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The O. A. C. Review

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The present session of the Ontario Legislature has afforded to some of the members an opportunity of indulging in the usual criticism of the expenditure in connection with the Agricultural College. Formerly this annual task was wont to occupy the attention of the House for several days, but like the fitful outbursts of an almost extinct volcano, the enmity has cooled down until now some three or four of the Opposition members have a monopoly of the noisic work.

One outrageous statement has been made, however, to the effect that each student costs the taxpayers \$600 annually, and it has since been widely copied by the newspapers of the Province to the detriment of the College. We have read it in papers which are presumably favorable to the institution without an attempt at contradiction, the only justification given being that the graduates are worth that much more money to the country because of the improved methods which they carry home with them. That, however, is a very lame answer to give the public, for if students cannot be educated for less than \$600 a year there is a mistake somewhere and it is high time the public were inquiring into the matter.

A presentation of the facts of the situation will perhaps be useful to the friends of the College in enabling them to combat the misleading statements so freely circulated. Time and space will not permit a full enumeration of the separate expenditures, but an outline of the work done and the necessary equipments which must be provided will show that value is received for every dollar expended.

Every one acquainted with the place knows what a number of new buildings have been erected within the past seven or eight years, the aggregate cost of which has been considerable, but all of them are indispensable if the college is to continue its work and keep pace with the times. These include the barns and piggeries, the Dairy, Poultry, Experimental, Botanical and Chemical buildings, and a large hall for public meetings, especially for farmers' excursions in June. Not one of these could be dispensed with. Agricultural Colleges in the different States of the Union have similar buildings, costing in many cases twice or three times the amount of those here. In Wisconsin, for instance, the Legislature voted \$40,000 for a Dairy building and \$120,000 for a gymnasium, to be paid for by direct taxation. The New York State Legislature voted the sum of \$50,000 for a Dairy Building and \$100,000 for a Veterinary Building at Cornell. In Iowa also the outlay has been far beyond that of Ontario.

But if this expenditure has been justified by the pressing need which at one time existed for laboratories, the amount required for maintenance can also be shown to be no greater than is absolutely necessary. The instruction given to the students forms only a small part of the labor done in the various departments by the professors and lecturers. Indeed, the greater part of their time is taken up with experimental and other work which is directly beneficial to the Province as a whole. For instance, the Experimental Department, one of the most expensive here, yet the best of its kind on the continent, is devoted entirely to field tests of farm products, these being carried on not only at the College but on over 2,200 farms throughout Ontario. Working along these same lines in live stock, are the Experimental stables lately added to the station work which give promise of valuable results in the near future. But it is useless to go more into detail of the vast system of experimenting found here; in butter and cheese at the Dairy for 9½ months of the year; at the Horticultural Department in variety tests of all the small fruits; at the Chemical Laboratory in extensive analyses of cheese, butter, fat and casein in milk, wood-ashes as a fertilizer, etc.; at the Bacteriological Laboratory, on foul brood of bees, the stable contamination of milk, etc. Then there is the manufacture of tuberculin for the Province; the writing and publication of bulletins; the entertainment of over 14,000 visitors annually, with the expense of looking after a large lawn especially for the pleasure of these farmers. The Travelling Dairy, another part of the work, is wholly for the Province. The Professor of Biology spends probably half of his time in identifying weeds and insects and in replying to inquiries sent to him by farmers and fruit-growers, and also during the summer, in going directly to districts ravaged by insects, to assist the people in their efforts at extermination of the pests. All this is but a part of the good work being done here directly for the farmers of Ontario. Yet a few members of the Legislature who have probably never been within sight of the institution raise a protest against the enormous expense of the students of the O. A. C. to the taxpayers without any recompense whatever to the Province. A first-class agricultural college cannot be maintained in efficiency without a considerable expenditure of money; but in making estimates and drawing conclusions regarding our own College it should be borne in mind that more than half the whole work of the institution is for the Province as a whole.

Injurious Insects with Some Methods of Combatting Them.



THE study of insects in relation to agriculture has of late years commanded much attention, and is usually referred to as Economic Entomology. This is largely owing to the fact that for the last quarter of a century injurious insects have at times become almost uncontrollable, and Science was asked to remedy the difficulty if possible, with the result that insect ravages of an alarming extent are becoming more and more a thing of the past.

According to recent enumerations nearly 100 species have been found preying upon grain and forage crops; upwards of 40 upon vegetables; 50 upon the grape; and 75 upon the apple. The pine has 125 species as enemies; the oak, 300; the elm, 80; the hickory, 170; the maple, 75; the beech, 15; and the willow 400 insect foes.

