

PAGES

MISSING

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Devoted to Advanced Methods of Education and General Culture.

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The REVIEW for September will have a picture supplement.

Strictly speaking the year of the REVIEW begins in June. But a school magazine naturally makes its plans for the school year, and it is in August, when we welcome many new readers, that we are ready to announce our programme for the next eleven months.

Our readers will be glad to know that assistance in Nature Study from Professor Perry and Professor DeWolfe may still be counted

upon, and that the Current Events columns will be continued by the same writer who has for years made them so valuable. We propose to give, every month, under the heading "The Current History Class," a set of questions on the war news and topics suggested by it, for the use of teachers who are teaching the war in their classes. Notes on the School Readers begin in this number, and will deal with selections from both New Brunswick and Nova Scotia Readers. Teachers are invited to send requests for notes on particular lessons. Notes on High School Literature will be given *only as they are asked for*. The series of papers called "Hints for the Months" will end in December, and in the January number the editor will begin a set of informal talks on some of the special problems of teachers. In October, the new set of "Who, When and Where" questions will begin. The papers on "Useful Books" will continue to appear occasionally, and some time before Christmas the editor will give some advice about books for children. Little plays, dialogues and poems for school entertainments will appear at special seasons. We plan, if space permits, to have a series of lessons on letter writing. The picture supplements will be issued four times a year,—in August or September, at Christmas, with the Empire Day number, and with one other issue. The departments of school and college notes, book and magazine notices, and reports of educational events and movements will go on as usual. Our readers are urged to contribute to the usefulness and interest of the paper by sending us items of school news, questions for the Question Box that will be of general interest, short accounts of plans or methods that they used successfully, and also by telling us where they have found the REVIEW helpful, and by suggesting how they think it might be made more useful still.

Will subscribers who have changed their addresses kindly notify us.

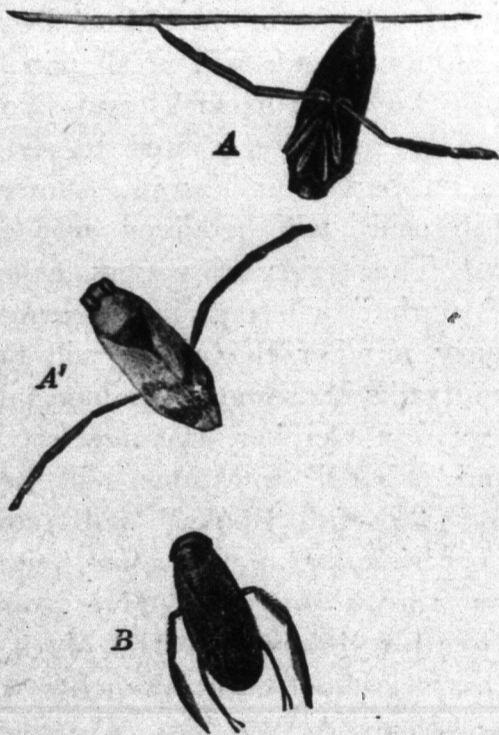
NATURE STUDY OF ANIMALS.

Pond Life.

H. G. PERRY.

In the REVIEW for November, 1914, short notes were given on three species of insects that live in fresh water ponds and streams; the whirligig-beetles, the diving-beetles and the water-scavenger beetles. Review these notes and be on the watch for these and other forms in further work on pond life.

The three forms mentioned were all beetles, but those pictured in Fig. 1 are true bugs.



The water-boatman and the back-swimmers are much alike in general appearance as one sees them swimming through the water. Collect several of each and place in glass dishes for close observation. As the name implies the back-swimmers always swim on their backs. A shows one in its natural swimming position. Note the position of the legs as shown in the picture, and that the third pair alone are extended. In one of our common species of back-swimmers (*Notonecta undulata*) the other two pairs of legs are set out from the body, somewhat like arms akimbo. A favorite position of these insects is to float with the head down and the tip of the abdomen protruding just enough to admit the passage to chambers beneath the wing-covers. Look for their sharp beaks, and examine carefully the wings. Have these insects the true bug characteristics? What

are the chief differences between a bug and a beetle?

The water boat-man is shown in Fig. 1. B. How many pairs of legs are extended? These insects swim very rapidly by means of the lengthened and fringed middle and hind legs. Note their silvery appearance in the water. Are they of the same color when in air? Note carefully the covering of the body. Place a piece of plush under the water and note its silvery appearance. To what is it due? How is the insect like the plush in this respect? Why does the water boat-man carry a film of air? How did the back-swimmer carry its air supply? How are whirligig-beetles, diving-beetles and water-scavenger beetles supplied with air?

In another animal that one is apt to find in ponds and streams, the water-scorpion, the air supply is taken in by means of a long tube extending from the tip of the abdomen. The water-scorpions are elongated insects with long legs, and closely resemble the stems of the plants on which they are usually found. In general appearance the giant water-bug or electric-light bug stands in sharp contrast to the water-scorpion. It has a broad flat grayish or brownish body about two inches long. It preys upon other insects and small fish. When fully developed they are strong fliers, and fly from pond to pond during the night. In these flights they are often attracted to electric lights and are frequently found in towns and cities, far from their native ponds, and in consequence have become generally known as electric-light bugs. Dr. L. O. Howard tells us that, "The fish ponds in Washington, since the advent of the electric light, have become so greatly stocked with these bugs that they are a serious detriment in fish raising."

Pond-skaters or water-striders are very common forms, and make interesting subjects for school study. Watch a water-strider and describe its locomotion: Does it use its legs in the ordinary insect-way? Which pair of legs are the chief organs of locomotion? By floating a needle on water show your pupils the presence of the surface film of water. Observe the dimples in the surface film where the feet rest. Why do the feet not break the film? The answer to this question is suggested by examining the feet under a microscope. Remove a specimen to a table

and compare its locomotion on land with its locomotion on water.

Do they live singly or in colonies? Are they shy or otherwise?

Throw an insect, such as a small grasshopper, near some water-striders, and note the action of the latter. What is likely to happen to an insect that falls into the water where there are water-striders?

"Water-striders are dimorphic — that is, there are two distinct forms of fully developed individuals in each species. One form is winged, the other wingless." Try to procure both forms.

Do the striders belong to the order of bugs or beetles?

All the insects mentioned in the foregoing pass practically their whole life cycle in the water, all are provided with wings, by the aid of which they migrate from pond to pond, and all respire air in the adult stage. In sharp contrast with these, most insects are terrestrial and aerial, passing their whole life cycle surrounded by air; others again live only part of their life cycle in the water, the adult stage being passed as terrestrial and aerial forms. For an example of the latter, review the life history of the mosquito. See REVIEW, September 1914, page 59.

The mosquito is a good subject for school study. Collect several larvae in a fruit jar, cover with a cloth, and watch their metamorphosis. To what order of insect does the mosquito belong? Compare the life history of the house-fly. Does it pass part of its life-cycle in the water? Give lessons on the economic importance of these forms.

Chief among our common insects that pass the larval stage only in the water are the caddis-flies, dragon flies and May-flies.

With a strong dip-net collect small sticks, stones, and other sedimentary material from the bottom of ponds and streams. A long handled dipper or bucket may be used to advantage in gathering material in shallow water. For observation place this material in glass dishes — fruit jars, etc., and as the water clears watch for animal life.

At the bottom you will likely find several masses of small cross-piled sticks moving slowly along. Observe closely and you will soon find that the mass is in reality a little case, with a

small animal inside. Note the protruding head and the three pairs of legs on the segments next the head.

This is the larva of a terrestrial aerial four-winged insect, the caddis-fly. It is a wonderful little larva, and as it spins a coat of silk it fastens in among the threads little bits of sticks or stones, and by this means so thoroughly disguises itself that its worst enemy passes it by unnoticed or fears the formidable appearance of such a rough looking little fellow.

Place a larva in a shallow dish and touch its protruding head with a straw. What happens?

Some caddis larvae build their cases of stone, and others even of small shells. Collect as many kinds as you can find, and keep in an aquarium with a supply of water plants. On what do they feed?

The larvae are mostly free moving, but some are attached by silken lines to sticks and stones.

The larvae or nymphs of dragon-flies are not provided with protective cases, being quite capable of taking care of themselves. When full grown they leave the water to undergo their last molt, and the skin cases, exuviae, are often found in abundance, during May and June clinging to sticks and stones near the water. Look for such skin cases, and note the longitudinal opening in the dorsal side of the thorax; through it the winged form emerged to enjoy a new life in the air.

To day I saw the dragon-fly,
Come from the wells where he did lie;
An inner impulse rent the veil
Of his old husk; from head to tail,
Came out clear plates of sapphire mail,
He dried his wings; like gauze they grew;
Thro' crofts and pastures wet with dew,
A living flash of light he flew.— Tennyson.

