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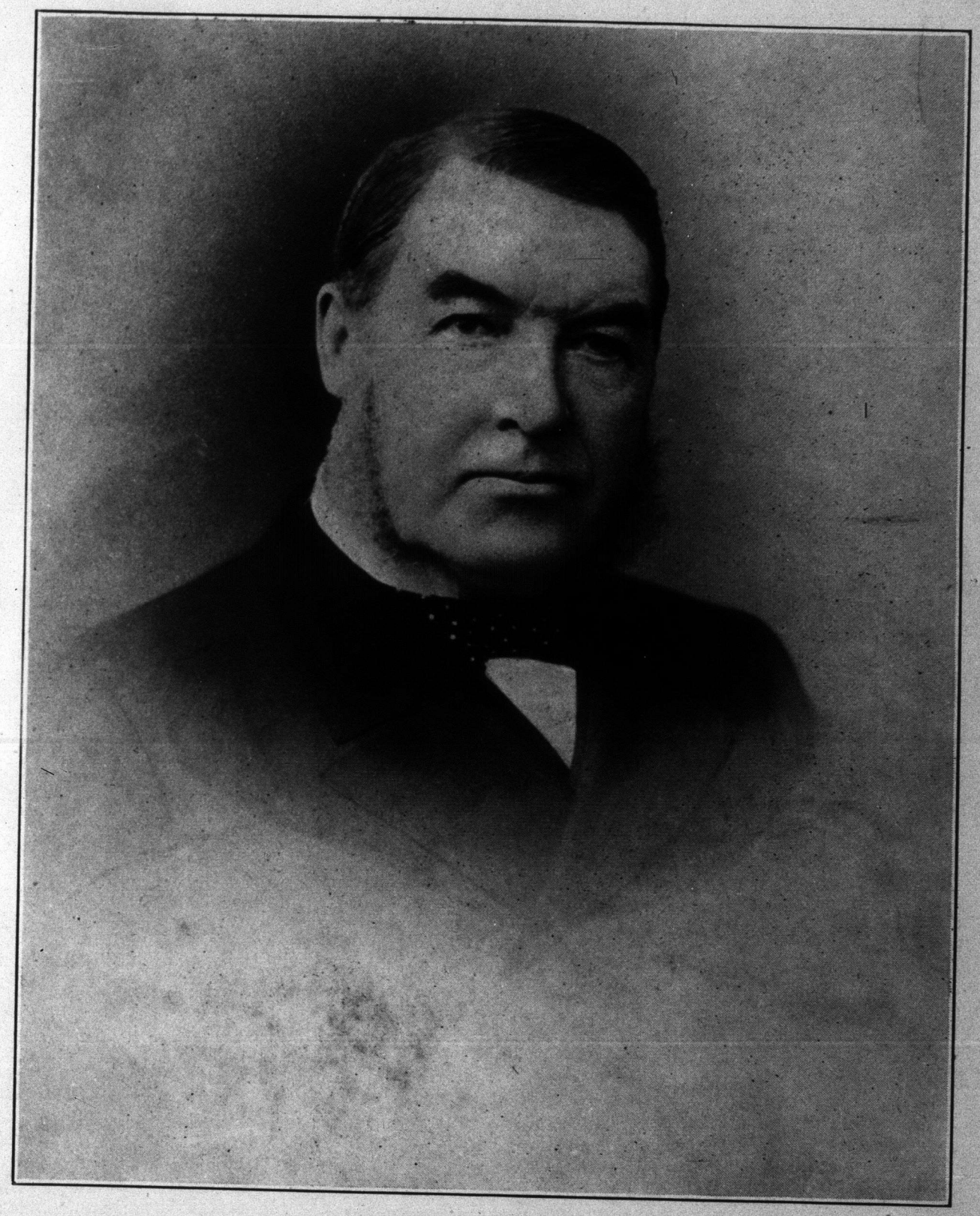

SIR CHARLES TUPPER, BART., G. C. M. G., C. B.

The Educational Review.

Devoted to Advanced Methods of Education and General Culture

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

THE REVIEW AND ITS FOUNDER.

With this number the REVIEW begins a new period of its history. For twenty-six years it has been the expression of the high ideals of education held by its founder, and the medium through which he offered his friendly help to his fellow-teachers. His influence cannot but be sadly missed by its readers. One of them, writing in condolence, spoke of Dr. Hay's "strong but gentle personality," and every one who knew him will recognize the fitness of the words.

His old pupils, and the teachers who worked under him bear witness to that rule of mingled strength and gentleness. Singleminded, unmoved by self-seeking motives, he was always firm on the side of right, and could be sternly indignant over public wrongs. But how broad-minded and sweet-tempered he was in personal matters. Some of us remember well the little laugh, and "Ah, well—" with which he would dismiss a slight or vexation that others resented for him.

Those who knew him in his daily life knew the sources of the punctilious truth and honour, the calm steadfastness, unselfishness and courtesy, that were the outstanding qualities of a most lovable character. Deep religious principle guided his life, and prompted not only exemplary devotion to outward observances of religion, and to good works, but also,

> "That better portion of a good man's life
> His little, nameless, unremembered acts
> Of kindness and of love."

And second only to the power of religion came the calming and elevating influence of the nature which he so ardently loved and studied. To see him at his summer home at Ingleside was to recognize the truth of the picture drawn by the greatest of nature poets, of the man

> "removed
> From little enmities and low desires,"

And finding in Nature

> "A never-failing principle of joy
> And purest passion."

We who have to carry on the work of such a man may well feel the responsibility a heavy one. We are grateful to the many friends among our readers who have encouraged us by their expressions of confidence and good wishes, and we hope to justify them by trying to maintain in the REVIEW the high standards of its founder.

AN IDEAL SCHOOLMASTER.

There are various ways of judging the merits of a schoolmaster. One of the simplest and least effectual is that which may be called the extra-personal. Its method is to count the letters after his name, to glance at (not necessarily to read) the pile of learned articles he has written, and to note the names of the institutions in which he has been trained. These things are symbols, not without value, but it can hardly be questioned that they are worth less as evidences of success than the voices of generations of pupils who rise up and call him blessed.

Scattered now far and wide over the earth are hundreds of women who, in the diverse responsibilities which have come to them since their school days, bless the name of George U. Hay. In the name of those scattered hundreds, may I give the readers of the REVIEW some fragments of reminiscence?

Across the gulf of years into which many educational experiments have fallen, certain recollections stand out, clear and secure. Here was a schoolmaster who grasped and lived by certain principles which gently, quietly and persistently he worked into the life scheme of each pupil and made powerful there. Of these none was more compelling than the sacredness of the daily task. We might like it or dislike it, but there were few of us who resisted its claims. Relatively speaking, we did a good deal of work and, relatively again, we did it well. This is not the place for a history of St. John High School successes, but those who care to search will find that more than one university gives it an honourable place in the records. We are more concerned now with a different theme, that of the personal force and influence of this remarkable schoolmaster.

I have said that he taught the sacredness of the daily task. It is not to be supposed that he fell short in that other phase of the matter, that which gives life to the teacher's vocation, of making the task attractive. In literature, in history, most of all in his own most beloved subject, botany, he knew the secret of imparting his own enthusiasm and of securing in even larger and more willing measure the time and attention of his pupils. Very distinctly across the years comes the recollection of evenings when the Principal, with Mrs. Hay, who seconded his every effort, received the girls in their home, and we read, tremulously, the essays which after long study in our literature class we had composed for this great occasion. To Dr. Hay as a teacher of botany a whole article might well be devoted. Under the stimulus of his enthusiasm, we spent hours ranging the hills and river banks of St. John in search of specimens, we crowded our rooms with presses, and gave up precious Saturday afternoons to mounting and naming our plants, and executing the fine pen and ink drawings which illustrated our note books. We were to find out later that we had but touched the fringe of a science, but I believe that no one of us regretted the time that we spent so. We had gained an insight into a wholesome pursuit which in days to come was to lead some of us afar. And meantime we had done a piece of work as well as we were able.

It was only in later years, perhaps, that we were able to appreciate some of our master's finest qualities. We comprehended dimly, if at all, the force which attached his assistants to him in such staunch loyalty, and preserved such order and earnestness throughout the school. But there were virtues which we did not miss, the unfailing patience, the tactful help, the appreciation of effort, the rare and discerning word of praise — these are things very dear to the school girl, and these our beloved master gave us ungrudgingly.

The testimony of an old pupil who cherishes a special gratitude to Dr. Hay may be cited. She came to the school a shy stranger untrained in the routine of classes and examinations. She was unprepared to pass the proper test, but in response to her earnest request she was placed in a certain class, one which almost any teacher would have pronounced too high for her. In a few months she had overtaken her classmates, almost solely through the unobtrusive guidance of the head master. Many years afterwards when they met as compatriots in the educational world to which the St. John High School had opened the door for her, she told him of what those months of training had meant. It was the consciousness that his confidence in her had placed her in that class, that spurred her to subdue nervousness and discouragement and earn her place. And with other lessons came the dawning knowledge that in the august reign of law there is a vast difference between strength and rigidity.