The average loss to the Dominion of Canada from insects during 1884 is calculated to have been \$35,000,000, and for 1891, \$25,000,000. These figures no doubt give an under-estimate, and we must conclude that a study of a subject that will enable us to lessen this loss is of great importance.

In order to cope successfully with the numerous insects which attack agricultural and horticultural products a knowledge of their life history, habits and mode of existing is almost indispensable. Such a knowledge enables the person concerned to use the best remedies, at the most favourable time, and thus achieve the best possible results.

Nearly all insects undergo a well-defined metamorphosis: i. e., they go through several changes in passing from the egg to the adult stage. For instance, the egg of the "currant worm," *Nematus ribesii*, hatches into a worm or larva, which feeds upon the leaves of the currant. In due time it develops, and after a few weeks falls to the ground, where it spins a tough brown case or cocoon for itself in the leaves or rubbish at the foot of the bush. This is what is known as the pupa or resting stage. After the insect undergoes another change, and in a few weeks bursts its cage and emerges as the full-grown imago of the currant fly, which in turn sets to work and lays another brood of eggs for future propagation of the race.

In nearly every instance insects are the most injurious in the larval state. During that period they are voracious feeders and attain their maximum weight, and if successfully exterminated it prevents the occurrence of succeeding broods.

All injurious insects can be classified according to their manner of eating, viz., those having biting mouths, such as the "potato beetle," *Doryphora decem-lineata*, and those having sucking mouths such as the "plant aphid," *Aphis mali*, or the notorious "horn fly," *Hannetia serrata*. It will thus be readily seen that insects of the first class will require, as a rule, to take some poison which will act internally; while those of the second class will require some remedy which will kill by external application. For instance, the larva of the currant worm would be killed by an application of Paris Green to the bars attacked, while the plant aphid requires an external application of kerosene emulsion, which kills it by burning its soft body.

In dealing with injurious insects a great variety of remedies are

employed in their extermination, of which the following is a list of the more important ones:

1. NATURAL ENEMIES.—Nature is one endless chain of destruction and happily so. If such were not the case certain species of insects would soon become uncontrollable. No sooner does one particular insect become alarmingly numerous than a natural enemy in the form of some parasitic insect, or fungi, immediately comes on the scene to keep it in check. A good example of this is seen in the case of the "army worm," *Leucania unipuncta*. The Tachina fly lays its eggs on the back of the neck of this voracious larva, these hatch, and the Tachina larvae in turn feed upon the body of the army worm. A great many animals are insectivorous. Many kinds of birds are faithful friends in helping to keep down insects, when the latter become too numerous. Insectivorous birds should, therefore, be safely guarded by the agriculturist and fruit grower. Carnivorous plants, such as the famous "fly trap," serve to some small extent as an insect check.

2. INSECTICIDES.—There are very effective remedies in the hands of the skilful farmer or fruit grower. The most important ones are the following: Paris Green (arsenic of copper, containing 50 to 60 per cent. of arsenic). This is applied dry or in solution. In the dry form it should be mixed with 50 to 100 parts of plaster, wood ashes, or air-slaked lime, and dusted upon the plants. The form in solution is usually 1 lb. of Paris green to 200 gals. of water; but if the foliage is tender 250 to 300 gals. of water may be used. One pound of lime to every 100 gals. will prevent injury to the foliage. Kerosene emulsion consists of half-pound of hard soap in one gallon of water. Boil till dissolved, and then add two gallons of coal oil, and mix thoroughly for about five minutes. When properly mixed it will adhere to glass without oiliness. Dilute the mixture with nine parts of water. If the foliage is very tender the emulsion must be more dilute, 15-20 parts of water.

In nearly all cases Paris green is an effectual remedy against insects that feed by chewing. Kerosene emulsion is also a most successful general remedy when applied upon insects that feed by sucking the juices of plants, such as plant lice. We then have two insecticides which cover almost every case, and are no longer required to learn a different remedy for each pest, as was necessary not many years ago.

3. BARRIERS. In cases where the destructive larvae travel from one place to another some means is required to stop their march and confine their attack as far as possible to one particular spot. In the case of the army worm a whole field may be attacked, and it is an impossibility to attempt their destruction by spraying the crop. If kept in this certain spot until they pass into the pupa state there is very little fear for the surrounding crops. The edge of the field likely to be attacked may be sprayed with Paris green, and as the worms advance to feed upon it they are killed in large numbers. In bulletin No. 104, New Series, of the N. Y. Experiment Station, Geneva, the following is recommended as a method for checking the army worm. Plow deep furrows around the infested field, or around an infested section of a field; also where possible in front of advancing insects. Make the sides of the furrow as near perpendicular as possible, and where the soil will permit, slant them back, especially the sides of

posite the infected section. Holes should be dug at intervals of from ten to fifteen feet along these furrows. The caterpillars fall into the furrow, crawl along it, and finally fall into these holes, where they may be killed by crushing or an application of kerosene. The bulletin shows a cut of a large corn field which was almost entirely saved by this method.

