the work by some of the apparatus of the school. Principal Calkin and Colonel Blair spoke very highly of the very able presentation of the subject by the lecturer, and its great importance. The officers for the ensuing year were elected as follows: President, Miss Bessie Miller, North Sydney; Vice-President, Dr. Hall, Normal School; Secretary, Mr. McKenna, Halifax; Executive Committee, W. T. Kennedy, J. W. King, Prof. Eaton, D. H. Burbidge, Miss Poole, Miss Cunningham and Miss Findlay.

At a meeting on Friday afternoon, July 15th, in the Normal School, Truro, called for the purpose of considering the question of starting a Kindergarten school, Mrs. Hinkle Condon explained the system of Froebel, and in a masterly address advocated its claims on the attention of parents. Resolutions were passed favoring this system of training, and pledging the meeting to adopt measures for the establishment of the school. Mr. Hugh McKenzie, Principal Calkin and others took part in the discussions. Steps will be taken at once to found a Kindergarten. The cost will be about $1,000 for the first year. A Kindergarten in Truro will be a great boon to student teachers. A summer school for teachers could also be started. Much credit is due to Truro for this progressive step.—*Hx. Chronicle, 18th ult.*

THE CLASS-ROOM.

Under this head will be placed hints and suggestions to teachers in the arrangement of classes and exercises, selected because they are practical and designed to teach pupils to *think*. Contributions for this page adapted for all grades, are solicited from teachers of experience. Catch questions and knotty problems not desired. Those only that will train the thinking and observing powers of the pupils can be inserted.

Method of Teaching Spelling.

Business men say they can get accurate accountants, good writers, grammatical talkers, for clerks; but the crying need of the hour, they say, is good spellers. Methods must be re-examined and reformed. To learn to spell is an effort of pure memory; and with pupils of average ability, the effort must be often recurring to be successful. It is an universal experience of teachers, that different pupils learn to spell most easily in different ways: that is, one pupil will learn most easily by the *written method*, another by the *oral method*, while still another will learn most easily by the new *reading method*. The difficulty with teachers has been, that they have not allowed sufficiently in their methods of teaching spelling for the differences *in kind* of ability among pupils. There are pupils who can write correctly words which they would misspell orally; and it is unfair to judge pupils by the results obtained while using one method, without having tried the other. Therefore, we offer the following reasonable method of teaching spelling: Use a book; and let your pupils use one. Assign a lesson from the book of not more than forty words. Experience teaches us that this number is sometimes more than enough, always enough. Have the whole lesson written on the blackboard; and have the class spell each word in concert as it is written. Tell the pupils to study the lesson well for the next day, and the next day hear them spell it orally. On this second day assign another lesson as before, and tell

the pupils that to-morrow they will be expected to *write* ten words of the lesson assigned yesterday, besides spelling orally the lesson assigned to-day. And so on. It will be noticed that this method combines the *written* and *oral methods*, with some features of the new *reading method;* and that it includes a continual *review*. If the pupil cannot learn to spell under such a method, he will learn under no method whatever: for thoroughness is its very watchword. There are educational principles underlying it that are vital in importance, and that may be discovered by all who give the method a trial.—*Philadelphia Teacher.*

Test Problems in Arithmetic.

1. How many yards of carpeting, 1 yard wide, will cover a floor 22 feet long and 12 feet wide?

2. How many gallons of water will a tank hold that is 22 feet long, 21 feet wide, and 10 feet deep?

3. I sell peanuts at 8 cents a quart and double my money. What do they cost a peck?

4. How many square feet in the floor of a room 12 feet 6 inches long, and 10 feet 8 inches wide?

5. What will 4 cwt. 3 qr. and 18 lbs. of sugar cost at $8.00 per 100 pounds?

6. How many square feet in the walls of a room $14\frac{1}{2}$ feet long, 12 feet wide, and 8 feet high?

7. From the sum of 2 tens + 8 twelves, take the sum of 2 fours + 4 twos.

8. If by working 8 days of 10 hours each, 240 pairs of boots can be made by 6 men, how many pairs of boots can be made by 15 men in 12 days, of 6 hours each?

9. For how much must I give my note so as to receive $720 at the bank, time being 1 month, and rate 6 %?

10. A and B go into business Jan. 1, 1883. A puts in $800, B puts in $900, and April 1, they take in C, who puts in $500. They find, Jan. 1, 1884, they have gained $1600. What amount of the gain will each man receive?