Spontaneously the pupils of such a master rise up and call him blessed. Of such, when their work is finished the ancient words are compact of meaning: "They rest from their labours and their works do follow them."

G. E. CAMERON.

SIR CHARLES TUPPER.

Our supplement this month is a portrait of Sir Charles Tupper, Bart., G. C. M. G., C. B., taken from a photograph which he has kindly sent for the use of the REVIEW. This picture was intended to accompany the Empire Day number in May, and the connection would have been a fitting one, as there is, perhaps, no living Canadian who has done more for the Empire than this veteran statesman.

Born in Amherst, Nova Scotia, on July 2nd, 1821, Charles Tupper was educated at Horton Academy, and the University of Edinburgh. He studied medicine, received the degree of M. D. in 1843, and returned to practise medicine in his native county.

In 1855 he was elected member for Cumberland in the Provincial Assembly, defeating the popular Joseph Howe; and this was the beginning of forty-five years of active public life.

In 1864 he became Premier of Nova Scotia, and under his guidance was passed the School Law of 1864, upon which is based the educational system of the Province.

Devoted as he was to the service of his native province, he foresaw a larger destiny for it as part of a United Canada that should grow to be a great nation. Many have heard him tell the story of the meeting at Charlottetown to discuss a union of the Maritime Provinces, the consequent Federal Conference at Quebec with wider views, and the final gathering in London out of which came the Confederation of the Dominion in 1867.

In recognition of his services in bringing about Confederation, he was made a C. B.

In the new Dominion Dr. Tupper held successively many important offices of state. He has worked consistently and vigorously to develop the resources of Camada, to make her a great nation, and to bind her closely to the Mother Country. His services to this country and to the Empire are recorded in history.

Throughout his career he has shown three essential qualities of a statesman:—large ideas, sure foresight, and tremendous fighting power. His kindly disposition and courtesy have won for him personal popularity.

In 1886 he was made a G. C. M. G., and in 1888 a Baronet of the United Kingdom. In 1900 he withdrew from political life, and is now enjoying the well earned rest of a hale old age in the English country.

BOTANY.

L. A. DEWOLFE.

In past numbers of the REVIEW botany articles have been somewhat general, and chiefly on ecological phases of the subject. It may be wise this year to devote each article to one or two well known families of plants. I shall not attempt to take them in order of evolution, but shall choose, rather, those one is most likely to meet everywhere.

For this month the *Rosaceae* is a good family to observe. Learn, first, the characteristics of the family. Taking a flower of, say, Cinquefoil, or Wild Rose, or any other named in this article, notice the five petals and the numerous stamens *attached to what is apparently a ring of the calyx.* Below this ring the sepals are united into a bowl or saucer-shaped vessel; and above they are separate. This feature alone is enough to make one reasonable safe in saying what does and what does not belong to the Rose family. A second check in placing plants in this family is the presence of stipules. The shape, size and duration of the stipules vary with the plant; and, in themselves, furnish good topics for a few lessons.

To learn the use of stipules, one should watch leaves unfolding from the bud next spring. In a few cases, a different use may be noticed on a rainy day during the summer. Compare Wild Rose stipules with those of the Apple or Indian Pear.

Peas and Willows are among other plants with prominent stipules. How do you know they are not *Rosaceae*?

In counting the parts of the blossom, apparent trouble arises. The rose, apple — in fact, nearly all flowers of this family have five sepals. The strawberry, cinquefoils and avens, however, seem to have ten. Are all of the same size? Notice the five smaller ones alternating with the others are slightly below the real sepals. By some botanists, these are considered stipules. The belief is that all parts of a flower are modified leaves.

Sepals, then, are leaves that have assumed the work of protecting other parts of the flower. As these sepal-leaves became modified to suit their new work, their stipules also became modified. Two adjacent ones grew together to form one bract between two consecutive sepals.

After all, then, the variation in the number of sepals is only apparent. Not so, however, with the carpels. Unquestionably, their number is not uniform. In a strawberry there are many. For proof, notice the great number of seeds over the outside of the berry. In the apple and pear blossoms there are only five carpels. See the five seed-cells in an apple. How many carpels in a plum or cherry blossom?

With this variation in numbers, one problem for the early systematic botanists, doubtless, was whether or not to make separate families based on these differences. Botanical families, however, are not so much a matter of *number* as of *structure*. In some Keys the *Rosaceae* are divided into three sub-orders. These all agree, however, in the one characteristic, viz.:— the petals and stamens are attached to the "calyx-ring." If the raised ring near the base of the stamens be tasted, perhaps one might suspect its use. Why should it be placed where it is?

The Rose family gives us more of our cultivated fruits and ornamental shrubs than, possibly, any other one family. Our orchard and garden fruits nearly all belong here. Perhaps some reader will have her children make lists of garden shrubbery belonging here.

Teachers who wish, could begin at once looking for wild species. About a dozen genera may be found in any school section. A few of these genera consist of eight or nine common species; and they range from that down to a single species, as in the case of Dalibarda and a few others.

Several species of *Potentilla* (Cinquefoil) are still in flower. If not, some of them are easily recognized by their leaves. I suggest trying to find the Canada, Norway, Three-toothed, Shrubby, Silverweed and the Silvery Cinquefoils. The teacher on the seashore will find one of these that will not likely be found inland. Many sections might also have the Marsh Cinquefoil.

Somewhat like the Cinquefoil is the Avens (*Geum*). Four or five species belong to the Maritime Provinces. The commonest is Purple or Water Avens (Chocolate flower). The Yellow Avens and the White Avens are also fairly common.

The blackberries, of which we have three wild species, and the raspberries are well known. Many students, however, are unable to name the dwarf raspberry (*Rubus triflonis*) when they find it. In several localities it is called Dew-berry — which is really one of the blackberries — and others call it Wine-berry. The Baked-apple of peat bogs also belongs to the genus *Rubus*.

Lady's Mantle is a troublesome weed in Yarmouth and Shelburne Counties, N. S.

Agrimony is common along the banks of brooks and rivers. Its hooked fruit reminds one of small burdock heads.

The cherries and choke-cherry are well-known.

We have several species of Wild Rose. One is a climbing species. Try to work out a few of these. The shape and size of the spines or briars will help.

The Choke-berry of swamps is not well known. The Mountain Ash is too often called dogwood.

The Spireas are worthy of acquaintance on account of the many cultivated varieties. The Hawthorns also are worth studying. I suggest starting this work now with the aid of a botanical key, and continuing it next spring and summer.

SPELLING REVIEWS.

A plan that has worked well in ungraded schools is to have every word misspelled written on the board and the list left until Friday morning. Let one of the older pupils, who writes clearly, put the words up before school each day from the list furnished by the teacher. On Friday, when spelling review time comes, let the same boy or girl erase the words from the board and give the teacher a fair copy, with the words numbered. The words may then be given out for oral or written spelling. On Monday morning, the words misspelled in review are put on the board again with a "2" after each, signifying that a double mark will be lost if they are spelled wrongly again. The deducted mark will be doubled each week, and in this way the common mistakes are hunted down and overcome. All pupils above Grade IV should take the review together, but the younger ones need not take more than the first twenty or thirty words, if the list is a long one.

All things that love the sun are out of doors;
The sky rejoices in the morning's birth.
—Wordsworth.

NATURE STUDY OF ANIMALS.

PROF. H. G. PERRY.

"There is a pleasure in the pathless wood,
There is a rapture on the lonely shore,
There is society where none intrudes
By the deep sea and music in its roar."

—BYRON

The opening of another year's work in nature-study is at hand; and, as teachers, we all naturally wish to do better than ever before, to come in closer touch with nature, to learn more of her ways, to find more of her secrets and thus prepare to give the best.

In attempting to conduct this page for another year I recall many encouraging notes and suggestions from teachers throughout our constituency. I wish to thank all who helped to make whatever success attended last year's effort, and ask for a renewal of your interest, and also to welcome to our circle every teacher throughout the Maritime Provinces.

In these pages during the coming year you will find some suggestions and directions along nature-study lines, which I trust you can mould into your school work with profit and pleasure. But, every reader should remember that these articles are not intended to take the place of the personal contact with nature. We must study things, not books, or we are feeding merely on the husks.

From month to month during the coming year, we hope to present a list of subjects which will form a well rounded course for the year, taking the pupil over the prescribed work, and at the same time giving scope for extra work for the more enquiring and progressive students. With this in view a carefully selected list of subjects have been prepared suitable to the various grades. The work of the lower grades should be well done, as these comprise the great mass of our boys and girls. But something will also be attempted in the way of more advanced or High School work from time to time.