4. TREES.—The females of some insects are unable to fly, and must reach the foliage by crawling up the trunks of the trees whose foliage their larvae feed upon. This is taken advantage of in the case of the canker worm. A band of dendrolene is smeared on the trunk, and acts as a trap beneath or through which no insect can crawl and live.

Dendrolene is a crude petroleum product, and is in the nature of an impure vaseline, more or less greasy, smooth, of butter-like consistency at ordinary temperatures, and absolutely resisting wash by rains. Applied three-sixteenths of an inch thick or more to the surface of the tree to be protected, it will last an entire year without renewal. It should not be left too long on young trees, as it has a tendency after a time to injure the bark, especially so in the case of peach trees. On such trees it should be washed off after midsummer with some potash wash.

5. AGRICULTURE.—Finally the most important of all preventive measures is good farming. Keep crops of all kinds in the most vigorous possible condition, with plenty of readily available plant food. Any animal or plant kept in a sickly condition is more liable to attacks from parasites than when in a perfect state of health. In all cases make the conditions as unfavourable as possible for the propagation of insects.

In the case of field and garden crops a systematic rotation should be followed as far as possible. Particular insects attack particular crops, and if the same crop is grown continuously for a number of years on the same land, the insects attacking it become more and more numerous each year. This is especially seen in the case of old pastures. They furnish an excellent breeding ground for grasshoppers and such insects, and grain crops in the near vicinity are more liable to attack than when at some distance away.

The sowing of good seed is another factor of importance. Peas affected with "pea-weevil," *Bruchus pisi*, are often sown. The bugs are thus set free, and remain ready to deposit their eggs on the pea pods when the latter have nicely formed. A good remedy for killing these insects is to place the grain in an air-tight vessel, and place a saucer containing some carbon bisulphide on the top of the grain, and cover the whole up for forty-eight hours. The heavy vapor will sink among the peas and destroy the bugs or any insects in or among the grain. One ounce is sufficient for 100 lbs. of grain. As the compound is very inflammable and volatile great care should be taken not to bring any light near it.

Varying the sowing time of some kinds of grain has also a preventative effect. In some localities which are subject to attacks from pea-weevil, peas are sown at a later period than usual, and thus escape the first attack, which is generally the most destructive.

Good drainage also acts as a very good insect preventive. Such insects as the "cranio fly," which are most frequently seen in low,

rank meadows, or along ditches or sluggish streams, and whose larvae feed upon the roots of grasses in such places, are deprived of their breeding grounds by draining the land affected.

Lastly, fall ploughing is one of the best insect destroyers. The eggs and pupa cases of the insects are turned up and exposed to the action of frost, and thereby large numbers are killed. It is quite safe to venture the assertion that this method is the most destructive of all to insects affecting field crops.

T. F. PATERSON.

O. A. C. CREAM.

The Relation of Bacteria to the Souring of Milk.



WITH the exception of the first few drops in the milk duct, pure milk drawn from a healthy cow contains no bacteria, so that all bacterial contamination of the milk comes from external sources. For practical purposes, however, this statement requires to be modified. The immediate atmosphere surrounding the cow is thickly populated with bacteria and in the process of milking, the milk ordinarily becomes heavily seeded with them. In a sample of separated milk, which gave no indications of souring, we have found an average of 74,000 colonies in every cubic centimetre: each colony being the product of a germ growth.

The sources of contamination are various. One that is always present is the milk left in the milk duct after milking. This duct is open to the air and the germs find here a temperature and food suitable for their rapid multiplication. Another cause is the air, although it has come to be regarded as a less potent source than formerly. Of course if while milking, the stables are swept or any work done which will raise a dust the danger is greater. The milk vessels and the hands of the milker are also sources of contamination. Most of the diseases capable of being carried in the milk, such as typhoid fever, are transmitted in this manner. The hairs of the cow's body are always covered with dust and dirt, and unless the udder be carefully brushed and then moistened many impurities, containing bacteria, will fall into the pail.

In the ordinary souring of milk the bacteria act upon certain constituents, notably the milk sugar, and produce from them acids which give the sour taste and curdle the casein, making the milk thick. Fortunately, lactic acid is the principal one formed, although smaller quantities of other kinds usually accompany it, and predominate as soon as the lactic germ ceases to multiply.