ANSWERS.—1. $29\frac{1}{3}$ yds. 2. 34,560 gallons. 3. 32 cts. 4. $133\frac{1}{3}$ sq. ft. 5. $39.44. 6. 424 sq. ft. 7. 100. 8. 540 pairs. 9. $723.98. 10. A $\$616\frac{2}{83}$; B $\$693\frac{81}{83}$; C $\$289\frac{13}{83}$.

Twenty-five thousand square miles of land have inundated in Hungary by another hurricane. At Mako, on Saturday, 11th inst., the water washed over the dykes and destroyed a number of bridges. The laborers on the dykes fled, but were driven back by the soldiers.

EDUCATIONAL OPINION.

Those who, from years of residence and observation, are capable of forming a sound judgment, unhesitatingly affirm the common school systems of the States to be palpably inferior to those of the Provinces, while the higher schools and colleges, even in Boston and a few other favored places, are but little superior. —*Halifax Critic.*

A curious book indeed, is an algebra, published shortly before the war by D. H. Hill, then Professor of Mathematics in Davidson College, North Carolina, and afterwards a Confederate general of celebrity. Professor Hill was "sectional" in his feelings, as the following problem, one out of many like it in animus, demonstrates: "A Yankee mixes a certain number of wooden nutmegs, which cost him one quarter of a cent a piece, with a quantity of real nutmegs worth four cents a piece, and sells the whole assortment for forty-four dollars, and gains $3.75 by the fraud. How many wooden nutmegs were there?—*Ex.*

What do teachers read, and what is the extent of their reading? Many read too little, a few read too much, others read nothing. Excess is better than deficiency. Nothing is more degenerating, monotonous and unbearable to a bright, active pupil, than a teacher whose general information and literary horizon are bounded by the texts of the school. A person that has never been electrified by good literature cannot develop in children a correct estimation of an Irving or a Longfellow, or stimulate the noblest elements of child life. The teacher who reads with care can often enliven and fix, with happy illustration or anecdote, an otherwise dull recitation, or with an appropriate quotation fire to white heat a generous impulse. Question teachers as to what they have read, and drive from the ranks those who, in these days of good and cheap books, have read not at all or have feasted and corrupted their minds with the frivolous and impure.—*Western School Journal.*

"I commend to you the school-teacher who cares for atmospheres, impressions and tone quite as much as for text-books, tasks, and for accuracy in recitation. I ask you to help him when he tries to make his school-room a place of neatness and brightness, with plants, flowers, pictures, statuettes, window and wall hangings, and whatever besides may give ideas of taste, of purity, of restfulness, and which will fill his soul with images and memories to go with him to the end of life, a source of inspiration and a safeguard against evil." "We have been in school rooms that were thus ornamented and beautified from month to

month, from year to year. Flowers and vines graced the windows, engravings and portraits adorned the walls, statuary beautified odd niches, objects of interest and curiosity relieved the corners, a congenial and happy teacher presided, and bright children filled the room with sunshine from happy faces."—*J. H. Vincent, LL. D.*

Monseigneur Dupanloup, whom Rev. W. B Trevelyan of England calls "the greatest of all modern educators," says: "What a teacher does by himself is little; what he induces his pupil to do freely is everything; for authority is not constraint; it ought to be inseparable from respect and devotion. As for me, as long as I have anything to say to education, I will respect human liberty in the smallest child, and that more religiously than in a grown-up man, for this latter can defend himself against me, and the child cannot. We must respect the weakness, but also the power. You must win the heart of the child; but to win his heart you must love him. Without love there is no devotion in the master, no affection in the child. Be fathers and not masters to these boys; but even that is not enough—be their mothers."

"A severe, but just, cricicism of our public-school system is, that many children graduate from our grammar schools without being able to write a simple note correctly."

"A severe, but equally just criticism is, that many children graduate from our grammar schools without being able to speak their mother tongue with fluency or correctness. Is not this, then, the reason for the deficiency in writing? If a child can *speak* well, he can, with little drill, be enabled to *write* well. The key to the whole trouble in language teaching is, that two-thirds, rather four-fifths of the teachers will persist in teaching the *science* in place of the *art*.