The dragon-fly or devil's darning-needle is too well known to require any description. Note that it has two pairs of nearly equal wings, which it always holds level with its body when at rest; a near relative, the damsel-fly, folds its wings nearly parallel with its body when resting. Collect specimens of both kinds and compare them. In which are the eyes closer together? This is a constant distinguishing feature.

These flies feed on other insects which they capture on the wing. They have voracious appetites and eat large quantities of mosquitos and flies. Many superstitions have become

associated with them, but they are entirely harmless, and are among our most beneficial insects.

The dragon-fly and damsel-fly belong to the *Odonata* order of insects (Gr. *odons* (*odont*), a tooth). This order is distinguished by biting mouth-parts and by four equal or nearly equal net-veined wings.

Adult May-flies appear in countless numbers in late spring and early summer, and dance about in the air at dusk in swarms so dense that the atmosphere seems one mass of moving forms, and, after laying their eggs, perish with the day, forming a great food-supply for fishes and birds."

The nymphs live in the water at the bottom of ponds and streams. Along both sides of the abdomen are delicate platelike, fringed tracheal gills, through which it breathes, and at the tip of the abdomen are three feathery appendages. When the "nymph sheds its skin for the last time, the gills and mouth-parts are left behind, and the winged May-fly comes forth," an air breathing creature but without a mouth or any means of taking food." After flying a short distance it alights and again sheds its skin, a thin layer coming off from all parts of the body, even from the wings." In this particular it is the great exception among insects, for no other forms ever molt after becoming winged. In the adult the hind wings are much smaller than the forewings, and the abdomen is tipped with two or three long threadlike appendages, called cerci, which are quite characteristic of May-flies. Look for these forms, and keep specimens for school work.

May-flies belong to the insect order *Plecoptera* (Gr. *plektos*, twisted; *pteron*, wing). They are distinguished by reduced mouth-parts, the great disproportion in size of the anterior and the posterior wings, and by the presence of abdominal filaments.

The United States Department of Agriculture finds that a little powdered borax sifted over a manure pile, about a pound to each bushel of the manure, will kill the eggs of flies. The treatment should be repeated with each addition to the pile, immediately upon its removal from the stable, since the eggs hatch out in one day. The cost is about one cent per horse per day; and if all refuse and garbage were treated in this way there would be no need of fly screens.

SERVIA, ROUMANIA, GREECE.

BY A CORRESPONDENT.

Three words, which every teacher talking to the school children about the present war can not avoid. Servia must be used in connection with its beginnings, and who can mention possible new belligerents and not name the other?

I do not confound the EDUCATIONAL REVIEW with the defunct "Fonetic Nuz" nor mean to urge "simplified spelling;" but I wish to refer to spelling. Since the natives of the first of the three countries named spell the root of the name s—r—b, and we ourselves write Serb, why should we soften the b into v? We commonly continue the bad tradition of the unknown who was so deaf that he did not catch the sound or so tongue-tied that he failed to reproduce what he heard. Surely we ought all to write, Serbia. About the u in Roumania, or worse still, in Rumania? The bibliography in any standard encyclopaedia will show that the people spell it as Romania. Only foreigners, as the French and ourselves, refuse to let them spell their own name in their own way. They make it plain that they wish to lay stress on their connection with Rome, from which comes both the language they speak and their proper title. Of course these do not come directly to them from the well known Italian city on the Tiber, but by way of "New Rome," Byzantium, Constantinople on the Bosphorus. That is our excuse. For when the Turks conquered Constantinople, they began to spell the name they found as Rom, Roum or Rum. But should these people want to forget their subjection to the Turks why should we remind them of it by the way we spell the word? That Christian Europe allowed it to go on does little credit to our chivalry. Should they try to link the present not so much with their father, New Rome, as with their grandfather, old Rome, and so spare both their feelings and ours, I for one will not say them nay. Will you help? When the king of Italy offered the other day to mediate between Romania and the Allies, he was influenced by recent events; but Romanian patriots would recall a more distant background. So I come to what I most wish to say. Read that section of history which has to do with New Rome both for your own sake and for the children's. You would rejoice now and then to

give them a fresh anecdote or illustration in addition to the hackneyed ones from Western Europe. You have told them "Belgium is called the cock-pit of Europe; for you see it lies where the armies of France, Germany and England when at war are apt to meet and fight." True. Would it not be a relief to you and to them to add, "and notice why the Balkan peninsula is such another; for here Europe and Asia, Moslem and Christian hosts can get at each other between the Black Sea and the Mediterranean." Read, and you will find as much that is fascinating, varied and unexpected as in western history; as well as a subtlety of thought and intensity of feeling, both for good and bad aims, peculiarly Oriental. While urging you to read and study, I want to give a caution, which brings me to my third word, Greece, or rather, Greek.

My caution is, take your attention, your brains with you when reading. Especially be on your guard to notice ambiguous uses of words you thought transparently simple. Such words, e. g., as Greek and Roman. I have said enough already to hint to you that some writers mean by the latter word what belongs only to the Italian Rome; others will limit it to New Rome, Byzantium or Constantinople. So with the word Greek. We think that all belonging to a certain race, to a certain language, is Greek. It is a shock to find a writer using the word so as to exclude every person or fact that is Christian. If Christian, it is, according to some, not Greek, but Romaic. It is not easy to recognize our old friend "Greek fire" under the title "Romaic fire." Most of us would call modern Greek a different dialect; but some refuse to call it Greek at all! So be ready for ambiguous uses of common words. However, this is not peculiar to the later Roman Empire, only we find some bad cases there.

Keep your head when you come to adjectives or adverbs. Gibbon is a great name in history. He calls the later Empire "weak." To guard Europe for all these centuries against the constant attacks of the Moslem armies! Weak! Where do you find your strong nations? Of course, if to be finally overthrown is to be weak, it was. But both Europe and the Turks themselves were astonished when Constantinople fell. Before you follow Gibbon's views, read Professor Freeman.

Unless a writer is in sympathy with his subject he will not be fair.

The trouble is that most of our books about the modern Greeks are written from the western standpoint by westerners, "O East is East and West is West and never the twain shall meet," and understand each other without effort and difficulty. Take the Crusades. Did you ever read any history written from this point of view:— the Greek Emperor asked help to restore to him what he had lost, and the Crusaders came in response and most of their leaders took an oath to him of loyalty — which no one kept? You never read any books often or always reminding you that the kingdom of Jerusalem was founded on broken vows, treachery and all that was base. It is not that history is falsified so much as that other points of view are kept in the foreground. Read with discrimination, never forgetting that the writer, if a westerner, has little sympathy with a Greek, who is of the near East.

Often writers of travels in the Balkans will contrast the "cowardly Christian" with the "brave Turk." Remember, the one is an unarmed man of a subject class and the other an armed member of the dominant race. The way those Christians fought in later wars shows their courage. Little Montenegro could never have kept free in the midst of mighty Turkey had her sons been cowards.

All along the centuries since the Crescent first gained power over the Christians to this year of grace there have been what the books call coldly "murders;" but what are murders because of religion? Any sympathy with the victims would proclaim them of "the noble army of martyrs." Read, then, with caution as to spelling; with discrimination as to ambiguities, and be on your guard lest adjectives debase the moral coinage — but *read*.

A MILLION LITTLE DIAMONDS.

A million little diamonds
Twinkled in the trees,
And all the little maidens said,
"A jewel, if you please!"

But while they held their hands
To catch the diamonds gay,
A million little sunbeams came
And stole them all away.—*Selected.*

HIGH SCHOOL WORK IN THE MISCELLANEOUS SCHOOL.

BY ETHEL J. COSSITT.

The School Law of Nova Scotia decrees that, "The High School subjects to be taught in a rural, or incompletely graded high school, shall be determined by the school board in agreement with the principal, with an appeal to the Inspector and from him to the Council in case of disagreement or dissatisfaction."

In the larger and better class of incompletely graded high schools, this matter has, apparently, been settled in a manner to produce the best results, but in the greater number of rural schools, the reverse of that happy condition certainly obtains.

In these rural schools, some with large, some small registration, are found pupils in all the common school grades I to VIII inclusive, to which are often added grades IX and X and occasionally grade XI.

To teach successfully a school of this kind — if indeed it be not impossible — would require a teacher possessing the very highest qualities in every respect — physical, mental, moral and pedagogical. When it is attempted by a teacher of average ability and attainments, there can be but one result.

The unreasonably large number of grades included in these schools is bad for the high school students, for the pupils of the under grades, and for the teacher herself.

Many of the smaller rural schools employ untrained teachers of class C or D, with a certificate of scholarship one degree above their license, and it is not uncommon to find such a teacher attempting to teach the work of her own grade. Her students, if they succeed in passing the Provincial Examinations, in their turn become teachers, with no training save that of their home school, thus making an endless chain of inefficiency. Or perhaps, they go to the Normal College, where their lack of preparation is a serious handicap to the work of that institution.