Many people think that electricity has a special effect upon milk, and attribute its quick souring during thunder storms to this cause. In experiments in which electric sparks were discharged over the surface of milk little or no effect was produced on its composition. It was shown that electricity is not of itself capable of producing sourness or even hastening the process to any extent. It seems that the connection between the thunderstorm and the souring of milk is of a different character. We know that a warm sultry atmosphere is conducive to the rapid growth of bacteria, and it generally happens that the quick souring of milk and the thunderstorm occur together, not because the thunder hastened the souring but because the climatic

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conditions which generated the storm have also been favorable for an unusually rapid growth of bacteria. This fact has been proved by many experiments which have shown that without the presence of lactic organisms there can be no spontaneous souring of milk. The same climatic conditions would affect the milk in exactly the same way even if no thunderstorm were produced, as is frequently observed by dairymen during the warm sultry days of autumn.

Under ordinary conditions milk undergoes some sort of lactic fermentation. During recent years, however, a great variety of fermentations have been recognized in milk, and many products result from their action. Some give it an alkaline reaction, at the same time curdling it; others impart to it various colors, such as green, yellow, blue or red, by the formation of pigments. It is not our intention to study these in detail here except to state that they are very undesirable and oftentimes sources of trouble. We have learned in our study of milk that the cause of all these changes, even the desirable ones, lies in the contamination of the milk from without, and the great remedy for the prevention of undesirable forms is extreme cleanliness in handling the milk.

The souring of cream is now regarded as simply a result of bacterial growth. Many attempts have been made to isolate and grow the special bacteria which give a fine flavor and aroma in butter, and produce a gilt edged product by inoculating this bacteria into cream which has been practically freed from germ life by the pasteurizing process. So far they have found no single germ which will generate all the desirable qualities. Cultures have already been found, however, which have a decidedly favorable influence on the butter. In Denmark, the leading butter country of the world, 95 per cent. of the exhibition produce is made from cream ripened by these special cultures.

In guiding the dairyman to the best method of securing pure milk and in helping the butter maker to produce an article of a uniform flavor, dairy bacteriology, as a study, has already done much and promises still more in the future. The time will come when it will be possible to manufacture butter from which undesirable flavors have been eliminated; when the cheese-maker can obtain by the use of special cultures any desired form of ripening.

LITERARY SOCIETY.



THE O. A. C. Literary Society as organized for the season of 1896-7 has had a fairly successful year, and at the close it is perhaps well to take a retrospect of the work done. In the first place all will agree that the officers selected in October have proven themselves thoroughly capable and faithful in the performance of their respective duties. The society was especially fortunate in the choice of a critic, for in Mr. Henry they found a man whose four years experience in the Literary Society of Toronto University had familiarized him with the workings and proper mode of procedure which should govern such a body. His remarks were always encouraging, and some of the suggestions made by him were acted upon to the great benefit of the society as a whole. Of the other officers it would be invidious to make any particular mention where all had done their part so well, but to Mr. Oastler, as chairman of the managing committee, belongs much of the credit for the well filled programmes of the different meetings throughout the year.

The attendance at the meetings usually counted at least eighty per cent. of the whole student body. In the debates and discussions the latent oratorical ability was called forth at times until one could indulge in the hope that the halls of our Legislatures would before many years resound with the eloquence of some of the graduates of the O. A. C. Literary Society. In the musical parts of the programme many of the amateur singers and players have shown themselves to be possessed of no mean talents. Essay reading has been neglected during the past few years and this session only two have been presented. But what was lacking in quantity was compensated for in quality. Mr. Bishop, B. S. A., favored us with an essay on "The Poetry of Tennyson. Mr. Bishop has a thorough knowledge of English literature, and his excellent style is an evidence of how deeply he has drunk at the "pure wells of English undefiled." The other essay was by Mr. Henry, the subject being Free Trade and Protection, a comparison of the merits of the two systems. It appeared in a slightly changed form in the February number of the Review.

After the Christmas vacation the question of holding a number of sessions of a Mock Parliament was taken up with the result that Messrs. Henry and Summerby were appointed leaders for the respective parties. On January 30th the society met and resolved itself into a Parliament, Mr. T. F. Paterson officiating as Speaker. The Speech from the Throne, as previously published, detailed the several planks in the policy of the Government party.

Messrs. Reid and Baird spoke for the Government on the different items, after which the leading members on both sides joined in a general discussion of the policy outlined.

The Budget which was presented later contained some interesting figures, showing how the money had been spent. In the estimates was a grant of \$20,000 to fit out an airship to distribute advertisements for the Agricultural College, and provision was to be made for a grant to the O. A. C. kitchen large enough to cover the deficit occasioned by the serving of \$5.00 a week board for \$2.50.