Along with this work will be found suggestions for the location, collection, and preparation of subjects for study; directions will be given when necessary for the preservation of material for study and museum specimens, and for the construction of apparatus, etc., etc.

We ask you as teachers to consider that this page of the REVIEW is your special department, to which you are urged to send in reports on conditions in your locality, *e. g.* the presence of injurious insects, etc., as Arm Worm, Tent Caterpillar, Brown-tail Moth, etc., etc., also to send in specimens (four or five when available) of forms you wish named. All specimens that seem in any way injurious should be killed before being sent through the mails. We hope you will also make this department a question box. Questions will be given from time to time for solution. We invite your answers, and ask for your questions.

I would urge every teacher to make a collection of the injurious as well as the beneficial insects of her locality. Gradually work out the life history of each, collecting and preserving specimens of the various stages as you find them. Ten insects this year, collected, properly preserved, and named, and arranged, will tend to make nature-study popular both in your school and district. Your pupils are anxious to be busy, all they need is direction, when once under way they soon spread the interest through the community. The teacher to make the subject a success should have the work well in hand before school begins. These are vacation days, but let us as teachers make them worth while, and fill them full, notwithstanding their name.

Work for the Grades for August and first part of September;

GRADE I.— The work for this grade must in its beginnings be distinctly by itself.

Introduce your nature-study through talk about home pets and domestic animals. A few facts about the dog, and the cat, will lead to the cow, horse, sheep, hen, turkey, etc. Of what use are these animals to man? On what does each feed? What is the color of each? What kind of a coat has each? etc., etc. Develop the idea of tame and wild animals. Be content with simple statements of simple outstanding facts. These are days of adjustments for our little folk, and each one is a fitting subject for the "teacher's-nature-study."

GRADES II, III, and IV.— Review and extend the work in domestic animals. More work can be given regarding the taming of animals, Why did man tame animals? How has man benefited by taming animals? Is the process going on to-day in our Provinces? Why?

With III and IV, extend the work to insects. The housefly as a pest is a good topic. Name other insect pests. These should be treated in a general way. The country boy will find several pests on the farm. The life history of the housefly or Cabbage Butterfly should be attempted in GRADE

IV.— The Cabbage Butterfly is found in abundance. Note its manner of depositing its eggs in the nasturtium or cabbage. Watch it flitting over these plants on bright days. What is it doing? How many eggs in a bunch? Examine an egg under a hand lens, noting its markings and shape.

In Bird study the crow, robin, and bluejay are in evidence.

In more advanced classes the life history and life cycle of the Cabbage Butterfly and Housefly should be attempted.

In the study of Cabbage Butterfly learn to distinguish male from female. The male shows one round black spot on the fore wing; the female two. For the life cycle begin with the egg, which hatches into the larva, the green worm, the chief feeding stage of the animal, then its resting stage, pupal stage, in which it remains during the winter, and finally its adult or winged form, the imago.

Diagram this cycle on the board, leaving spaces for the insertion of the name of the stage at the beginning of each quadrant. This presents the life history in a striking form, and affords good subjects for composition work for older pupils.

Encourage the capture of a number of Cabbage Butterfly larvae. Place in a cage made from an empty chalk box, filled with a wire-cloth cover, supply fresh cabbage or nasturtium leaves each day, removing the old ones. Notice their feeding habits, and their passing into the pupal stage. Keep cage in a cool place for spring work. The butterfly will come out in April or early May, or much earlier if cage is kept in warm school room. Search for similar pupae on fences and buildings near turnip or cabbage fields or nasturtium beds. Is it natural for the pupae to be exposed to cold during winter? Take your hint from nature, and copy as far as possible natural conditions.

As the Housefly passes through its life cycle in about fifteen days it presents some advantages over the Cabbage Butterfly. It deposits its eggs on fresh horse manure. These hatch within a day into smooth, white conical, footless larva, called maggots. The larva feed for about a week and then pass into the pupal stage, and in a week more the adult or winged form appears. With but little care students can see all these changes, and can collect and preserve the specimens from each stage.

High School grades should study the Potato-Beetle in a similar way. Here the life cycle is also of short duration. The larvae "soft-bugs," should be placed in a cage with the ends also of wire cloth, and the cage placed on end with about four inches of moist earth from the potato field in it. You will get best results by placing the cage in earth in the garden to the depth of four inches in order to keep the earth in it properly moist. Feed your larvae with potato leaves. If you selected large larvae they will soon burrow in the earth, and in a few weeks the adult, winged form will appear.

Another striped beetle, somewhat like the Potato-Beetle, as to color, though very much smaller, is found on pumpkin, squash and cucumber vines. It is the Striped Cucumber-Beetle.

How does it compare in activity with the Potato-Beetle? The striped Beetles are the adult or winged forms. Have you ever found the larva? In the Potato-Beetle the larvae are common and are the chief source of injury to our crops; in the Striped-Beetle the adults eat the young leaves of our cucumbers, squash, etc., and even search out the sprouting seeds and by nipping off the young sprouts destroy the plant before it is even out of the ground. Further, when the vines have grown large we often find one that begins to wilt and finally dies outright. No wound or injury is to be found in the vine above ground, but upon carefully examining the roots they are found to be pierced here and there with small holes. Examine carefully and you will detect the cause, either embedded in the root or lurking close by. They are little whitish worms about a third of an inch long, and as thick as a good sized pin; the head is of brownish black and horny, and there is a plate of same color and consistency on the last segment. These are the larvae of the Striped-Beetle. The eggs are deposited near the roots. When full grown the larvae leave the roots and pupate in the surrounding earth, and after about three weeks the adult forms appear.

Work may also be undertaken on the larva of insects infesting apples, and peas.

Directions for making apparatus:

A good poison bottle for insects is made by placing about half an ounce of potassum cyanide broken in small pieces, in a wide mouth bottle — a vaseline bottle does very well for all save the larger moths and butterflies. Moisten with water, place over it enough cotton to give a level padded surface, and force down a disk of tightly fitting sheet cork or

thick cardboard. Label "Poison" and keep out of the way of children. If bottle has a screw top, a thin sheet of cork or card should be placed in top to prevent the escape of the gas, as potassium cyanide is a deadly poison. Great caution should be exercised in allowing your pupils to have such poison bottles, as they are often left carelessly within reach of smaller children. Each student should have a collecting bottle, when the killing that is necessary may be done under the teacher's supervision. Chloroform can also be used as a killing agent. In this case use a fruit jar with some cotton in the bottom wet with a small amount of chloroform.

A collecting or insect net may be easily made by taking a piece of No. 12 spring brass, or telephone wire, three or four feet long. Bend it into round loop eight or ten inches in diameter; cross the wires, keeping the ends of equal length, and give it several firm twists continuing out to the ends of the wire. Next clamping it tightly against a small iron rod or round stick in a vise, wind the twisted end closely around the rod into a spiral. You now have a convenient frame into which any stick can be screwed for a handle. The net may be made of mosquito bar, or cheese cloth; the bag should be a little more than twice as deep as the frame is wide, so as to lap over and close well when an insect is caught.

See book notice of the Comstock Hand Book of Nature-Study.

Address all communication for this Department to H. G. PERRY, Wolfville, N. S.

As an instance of a forest pest I wish to mention that a specimen of the Spruce Budworm Moth reached me a few days ago from Albert County, N. B., through the kindness of Mr. W. Garfield White, Sussex, N. B. Mr. White reports that it has defoliated the spruce two feet from the top down and has extended its ravages over hundreds of acres. This is a serious pest, and threatens our lumber and pulpwood industries. As far as I am able to learn, this is the first report of this insect in the Maritime Provinces. It has formerly been confined to British Columbia, Quebec, and a few other localities in Western Canada. I trust all our teachers will be on the lookout for this and similar pests. H. G. P.

The June garden is a thing of hopes and fears. The July garden is a scene of combat and accomplishment. The August garden is the ripe reward of husbandry.

Youth's Companion.

CENTENNIAL ANNIVERSARIES OF THE WAR OF 1812.

J. VROOM.

XIV.— The Battle of Lake Erie.

September 10.— The struggle for the control of Lake Erie, which was to decide the fate of Michigan, if not that of Upper Canada, came to a decisive issue in the battle that took place on the tenth of September, 1813, between a British fleet of six vessels under Captain Barclay and the enemy's fleet of nine sail under Lieutenant Perry. The difference in effective force was not quite so great as the number of ships would imply; and the result was in doubt until an unfortunate collision between the two largest vessels of the British squadron put them at a disadvantage. The direction of the wind, always an important factor in a naval engagement in those days, was in favour of the enemy. Captain Barclay himself was wounded early in the fight; and, before the battle was over, all the British officers commanding vessels and their seconds in command were either killed or so severely wounded as to be unable to keep the deck. There were but fifty experienced seaman in the crews. After stubbornly resisting for two hours and a half, four of the British ships surrendered; the other two were captured in trying to make their escape.