It is sometimes urged that high school students in country schools, being obliged to depend largely upon their own efforts, develop a resourcefulness and independence of thought not shown by those who have more constant attention and

assistance from the teacher. As a matter of fact, in most cases, they manage to acquire sufficient knowledge to secure a pass mark at examination, while many important points requiring some explanation are never grasped by them at all.

But quite naturally, the pupils of the lower grades are the greater sufferers, from the overcrowding. With so many classes, when can the teacher find the time for necessary drills in arithmetic, English, and other subjects so important to beginners? Small wonder that one hears such bad English in some of our communities. It is perhaps a more natural cause for wonder, that under such conditions a child ever gets through the work of the common school grades sufficiently well to be admitted into a high school grade.

As for the teacher who essays advanced high school work in connection with a miscellaneous school — she must expect to have her physical and nervous strength put to a severe test. She will be expected to stay hours after school with her classes, and in consequence of having attempted the impossible, will be forever goaded with the thought of work half done. When thus overworked she becomes tired and nervous and incapable of her best effort.

Suppose the teacher learns by experience or otherwise, that these statements are in the main true. What can she do about it?

Of course the proper time for the agreement upon the number of grades to be taught, is when the teacher is engaging with the section. But suppose the matter is left for later settlement, and school opens with the common school grades well represented and with one or two pupils in each of grades IX, X and XI. The teacher probably learns that later in the season some large boys from the farms will be taking partial grade IX or X work during the winter months, when they can be spared from home work. These can be arranged for, as their attendance will be at a time when, perhaps, many of the smaller children will be kept at home by bad weather. But what is to be done about the others?

Several courses are open to the teacher. If she flatly refuses to teach the advanced classes, she may make enemies, and give the impression that she is deficient in scholarship. By talking

with the parents of the would-be candidates for Provincial Examination, she may be able to persuade them of the disadvantages under which high school students labor in a miscellaneous school, and induce them to make use of their County Academy, thus gaining a bloodless victory.

But in many sections there are parents who are ambitious for their children, but to whom the expenses of sending them to a town school would be too great a burden. With these the teacher could perhaps agree, for a reasonable remuneration, to give their children an hour of private instruction each night after school, and let them get along with as little help as possible while the regular school work was in progress. For this, she would possibly be considered mercenary, and be compared to her disadvantage with her predecessor, who "stayed hours after school all through the term and never dreamed of making any charges." But the giving of something for nothing is contrary to the laws of Nature, always was bad economics, and is no longer considered advisable even by dispensers of charity.

It may be thought, and quite rightly, that the trustees should take more responsibility in limiting the number of grades in their school. But trustees in rural sections are, as a rule, busy men, and so long as the teacher can maintain discipline, are not likely to concern themselves deeply over the grading. However, when their attention is called to the matter by a teacher who is tactful and reasonable, they can usually be depended upon to uphold her in her efforts to secure the greatest good to the greatest number.

In case the teacher succeeds in materially reducing the amount of high school work in her school, she will likely again, suffer in comparison with those who have preceded her, for in many rural sections a teacher's professional standing is still based on the number of students she is able to prepare successfully for the Provincial Examinations.

But pioneers must always expect a measure of criticism, and if the children of the common school grades are interested in their work, and make satisfactory progress, the parents will soon appreciate the fact, and public opinion will come to be with the teacher.

Then, in the interest of all classes of her pupils, of herself, and of the community in general, let the teacher use her every influence toward sending the high school students to the County Academy, where they belong, and, confining her efforts to the work of the common school, do that work well.

HINTS FOR AUGUST AND SEPTEMBER.

THE EDITOR.

Greatly begin; though thou hast time
But for a line, be that sublime,
Not failure, but low aim, is crime.

—Lowell.

To teachers' the year reckons itself from August to June, rather than from January to December. August is the month of beginnings. The beginning of a useful and happy life-work to many new teachers who join the ranks this year; to those already experienced, a new beginning, the turning of a fresh page. Do you ever count this as one of the advantages of a teacher's life? We ought to come back to school thankful not only for the rest and refreshment of the holidays, but also for the new start, the looking forward to a new year, with all its wonderful possibilities of usefulness and joy.

To be ready to make a good start, take a little time before school begins, not only to make definite, external plans, to draw up programmes, to prepare books and equipment, but to get into the right spirit. If you have been at a Summer School, you have probably come home full of enthusiasm; but that may have had time to fade a little before school opens. It is a good plan to read vigorously some good professional books and papers, to get a breath of the air of school. But nothing can take the place of quiet thought about your own duties and difficulties, your past work and your future hopes. Try to know yourself in relation to your work better than you did last year. Think also about the children, of *their* new beginnings, and of school from their point of view. Think of the power that you have to make them happy now, and of your opportunity to train them in some habit, or instil in them some principle, or open their eyes to some beauty, that will be

a strength or happiness to them all their lives. Think of your own teachers and of what they did for you, and in the truest gratitude pass on to the next generation the debt of honor you owe; or, if you have suffered from their misunderstanding or indifference, resolve that your own pupils shall never have a like reason to regret their relations with you.

Make your resolutions as definite as possible. If you are going to a new school, or a new class is coming up to your room, you will have to wait a few days before deciding where the hardest work is needed. But as soon as possible begin to drill for some one good habit, be it punctuality, neatness, attention, politeness, or whatever else strikes you as most important. And as for subjects, cultivate a special enthusiasm for one, and make that the strong point in your teaching. This will not mean that others will be neglected. Few are so gifted as to teach every lesson equally well, and it is right to make the best use of your own distinctive aptitude and interest. You want to be a good, conscientious, all round teacher, and you will not be hindered, but helped, by setting before you each term some one thing that you, personally, want to accomplish in these particular children. Do you want to open their eyes to the wonders of nature? Or their ears to the beauties of poetry? To help them to find ideals in the lives of great men? To get them to see the value of accuracy, or of faithful drudgery? To raise their standards of truth and honour? To help them to plan for their future? To teach them to read history intelligently? Or what other thing do you desire to do for them? Whatever it is, do not be satisfied with fleeting desires about it, but keep it constantly before you, and at the end of term ask yourself, "Have I done it, even in a small degree?"

You may be able also to add something to the equipment of the school; to start a school garden, a school library, a museum, to form a bird class, to join the correspondence branch of the league of the Empire. [This Branch has had a large increase of membership in Canada since the war began.] Resolve never to be satisfied with merely putting in the time. "Make your life more than a dash between two dates."

Plans for the opening day must differ so widely with different schools that only a few hints of

general application can be given. Have a written programme. You may not be able to carry out every detail, but it will keep you from wasting time and getting flurried. Have plenty of material ready for seat work, and a definite plan for taking names and ages of children. Be early; if possible, earlier than the first child to come. Give a little thought to your own dress and appearance, and make the schoolroom look as attractive as you can. If the children are new to you, watch them closely, but reserve your judgments, and let them seat themselves as they will at first, with the understanding that you will assign seats later.

Don't be discouraged if they appear to know nothing of what they learned last year. A good deal of knowledge will shine out after the rubbing of a few days of work. Don't try to introduce untried plans with unknown children. Keep to old grooves until teacher and children are acquainted. If you set one class to study while you are teaching another, give definite work to be done in a given time. For instance, if you want them to review certain lessons in geography or history, give each pupil an envelope on the outside of which is written directions what to do, while inside materials or questions are found. Thus, envelopes marked, "Assign events to the following dates," or, better, "Find in your history what event happened on each of these dates" would contain ten or more slips with a date on each. The answers may be written in complete sentences, or learned for recitation later. The location of towns, courses of rivers, chief towns of countries or provinces; the achievements of great men, particulars of battles, discoveries of explorers and many other topics may be set for study in this way. For composition work, if you want to review grammar, give a list of words, with directions to write sentences, using each word as a noun, a verb, or an adjective. Write two or three letters purporting to come from boys or girls in other countries. Hectograph these and give one in an envelope to each pupil to be answered. Set a short passage of prose or poetry to be memorized in a given time, in order to get an idea of the pupils' ability for memorizing.

Don't let all the work be review or preparation. Try to have each child go home having learned some new thing, if it be only to spell one new

word, or to repeat one short text, or verse of poetry. An interesting lesson can be given to older pupils on introducing a new text book. The title page should be studied, attention drawn to the words author, publisher, printer, editor. These terms should be carefully distinguished, as also, preface and introduction, index and table of contents. What does the date on the title-page mean? What is an edition of a book? Are there footnotes and appendix? What is their use? Was this book written as a whole for school purposes? Or is it made up of selections from other books? Is it the only book on the subject? If you were asked what book on the subject you were studying, what would you say? [One often gets the answer "A little red book." "A thick green book," and so on.] This lesson may be expanded. The object is to lead pupils to see that school text books are only introductions to their respective subjects, to name them correctly, to know, in a general way, what is to be found in them, and to be able to use them, as tools, intelligently.