Three weeks later the Parliament was resumed, this time with Mr. Summerby as Premier and Mr. Henry leading in the cold shades of the Opposition. An order of business much the same as that followed in the previous meeting was gone through with. Mr. N. C. Scott made the speech of the evening, and dilated eloquently upon the plans of the Government for withstanding the tyranny of such combinations as the College Staff. He demanded that the students should be dealt with separately, according to their deserts, and protested against any impositions upon the student body because of the small boy tricks of a few.

A closing entertainment on March 19th at which Miss Alexander Ramsay, Mr. Smedley, and Mr. Wilson are to appear, will enable the members of the society to offer some slight recompense to their friends in the city for the kind treatment they have received.

Personals.

The following is the first instalment of a series of articles written by one of our leading graduates, at our request. The "boy's" college experiences from Matriculation to Graduation will be given as they actually occurred, and we can assure you that the best is yet to come.

—En.

OLD COLLEGE DAYS (And a Few Nights).

CHAPTER I.

PREPARATION FOR COLLEGE.

Time is measured by even's, not by days. It is only the great events in a man's life, that mark the successive stages, and serve as memory milestones in later life. These milestones, connected often by tortuous lines, make a map of life; and as in the old school geographies the principal or Capital Cities were designated by stars, so on our Life Map principal events stand out prominently, and perhaps the brightest star of all is placed over that spot that stands for "College Days."

We forget faces and facts met with in business; we may not be able to recall the names of girls we flirted or danced with at a certain party last winter; we may even forget to pay back that five dollar we borrowed six months ago, but we remember in detail the most trivial events that occurred during our college life.

Some of us country boys can even recall the principal events that led up to our leaving home for college. Each day father would say, "remember, son, mother and I will be very much disappointed if you do not stand first in your class." Then mother would say, "My boy, always do right, and if you tear your pants you will find needle and thread in the lower left hand corner of your trunk." Your little brother also looks at your new store suit of clothes and the six brand new collars, and wishes he was grown up too.

Then the last Sunday night when you walk home from church with the little girl that lives a good mile beyond the church (I never did know why it was that a fellow always liked best the girls on the other side of the church, while the boys on that side regularly came home with the girls on our concession), she says she knows that just as soon as you get to that "Model Farm" you will forget all of your friends at home, and you admit that wearing a boiled shirt and cuffs every Sunday, may make some difference, but you hope you may die if,—etc., etc., etc.

But the trip on the train.—It carries you back to the "one time" when you were a little chap and your father took you to the Toronto Exhibition. Two hours after he got you there he wished he had not and you wished he had not too, and how he dragged you by the hand for two hundred miles around the sheep pens, and the honey exhibit, and the horse ring, and the main building, and the windmills, and the balloon ascension. How your little feet did ache, and, oh! how you cried for mother that night and how cross your father was. The next day he relented and bought you some peanuts and took you home and you declared you never wanted to leave home any more.

But here you are again, and alone, with no one to occupy the other half of the seat but a new overcoat. You wonder why all the people in the car happen to be travelling the same day that you are and you tell the conductor to be sure and let you off at Georgetown for you are going to College, and your father's name is Smith, and you have a fine Collie dog at home, and he (the conductor) smiles and tells you that the train is due at Georgetown at 6.12, and that they will be sure to stop. It is now only 1 o'clock, but you are afraid to rest for fear you should go to sleep and pass by your junction point. But time does not hang heavy on your hands for the news boy comes along and your eyes feast on his display of goods. Surely he must be very rich to have all those things. And he is so obliging. He lets you tell him all about yourself and your brothers and sisters and chums, and offers you books so cheap. Books with pictures of actresses and things, and you finally buy a prize package for ten cents and get some nice hard lumps of red and white and green candy and a beautiful tie pin in the shape of a lady's shoe.

After a while you settle down and look fixedly out of the window. You count the telegraph poles and think. What do you think? Well, if the truth be told you don't know whether you really care to go to College or not. "Would father be very angry if I came back home on the next train." In the midst of this reverie the brakeman announces Georgetown, and you tumble out quick and run down to the baggage car to make sure that your trunk is transferred. You feel sure that the baggageman is just as likely to send it on to Hamilton or Detroit or somewhere, so you show him which one and tell him where it is going. He glances at the check, rolls it out, and you feel glad that you attended to it yourself.

In five minutes you are again seated in a car on the main line, and as it is only an hour's run you keep on your overcoat, notwithstanding the fact that the car is already too hot for an ordinary mortal to live in.

All of this happened to me in the early eighties and it seems funny now, but it wasn't then. If you doubt my word, drop down to the G. T. R. station at Guelph sometime, on Oct. 1st., and watch the countenances of the young men who step off the train with paper valises and celluloid collars, and let me know whether it strikes you as a 1st of July celebration or friends come to a funeral.

"CREELY."

