

PAGES

MISSING

THE O. A. C. REVIEW

THE DIGNITY OF A CALLING IS ITS UTILITY.

VOL. XXI.

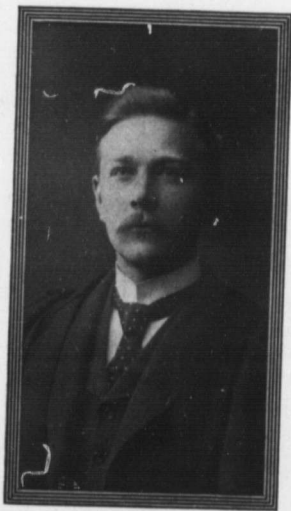
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Fragments.

BY W. C. GOOD, B.A.

Mr. Good matriculated from Brantford Collegiate Institute in 1896, winning the Prince of Wales and Edward Blake Scholarships. He obtained his B. A. degree from Toronto University in 1900, and was gold medalist in Physics and Chemistry. During 1902 he was demonstrator in Chemistry at O. A. C., but retired to his own farm at the end of a year where he has since been engaged in actual farm operations.—Editor.



W. C. GOOD, B.A.

The request by The Review for some contribution finds me too busy to think of preparing any special article

before the date set for handing in the manuscript. I shall, therefore, on this present occasion, give to Review readers some more or less disconnected observations on men and things, in the hope that I may at least stimulate thought.

One of my correspondents in the West, an active Single Tax propagandist, has the following printed on the back of his envelopes:

Our Policy: "We would take for the community what belongs to the community, the value that attaches to land by the growth of the community, leave sacred to the individual all that belongs to the individual."—Henry George.

One Single Tax on Land Values will produce revenue enough for every Municipal, Provincial, and National purpose, and is the only way to Free Trade. An acre of land, minus improvements, ten miles from a village, has very little Land Value. In the village this value rises to \$4,000 per acre, according to site; in a town it rises to \$40,000; in a city like Winnipeg it rises to \$1,000,000 per acre; in Toronto to \$4,000,000, in New York to \$20,000,000. At one time these lands had very little or no value. The increase of population, and growth of industry have raised these values from

of and are dependent upon, his social environment. And thus the issue is joined between those whose motto is "all for each and each for all," and those who cry, "Give to the individual what he creates, and to the community what it creates." My own opinion is that for all practical purposes in this present stage of civilization, the Single Taxer makes the more timely recommendations. However, I am not here debating the issue; I merely state it.

To "the man in the street," of course, all this seems *doctrinaire* and impractical. Those lacking in imagination accept things as they are, and look with a mixture of suspicion and perplexity at the "dreamer of dreams." Nevertheless it can be safely asserted that visionaries, seers, men of imagination, or prophets, whether in the fields of Religion and Morality, Statesmanship and Politics, or Science and Art, have been, and, I presume, will continue to be, the main forces in the history of mankind. Paul expresses the idea thus: "That which is seen is temporal, but that which is unseen is eternal."

In this age of miracles we have almost forgotten how to be astonished, and one scarcely ventures to cast a doubt on the feasibility of anything. All things are becoming possible. On the material plane wireless telegraphy and aerial navigation, in matters of the mind hypnotic suggestion, and what shall we say of higher things? Medical Science and Psychology are confirming the truth of such old maxims as "A merry heart doeth good like a medicine." We are learning in a new way that Hope is a tonic and Fear a poison. As has been said:

"Our remedies oft in ourselves do lie,
Which we ascribe to Heaven."

Hence arise schools of Christian Therapeutics, and talk of auto-suggestion and the sub-conscious self.

All this is, of course, only a new way of looking at an old subject. It throws some light, however, on a question I proposed for Economists in my last contribution to the Review, viz., how great a factor in industrial efficiency the emotions were. The state of mind has been shown to have much more to do with the bodily activities than many people have supposed, and it is a question how far employers should reckon with joy, cheerfulness and interest as factors in their employees' productivity. Unfortunately the modern factory system does not conduce to any of these healthy states of mind, and one is tempted at times to agree with Thoreau, or to look longingly at the Roycrofters' picturesque protest against modern industrialism. In many respects our industrial methods compare unfavorably with the more primitive methods that preceded them. The excessive specialization in modern industry tends to make the man a part of the machine he operates, cultivates an indifference to the monotonous daily drudgery, and promotes anything but joy and interest in the work in hand. Not only this, but the growing separation, also, between those who own the instruments of production—the capitalists,—and those who operate them—the wage-workers,—often leads to a substitution of antipathy for sympathy; and efforts to "skin the boss" replace efforts to improve and increase the business. One of the most serious developments in the

growth of modern industrialism is the change which has taken place in the emotional relationship of employer and employee. Some remedy must be found. As a temporary expedient the scheme of profit-sharing seems most promising; but ultimately the complete re-identification of capitalist and wage-earner must take place. In primitive industry each man was capitalist and worker combined, and lived pretty much to himself; in the industry of the future the workers must jointly assume the responsibilities and privileges of capitalists, or, in other words, wage-earners must become stockholders. Something should be done also to neutralize that deadening and crushing effect of the factory system which makes the ordinary factory hand so completely lacking in initiative and resourcefulness. Shorter hours, better education, technical instruction, and so forth, may do some thing to alleviate conditions; but, so far as I can see we cannot altogether escape paying for our multifarious and cheap commodities with human lives. A vivid perception and a persistent realization that the veins of wealth are in flesh and not in rock, are the chief requisites for any genuine industrial reform.