It is well to put before all pupils at some time during the first few days of school, some of your own plans for the work. The beginners may be told what you hope they will know, or be able to do at the end of a week, a month, by Christmas time. Short views are best for them. Their elders, of course, know the outline of what they must do to grade, but they will enjoy being taken into confidence about the order in which work is to be taken up, and any new ideas that you hope to work out with their co-operation.

The quickest method of calling the roll is to have each pupil give his or her own number, the teacher giving the number of each one tardy or absent. In large schools the saving of time must be considered; but in smaller classes, and especially with little children, the personal touch which the calling of each child's name gives may be preferred.

Suggestions for opening exercises are often asked for, but it is hard to find anything new. A list of suitable Bible readings is given in each number of the REVIEW. Where the Bible is read, the Lord's prayer said, or hymns sung, much pains should be taken to ensure a reverent attitude and manner. The teacher's example is everything here. The two well known verses given below are suitable for repetition.

1. Father, we thank thee for the night,
And for the pleasant morning light,
For rest and food and loving care,
And all that makes the world more fair.
Help us to do the things we should,
To be to others kind and good,
In all we do, at work or play,
To grow more loving every day.

2. Now that the daylight fills the sky,
We lift our hearts to God on high,
That He, in all we do or say,
Would keep us free from harm today.

Some teachers give ten minutes or so to talks on current events, or some other topic of interest, before classes are formed. Where children are inclined to be tardy, five to ten minutes given to telling a continued story may serve as a bait for punctuality. This is a good chance to tell some of the classic stories, e. g., from the Iliad, the Odyssey, any of the Greek myths, stories of King Arthur. The story should always break off at an exciting point.

There is a bit of history about the names July and August. The former is named for Julius Caesar, and August, originally called by the Romans *Sextilis* (the sixth month), was named in honor of the Emperor Augustus. It was not the month of his birth, but that in which he had his greatest good fortune. It used to have only thirty days, but as July has thirty-one, August was made equal in length that the Emperor might not be slighted. September and the three months following are, of course, named from their numbers when the year began in March, from *Septem* seven, *octo* eight, etc.

Many battles famous in English history were fought in August; among them are Blenheim, 1704, the Battle of the Nile 1798, and Crecy, 1346. And in September Dunbar was fought, Quebec taken, Lucknow relieved.

If your pupils are following Professor Perry's "Nature Study of Animals" and have observed dragon-flies and caddises for themselves, be sure to read to them from "The Water Babies," Chapter III, about Tom's experiences with these creatures, when "he found there was a great deal more in the world than he had fancied at first sight," and let them memorize Coleridge's lines:

"He prayeth best who loveth best
All things both great and small;
For the dear God who loveth us
He made and loveth all.

A SCHOOL EXCURSION.

While teaching in the Rural school at Stewiacke East, I planned a little excursion trip for my pupils. Wishing this to be instructive as well as a pleasure trip, I wrote to Principal Cumming asking him if we might visit the Agricultural Farm at Truro, and promptly received a very cordial invitation to come. This we gladly accepted.

Thirty pupils, along with parents and other visitors, arrived in Truro at 9.20 a.m. We were met by Professor L. A. DeWolfe, who kindly invited us to visit the Normal College before going to the Agricultural College. At the Normal College Professor DeWolfe showed us the grounds and the Rural Science garden, where the children learned to recognize shrubs they had never seen before. We next went through the greenhouse into the Science building, where the pupils were able to see many mounted specimens of wild animals, birds, moths, butterflies, etc. After visiting the various rooms of the Normal College, we went to the College Farm, where Principal Cumming and Professor Shaw took us to have a look at the cattle. They gave us some valuable information about these, also a little arithmetic. After we had seen the stock, we went to the Horticultural building, where Professor Shaw did his part in showing us the plants. After spending a very interesting half hour we went to the dairy. Here Principal Cumming had placed chairs and a table under the trees for our lunch. Mrs. Trueman then provided us with hot water and tea.

After luncheon Principal Cumming, with unremitting kindness, gave us some further information about the cows. He then took us to see the horses. The children were much interested in Lord Ullin and his daughter. We next went to the hennery, where the children were delighted to see so many little chickens together; and the idea of hatching chickens from an incubator was found to be entirely new to most of the children.

After having seen many more interesting things too numerous to mention, we left the Farm at about 2.30. We then had a run through Suckling and Chase's Nursery, Colchester Academy, and the new station. We left on the five o'clock train.

It is impossible for me to estimate the value

of this trip to the children. As a result, Geography, Composition and Nature-study are approached with a greatly increased interest. To give one example:—the children, when they saw the school garden on the Normal College grounds, wanted to know if such a garden were possible on their own school grounds; and they went home anxious to copy many things they saw on their trip.

For all of these benefits we feel very grateful to Principal Cumming, Professor DeWolfe, Professor Shaw and all others who made the day so interesting.

ALBERTA GOODWIN.

THE CURRENT HISTORY CLASS.

1. When did Italy enter the war? Why did she not join Germany and Austria? What are her past relations with Austria? Bismarck said that Italy would never be drawn into a war against England; can you give any reason for this? Name the King of Italy and any prominent Italian statesmen or generals. Where are the Italians fighting? What is the Trentino?
2. What is a Coalition Government? "Since the days of Queen Anne there have been at least two Coalitions." Look these up in your histories; give the dates; name the leaders in each. In what wars was England engaged at the time? The present Coalition ministry is composed of members of what parties? What new office has been created to meet the present crisis? Who holds it? Name the Secretary of State for the colonies, and the Secretary of State for War.
3. What is the question at issue between Germany and the United States?
4. Look up in a good dictionary and make a note of the pronunciation of ally, allies, aeroplane. The first two are very commonly mispronounced.
5. Locate Trieste, Lemberg, Warsaw, Tyrol, Plymouth, Shornecliffe, the Gallipoli Peninsula. What is the importance of each at present?
6. What do you understand by the following: siege, reinforcements, an effective blockade, concerted action, flank (of an army), evacuation (of a town). Bring to class any words or expressions from war reports that you do not understand.

WHEN THOMAS TAKES HIS PEN.

Young Thomas Jones came home from school with sad and solemn air;
He did not kiss his mother's cheek nor pull his sister's hair;
He hungered not for apples, and he spoke in dismal tones;
'Twas very clear misfortune drear had happened Thomas Jones.

"My precious child," his mother cried, "what, *what* is troubling you?
You're hurt — you're ill — *you've failed in school!* Oh, tell us what to do!"

Then Thomas Jones made answer in a dull, despairing way:
"I've got to write an essay on 'The Indian Today.'"

His tallest sister ran to him, compassion in her eye;
His smallest sister pitied him — nor knew the reason why;
And all that happy family forsook its work and play
To hunt up information on "The Indian Today."

They read of Hiawatha and of sad Ramona's woe —
You found encyclopedias where'er they chanced to go.
They bought a set of Cooper, and they searched it through
and through,
While Thomas Jones sat mournfully and told them what to do.

For three whole days the library was like a moving-van.
"Is Mr. Jones," each caller asked, "a literary man?"
And day by day more pitiful became young Thomas' plight,
Because, alas! the more he read, the more he could not write.

"Write what you know," his mother begged (she stirred not from his side.)
"I do not know one single thing!" that wretched child replied.
"Oh, help me, *won't* you? Don't you *care!*" Then, when assistance came,
"Don't tell me — *don't!* It isn't *fair!*" he pleaded just the same.

The night before the fateful day was quite the worst of all
Black care upon the house of Jones descended like a pall.
All pleasure paled, all comfort failed, and laughter seemed a sin;
For "Oh, tomorrow," Thomas wailed, "it must be handed in!"

When, lo! the voice of Great-aunt Jones came sternly through the door:
"I can not stand this state of things one single minute more!
The training of a fractious child is plainly not my mission
But — *Thomas Jones, go straight upstairs and write that composition!*"

And Thomas Jones went straight upstairs, and sat him down alone,
And — though I grant a stranger thing was surely never known —

In two short hours he returned serenely to display
Six neatly written pages on "The Indian Today!"

His teacher read them to the class, and smiled a well-pleased smile;

She praised the simple language and the calmly flowing style;
"For while," she said, "he does not rise to any lofty height,
'Tis wonderful how *easily* young Thomas Jones can write."
—*St. Nicholas.*

PLEASANT MEMORIES.

The Rural Science School of Nova Scotia, held its annual session at Truro, July 7 to August 5, 1915, with 160 students enrolled.

The work in all branches was carried on with enthusiasm. Class work went on from 9 a. m. until 4 p. m., and was followed by botanical and entomological excursions, participated in by all the students.

Occasionally, a few of the braves started out at 6 a. m. to the park or elsewhere for bird study; and many, braver still, at 10 p. m. withstood the bewildered gaze of the public, and armed with insect nets and cyanide bottles made murderous raids on the moths.