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Brewer E. Paterson, B. S. A., '88, is editing the *Post*, of Chignecto, N. B. He is deeply interested in the Ship Railway scheme, but his proverbial reputation for a joke will not allow us to take him seriously.

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We have a grist of notes from the West for this month. In British Columbia we have located the following, all of whom are farming or ranching.—J. C. Harris, '91; P. B. Johnston, '89; R. Musgrave, '89; T. Jackson, '91; S. and R. Ransom, '88; and Bayne Bros., '89.

Coming to this side of the Rockies we have:—F. A. Jackson, '87; N. Willans, '88; J. Kemmis, '86; and C. W. and R. F. Elton, '88. In Manitoba are:—R. E. Harrison, '88; and T. B. Willaus, '88.

Mr. Willans, who will be remembered as Valedictorian of his class, has lately moved from Carnduff to Neepawa.

G. H. Ladwen, '90, is also farming at Duncan's, B. C., and figures prominently as Secretary of their Provincial Dairymen's Association.

H. B. Bealey, '91, best known as "Granny o' Lancashire," has gone to the old land to enter into possession of estates which he lately inherited. He visited us recently and renewed old acquaintances.

A. S. Leavitt, '96, is farming near Venkloek Hill, Ont. We are surprised to learn that he has become quite a ladies' man. He took an active part in the Institutes in his locality during the past season.

W. A. Carpenter, '88, is the owner of a model farm near Simcoe, and is doing splendidly. Some years ago, his farm, which is managed in conjunction with that of his brother, E. C. Carpenter, M. P. P., was awarded the gold medal of the Agriculture and Arts Association.

W. Robertson, '92, is foreman of a ranch at P. de Fourche, South Dakota. We nearly lost sight of him, but were not at all surprised to hear that he was enjoying life.

D. Buchanan, B. S. A., '91, visited us a short time ago. He has completed his studies and is now leaving for Buenos Ayres, Argentina, as a missionary. May success crown his labors.

John Atkinson, '94, will be remembered by the class of that time, as having suffered almost complete loss of his eyesight. Everything that medical skill could suggest was done, but for nearly three years he could scarcely distinguish light from darkness. In August last, he entered a Surgical Institute in Chicago, and we are gratified to announce that he is now almost well. During these years of enforced confinement, the musical qualities must have been stirred within him, for he is now thinking of pursuing studies along that line.

A. C. Weir, '90, is dairying at Chilliwack, B. C., and, in partnership with his father, possesses one of the best farms, and finest herds in that Province.

D. W. Roblin and D. H. Allison, '95, are farming in Lennox Co. "Dave" is much missed by our baseball enthusiasts.

D. H. Leavens, '87, is following general farming near Belleville, and belongs to the type who "say little but saw wood." His speciality is fruit, and he is meeting with a marked degree of success.

Chas. King, '95, is working with W. J. Thompson on Mr. F. W. Hedson's farm at Brooklin.

The men of '97 will learn with sorrow that another of their companions has been removed by death. Arthur Ratcliffe, one of the most popular students in the freshman class of '94-'95, died at his home, near St. Marys, on Monday, March 15th. While at the College, Arthur was an earnest student and an active Christian worker in connection with the Y. M. C. A., having been a member of the Missionary Committee for the year. In the spring of 1896 he left to take a position on the new Government farm in the Wabigoon District, where he remained until called home by the serious illness of a younger brother. He arrived only in time for the funeral, and soon after succumbed himself to a severe attack of la grippe and pneumonia. Another brother is now in a low condition from the same disease. As representing the class of '97, we extend our heartfelt sympathy to the family in their sad affliction.

Locals.

Johnstone -

A winter's night,
A slippery street,
A shock - and oh!
What struck my feet?

Benny's motto: "Never do anything that you can get done for you."

Balfour—"What are you doing, 'old woman?"

Morley—"Writing for a living."

Balfour—"How is that?"

Morley—"Writing to the Pater for more money."

Although Mr. Wagg is not head of his class yet he is the best red man of the year.

J. M. Reade—"What are you going to do with that lump?"

E. Beam—"I don't know what to do with it; it smokes, drinks, and goes out nights."

We notice that the dim foggy appearance has left the side of Hume's face. He says he does not care for midnight barbers.

We were in error last month in stating that A. C. Wilson aspired to the position of choir leader in the First Baptist Church. It should have read Knox Church.

Some trifles which amuse us in the dining room:

Fitzzy's wanderings.

McLaurin's military gait.

The dignity with which Pompey presides at No. 2.

The agility with which Robertson slips out of sight under the table.

The close watch which Snider keeps on the kitchen doorway.

The look of anxious suspense on Whigham's face as the mail is read on Friday.