Perry, whose commision as a captain happened to be dated on the very day of the battle of Lake Erie, is regarded by his countrymen as the hero of the occasion. He had not only shown great ability in preparing for the contest; but, when his flag-ship was disabled and defeat seemed near, he had boarded another vessel to continue the combat, and by his own personal bravery and skill had succeeded in turning the impending defeat into the first important victory of the war.

Our neighbors across the line are holding a series of celebrations in honour of Perry's success. We can join with them in acknowledging that he deserves the honour; yet Barclay's defeat brought with it no disgrace. "Our father with one arm," as he was affectionately called by the Indians, (for he had lost an arm fighting under Nelson at the battle of Trafalgar,) was fully and honourably acquitted of blame for the loss of his fleet. He had made the best of his limited resources, and only yielded to singularly adverse circumstances and superior force. The loss of Detroit, which immediately followed, was the inevitable result.

THE FOURTH INTERNATIONAL CONGRESS ON SCHOOL HYGIENE.

International Congresses on School Hygiene have been held successively in Nuremberg, London and Paris. The Congress of 1913 is to meet at Buffalo, August 25-30.

The objects of the Congress are:

1. To bring together men and women interested in the health of school children.
2. To have papers and discussions on the subject.
3. To have exhibits representing ideals of school hygiene.
4. To publish and distribute the proceedings of the Congress.

It is hoped also that a permanent organization may be formed to carry out reforms in school hygiene.

There is a programme of two hundred and fifty papers and fifteen symposiums, discussing hygiene from the following points of view:

1. The hygiene of school buildings, grounds and materials.
2. The hygiene of school administration and schedule.
3. Medical, hygienic and sanitary supervision in schools.

There will be many special discussions, arranged by experts, including discussions on School Feeding, School Illumination, Tuberculosis among School Children, The Mentally Defective Child, etc.

Fifteen national associations have taken part in arranging plans for the Congress. Public health officers will take a prominent part in the discussions; Departments of Public Instruction are urging their officials and teachers to attend the meeting. Women's Clubs are actively at work preparing for a special conference on "Women's Work in School Hygiene."

The President of the Congress is Mr. Charles W. Eliot. Among the Vice-Presidents is Sir James Grant, M.D., K.C.M.G., Ottawa. The Congress is open to all who are interested in promoting the health and efficiency of school children.

Regular membership, entitling the holder to vote in the Congress, costs five dollars. Associate members pay two dollars and a half.

The Secretary, to whom application for membership should be made, is Dr. Thomas A. Storey, College of the City of New York.

PRINCE OF WALES COLLEGE.

The fifty-third annual commencement exercises of Prince of Wales College, Charlottetown, were held on Friday morning, May 30. The Principal's report showed that the year's work had been most encouraging. The attendance was the largest in the history of the institution, the registration being two hundred and eighty-seven, an increase of five over the preceding year. The following were the prize winners: Anderson Gold Medal (presented to the student making the highest number of marks in the third year) David McLean, Charlottetown; Governor-General's Silver Medal (to the student making the second highest number of marks in the third year) Thane Campbell, Summerside; Governor-General's Bronze Medal (to the student of the third year best fitted for teaching) George Webster, Charlottetown; the D. A. MacKinnon Prize (to the student of the third year standing highest in English) Miss Bernice Norton, Charlottetown; the Charles Lyons Prize (to the student of the second year standing highest in classics) Elmer McLeod, Hunter River; the John Caven Prize (to the student standing highest in the second year) Donald Lamont, West River; the T. A. LePage Prize (to the student standing highest in the first year) Miss Bessie Rattee, Malpeque.

The REVIEW regrets to record the close of a useful life in the death of Senator John V. Ellis, on July 10th. Among all the activities of his public-spirited career, the part of most interest to our readers is the vigorous share that he always took in educational matters. He was for many years a member of the St. John School Board, and showed great interest in the work of the schools, offering prizes, and, wherever possible, attending the closing exercises and encouraging the students by his cordial and happy words. He presented a gold medal for annual competition in English Composition at the High School.

He was a member of the Senate of the University of New Brunswick, and was active in promoting University Extension teaching in St. John. He was a director of the Horticultural Society, and for years President of the Natural History Society.

As an editor he was always ready to give prominence to educational news or discussion, and to support with his able pen the cause of teachers and students. A true friend to education, he will be greatly missed by educational people.

THE SUMMER SCHOOL OF SCIENCE.

The twenty-seventh session of the Summer School of Science closed on Tuesday, July 29th. This is the first time that the school had met in Halifax, and to its customary attractions were added those of the beautiful and interesting surroundings which that city affords. We have always thought that one great advantage of the Summer School of Science is the variety of its meeting-places. Not only do the teachers have an opportunity of seeing the scenery and resources and historic spots of different parts of the provinces, thus studying geography at first hand, but also, it cannot but be good for any community to entertain a body of hard-working, enthusiastic teachers.

More than two hundred students, a large proportion of whom were from New Brunswick, attended the school. The work done was excellent in quality, as is usual in summer schools, where the attendance is purely voluntary, and most of the students have found out, by teaching, what they want to learn.

While hard work was the rule, the students had their recreations, one of the most pleasant and novel being the band concert in the Public Gardens, given to the members of the School by the City of Halifax. They were also entertained by the Lieutenant-Governor, and by the Governors of Dalhousie College.

The meetings were held in the Technical School Building. The subjects taught were Agriculture, Physics, Chemistry, Geology, Botany, Zoology, Physiology, Literature, Elocution, Drawing, Manual Training, Physical Drill.

The class in Agriculture was the largest, but students in the other classes were equally keen. Special mention must be made of the Manual Training class, where everyone was enthusiastically busy, and the conversation was chiefly about the passing on the delights of making cardboard work, etc., to the school children.

At the closing meeting seventy-one scholarships were awarded, through the generosity of public-spirited citizens and friends of the school. Honours were shared by Miss Olivia Maxwell, of St. Stephen, N. B., and Mr. Hubert Vickery, of Yarmouth, N. S., who each carried off a $50.00 prize.

There is a likelihood that the session of 1914 will be held in Charlottetown.

DO YOU MULTIPLY OR DIVIDE?

GERALDINE COSTER.

It has been said that all arithmetic consists merely in the four rules plus common sense. Nothing could be more obvious. We all know it. But how many of us think it worth while to teach it? And yet to the average child who has no special aptitude for mathematics, and who "never could do problems," that obvious truth is far from self-evident; and many such children cross the *pons assinorum* of arithmetic on the day when that truth comes home to them.

In the lower middle grades there are usually a considerable number of children who are good reckoners, and can multiply and divide with accuracy by enormous numbers; but set them down in front of the simplest problem and they fail utterly. It is not that they are unusually dull, but that their minds have no power to attack a problem. They cannot "get started on it," but will sit helpless before it for half an hour and then assure the teacher that they "tried for ever so long." No doubt they thought they were trying, but in all probability their minds were not working at all. How often have we not heard a dialogue somewhat as follows:—

Teacher: Now, Katie, how would you set about working example 6?

Katie (with an air of alertness): You divide.

Teacher: What do you divide?

Katie (feeling that her reply was not satisfactory): Oh! I see! You multiply—I mean—Oh! you *add*.

Katie is a good child, and is trying to please her teacher, but is she thinking? Yes, in a way she is, for is she not trying hard to find out what *the teacher wants her to say*!

To Katie one answer is just as likely to be right as another. It is merely a species of guessing contest, in which she is somewhat unreasonably expected to guess right the first time. If this amiable but otherwise deplorable attitude of mind is not corrected while Katie is young, by the time she is fifteen her intellect will be hopelessly stunted, not only so far as arithmetic is concerned, but in all her school studies. She will have developed into one of those children, alas! far too common in our schools, to whom words mean nothing, and in whose eyes question and answer have no necessary or logical connection.

In the middle grades, arithmetic is the subject that acts most directly on the newly awakened

reasoning powers, and if in this study the teacher does the reasoning and the scholar merely assents, the chief value of the subject is gone. If the teacher patiently explains over and over again the way to do certain typical problems, until at length the child grasps the idea, the child's reasoning power is exercised to the minimum rather than to the maximum degree.

It is, therefore, of the highest importance that the child should be taught independence in the matter of attacking problems, and it is often a good plan to concentrate on this for a considerable time at the beginning of the school year. Practise attacking problems in class. Never mind arriving at the answers. That may be done later, and it is incidentally very good for children to learn that the answer is not everything. Most children think that "so long as you get the answer" all is well, and that is a pernicious idea. Select, then, a considerable number of easy problems, and treat them somewhat as follows:—

I.