On July 9th an informal reception was tendered us by the Faculty. During the session, two evenings were spent in social intercourse, and on the afternoon of July 27, we thoroughly enjoyed an indoor garden party, the weather proving unfit for outdoor pleasures.

Excursions were made to Folleigh Lake and Short's Lake, and much valuable material was collected for Nature Study.

On Saturday and Monday, July 31st and August 2nd, an exhibition was held. The students made a splendid showing of pressed ferns, mosses, weeds, grasses, butterflies, moths, beetles, brush work, wood work, needlework, etc. Some beautiful specimens of garden flowers were shown in the Horticultural exhibit. A miniature log cabin in the woods and a model school garden were among the interesting things exhibited.

Tuesday, August 3rd, saw the beginning of an Entomological Society for Nova Scotia. The meeting was addressed by Dr. MacKay, Superintendent of Education, Messrs. Allen, Gooderham, DeWolfe, Sanders, Good and Brittain. At the close many rural students became members of this society.

Many of us heartily regretted the ending of the session of 1915. Let us hope for even a bigger and better school next year.

A VIOLA BURGOYNE.

NOTES ON SCHOOL READERS.

BY THE EDITOR.

I.

THE LITTLE LAND: by Robert Louis Stevenson.
N. B. Reader III.

This is a good selection to begin with at the opening of term while children are full of memories of summer days in the country. The aims should be to get them into sympathy with the little boy in his escape from loneliness and dulness, and to see the pictures that he saw. It is a lesson in imagination. If you have *A Child's Garden of Verse*, study the section "The Child Alone" and also "Flowers" and compare with the "Little Land" before you teach it. This will give you suggestions.

Begin the lesson with a little talk about the writer. He was an only child and a delicate one, and living in Edinburgh where the winters are bleak and cold, had to stay indoors much of the time. But he spent his summers in the country, where, in his grandfather's garden, he played with his cousins. [See "To Willie and Henrietta" and "The Pirate Story".] Have the first verse read silently, then let the children tell in their own words what is the starting point of the story,—where the little boy was, why he shut his eyes; then, what he saw, as fully as they can. Do the same with the other verses. In the third verse they should notice (a) his return from the "little land," (b) the contrast, (c) his wish. Let them pick out the words that mark the contrast; e. g., "*great bare floor*." Another contrast is between the round sun "heeding no such things as I" and the "little things" that "look kindly on." Have them read to you, (a) lines that please them by the sound, (b) lines from which they could paint pictures. Here are some suggestive questions:—What can we learn from the poem about the little boy's life? Did he just imagine the little land, or did he remember it? Can you remember one like it? Do you ever play "make believe" games? Can you name any of the "little creatures" in verse 2? The teacher may here connect this lesson with Professor Perry's lesson on animal life in ponds. "The greater swallows;" greater than what? Explain.

"Each a hill that I could climb
And talking nonsense all the time."

How did the boy feel towards the "little people?" Why would he want to come back at night? Why are there no long or hard words in the poem?

An unusual word like "pied" should be fixed in the memory by other lines or phrases containing it. e. g. "The Pied Piper," "Meadows trim with daises pied." Look up the words, magpie, and piebald.

If it comes in naturally, a suggestion might be given about this kind of "making believe" to get away from dulness. Whether it is good for us or not depends upon two things.

First, do we escape into beautiful thoughts, or into ugly and selfish ones? And second, do we let ourselves dream and imagine when we ought to be working? The children who read the poem are probably a good deal older than the little boy, and some of them may have the temptation to idle dreaming. A moral should certainly not be forced, but the thoughtful teacher will surely be reminded how important it is that the child's imagination should be directed to beautiful things, and will recall the words of St. Paul:—"Whatsoever things are pure, whatsoever things are lovely, think on these things."

BLACK BEAUTY. Here the child's imagination is called upon in a different way, and with a direct moral aim. He has to imagine the horse's feelings. This extract serves as a good introduction to the book from which it is taken. Here is a good place to master the meanings of the words, *extract*, *selection*, the difference between author and publisher. Who is the publisher of your reader? Of your arithmetic? The author of your history? Name some of the authors represented in this book. Where do you find the author's name? What about the name at the end of "A Far Distant Country" on page 42? What name is opposite "The Lion and the Spaniel" in the table of contents? For what is that word an abbreviation, and what does it mean? What is the difference between biography and autobiography?

Why did Jakes use the bearing rein? Why did the foreman put on too heavy loads? Why did the lady take the trouble to interfere? "My mind was hurt quite as much as my poor sides."

A discussion might come in here about the feelings of animals. Children who are used to dogs and horses may have interesting things to tell about their feelings being hurt, their ways of showing pleasure, grief, shame, etc. What is the reason why it is wrong to let animals suffer? They are "God's creatures." A great deal of information might be given in connection with this lesson about the work of the Society for the Prevention of Cruelty to Animals, Bands of Mercy, Dumb Friends' League, The Blue Cross Society (to care for sick and wounded horses at the war) and Animal Rescue Leagues. But care must be taken not to direct attention from the lesson itself. Is there any "making believe" in this story? Does the language seem as suitable as that of the "Little Land?" Substitute other words for, persuasively, laughing-stock, frequently, overruled, on the premises. What is the difference between continually and continuously? Is the former correctly used in "was obliged continually to stop?" Tell the story as (a) Jakes, (b) the lady, (c) the foreman, might tell it. [This is a good exercise in either oral or written composition.]

Put on the blackboard to be learned:—

Evil is wrought by want of thought, as well as by want of heart.

Make for yourselves nests of pleasant thoughts.

BIBLE READINGS FOR OPENING EXERCISES

1. Exodus 20:1-17.
2. Exodus 23:1-9.
3. Leviticus 19:9-17, 32-35.
4. St. Matthew 5:1-12, 13-16.
5. St. Matthew 7:1-12.
6. 1 Kings 17:1-16.
7. St. Matthew 15:29-38.
8. 1 Kings 17:17-24.
9. St. Luke 7:11-16.
10. Psalm 91.
11. Deuteronomy 6:1-15, 24, 25.
12. Psalm 19.
13. Daniel 6:4-23.
14. Proverbs 3:1-13.
15. St. Matthew 22:37-40; 25:34-40.
16. Daniel 1:1-17.
17. Psalm 119:1-16.
18. Romans 12:9-21.
19. St. Luke 12:13-21.
20. Proverbs 3:13-24.
21. Psalm 1.
22. St. Luke 10:25-37.

THE QUESTION BOX.

[Questions to be answered in this column must be received not later than the fifteenth of the month for answers to appear in the issue of the month following.

Requests for information by letter must be accompanied by stamps for reply.]

C. M. D. asks for a list of kings of Bulgaria, Roumania, Serbia, Greece, and for important details about certain Cabinet Ministers.

1. BULGARIA. Ferdinand, son of Augustus, Duke of Saxe Coburg and Gotha, and grandson of King Louis Philippe of France.

GREECE. Constantine I. He married Sophia, Princess of Prussia and sister of the Kaiser.

ROMANIA. Carol I.

SERBIA. Peter I, who succeeded in 1903, is still the nominal ruler, but his son Alexander is acting as Prince Regent.

2. Right Hon. Herbert Henry Asquith, K.C., Prime Minister and First Lord of the Treasury. Born in Yorkshire 1852. Scholar and Fellow of Balliol College, Oxford. Barrister. Honorary degrees from different Universities. Liberal M.P. for East Fife since 1886. Prime Minister since 1908. Previous offices, Home Secretary, Chancellor of Exchequer.

2. Rt. Hon. Arthur James Balfour, born 1848. Educated at Eton, and Trinity College, Cambridge. Honorary degrees from different Universities. Conservative M.P., for City of London since 1906. Leader of House of Commons 1891-92. Leader of Opposition 1892-95. Prime Minister 1902-1905. First Lord of the Admiralty in Coalition Cabinet, 1915. Chancellor of Edinburgh University. Gifford Lecturer, Glasgow University, 1913-14. Writer on philosophy and economics. Best known work, "The Foundations of Belief."

Rt. Hon. David Lloyd-George. Born in Manchester 1863. Liberal M.P., for Carnarvon since 1890. Solicitor. Honorary degree, D.C.L. from Oxford. President Board of Trade 1903-1908. Chancellor of Exchequer 1908-1915. Minister of Munitions in Coalition Cabinet, 1915.

Rt. Hon. Winston Spencer Churchill. Born 1874. Educated Eton and Sandhurst, entered army 1895. Served in Cuba (with Spanish Army, 1895) in India, Egypt, and South Africa. Present at battle of Khartoum and other engagements. War correspondent "Morning Post" 1899-1900. Taken prisoner, but escaped. Con-

servative M.P., Oldham, 1900-1906. Liberal M.P. Manchester, 1906-1908. Liberal M. P., Dundee since 1908. Held office successively as Under Secretary of State for Colonies, President Board of Trade, Home Secretary. 1911-1915, First Lord of Admiralty. In Coalition Cabinet, 1915, Chancellor of Duchy of Lancaster. Writer. Chief Works. "The River War," "London to Ladysmith via Pretoria," etc.