The fatherly way in which Parker reproves any boisterous conduct at No. 4.

The reckless manner in which some of the First Year continue to tempt Providence by drinking the so-called tea and coffee.

We are much beholden to certain generous young men who reside in Panton Street. We have to thank them sincerely for the noble way in which they responded to the call on their pockets. The call was one cent each. We may say that we hope that when next our hair requires pruning that they will not be called upon in such a manner, but that by that time we may by our labors with our pen earn enough to get our hirsuteness obliterated.—W. L. S.

West (to Westgate who has just received a letter)—"I don't know

how it is, but ever since you came I never get a letter. You get all those that should come to me."

Morley (to West)—"If you'd get a 'gate' on you might get his letters."

—o—

Some say that nothing mortal can
Exceed a mother's pride,
When she beholds her first-born babe
Pressed fondly to her side.

But others state maternal joy
Without a doubt is less
Than is the lover's when he hears
The shyly whispered, "Yes!"

And others yet award the palm,
I can't tell why or how, sirs,
And say a boy will take the cake
When first he dons the trowsers.

These may be right; but I give it
To Morgan, when, in his glee
That young man stroked upon his lip
The hair he'd longed to see.

—o—

The other evening Mr. J. Hollis, Bermuda, paid a visit to the sheep-sheds. He had never seen a young lamb before but had seen lots of sheep. This may help to explain the young man's exclamation: "My! What long tails they've got!"

—o—

Morgan says they plant turnip seeds and potatoes before sunrise or after sunset to prevent the ravages of bugs. Now if such is the case, why did not this young gentleman sow his mustache seed in the gloaming?

—o—

As we are going to press we learn on good authority that A. C. is not going into the choir leading business but has accepted the job of night watchman on Dublin Street.

—o—

Gamble:—Methought I heard a voice cry, "Sleep no more! Wilson doth murder sleep."

—o—

— first opened his eyes to the light of the world sometime in the seventies. From that time until lately he has resided with his relatives in Simcoe county. His advent to the College dazzled the ordinary student; he burst upon the scene with the brilliancy of a blazing comet. His early connection with the College is too memorable to pass over lightly. His first day's sojourn here was marked by an incident which gained him notoriety over the face of the civilized globe. I refer to his experiment of investigating the power man has to resist the effects of gas. In the near future he intends taking a course in horticulture for the purpose of learning the splice graft. Afterwards he intends going into mixed farming in the Sahara.

—o—

M—g—n and wife:—

Pride in their port, defiance in their eye,
I see the lords of humankind pass by.

—o—

In view of the indignation that has been aroused in some quarters by some of the "locals," we have decided to be more careful in future and avoid any serious complications. We have sent to Koniakofski, Russia, for an experienced censor who will carefully revise the copy before it goes into the printer's hand. He will, in all probability be

here in time to superintend the next issue.

—o—

Extract from a Second Year lecture:

Professor in Practical Horse.—Now, gentlemen, in beginning our course of lectures in this subject it is of paramount importance that we have before us the best obtainable specimen of the equine race. With this object in view, I have brought up my old grey mare. We have in her a splendid animal (hear! hear!), an animal whose fame is not purely local. The admirers of this mare are numbered by hundreds, and she is well known in all the Northern States as well as Canada. For myself, I think quite a bit of the old mare and she thinks well of me. For these reasons it may be that I am inclined to overlook her faults, if she has any and perhaps overrate her strong points (loud cries of No, No!). At twenty-two years of age this mare will carry me quite easily, and it requires a good strong animal to bear a man of my weight. Last season on a cross country run she cleared the thirteenth and last jump when younger animals had dropped to the rear from fatigue (prolonged and hearty applause).

—o—

A crowd of eight or ten boys were gathered in Room No. 35 the other night when a discussion arose on the question, "Should engaged couples kiss?" Our reporter has put into verse some of the opinions expressed, as follows:

Richardson—

This for myself at least I'll say,
Her form appears by night, by day;
But, boys, I know of no such bliss
Until I stole my first fond kiss.
Oh! worldly thoughts were then effaced:
Of heaven itself I had foretaste;
And strange the question seems to me—
"Should couples kiss?" Eternity
Is far too short for me to tell
The rapture of that hallowed spell.

MacDonald—

Accursed be the tongue that asketh this:
"Should couples with a conscience ever kiss?"
I'll tell thee o'er thou ask it me again,
This is an age when there's no sense in men.
Engaged I am but I did never kiss;
Accursed be the tongue that asketh this.

McKinley—

Humid seal of soft affection,
Thou indeed hast wondrous charms!
Conscience, though, has disaffections
When I fold her in my arms.
"Nay" unto your subtle query,
Self-denial is my road,
Treading it, I may grow weary,
Meantime I can bear the load.