"The weary months spent on grammar were worse than wasted; they did me permanent injury."—*President E. G. Robinson.*

"The good old days (?) when muscle to ply the birch was a teacher's only qualification; when the 'rule of three' was the *ultima thule* of all earthly knowledge, are gone forever. Teaching in these days has become a science and an art. A teacher's true mission is no longer confined to the presentation of dry facts, but has broadened to embrace the higher duties of training the mind and teaching how to think and how to study."—*Supt. W. B. Scott.*

LITERARY NOTES.

Rev. W. C. Waghorne of Newfoundland, is publishing a list of native plants in the *Daily Colonist* of St. John's, Nfld. This work speaks well for the *Colonist*, and for Mr. Waghorne. The botanists of Canada and of all countries, are interested in this work, and we hasten to announce it.

Dr. J. G. Schurman of Cornell University, and wife, are at present visiting friends in Nova Scotia and Prince Edward Island. *On dit*, that American educational literature will probably be very soon enriched by a publication which the learned Professor has had for some time in preparation.

Professor Roberts, of Kings College is writing an article on Imperial Federation. We regret that our informant has not given us the name of the magazine in which it is to appear.

Principal Calkin's "Notes on Education" is expected to be published about the 1st of Nov. The work will be invaluable to teachers who have not attended the Normal School. And to those who have—why, it will be just what they want. We have had the pleasure of glancing over some of the proof sheets.

BOOKS AND EXCHANGES.

A most beautiful and appropriate souvenier of the Queen's Jubilee is a book issued by J. & A. McMillan, containing an account of the celebration in St. John. It is compiled especially for the citizens of St. John, but is interesting to residents of other parts of the Province, and would be an elegant volume to send to friends elsewhere. The Jubilee Ode, *Carmen Acadium*, by Mr. W. P. Dole is especially worthy of a place between the handsome covers of this book. Of the merits of this poem, a gentleman belonging to a neighboring city, possessed of no inconsiderable literary and critical ability said a few days since: "To my mind it is the finest specimen of Jubilee poetry that has been published anywhere through the British Empire this year." Messrs. McMillan are to be congratulated for their enterprise and the admirable workmanship displayed in the get-up of this handsome little volume.

McMillan's Series of Copy-books, lately prescribed by the Board of Education for use in the schools of New Brunswick, appear to be admirably adapted to secure good results in penmanship The system outlined in them is practical and progressive, and fitted to gain the confidence of teachers and secure improvement in writing in the schools.

History of England for beginners, by Arabella B. Buckley (Mrs. Fisher), with additions by Robert H. Labberton, L. H. D. London: MacMillan & Co., and New York. Price $1.00. We have delayed noticing this book which has been on our table for some time, until we had an oppor-

tunity to give it somewhat careful attention. It has many excellent features, being written in an easy and entertaining manner which will charm mature as well as youthful readers. It is filled with excellent maps, illustrating the political growth of the country, and the chief wars in which England has been engaged. The excellence and variety of these maps are an admirable feature in the work, securing simplicity and giving the pupil correct ideas of the geography of the country. The history is brought down to the year 1887, and is the most useful and comprehensive compendium of English history that we have seen, combining interest and orderly arrangement.

PESTALOZZI'S LEONARD AND GERTRUDE: Translated and abridged by Eva Channing, with an Introduction by G. Stanley Hall, Professor of Pedagogy in Johns Hopkins University. Boston: D. C. Heath & Co., publishers; 5¼ by 7½ inches; cloth; 193 pp.; price $0.85.

"This is a carefully abridged translation, into which the gist of five large volumes is compressed. All teachers should read it with care, for it comprises within modest limits the whole substance of the Pestalozzian theory of education. In the charming, instructive and suggestive union of a capital story and a pedagogical treatise, Pestalozzi sets forth his radical, far reaching views of the true scope and end of education, as well as of the true method of attaining that end. It is this book on which his fame as an author mainly rests, and it was dictated by an earnest desire to lift up the lower classes of Switzerland—to found a republic of thought, of capabilities, of work." The first volume of the original work was published in 1781. This abridgement is very well written, and is altogether more attractive than a full translation.