Rt. Hon. Reginald McKenna, born London, 1863. Educated King's College, London, Trinity Hall, Cambridge. Liberal M.P., North Monmouthshire since 1895. Barrister. President Board of Education, 1907-8. First Lord of Admiralty 1908-11. Home Secretary 1911-1915. Chancellor of Exchequer in Coalition Cabinet 1915.

G. H. C. asks for answers to the following problems:

1. A glass globe was weighed full of air. Afterwards the air was exhausted from it and it was found to weigh less. The same experiment was tried with a collapsible rubber bag, and no difference in weight was found, whether the bag did or did not contain air. Why was this?

2. When a ball is rolling rapidly on the ice the force of friction naturally tends to stop it. If the ball weighs 100 grams and the force of friction acting on it is 1,500 dynes, how much more slowly will it move at the end of half a minute than at the beginning? State the units in which answer is given.

1. When the glass globe filled with air is weighed we weigh globe and air. When the air is exhausted a vacuum is created and we weigh glass only; hence the difference.

When the collapsible rubber bag is weighed filled with air we also weigh the bag and the air contained in it. When the air is exhausted we do not create a vacuum and therefore we have the same height of air above the scale as before and exactly the same air pressure upon the scale as when the bag was full of air, therefore no difference in weight.

2. A dyne is a force which working upon 1 gram for 1 sec. causes a change of velocity of 1 cm. per sec. Therefore, ∴

If 1 dyne of force causes in 1 sec on 1 gram a change of velocity of 1 cm. per sec., 1500 dynes on 100 grams for 30 sec. will cause a change of

$$\frac{1500 \times 30}{100} = 450 \text{ cm.}$$

per sec. Hence the ball at the end of the 30th sec. is moving 450 cm. per sec., more slowly than at first.

Or by formula: —

$$M. V. = F.T.$$

$$100 \times V = 1500 \times 30$$

$$\therefore V = \frac{1500 \times 30}{100}$$

$$= 450 \text{ cm. per sec.}$$

$$M. = 100 \text{ gr.}$$

$$F. = 1500 \text{ dynes.}$$

$$T = 30 \text{ sec.}$$

or a negative acceleration of 450 cm. per sec.

R. MACD.

Problems sent in were illegible in places. If legible copies are sent at once, answers will be given in September.

NURSE'S SONG.

When the voices of children are heard on the green
And laughing is heard on the hill,
My heart is at rest within my breast,
And everything else is still.
"Then come home, my children, the sun is gone down,
And the dews of night arise;
Come, come, leave off play, and let us away,
Till the morning appears in the skies."

"No, no, let us play, for it is not yet day,
And we cannot go to sleep;
Besides, in the sky the little birds fly,
And the hills are all covered with sleep."
"Well, well, go and play till the light fades away,
And then go home to bed."
The little ones leaped, and shouted, and laughed,
And all the hills echoed.—*William Blake.*

THE TREE.

The Tree's early leaf-buds were bursting with bloom:
"Shall I take them away?" said the Frost, sweeping down.
"No; leave them alone
Till the blossoms have grown,"
Said the Tree, as he trembled from rootlet to crown.

The Tree bore his blossoms and all the birds sung;
"Shall I take them away?" said the Wind, as he swung.
"No; leave them alone
Till the berries have grown."
Said the Tree, while his leaflets quivering hung.

The Tree bore his fruit in the midsummer glow:
Said the Girl, "May I gather thy berries now?"
"Yes, all thou canst see,
Take them; all are for thee,"
Said the Tree, while he bent his branches down.

—*Bjornson.*

WHICH DO YOU SAY?

TWENTY WORDS COMMONLY MISPRONOUNCED.

Do you say.

1. Geography or jography?
2. Zoology or zoo-ology?
3. Brethren or brethern?
4. Arctic or artic?
5. February or Febuary?
6. Surprise or supprise?
7. Umbrella or umberella?
8. Squirrel or squirl?
9. Poem or pome?
10. Mischievous or mischeevious?
11. Hundred or hunderd?
12. Morals or morls?
13. St. Lawrence or St. Lournz?
14. Current or curnt?
15. Aeroplane or aireoplane?
16. Catch or ketch?
17. Height or hitth?
18. Italian or I-talian?
19. Spirit or speert?
20. Bouquet or boquet?

FIFTY WORDS OFTEN MISSPELLED.

Test your new pupils with these.

grammar	exercise.
business	forehead.
potato	jewels
potatoes	lettuce.
brethren	lightning.
arctic	necessary.
several	occur.
geography	pursue.
separate	rhyme.
February	seize.
judgment	writing.
iron	truly.
surprise	formerly.
except	whose.
niece	apron.
until	spoonful.
occasion	autumn.
scissors	bicycle
believe	column.
biscuit	colonel
spinach	describe
regiment.	foreigner.
rhubarb	salmon.
Britain	yacht.
college	destroy.

CURRENT EVENTS.

The germ of typhus fever has been found by a New York physician, Dr. Plotz; and a preventive serum obtained, which, it is hoped, may enable physicians to control the dread disease, as they control typhoid and smallpox, by inoculation.

The Arctic expedition known as the Crocker Land expedition has completed its work and is about to return. It has found Crocker Land to be non-existent.

It is now believed by some students that carrier-pigeons and other birds of passage are guided by electric currents; and the flights of these birds, it is said, are becoming uncertain and erratic since wireless telegraphy came into extensive use.

That insects, and not man, are the dominant power on earth is the startling assertion of a scientist in the Smithsonian Annual Report. Against these enemies, birds are our chief protection.

Paying ninety thousand dollars in bounties for the extermination of hawks and owls, Pennsylvania lost over forty times that amount from the resulting increase in rodents.

Woven fabrics found in the graves of the ancient Peruvians are said to be the most beautiful ever made, and the threads of which they are woven are finer and better than any that are made to-day. A magnifying glass is needed to count the number of threads to the inch, the counting taking three and a half hours.

It has long been known that there are dark stars in space; that is, stars having a temperature so low that their radiations do not affect our eyes or photographic plates. Now it is suggested that these dark stars are very much more numerous than the bright ones, perhaps four thousand times as many.

That there is no planet within the orbit of Mercury is now fairly certain; but astronomers expect to find one or more far out beyond the orbit of Neptune. The irregular movements of Uranus lead to this expectation; and it is predicted that such a planet may be found this year in or near the constellation of Sagittarius.

The thermaphone is the name of a new telephone recently invented in Holland. It is so small that it can easily be carried in the vest pocket.

The first year of the war has passed, and we look back to recall its chief events and think of what has been accomplished. German troops, setting out to invade France, entered Luxembourg on the second day of last August. They demanded free passage through Belgium, which was refused. On the fourth of August, Great Britain declared war. Two weeks later British troops had been landed in France, where they helped to extend the French lines, but soon fell back with the French armies before the rapidly advancing Germans, in the great retreat which ended in the battle of the Marne. Checked at the Marne, and driven back a short distance, the Germans established themselves in entrenched positions along the battle line in France and Belgium, which they have practically held ever since. Here they have been comparatively inactive. They still threaten to advance in pursuance of their original plan, to complete the conquest of Belgium, to take Paris and Calais and reduce France to

submission, and to invade England later; but the seven months delay has been of great advantage to the Allies, who are now better able to resist the onward movement when it comes. Meanwhile Russia has won and lost the greater part of Galicia, has lost all or nearly all of Russian Poland, but has kept her army unbroken, and has kept and is keeping large German and Austrian armies engaged along her frontier, thus saving the situation in France and Belgium. Japan has conquered and holds the former German possessions in the Far East. Italy has entered the war, and has taken possession of a narrow strip of Austrian territory. France continues to hold a small portion of Alsace. Albania, nominally neutral, is partly occupied by Italian, Serbian and Montenegrin troops. The Allies have a foothold in Turkish territory at the Dardanelles. A British Indian force is moving up the valley of the Euphrates; and Turkish troops have apparently been withdrawn from Russian territory in the Caucasus. German Southwest Africa has been conquered by the British South African forces; and French troops from the Congo have invaded the German colony of the Cameroons. All other German colonies except that of East Africa have been taken by the British or the Japanese; and German commerce has been driven from the sea. So matters stand at the close of the first twelve months. Great battles have been fought, great losses sustained, more than a million men have been slain, an unprecedented destruction wrought; yet all this is indecisive, and the end of the war still seems to be very far off. Only the British and the Russians can furnish many more men, and many more men are needed.