Problem:—A train travelling 42 miles an hour, takes 16 hours to go from Newton to Avonmouth. How far is it from Newton to Avonmouth?

What quantities are mentioned in this problem? What will be the denomination of the answer? Is it more or less than 42 miles from N. to A? What possible ways are there of making 42 bigger?

(If the class does not at once see that there are but two possible ways, question as follows:—What four ways have you learnt of dealing with numbers? Does dividing make a number bigger or smaller? Does adding..... etc., until you have elicited that only by adding or multiplying can any number be increased). Shall we add 16½ hours to 42 miles? If adding is no use, what is left to try? Are you positive adding is no use? (Find out what the class thinks on this point, but do not express any opinion yourself. If any pupil thinks adding might be of service, let him demonstrate. If all think it of no use here, let the answer pass, and continue). How far did the train go the first hour? Have written on board:—

Train went 42 miles first hour. How far did it go the second hour? Set that down exactly under the first statement. Continute this form of question until 16 hours are accounted for on the board. Now, who can find out how far the train went in 16 hours?

After the 42's have been added, ask:—How many 2's are there in the units column? What does 16 times 2 make?

How many 4's in the tens column?

What does 16 times 4 make?

But if you say 16 *times* 2, and 16 *times* 4, that in not adding, it is ————?

Then what is the sensible way to set down that clumsy column of 42's?

Is the answer the same whether you add or multiply? Do it and see.

Try the same process with 4 times 37, and 6 times 53, etc.

Why then should we multiply in this problem rather than add?

Which do you suppose was invented first, adding or multiplying?

Show that the man who invented multiplication was a little like the man who invented printing. They both wanted to *save time*.

Can you do this sum by multiplying?

618 + 917 + 314.

Can you do this one by multiplying?

618 + 618 + 618 + 618.

What is the difference?

II

Problem:—68,179,600 pounds of pork were exported from the United States in a certain year. How many barrels of 200 lbs. each were exported?

What quantities are mentioned in this problem?

What will be the denomination of your answer?

Will there be as many as 68,179,600 barrels of pork exported?

Then will your answer be greater or less than 68,179,600.

What two ways do you know of making a number less?

What quantity have we in this problem that we could subtract from 68,179,600?

If we took 200 lbs. away, how many bbls. would it fill?

Take away 200 lbs. enough times to fill ten barrels.

Have you used up all your pork?

Could you go on subtracting 200 lbs. until you found how many bbls. 68,179,600 lbs. would fill?

Would it be a good way to solve the problem? Why not?

In what other way could you solve it?

Would the repeated subtraction give you your answer in the end?

Then what is the advantage of division?

This long method of attack should be continued until all the children have grapsed the idea of it, and can themselves make the following generalisations.

1. To make a number larger we can add or multiply.

2. To make a number smaller we can subtract or divide.

3. Multiplication is merely a quick way of adding when all the addends are the same.

4. Division is merely a quick way of subtracting the same number over and over again.

When this has gone home to the whole class, it should be enough in attacking the problems to put a few general questions as follows:—

III

Problem:— A cider merchant made 12000 gallons of cider, which he put into casks holding 42 gallons each? How many casks did he fill?

What amounts have you to work with?

What will be the denomination of your answer?

Will there be as many as 12000 casks?

How can you make 12000 less?

Which shall we use, division or subtraction?

If any pupil suggests subtraction, insist on using it first, and division afterwards. There is no better way of checking foolish, parrot-like answers, than by seriously acting upon them. It makes the offender feel foolish, and also helps to teach him that he is responsible for his words. If a pupil suggests division but does not see at once what to divide by, make him use subtraction first. But as soon as he really sees what divisor to use, let him stop subtracting and divide.

So far, so good, but do not stop there. We have not reached independence so long as the teacher is putting the question. It is more than half the battle to make the child put the questions. It is very difficult to make a young child ask himself questions. It is not natural to him. So bring two children up, have your problem put on the board, and make one child question the other. But bear in mind that here it is the questioner who is learning the most, so try to give every child a turn as questioner, *especially the duller ones*. Do not put a dull child on first. If he fails he will discourage the others. Continue using this device of making the children the questioners, until you feel that your whole class has learnt to attack a simple problem, and could do it perfectly well in your absence.

A word of warning may be useful as to the kind of problems to begin on. Select problems that require only one operation, as is the case with the three problems treated above. Problems involving two or three operations are much more difficult to attack, and should be left until the simpler ones are well understood. A problem such as :"A dealer bought 4 dozen pairs of shoes for $96.00 and sold them at $3.00 a pair. What was his profit?" requires three operations,

1. How many pairs of shoes were there?
2. What would they bring at $3.00 a pair?
3. The difference between the buying and selling prices.

SUGGESTIONS FOR PRIMARY WORK.

One Way of Teaching Letters

I cut pieces of cardboard about three-quarters of an inch square, and write a letter on each side, making a complete alphabet for each child. I rule a page in the child's book in small squares, and on alternate lines write the alphabet. The children place the cardboard letters in the blank squares below the corresponding written letters. When all the squares have been put in their proper places, the child picks up each one, names it, and returns it to the box. The same plan may be used to teach figures and Roman numerals.

Different alphabets are made of different coloured card-board, and a box containing several alphabets is used for building short sentences.

A Device for Teaching New Words.

A box containing a number of small pictures of various common objects (house, box, cup, dog, etc.) pasted on card-board, is kept on a shelf. The name of each object is written or printed below it, and each child is given a picture, and required to write several short sentences about it. As they advance, new pictures are chosen, and harder words added. The pictures may be cut out of advertisements in magazines or catalogues.

For Drill in Silent Reading

A short story, or a number of short sentences, is written on a large sheet of card-board. Then another copy is written and cut up into words.

The children put the words together to form the story or sentences using the complete copy as a guide. A hectograph, or some sort of duplicator is necessary for making the copies for a large class. For a very small class, the story could be put on the black-board, and the copies to be cut up written out separately.

Reading and Manners.

In beginning to teach reading, if a child forgets the name of a letter, I say," Let me introduce you to M. Johnny this is M. Now, it is very rude to forget anyone's name, and call him by the name of another person. M will be cross if you call him, L or N."

. Some materials for primary work that may be had for little or nothing are the following :

Pictures of all kinds cut from old magazines and illustrated catalogues.

Figures cut from old large calendars.

The backs of writing pads and calendars, stiff exercise book covers, old visiting and invitation cards. The latter are of a very good thickness to paste calendar numbers on.

Small card-board boxes. Wall paper pattern books, for cutting out designs. Pattern books of thin oil-cloth for making book covers.

Soda-water straws make good counting sticks, and so do matches with the heads cut off.

The paste powder that is to be had at hardware stores for about fifteen cents a pound, is convenient for pasting. It keeps well when mixed with cold water.

A hectograph, or some sort of duplicating pad, is almost a necessity. Directions for making one have been given more than once in the REVIEW and will be repeated if desired.

Ingenious teachers are asked to add to this list, and give their fellow teachers the benefit of their discoveries, through the REVIEW.

Warm noon brims full the valley's cup,
The aspen's leaves are scarce astir,
Only the little mill sends up
Its busy, never-ceasing burr. —Lowell.

A great coal area is to be opened up in the Province of Alberta. It yields anthracite coal of the best quality. The out-put in excess of what is needed in the Northwest will be shipped from the Pacific Coast, and when the Panama Canal is opened large shipments will be made to Gerny.

THE HUNTER.

Ever since Robbie Evans was old enough to tease for the story of "Jack the Giant Killer", he had wanted to do something which other boys of his age could not do. He longed to do something great, which would make his family very proud of him.

When he was seven years old, Uncle Sam gave him a new, shiny, red bow-gun, and he thought the time had come for action.

He did not expect to kill a giant. Uncle Sam said there were none; that is, any wild ones.

He did think he might shoot a panther or possibly a tiger. He was sure if he looked carefully, he could find some wonderful game.

So he proudly shouldered the new bow-gun, took half a dozen of the very sharpest, pointed arrows, and started over the hill to the poplar grove.

The leaves had turned from green to yellow; and how black the old pine stumps looked through them! How strange it seemed! The rustling carpet of dried yellow leaves was not half as pretty as the soft grass and moss that covered the ground in summer, and he could not even find one bunchberry to tell of the starry white blossoms of the spring time.

If I could only kill a panther now—no, if I could only see one, of course I could kill it if I found it," thought brave Robbie.

Then as he stepped over a fallen log, an animal sprang up with a terrible hiss.

His heart stood still and he looked at the crouching animal. The eyes blazed and were fastened upon him with apparent anger or terror.

"It's just like the color Uncle Sam said that lion was out west," Robbie thought, and with a look at its coat, "and it's got a head just like a cat's. Oh, dear me!"

Poor Robbie! He was not so brave now. He stopped just long enough to see that the animal did not mean to run away, then dropped his new red bow-gun and ran.