ROUSSEAU'S EMILE: Boston: D. C. Heath & Co., publishers. Price 85 cents. Extracts from the great pedagogic romance which in 1762 created such a sensation in Paris, and caused the author to flee from France, then from Geneva, then from Berne. Oscar Browning says of the original book: "Probably no work on the subject of education has produced so much effect as the 'Emile.'" It has also been called "Nature's first gospel on education." While the genius of Rousseau threw a blazing sunlight on the defects in the systems of education, he was not always right himself; and in practice was a failure. But the truth he spoke changed the history of education in Europe. Every educationist would like to know something of such a classic work. In the volume before us, the author's style is fairly represented in the simple modern English translation, the best passages are selected, with the result of making a very interesting epitome of only 157 pages.

HYGIENIC PHYSIOLOGY: By Dr. B. J. Dorman Steele. New York and Chicago: A. S. Barnes & Co, publishers. This is a capital book. The plates are splendid. The arrangement is logical and effective, and the leading facts are stated in a simple yet very accurate manner. There is special stress laid on the effects of alcoholic stimulants and common pernicious habits. This makes it eminently suited for school-room instruction. The whole subject is treated so plainly in this work that any teacher can master the book without any other assistance. The volume is about the same size as "Steele's 14 weeks" courses.

FIRST YEAR IN LATIN, by George Stuart, A. M. Philadelphia: Eldredge & Brother. Mailing price, 95 cents. We must confess that it was with considerable misgiving that we opened the "First Year in Latin." The number of such books published during the last twenty years has been so great, and the absence of any new feature so marked, that we at once inferred that we must have a repetition of what has been written over and over again—a rehash of the most popular grammars at present in use. We discovered, however, on reading it through, that it possessed characteristics of its own, and that in the hands of a good teacher it would supply an excellent basis for a sound and thorough knowledge of the Latin language.

It is true that there is little that is new, either in arrangement or matter. The author claims for it the character of a "drill book," and says that "constant practice and repetition are the principles relied upon to impart that dexterity in the use of forms and constructions which relieves all subsequent translation of much of its labor and difficulty." The book is what it professes to be. Besides being clear in statement and exposition of the laws which were observed by the best writers, free use has been made of the scientific and philological investigations of the best grammarians, and abundant opportunity is afforded for exercise. We consider that no better plan can be adopted to secure familiarity with accidence and the rules of syntax than unremitting and careful practice in translation and re-translation. If this be associated with an ever-widening vocabulary, the memory of the pupil is stored with Latin words, and the strangeness of a new language, in sound and form, in great measure overcome. This excellence it possesses in common with other very good school grammars, but it has points of value of its own for which it must be commended. It gives great, but by no means undue prominence to *quantity*. In an elementary book, as in the one before us, every Latin word, every time it occurs, should have the quantities of its vowels marked, that the pupil may be impressed with the importance and necessity of accuracy, and acquire a habit of observation which shall cling to him ever afterwards.

It is equally praiseworthy because of the reasonable amount of grammatical knowledge to be acquired. Everything presented is important, nothing requires to be skipped; and if judiciously taught there is no excessive burden imposed upon the pupil. We do not consider the sections in syntax on the subjunctive mood, oblique narration and gerunds and gerundives, at all out of place in an elementary book, but indispensable to a successful study of Cæsar, or any other Latin author, which must be read before the teacher can reach, in such a book as "Arnold's Latin Prose Composition," the part which treats of these subjects. The paradigm of *capio*, in full, is not uncalled for, for we know that blunders are not unfrequently made by good students in those verbs of the third conjugation of which *capio* is the type. The exercises on the Roman calendar and the selec-

tions from the Gallic war will be welcomed by teachers as providing an admirable means of discipline preparatory to a systematic perusal of Cæsar or Nepos.

We must admit, however, that we miss many well-known rules, which we have been accustomed to regard as necessary in an elementary Latin grammar, that the examples of irregularity in the comparison of adjectives are rather limited, and that there is no complete list of irregular verbs. Yet this we do not complain of if it is understood that an advanced Latin grammar is to take the place of this one for contemporaneous study with Cæsar, Virgil or Horace. And while uncertain whether the use of heavier type to mark the case-endings and other inflections may be more advantageous than the hyphen, and that there may not be danger of confusion by the use of both *base* and *stem*, yet we have no hesitation in recommending this book as one of the best practical elementary Latin grammars we have ever examined.