When Russia was suffering from the effects of the war with Japan, Germany took advantage of the situation to make a treaty which gave her commercial privileges amounting to almost a monopoly of the foreign trade. These special privileges would have expired next year, and the Russians would not willingly have renewed them. But Germany would not relinquish her hold upon such a market if she could retain it; so Russia could see that war was inevitable. She must either fight or yield. It might be expected, therefore, that her armies would have been well organized and well equipped before this war began. It now appears that this preparation had not been neglected; but the Germans, choosing their own time for action, had agents in all parts of Russia, and within forty-eight hours of the declaration of war had destroyed by incendiary fires and dynamite explosions the factories engaged in making arms and ammunition, with a large part of the reserve supplies. This, at least, is a story that now comes to us in explanation of the shortage of ammunition in the Russian armies which has been the direct cause of their serious defeats.

Italy, though counted with the Allies, has not yet formally declared war with Turkey, nor sent any help to the naval and military forces engaged in trying to force the passage of the Dardanelles; but it is expected that this step will soon be taken. The group of islands off the coast of Asia Minor, called the Dodekanese, taken from Turkey in the war of 1912, is still occupied by the Italian forces. These islands, under the terms of the treaty of peace, were to have been given up when the Turkish officer and soldiers were withdrawn from Tripoli. But Turkey

has not yet withdrawn all her soldiers; and has never ceased to stir up the natives against the Italians in the new African colonies. At present there is a rebellion in these colonies, led by Turkish and German officers, which has compelled the Italians to retire from the district of Fezzan.

The avowed purpose of the Italians in making war upon Austria is to regain the Italian provinces now included in the Austrian Empire, Trieste, the chief city of Austrian Italy, seems about to fall into the hands of the Italians; but they may find it difficult to hold the ground that they have won.

Switzerland, as a neutral state surrounded by belligerents, finds it difficult to get food supplies; but an arrangement has been made with Italy to allow provisions to enter with the understanding that they shall not be exported to Austria or Germany.

It is reported that the Russians have abandoned Warsaw, and fallen back to their second line of defence, on the east of the Bug, (boog), where there is a strong fortress called Brest Litovsk. Before retiring they are said to have removed or destroyed everything of military value, and most of the Russian inhabitants left the city. The capture of Warsaw is the greatest victory for the Germans since the fall of Antwerp.

The Allies are making slow progress in the Gallipoli Peninsula; but it is understood that Turkey must soon yield for want of munitions. Rumania has positively refused to permit the violation of her neutrality by the shipment of military supplies from Germany across her territory, and no other route is open.

The conquest of German Southwest Africa was completed on the ninth of July. The oldest and most important of the German colonies in Africa, and the one which has most seriously interfered with British commercial interests, is thus brought under British rule, at least for the present. The victorious British forces were held by General Louis Botha, once a leader of the Boers, now Governor of the Union of South Africa. Ten thousand school children joined in the welcome of General Botha on his return to Capetown. Probably the territory will be annexed to the South African Union, and a railway across it will give Rhodesia a trade outlet on the Atlantic coast.

Germany is said to have had twenty-eight submarines at the beginning of the war. Now she has perhaps twice as many; but, though they attack merchant ships, and sometimes sink them without warning, they have not very seriously interfered with British trade. As the attacks are not confined to British ships, and as the lives of neutral passengers on British ships are endangered, the United States continues to protest against this system of warfare.

Though the first year of the mighty conflict ends with the Russians falling back from Warsaw, yet their courage is undaunted. A message sent out from Petrograd to mark the anniversary says: "A firm confidence in victory, in a community of world-wide interests, and in the final triumph of right, fires the spirit of the nation. It has been our guiding star throughout this year of bloodshed. It will serve us in the coming months, maybe years, of this terrible struggle. Russia greets her Allies—France, Great Britain, Belgium, Serbia, Montenegro, Japan and

Italy. All hail to their heroic loyalty and firm determination to stand by her to the end, till light dispels the gloom.'

Sir Robert Borden, Premier of Canada, has visited the Canadian troops in France; and while there has been decorated with the grand cross of the Legion of Honour, the highest mark of esteem which France can bestow. While in England he received many honours; and he was present by invitation at a meeting of the British cabinet; foretelling, perhaps the coming change which shall admit colonial statesmen to a part in the Imperial Government.

Admiral Lord Fisher, having resigned his position as First Sea Lord of the Admiralty, has been placed at the head of a committee or board of inventions, which is to encourage scientific work in relation to the requirements of the navy.

Sir Sanford Fleming, whose death took place in Halifax last month, was the surveyor whose work showed the practicability of building a railway through British territory from the Atlantic to the Pacific, a scheme which developed into the present Canadian Pacific Railway System. He had much to do with the adoption of standard time for railway service everywhere. In recognition of his public services, he was made a Knight Commander of the Order of St. Michael and St. George.

The name of the Intercolonial Railway is soon to disappear, when that railway and the Canadian Northern will together be known as the Canadian Government Railways.

Matters in Mexico have been going from bad to worse, until now it may be said that there is scarcely any semblance of a government in the country. The capital has changed hands several times between the Zapata, the Carranza and the Villa forces. The latest plan of restoring order is that of a joint intervention by the United States and some or all of the Central and South American republics.

Hayti, which has had eight presidents in the last seven years, now has none, unless Dr. Bobo, the leader of the latest revolution, may be recognized as ruler. President Guillaume Sam was taken from his place of refuge at the French legation by an angry mob and put to death, in the last week in July, in revenge for the death of one hundred and sixty political prisoners who were said to have been shot by his orders. Further violence is feared, and the United States is sending ships for the protection of the foreign residents.

SCHOOL AND COLLEGE.

The Rural Science Schools in New Brunswick and Nova Scotia are being largely attended. The Truro, N. S., school has 155 students, and of these 17 have returned to do graduate work. The new agricultural school at Sussex N. B., was formally opened on July 13th. The course there is being taken by the full number of students that the equipment provides for. A number of these are doing second year work. At the Woodstock, N. B., school 60 students are attending. The teachers at Sussex are:— R. P. Steeves, M. A., Director and Instructor in Method; H. H. Hagerman, M. A., Inspector in Soil, Physics and Chemistry; Prof. H. G. Perry, Animal Life; Dr. J. B.

Dandeno, Nature Study and School Gardening; Director F. Peacock, Farm Mechanics, Book-keeping and Drawing; Miss Jean Peacock, Domestic Science.

At Woodstock Inspector F. B. Meagher is in charge during the absence of Director Steeves in Sussex.

The instructors are as follows:—

Dr. Bigelow of Brown University, soils, chemistry and physics.

J. E. McLarty, Guelph, plant life.

Alden B. Dawson, Acadia, animal life.

Mr. Murray, P. N. S., farm arithmetic, bookkeeping, woods, drawing and farm mechanics.

Miss Turner, domestic science.

Over 300 boys are to go into the Boy Scouts' camp at Chipman, N. B., in the first week of August.

While the supply of qualified and experienced teachers in New Brunswick is by no means equal to the demand, the applicants for Normal School entrance increase steadily. Seven hundred and twenty-nine students applied for the year 1915-16, an increase of 100 over last year.

Rev. Dr. Campbell, who for four years has been the Principal of Mount Allison Ladies College, Sackville, N. B., has resigned to devote himself entirely to the work of professor in the University in connection with the Mount Allison Forward Movement, which includes the raising of money to increase the endowment fund and to erect a science building. Dr. Borden has been appointed acting principal until a successor to Dr. Campbell is secured.

Miss Evangeline Belliveau, teacher of the advanced department of the school at Pre d'en Hant, N. B., has resigned her post. Before leaving, Miss Belliveau was presented with a locket and an address by her appreciative pupils.

Mr. Elmer C. Close, of Upper Keswick, N. B., winner of the Governor General's silver medal at the Provincial Normal School, has been appointed principal of the Nashwaaksis school, succeeding Mr. Stanley Harvey, who resigned. Miss Cecil Gallagher, of Fredericton, will continue in charge of the primary department.

The University of St. Francis Xavier has just received a new professor for the department of geology and mineralogy, a position left vacant by the appointment of Dr. Hugh McPherson as district representative in the department of agriculture. The new professor is James S. Macdonald, B. Sc., a native of Guysborough and a former student of St. Francis Xavier.

We regret to record the death of Miss Margaret Alice Clarke, for over thirty years a member of the staff of the New Brunswick Normal School.

The Imperial Conference of Teachers, arranged to be held in Toronto in the summer of 1916, was cancelled at the annual meeting of the League of the Empire on July 17th. This step was taken on the advice of Hon. Dr. Pyne, Minister of Education for Ontario.

Mr. Malcolm Lent will be Vice-Principal of the Westville, N. S., schools for the coming year.

Miss Jean Johnston, of Great Village, N. S., who has been a successful primary teacher in Pictou, has resigned

her post there, and taken a similar one at Haileybury, Ontario.