Three things he was quite sure of — that the animal was following him closely — he could hear its feet over the dried leaves — that the way home never was so long before, and that he wanted to see his mother.

He reached the top of the hill at last. What a long time it took him to reach the orchard where John was picking apples!

"Oh, John! O mother!" he gasped, and then—

"Me-i-ow! Me-i-ow!"

"Where did you find Aunt Mary's cat? She will be so glad!" cried mother.

"Is — is that her cat?" panted Robbie.

"Of course it is. There isn't another cat like him in Maine. See what a beautiful yellow coat he has. "He is the largest pussy I ever saw," said mother, as she took a basket to put him in.

"I think he is big," answered Robbie, truthfully, "but I never knew cats were that color."

His voice was beginning to be steady again.

Then he walked slowly back to find the new red bow-gun, and he sat on a fallen log a while to think about it. — Margaret Anderson, in the Boston Herald.

SOME MATERIAL FOR OPENING-DAY TESTS.

1. Make lists of trees, plants and birds. Underline those that you know by sight. Which of them are to be found near your home?

2. Make a list of the streets through which you come to school; of the shops and public buildings that you pass. Through which streets in your town do the street-cars run? What is the most interesting street? Why?

3. If you live in a seaport town, what vessels come and go regularly? To what places do they go, and what do they carry?

Punctuate and space the following:—

1. Where did you go in the holidays I went to Cape Breton How did you go By the I. C. R.

2. What did Miss Smith say to you She said I think you can do Grade V work don't you

3. What did you say I said O yes I think so

---

1. If you know the cost of one thing, and want to know the cost of a certain number of the same things, what do you do?

2. If you know the price of a yard of ribbon, how do you find the price of a certain number of inches.

3. (a) Sarah's mother bought 4¼ yds. of cloth for a cloak at $1.20 a yard. How much did she pay for it?

(b) She also bought 3½ yds. of lining at 50c. a yd., and 4¼ yds. of braid, at 20c. a yd. How much did these cost?

(c) She then bought 6 buttons at $1.50 a doz., and 2 reels of thread, at 6c. a reel. What did she pay for them?

(d) The dressmaker charged $5 for making the coat. What did the making and material cost?

—From The Teaching of Arithmetic, D. E. Smith.

FOR FRIDAY AFTERNOONS.

A Misunderstanding.

The little doll from China and the little China doll
Sat looking at each other in surprise;
"That you were made in China," said the first, I can't believe,
For, you see, you have such funny round blue eyes."

"But I am made of china," said the haughty little blonde;
"I don't know why my word you choose to doubt;
And for my eyes, if mine were slanted water-melon seeds
I really think I'd rather do without."

The little doll from China and the little China doll
Sat looking at each other in despair.
"Why, all the dolls in China are brunettes like me," said one.
"Oh, no; a China doll is always fair!"

"But all the dolls in China have black hair that's smooth and straight!"
"Your're wrong—a China dolly's hair is curled."
And both were right, yet both were wrong; because, you see, there are
So many kinds of china in the world!

—ST. NICHOLAS.

The Boy Who Meant To.

He meant to get up early when the air was crisp and cool,
And mow the lawn and clip the hedge before he went to school.

But he was tired and sleepy when he woke at break of day,
So said another time would do, and slipped in dreams away.

He meant to do his lessons when the house was still at night,
But in a new book lost himself and read till morning light.

At school he meant to lead his class before the term was done,
But lessons are such stupid things and boys must have some fun.

In manhood feats he likewise meant to earn some laurels, too,
But fame is such a fickle dame and picks her favorite few.

He meant to reach a wise old age, esteemed by great and low,
But wisdom's path was hard and steep and pleasures lured below.

But since he never really TRIED the things he meant to do,
That nothing ever came of them I'm not surprised, are you?

—ACADIAN RECORDER.

The Sluggard's Mistake.

Came Opportunity, one day;
He heard her timid knock,
But went on with his dozing,
Contentedly supposing
That she would pick the lock.

—CHICAGO RECORD HERALD.

Five Little Brothers

Five little brothers set out together
To journey the livelong day,
In a curious carriage all made of leather
They hurried away, away!
One big brother and three quite small,
And one wee fellow, no size at all.

The carriage was dark and none too roomy,
And they could not move about;
The five little brothers grew very gloomy
And the wee one began to pout,
Till the biggest one whispered, "What do you say?
Let's leave the carriage and run away!"

So out they scampered, the five together,
And off and away they sped —
When somebody found the carriage of leather,
Oh, my, how she shook her head!
'Twas her little boy's shoe, as every one knows,
And the five little brothers were five little toes.

—ELLA WHEELER WILCOX.

An Ill Wind That Blew Somebody Good.

When little Tom went out to sail,
He leaned too far across the rail,
And dropped his precious glasses!
He saw them sink, but never knew
That, sitting far beneath the blue,
Where wave the long sea grasses,

There wept a little fish because
He could not go to school, he was
So dreadfully near-sighted!
When, looking up, through tears that rose,
He caught those glasses on his nose,
And wasn't he delighted!

He clapped his little fins for glee
That so much better he could see;
And now, fulfilled his wishes,
His little heart is light and gay,
For off he went that very day
And joined a school of fishes!

—THE YOUTH'S COMPANION.

A Better Name.

When three-year-old Lawrence came home from the zoo,
And described it to all who would hear;
His uncle, to tease him, leaned forward and asked:
"Can you say 'zoological,' dear?

Poor Lawrence was silent, and squirmed in his chair,
While his little face flushed and grew dark;
Then, raising his eyes, he courageously said:
"Uncle Dicky, I call it 'Noah's Ark,!"

—THE YOUTH'S COMPANION.

A Letter from a Cat

BY OLIVER HERFORD.

Mr. Editor:—
I hereby take
My pen in paw to say,
Can you explain a curious thing
I found the other day?
There is another little cat
Who sits behind a frame,
And looks so very much like me,
You'd think we were the same,
I try to make her play with me;
Yet, when I mew and call,
Though I see her mew in answer,
She makes no sound at all.
And to the dullest kitten
Its plain enough to see
That either I am mocking her
Or she is mocking me.
It makes no difference what I play
She seems to know the game;
For every time I look around,
I see her do the same.
And yet no matter though I creep
On tiptoe lest she hear,
Or quickly dash around the frame,
She's sure to disappear.

SUGGESTIONS FOR SUPPLEMENTARY READING.

An easy method is the use of "piece stories." After finding some well-written, interesting newspaper story adapted to her grade, the teacher can cut it into as many pieces as there are members in the class (according to paragraphs as nearly as possible), and number the slips in order. These, of course, are given out for study, each child being required to master his portion, writing it out on paper and mastering its hard words.

When the recitation begins, the teacher calls for the readers by numbers, and as each rises to read, he hands his written copy to her, so that she may inspect it and follow the reading. Since each pupil knows only his own part of the story, and is naturally anxious to hear the rest, there is perfect attention throughout the recitation.

—*Lea McCrae in Western School Journal.*

[The story called "The Hunter," on another page of this issue, is a good one to use in this way.]

The object of their education at school is to give boys mental alertness and an eternal curiosity, and its real test is whether it leaves them always saying to themselves, Why? All the great discoveries of the world have come because some one has asked that question.

—Bishop Creighton.

USEFUL BOOKS.

[We think that the REVIEW can be of use to teachers by bringing to their notice books likely to be useful in the school-room, in a fuller and more authoritative way than is possible in our regular book notices. With this end in view, we propose to devote a column or so every month to a detailed description of some one book, pointing out its advantages for the teachers' work, and giving some suggestions how it may be used. This month Professor H. G. Perry, whose authority on the subject will be admitted, recommends Mrs. Comstocks' book on Nature-Study.]

The Handbook of Nature Study, by Anna Botsford Comstock, Lecturer in Nature Study in Cornell University, stands unique among nature study writings, both in the manner of presentation and the comprehensiveness of subjects. Its bright, cheery, vivacious style breathes of the life of out-of-doors. There is motion, interest and joy in every sentence, and whole lessons in every paragraph. No other single book on nature-study fills so many needs of the school, and contributes so much to the information of the home in so clear and practical, and in so impressive and attractive a manner.

The book has been designed to meet the needs of the least-trained teacher, and through it she may learn precisely how to present the delights of nature. The facts that the teacher should know regarding each topic are given, or suggested as the "Teacher's Story"; this is followed by a lesson in which are outlined some of the observations to be made by the children. The great merit of the book lies in the fact that the interest of both teacher and pupil is aroused, and together they seek with keen delight the open book of nature.

There are two hundred and thirty-four lessons, with about one hundred and fifty bearing directly on Agriculture.