THIRTEEN STORIES OF THE FAR WEST, by Forbes Heermans. Syracuse, N. Y., C. W. Bardeen, Publisher. This, as its name indicates, is a volume made up of stories of the Far West, and is suitable for holiday reading. There is a vein of humor throughout the entire series, which is equal to that of Bret Hart. The first pathetic story of "Shingles" wins the reader's attention and is of absorbing interest.

WOODWORKING TOOLS; *how to use them*; *a manual*, published by Ginn, Heath, & Co., Boston. This is a capital little work which all teachers and school boards should study in connection with the generally discussed introduction of woodwork into our public schools. There can be no better exercise for any one of sedentary occupation than the useful one of woodwork. This book with its instruction is worth a great deal of experience and a kit of tools to the bargain. D. C. Heath & Co.

HABIT AND ITS IMPORTANCE IN EDUCATION: An essay in Pedagogical Psychology; translated from the German of Dr. Paul Radestock, with an introduction by G. Stanley Hall, Ph. D., Professor of Psychology and Pedagogy, John Hopkins University. Boston: D. C. Heath & Co., Publishers. Price 60 cents.

Dr. Paul Radestock's "Habit in Education" is undoubtedly the best of this eminent author's series of brilliant psychological monographs. It is full of valuable suggestions to the educator who would aid his pupils in forming right habits. We recommend it most heartily, not only to teachers, but to parents and normal school teachers, who will find in it solid food for thought. It is an attractive book, being well printed and strongly bound, and its moderate price places it within the reach of all.

THE JURNAL OV ORTHOEPY published at Ringos, New Jersey. Fonic spelling, Eufonic words, Fitness of words. The environs ov a people mold their language. Monthly, $1.00.

THE CONCHOLOGISTS' EXCHANGE.—Are you interested in the collection of shells? Then get this Exchange. Only 50 cents, monthly. Published by Wm. D. Averell, Chestnut Hill, Philadelphia, Pa., U. S. A.

THE HERALD, devoted to pronunciation and amended spelling, monthly, 25 cents per annum. Address "The Herald, 125 Harbord Street, Toronto." Well worth the money.

ST. NICHOLAS for August contains a school story, "Marigold," which is admirably told, and contains a healthful lesson to some teachers as well as scholars. The heroine gets into difficulty because she is not bright at mathematics and gets out of it because she is bright at other things. In the same number is an excellent article on "How some Animals become Extinct," referring especially to some that have become extinct within the history of man.

POPULAR SCIENCE MONTHLY for August contains several valuable scientific and educational articles. Mr. C. S. Ashley attacks "Educational Endowments" and maintains that the great endowed institutions of learning have been useless and obstructive to the general march of society toward improvement. Grant Allen traces the progress of science during Victoria's reign, and there is a timely article on "Manual Training in School Education" from the pen of Sir Philip Magnus. In the third paper of his "Astronomy with an Opera Glass," Mr. Serviss describes and illustrates pictorially what can be seen in the moon and the sun with that handy little instrument. Published by D. Appleton & Co.

THE BOOKMART: Another year and volume of the "Bookmart" began with its June number. Its publishers ("Bookmart" Publishing Co., Pittsburg, Penn.) say: "Our endeavor has been to make the journal one of positive value, worthy of the time bestowed in reading and the money expended by subscribers." The July and August numbers of this unique and valuable periodical show that the aim of its publishers is being verified in the sprightly and original tables of contents which make up the new series.

THE CENTURY for August: The midsummer holiday number of the "Century" opens appropriately with an attractive paper of holiday adventure, having the piquant title of "Snubbin' through Jersey," the object of which is to report the incidents, mishaps, and delights of a unique vacation trip in a canal boat. A short paper by William Earl Hidden, entitled "Is it a Piece of a Comet?" is accompanied by accurate drawings, of natural size, of a meteorite which fell near Mazapil, Mexico, on the 27th of November, 1885, and which acquires additional scientific interest from the fact that only seven meteorites have been seen to fall upon the surface of the earth. The Lincoln History, Battle Series, Edward Atkinson's discussions on economic questions, Mr. Stockton's novel, "The Hundredth Man," are continued, and these, with poetry, illustrations, "Topics of the time," etc., make an interesting and comprehensive table of contents. The "Century" and "St. Nicholas" Magazines are published by the "Century" Company, New York.