Miss Bessie A. R. Parker, of Millerton, N. B., who has been on the staff of the Sussex schools for ten years, was presented with an address and a purse of gold by the people of Sussex, on her resignation in June. Miss Parker expects to take a course in nursing at the General Hospital in Providence, R. I.

The large new assembly hall of the Le Marchant street school in Halifax was formally opened on June 15th.

Miss Mary Balmain, daughter of Mr. George Balmain of Woodstock, has graduated from the Woodstock High School with a remarkable record. During her school course she won sixteen first certificates, and on her graduation won two medals for mathematics and English, as well as the Latin prize offered by the Rev. Frank Baird.

The prizes offered by the Women's Canadian Club of St. Stephen to the schools within a twenty mile radius for the best mounted collections of weeds were won by Miss Margaret McAleenan, Lever; Miss Beatrice Simpson, Waweig; and Miss Louise Dinsmore, Blackland. The prizes for best essays on Canadian literature were awarded to Miss Mabel Christie, Oak Hill, and Miss Hazel Brockway, Upper Mills.

RECENT BOOKS.

The School Algebra by A. G. Cracknell, M. A., is a new text recently received. In arrangement it differs very much from the texts in common use. It opens with chapters on Simple Equations, Brackets and Simple Fractions and Negative Quantities. The use of a letter to represent the unknown quantity is explained early in the first chapter and thus the value and use of Algebra is at once understood by the student. Products and Factors are dealt with simultaneously and the connection between them is clearly explained. Much attention is paid to Graphs, a part of Algebra too often neglected.

Taken as a whole we would consider this book as a valuable addition to the equipment of the teacher of mathematics.

Published by The University Tutorial Press, Ltd., High St., New Oxford St., W. C. London.

To any one wanting a clear, concise and simply told outline of the first stage of the great war, we recommend *The World-Wide War*. This little volume is a record of events of the first six months of the war, and is intended to be not merely a record of the past, but a key to the understanding of future operations. The maps and diagrams are really a help to the reader, which is not always the case. Interesting, and not technical, the book is very suitable for reading aloud to a class. Naval battles and air-raids have chapters to themselves, and a clear little summary of results ends the volume, which is presumably to be followed by others to bring the record up to date as the war goes on. [*The World Wide War: First Stage. Captain A. Hilliard Atteridge.* George Philip & Son, Ltd., 32 Fleet Street, London. 1s. net paper; 2s. cloth.]

We noticed in May "The War Edition of Philips' Pictorial Pocket Atlas and Gazetteer. This firm has now

issued their *Handy Volume Atlas of the World*, with a war supplement, statistical notes and index, containing seventy-four maps. Each map is followed by a page of notes on the country shown, and a great deal of information is given in very compact and convenient form. [George Philip & Son, Ltd., 2s. 6d.]

A. & C. Black have sent us a specimen set of supplementary readers, called the *Fairy Realm Readers*, comprising tales from Aesop, Grimm, Andersen, and the Arabian Nights. They have stout paper covers, large and clear type, and one coloured illustration and several in black and white, in each little volume. The selections are those that every child should know, such as *Ali Baba*, *Cinderella*, *Big Claus and Little Claus* and *Aladdin*, and the price puts them within the reach of everyone who is looking for stories to read to children. [*Fairy Realm Readers.* A. & C. Black, Soho Square, London. 2½d. each.]

Educational Handwork, by Alfred H. Jenkins, does not attempt to give full instruction in the use of tools. It is intended for the use of teachers qualified to instruct, and gives notes of lessons, models and patterns. Raffia, basket, paper and cardboard work are all fully dealt with in the first half of the book, the rest being given to woodwork. [University Tutorial Press, London.]

In *Readings from American Literature* the compiler^s have succeeded in making a collection that offers interesting reading on every page, no small achievement in an anthology representing the principal writers of three centuries. The selections from the colonial period, beginning with Captain John Smith's account of his reception by Powhatan, and the story of Pocohontas, and ending with part of a sermon by Jonathan Edwards, and the New England Primer in full, are well adapted to light up the history of the period. But the compilers have escaped the danger of being drawn aside from their aim by considerations of merits other than literary. Among the writings of later authors we find many old favourites. The regret expressed in the preface that no more examples of American humour could be given is one that the reader will share. The book deserves a much fuller notice than we can give it here. [Giun & Company, Boston. Price, \$1.60.]

We have received from the Bureau of American Ethnology, Washington, their Bulletin No. 46. This is a dictionary of the Choctaw language, edited by Dr. John R. Swanton and Mr. H. S. Halbert, from the manuscript of Mr. Cyrus Byington, missionary to the Choctaws in the early half of the last century.

THE MAGAZINES.

THE REAL STRATHCONA.

Dr. George Bryce, of Manitoba University, is writing for *The Canadian Magazine* a series of nine sketches dealing in an intimate way with the personality, characteristics, and temperament of the late Lord Strathcona, as well as with incidents connected with Strathcona's life in Canada. The personal side of "Donald A." is but vaguely known even to many who were closely associated with him, but Dr. Bryce's reminiscences, judging by the first, which

appears in the July number, will serve to help thousands of Canadians to form a just estimate of one who for fifty years took a leading part in the development of Canada. Referring to the part Strathcona took in keeping down Riel and his followers, Dr. Bryce says) "It required the nerve of a Garibaldi and the skill of an Ulysses. The more we think of it the more desperate the case seems, and the thought arises that justice has never been done to Donald A. Smith for the immense service he rendered then to Canada."

The Federal Magazine for July is of more than usual interest, containing a chapter on South Africa and the war, a full account of the Empire Day Service in St. Paul's Cathedral on June 12th, and reports of the annual meeting of the Teachers' Associations of the Empire. At this meeting, held in Caxton Hall on Saturday, July 17, over 400 delegates and members were present, representing the profession in all parts of the Empire. Among the speakers was Dr. James L. Hughes of Toronto, representing the Ontario Education Department. The report of the Comrades Correspondence Branch of the League of the Empire shows that it has now 32,000 members, a great many having joined since the war began. The Imperial Education Conference was to have been held in Toronto in 1916, but it has lately been decided to postpone the meeting until more peaceful times.

N. B. OFFICIAL NOTICES.

The following is a summary of the changes in the School Law of the Province made at the last session of the Legislature:

"In any school district in which it has not been found possible to secure an acting school board, or to provide school privileges, the Inspector of the inspectorial district in which such school district is situate is hereby authorized to exercise any and all powers and to perform any and all duties vested in a Board of School Trustees by this Chapter."

"The school district may elect annually, and provide for the payment of the expenses of one or more representatives of the district to County or Provincial teachers, or trustees' institutes; in cities and incorporated towns such delegates may be appointed annually and their expenses provided for by the trustees at any regular monthly meeting."

All plans for new school buildings must have the approval of the Inspector.

Hereafter, whenever possible, school grounds shall not be less than one acre in extent.

The inspector may in his discretion audit the accounts of any school district not being a city or incorporated town.

Attention is directed to the N. B. School Calendar for 1915-16, published in this issue of the EDUCATIONAL REVIEW.

W. S. CARTER,
Chief Superintendent Education.

Education Office, May 22, 1915.



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New Brunswick School Calendar 1915-1916

1915. FIRST TERM.

- Aug. 26th.—Public Schools open.
 Sept. 1st.—Normal School opens.
 Sept. 6th.—Labor Day (Public Holiday).
 Thanksgiving Day (Public Holiday).
 Dec. 14th.—Examinations for Class III License begin.
 Dec. 17th.—Normal and Public Schools close for Christmas Vacation.

1916. SECOND TERM.

- Jan. 3rd.—Normal and Public Schools open.
 Apr. 20th.—Schools close for Easter Vacation.
 Apr. 26th.—Schools re-open after Easter Vacation.
 May 18th.—Loyalist Day (Holiday for St. John City only).
 May 23rd.—Empire Day.
 May 23rd.—Examinations for Class III License begin.
 May 24th.—Victoria Day (Public Holiday).
 May 24th.—Last day on which Inspectors are authorized to receive applications for Departmental Examinations. Reg. 38-6.
 June 3rd.—King's Birthday observed (Public Holiday).
 June 9th.—Normal School Closing.
 June 13th.—Final Examinations for License begin.
 June 19th.—High School Entrance Examinations begin.
 June 30th.—Public Schools close for the term.

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 Where every child should dance and sing,
 And always have a smiling face,
 And never sulk for anything.

—Gabriel Setoren.

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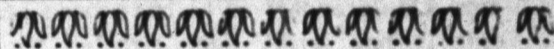
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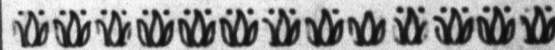
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S. KERR,
 Principal.



If bees stay at home
 Rain will soon come
 If bees fly away
 Fine will be the day.—Old Rhyme.



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