The book is divided into four parts. Part I treats of the Teaching of Nature-Study; Part II, of Animal Life, comprising such sub-divisions as, I, Bird Study; II, Fish Study; III, Batrachian Study; IV, Reptile Study; V, Mammal Study; VI, Insect Study; VII, Other Invertebrate Animal Study. Part III, of Plant Life, comprising, besides an extended introduction, I, Wild-flower Study; II, Cultivated-Plant Study: III, Flowerless-Plant Study; IV, Tree Study; and Part IV, of Earth and Sky.

The work is published by the Comstock Publishing Company, Cornell Heights, Ithaca, New York, and is a large 8vo. volume, with an attractive green-and-black-check cloth binding with gold lettering, comprising xviii+938 pages, and adorned with over 1,000 illustrations.

The book may be had from the publishers as follows:—

The one volume edition sells for $3.25, postpaid, $3.65; bound in two volumes, $4.00, postpaid, $4.50. These volumes are sold separately at $2.00 each, postpaid, $2.25. Volume I includes Parts I and II; Volume II, Parts III and IV, mentioned above.

This work should be in every school library, and in the hands of every teacher and student of nature study subjects. H. G. PERRY.

CURRENT EVENTS.

It will soon be possible to cross Central Africa by railway and the navigable rivers. The Germans have completed a line from the east coast to a point near Lake Tanganyika; and the Belgians are building lines to connect the navigable stretches of the Congo.

An American surgeon has discovered a new method of painless surgery which is believed to be of great importance. The area of operation, it is said, may be shut off from the brain for several days if necessary.

A new alloy of magnesium and aluminum will be useful where lightness is required. It has but one-third the weight of cast-iron, and a much greater tensile strength. Its power of conducting heat is fourteen times as great as that of iron.

A new telephone transmitter fits close to the mouth of the speaker and transmits the vibrations of the voice in the usual way, but allows no sound to escape into the room occupied by the speaker.

A wireless telegraph station using the Paulsen system is to be established at Newcastle, N. B. The central steel tower, which is being made in England, will be five hundred feet high; and there will be six other towers, each a hundred feet high. This station will send messages across the Atlantic to a station on the west coast of Ireland, and will form a link in an all-British service to extend around the world. The Paulsen system is the chief rival of the Marconi system, but differs from it so much that a Marconi instrument cannot receive its messages. The Marconi station in Cape Breton will still continue in use.

Exclusive of those things that are merely of transient interest, wars and rumors of wars make up the greater part of the current news of the day. The triumphs of peace are not so easily chronicled. A new invention or a new discovery may have a more important or a more lasting effect upon the future welfare of nations than a great war, and some of the most important contests are those that are not fought out on the field of battle, but are settled by diplomacy. Such events take place so quietly that they may pass unnoticed at the time. The clash of arms and the appearance of international questions that may lead to armed conflict will always demand attention.

The world or at least the English-speaking world and the nations of Europe, rejoiced when the war between

Turkey and the Balkan Allies ended in the Peace of London. Turkey-in-Europe had been reduced to a narrow strip along the sea of Marmora and the straits leading into it. Neither of the great powers of Europe could afford to see the conquered territory fall into the hands of a rival power; but it was hoped that the members of the Balkan League could agree upon dividing it among themselves. This hope has not been realized. A fierce and bloody war between the Bulgarians and their late allies over the division of the spoils has given the Turks the opportunity of re-occupying part of their lost territory, including the city of Adrianople. Roumania, which took no part in the late war, is now in active alliance with Servia and Greece, and has invaded Bulgarian territory, with the object of adding a large part of it to her own domain. The new war began with the Bulgars attacking the Greeks and Serbs at three different points along the line on the night of the twenty-ninth of June. They were driven back at all points by Greeks and Serbs, before the Turks and Roumanians commenced hostilities, and now seem to be completely crushed. It remains to be seen whether Greeks, Turks, Serbs and Roumanians can agree upon a division of territory, or will be allowed to do so.

Albania, the least civilized part of the Balkan peninsula, and, without exception, the least civilized part of Europe, is to be made a principality, probably under the joint protection of Austria and Italy.

We must hereafter recognize Tripoli under the new name of Libia Italiana. It is pleasing, even in this form, to see the old name of Lybia restored to the map.

The seccession of several of the southern provinces of the new Chinese republic has brought on a war, which though widespread, does not seem to be very warmly supported by the combatants on either side. Apparently, the people at large care little who is at the head of affairs, so long as the local governments to which they have been accustomed are not disturbed. Wu Ting Fang, well known in America as the former Chinese minister at Washington, is trying to mediate between the northern and southern factions, but it is not improbable that the once great empire of China will be broken up into two normal republics, and will lose both Mongolia and Tibet, over which she now has but nominal control.

The rebellion or rebellions in Mexico are not yet suppressed and there is little evidence that the government forces are really gaining ground, though that is claimed by the government supporters. There are only two or three states in the whole republic not affected by the rebellion. It is expected that four of the southern states, including Yucatan, will secede and form themselves into two small independent republics. Yucatan was formerly independent.

The proposed treaty by which the United States would virtually establish a protectorate over Nicaragua has been met with protests from Costa Rica and Salvador, the former because she is concerned in the route of a possible canal which would thus come under United States control, and the latter because it would hinder the long expected union of the Central American republics.

A serious uprising in Venezuela is reported. It is organized by the friends of ex-President Castro, and has already spread to two or three of the states in that little known republic. There is a third party in the country, the professed leader of which is now in the United States as a political exile, but is ready to head another insurrection.

The new battle-cruiser New Zealand, the first ship to be presented to the Imperial Government by any of the Dominions, has reached British Columbia, where she has met with hearty welcome. She will go around the coasts of South America and call at the West Indies and at Halifax before joining the home fleet in English waters.

There is great activity in naval construction in England. It is announced that there will be a new destroyer every week for the next nine months, a new light cruiser every thirty days for the next year, and a new super-dreadnought every forty-five days for the next eighteen months.

It is planned that a detachment of Canadian soldiers shall be present at the celebration of Perry's victory at Put-in Bay, September tenth. The remains of the British and American men who fell in the battle of a hundred years ago are to be removed from their present resting place and interred in the crypt of a great monument now approaching completion. The Union Jack and the Stars and Stripes will be draped on the bier together, while the soldiers of both nations do honour to the dead.

Dr. Robert Bridges has been appointed Poet Laureate, to take the place of the late Alfred Austin.

The Steamer Diana, of the McMillan arctic expedition, went ashore in the Strait of Belle Isle and was so badly damaged that the party had to return to port. Her cargo was transferred to the Erik, in which the expedition has again set out for its destination. It is their intention to find and explore Crocker Land. The Canadian Government steamer Boethis, which went ashore about the same time on her way to Hudson Bay, has been repaired, and proceeds on her voyage accompanied by the steamer Acadia.

Christian Leden, a young Norwegian explorer, is heading an expedition to the northern coast of Canada to study the Eskimo tribes.

The Steffansen expedition has left Alaska for the unknown north, and may not be again heard from for three years, except as wireless messages are received from time to time if that means of communication can be maintained.

SCHOOL AND COLLEGE

Miss Annie Sprague, honour graduate in mathematics of Mt. Allison University, and post-graduate student at Radcliffe College, has been appointed acting Vice-Principal of Mount Allison Ladies' College, as successor to Miss Baker. Miss Kenyon, of Alton, R. I., a graduate of the Emerson College of Oratory, is the new teacher of expression in the same institution. Other new appointments at Mount Allison are: Professor Alfred E. Whitehead, Associate of the Royal College of Organists, to be Assistant Director and Professor of the Organ and Harmony; Miss Winona Cruise, B.A., and Miss Mabel McLean Bentley, both graduates of the Massey-Treble Normal Training School of Household Science in Toronto, to the staff of the School of Household Science; Miss E. B. Nicholson and Miss K. R. Smith, honour graduates of Mount Allison Conservatory of Music, to be assistant teachers of piano; and Miss Christian Harris and Miss Nellie

Turner to be associate teachers in the Owens' Museum of Fine Arts.

Montreal teachers, under the jurisdiction of the Catholic school board, are to be given a general increase of salary. The minimum, as well as the maximum salary, is to be advanced $100.00 a year.

Sussex, N. B., has wisely determined to guard against an exodus to the West from their teaching staff by making a general increase in the salaries. The aggregate increase will be $500.00 a year.

The School Trustees of Fredericton are planning to put up an annex to the Charlotte Street School, to cost $12,000.00.

Mr. J. Roland Murray, of Westmorland County, has been appointed instructor in Manual Training at the N. B. Normal School, in succession to Miss Alethea Wathen, who has resigned to become supervisor of cardboard work at Calgary, Alta.

The N. B. Department of Education and Agriculture have appointed Mr. R. P. Steeves, Inspector of Schools for Kings and Queens Counties, to be Director of Elementary Agricultural Education.

Mr. Steeves' place as Inspector is taken by Mr. A. J. Brooks, Principal of the Hampton Consolidated School.