Bell—

With retrospective glance I scan
The yearnings of unmarried man;
No kiss should pass his lips till he
United by the church ties be.
Then, freed from all corroding care
He sips love's nectar sweet and rare,
And wonders how he lived before
These halcyon days of love galore.
Engaged couples should not kiss
I'm an authority on this.

Exchanges.

The keynote to good manners is B natural.

—o—

In the February number of the *Argosy*, of Sackville, N. D., we find a very timely article entitled "Nothing New under the Sun." It is a short discussion of a question of vital importance to all true students. Why is it that there are college graduates of little self-reliance and of small resources? Some have no powers of self-instruction or self-entertainment, they cannot employ their spare time contentedly and do not continue their studies, because they have not learned to work independently. Some students even graduate with less desire for knowledge than they had when entering college. Having spent their college course in "plugging," they are tired of the work and feel better fitted to hoe corn than to pursue their studies.

The aim of the ordinary college should be the mental growth of the student. What subjects are best suited for this end, what kinds and degrees of work are questions to be carefully weighed by college faculties. The method of teaching is also extremely important, as is also the amount of individual and independent work allotted to each student. But perhaps the kind of studying applied to the work is the most important. While the studies are important in themselves for the information which they give, the student's real aim should be to cultivate powers which will make him strong in himself, and give him alertness of mind, independence and conciseness of reasoning and powers of consecutive and logical thought. It is true these qualities are gained indirectly, and cannot be immediate aims, still many students, unmindful of the real aims, have habits of study that will destroy the results most to be desired.

Hence it is very important that every student should have correct ideas as to studying. One of the most common mistakes is to study when tired. Better fall behind a year's studies than injure your faculties, and sicken the desire for work, by plodding and plugging with aching head and wearied brain. Another error is to view the tasks too narrowly. We should learn to take an interest in our work and not consider it as so much ground to be covered. If we are not interested in the work we are apt to acquire habits of dreaming over our books, and this leads to negligent studying. Then we forget that the habits of study are more important than the studies themselves. The student should also seek to avoid becoming an automatic machine. Method is no doubt necessary to successful studying, it perhaps teaches greater freedom in the end, but is there not a chance of individuality being lost in such a process? It is sometimes a mistake for us to shelve casual questions, and leave them for another time. By so doing we acquire habit of putting stray thoughts aside, and finally become able to deal only with the work in hand. There are certainly times when a student should allow his inclinations to lead him. After all we are individuals and our peculiar tendencies should be cared for and encouraged along certain lines. Thus it is plain that the "inveterate plug" is not necessarily the best student. The most successful student from the standpoint of real education is not always

the one who has the most knowledge ready for examinations. Let us then, as students, be alive to our real interests, and acquire habits of study that will give the best results.

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Our married poet, who has been known now and then to tell the truth, tells us this story of his little daughter. Her mother overheard her expounding the origin of sex to her family of dolls "You see, childrens," she said, "Adam was a man all alone and he was ever so lonely-ponely, and Dod put him to sleep and then took his brains out and made a nice lady for him."—Ex.

—o—

He asked fair Rose to marry;
By letter Rose replied.
He read it; she refused him;
He shot himself and died.
He might have been alive now
And Rose his happy bride,
If he had read the postscript
Upon the other side.—Ex.

—o—

Love is a passion that masters the mind;
Turns a man to a fool or an owl—makes him blind;
And though hatred or envy be lurking behind
It will sweep o'er the steep and the deep unconfined.
Love is the lever that lifts mankind.—Ex.

—o—

THE TONGUE.

"The boneless tongue, so small and weak,
Can crush and kill," declared the Greek.
"The tongue destroys a greater horde,"
The Turk asserts, "than does the sword."
The Persian proverb wisely saith,
"A lengthy tongue—an early death."
From Hebrew wit the maxim sprang,
"Though feet should slip, ne'er let the tongue."
While Arab sages this impart:
"The tongue's greatest storehouse is the heart,"
The sacred writer crowns the whole,
"Who keeps his tongue, doth keep his soul."

—o—

"SIC SEMPER FEMINA!"

Miss Phyllis was charming—but oh, so shy—
Forever there glittered a tear in her eye;
Miss Phyllis was drooping as ready to cry,
But, alas! she was flirting and so was I.

'Twas summer, and idly in hammock we swung,
And soft in the pine-tree the whip-poor-will sung
Where the moonlight was stealing the tree-trunks among,
And Miss Phyllis and I—well, you know—we were young!

She promised to love me till death did us part;
She swore that I only had place in her heart.
But, alas! she was waiting for me to depart
To catch a new victim—my similar art.

—Varsity.