Sinclair Laird, M.A., B.Ph. (St. Andrews, Scotland), for three years assistant professor of Education in Queens' University, has been appointed by the board of governors of McGill University to be the head of the School for Teachers in connection with MacDonald College, and also assistant professor of education at McGill.

Mr. William D. Morrow, late principal of St. Andrews, N. B., grammar school, will shortly leave for Vancouver, where he is to be on the teaching staff of the High School.

Professor McCarthy, of Kings College, N. S., has been appointed to the Biological Research staff of the Government steamer Minto. His work is to report on the food fishes.

The vacancy left by the resignation of Professor Killam from the staff of Mount Allison University has been filled by the appointment of Mr. Harold W. McKiel, B.A., B.Sc., as Professor of Mechanical Engineering.

The School of Music of Acadia Seminary has secured the services of Mr. Carroll C. McKee, of the Toledo Musical College and the Detroit Conservatory, as Director of Music. The Vocal Department is to be in charge of Miss Eva Hardy, Gold Medallist of the London Academy of Music.

It is understood that Mr. John E. Page, classical teacher at the Fredericton High School, has been appointed by the Dominion Government to succeed Mr. Frank E. Good as Military Cadet instructor at the same school. The new appointment brings with it an increase of $50.00 to the salary.

Miss Florence Downing, of the Glace Bay teaching staff, has left for Saskatchewan, where she expects to teach.

Miss Edith Magee, who for some years has taught in the Victoria School, St. John, has accepted a position in the public schools of Vancouver, B. C.

Professor Lionel Stevenson, professor of Agriculture and Farm Superintendent at the Agricultural College, Truro, has gone to Ottawa to take a position in the Forestry branch of the Dominion Department of Agriculture.

His place is taken by Professor J. M. Trueman, of Point de Bute, N. B. Professor Trueman is a graduate of the Truro College, and also of the Cornell Agricultural College. He has had years of experience in farm management and in leading institutions in the United States, and it is a matter for congratulation that Nova Scotia has been able to bring back to Canada a man of such standing.

Robert A. Hall, Ph.D., has been appointed to the position of Professor of Chemistry at the University of New Brunswick. Professor Hall has been one of the faculty of the University of North Carolina, and later on the staff of Washington University, St. Louis.

The Moncton school board has engaged Miss Beatrice Welling, of Andover, to succeed Mr. W. A. Cowperthwaite on the staff of the High School. Miss Welling is an honour graduate of the University of New Brunswick, and of Radcliffe College.

At the closing exercises of the Fredericton High School in June, the Principal, Dr. Berton C. Foster, was presented with $100.00 in gold, as testimonial from former pupils. Mr. F. A. Good, who is leaving the High School for the Normal School staff, was presented with a travelling bag by the members of the graduating class, while the undergraduates and members of the teaching staff gave him a dressing case.

RECENT BOOKS.

Original sources are being more and more drawn up by history teachers who use modern methods, and nowhere have we seen them in more accessible form than in the series of *Documents of British History*, reprinted from Keatinge & Frazee's *History of England for Schools*. Every teacher should send at once for the section covering the history course for the year, for the series appears most conveniently and cheaply in six little books:—A. D. 78-1216; 1216-1399; 1399-1603; 1603-1715; 1715-1815, and 1815-1900. (Price eightpence each. Adam & Charles Black, 4 Soho Square, London).

A. & C. Black, also send such a charming illustrated French reader for the little ones, that we long to use it with a class. It is intended for pupils who have studied French by the Reform methods, and serves as a beginning book in French composition, as well as a reader. *Rècits et Composition D'Aprés L'Image*, par M. Auceau et E. Magee (price 1s. 6d.).

A more advanced French reader intended for translation, is Picard's *La Petite Ville*, a comedy of the time immediately after the French Revolution. It is published in a most attractive little volume, with vocabulary and notes, by Ginn & Co., Boston, and costs forty cents.

From Ginn & Co. we have also a delightful book called *A Dickens Dramatic Reader*, giving scenes from *Pickwick*, *Nicholas Nickleby*, and *Christmas Stories*. The original language is closely followed, and the scenes are well chosen. The book is recommended to those who want to have their high school or academy pupils present anything in the form of a simple play. [A Dickens Dramatic Reader, by Fanny Comstock. Ginn & Co., 60 cents.)

The Wentworth-Smith Mathematical series is represented this month by Book I of the *School Algebra*. (Ginn & Co., 90 cents.)

Books Received.

The Gospel of St. Luke, edited by Walker & Richards, 1s. 6d.

Child Mind, an introduction to psychology for teachers, by Benjamin Dumville, M.A., London, F.C.P, 2s. 6d.

Henry IV. Part I, by A. J. F. Collins, M.A., 2s.

Spelling and Punctuation, H. Shoosmith, M.A., 8d.

All these are published by the University Tutorial Press, High Street, New Oxford Street, London, W. C.

A First Book of Composition. Briggs & McKinney, Ginn & Co.

The Teaching of Arithmetic, by David Eugene Smith. Ginn & Co., $1.00.

Received With Thanks.

From the Smithsonian Institution:— *The Twenty-Eighth Annual Report of the Bureau of American Ethnology..*

The Physiography of the Rio Grande Valley in Relation to Pueblo Culture.

From the U. S. Bureau of Education:—

Report of the Commissioners of Education for the Year ending June, 1912, two volumes.

From the Department of Agriculture of New Brunswick:—

The Report on Horticulture and *The Annual Report of the Fruit Growers' Association for 1912.*

University of Ottawa Review.

Trinity University Review.

Announcements of University of Chicago.

Report of the Minister of Education for Ontario for the Year 1912.

RECENT MAGAZINES.

The *Chautauquan* has changed its form, and become "a weekly newsmagazine." The first issue in its new form appeared on June 7, with an attractive cover and interesting table of contents. Number 5, of July 5th is a special book number, and contains, besides critical articles and reviews, a suggestive and useful classified list, with prices of new and standard books. Subscription price, $2.00 a year. five cents a copy.

We have before us the eleventh number of *The Round Table*, published by Macmillan & Co. This is a co-operative enterprise conducted by people who dwell in all parts of the British Empire, and whose aim is to publish once a quarter a comprehensive review of Imperial politics, entirely free from the bias of local party issues. The affairs of *The Round Table* in each division of the Empire are in the charge of local residents, who are responsible for all articles on the politics of their own country. It is a publication which would seem invaluable to all who wish to keep themselves informed on the political movements of the day, and to get a comprehensive view of the affairs of the Empire. It should be very useful to teachers of modern history. The articles in the June issue include the following: *The Balkan War and the Balance of Power; Ministers and the Stock Exchange*—an attempt to sum up the history of "the Marconi Affair." *The Grain Growers' Movement in Western Canada* — an account of an organization which is of immense importance to the Empire. Four articles deal with Canadian matters — *Obstruction in Parliament; The Closure and the Senate* — accounts of and comments on the treatment of the Naval Bill; *Canadian Banking Legislation;* and *The American Tariff.*

One of the attractions of the *Canadian Magazine* is the series of charming reproductions of well-known pictures. The August number opens with an article by Professor MacMechan on *Changing Halifax.*

The *Century* continues the timely series of papers by Robert Hichens, called *Skirting the Balkan Peninsula.* This one is called *Stamboul, the City of Mosques*, and has colour illustrations. *American Makers of the New Japan*, and *If Canada were to Annex the United States* are other interesting articles. Mrs. Burnett's delightful story, *T. Tembarom*, is drawing to a crisis, and the author of *Molly Make-Believe* begins a story called *The White Linen Nurse.*

Recent issues of *Littell's Living Age* are as readable as that magazine usually is. Anyone wishing to keep up with current magazine literature cannot do better than to subscribe to this periodical.

St. Nicholas for August has, besides stories, instructions for swimming, an entertaining account of Louis Agassiz, and under the head of *The Story of Hunger and Food*, gives the substance, much simplified, of a lesson heard at the Rural School of Agriculture on Commercial Fertilizers.

Magazine articles of special interest to teachers are:—

Commonsense in Pronunciation.

Cain, the Key, a story — Atlantic Monthly, August.

Makers of the Dominion, Canadian Magazine, July.

How Can we Know Ourselves, by Hugo Munsterberg Youths' Companion, June 19.

The Economic Value of Imagination, World-Wide, August 2, (from the Outlook.)

Morality and the Child, Littell's Living Age. August 2.

N. B. OFFICIAL NOTICES

Options in Latin and Greek for Grammar School Class

No options outside the four Latin authors prescribed for Grammar School Class will be allowed in future.

In Greek, an equivalent play of Sophocles may be substituted for the Alcestis of Euripides, otherwise the options must be confined to the Authors prescribed.

There are no options in French.

W. S. CARTER,
Chief Superintendent of Education.