In Shakespeare's "Merchant of Venice" there is an interesting debate between Antonio, the Christian, and Shylock, the Jew, regarding the practice of lending money at interest. I suppose it rarely occurs to us in this age to question the propriety of taking interest, the custom being so universal, and yet at one time, alluded to in the play above mentioned, it was thought un-Christian to take interest. Shylock justifies his custom by referring to the clever breeding devices of the patriarch

Jacob, and, when we remember that cattle (*pecus*, cattle, whence comes *pecunia* and our *pecuniary*) were one of the earliest forms of money, we can understand the significance of Shylock's comparison. Antonio, however, cannot see that "barren metal" is entitled to increase.

To me the question presents two distinct sides. In the first place, regarding capital as "accumulated wealth used for the production of further wealth," the possession of money gives power to use capital, and thus to produce further wealth. Therefore the borrower is willing to pay interest that he may have the use of capital. An example very familiar to farmers is the borrowing of money to do underdraining. The tile are the "accumulated wealth used for the production of further wealth," that is, larger crops. Looked at from this point of view interest is obviously just. On the other hand the practice of taking interest enables the receiver to live without working, or, in other words, to be the recipient of a perpetuity for which no direct personal equivalent is given. From this point of view the practice is scarcely distinguishable from that of landed proprietors who, generation after generation, live on the "ground rent." The reader may reconcile the two aspects as best he can, and may keep in mind also the lately enacted Federal law fixing a maximum legal interest, together with the revelations which led up to this enactment.

How strange to us in these days seem the old monastic vows of poverty! And yet, in spite of all their foolish asceticism there was something admirable about the religious brotherhoods of the middle ages. They stood for the things of the spirit, which we, in these days

of unprecedented material progress, are in danger of losing. Even education is now-a-days regarded as but an instrument for money-making, and all spiritual values tend to be measured by material things. Hence general obtuseness regarding the moral quality of our business customs, and the apotheosis of "success."

It is popular now-a-days to believe that each generation inherits the accumulated knowledge and wisdom of preceding generations; and people are prone to magnify the advantages and privileges of modern civilization. As a matter of fact, however, it is only by the most strenuous efforts that degeneration is prevented. Farmers know how necessary it is to exercise the greatest care both in selecting and caring for their cultivated plants and domestic animals. It is no less necessary for society to ensure continuous education, and mental selection. In regard to all social truths (including Ethics, Economics, Politics, etc.) each generation has to be converted anew, just as each individual has to learn afresh "self-knowledge, self-reverence, self-control." Each succeeding age witnesses the persistent resurrection of old social fallacies and errors, just as in each individual the primitive instincts are re-incarnated. There is no royal road to learning, and no easy road to national advancement. Eternal vigilance is the price of liberty, eternal effort the price of life, and a short sighted optimism is the precursor of decay. All this should be borne in mind when listening to an ordinary political stump speech.

Mention of stump speeches suggests the inquiry as to how much reliable information has been imparted, and how much unselfish patriotism aroused in

our recent political campaign. From my own observations I am disposed to think that the primitive love of fight for fight's sake, and the unconscious willingness to be humbugged have induced the politicians to provide a very unprofitable bill-of-fare. How much more salutary, under the Initiative and referendum, was the Oregon State campaign of last June? There, in addition to the election of legislators, some nineteen important questions were submitted to the electorate. Not only so, but weeks prior to the election a book containing statements, explanations, and arguments *pro* and *con* concerning each one of the questions to be submitted was sent by the State Secretary to each registered voter. The campaign was admittedly one of the "greatest political school meetings" ever held. In respect to the sound political education of the electorate, our campaigns are, in comparison with that recently held in Oregon, insignificant and contemptible.

When we speak of an anarchist we usually think of some half-demented ignorant wretch, throwing bombs or trying to assassinate those in authority. It is, however, true that there are a number of people calling themselves anarchists who are entirely harmless, and, moreover, very interesting types of humanity. They may be more specifically defined as philosophical anarchists. Briefly stated they hold that all law is futile, and that education and freedom of thought are the great desiderata. Education will reveal the law written on the heart, and this only will the anarchist acknowledge. All sorts of external restraints are offensive to him. "Prohibition," legislation protecting the Sabbath, capital punishment, he will have none of. If he

wishes to marry it is a matter of mutual agreement between husband and wife, and the intrusion of the State or the Church with their forms and formularies is obnoxious and impertinent. "Light, not Law," "Education, not Legislation," are the mottoes of the philosophical anarchist.

I wonder sometimes how deep an impression our modern science-teaching is making. I find well-informed and intelligent young men and women holding, for example, that the nearer a load is to a team of horses the more easily they will draw it, that a body will float more readily in deep water than in shallow, that the plum crotch will point to subterranean springs, that sunshine puts out a fire, even in a close iron stove, and so forth. In most of these cases certain observations are correct enough, but the interpretations thereof, and subsequent deductions therefrom, are often entirely wrong. For example there is sound reason for hitching a team close to a loaded stone-boat instead of using a long chain; but when such an experience leads a man to try to get as much as possible of his load over the front wheels of a lumber wagon, there is something wrong with his mental machinery.

Even gross superstitions still prevail. The wife of a neighbor, some weeks ago, reported, in perfect sincerity, of how the kiss of a certain old negro was a sure cure for the whooping-cough. The Kentucky mountaineers have a similar remedy for various maladies, namely, a drink out of a stranger's shoe. Perhaps, The O. A. C. Bacteriologist can throw some light on such matters.

The extraordinary sale of patent medicines, and their vendors' methods of advertising are other indications of

how slight an impression on the popular mind modern science has as yet made. Weather prognosticators also obtain fairly wide credence. I remember a few years ago hearing a man remarking on the wonderful accuracy of certain weather predictions. It happened that, during the period covered by his observations, some two or three months, he was living in England, crossing the Atlantic, and living in various parts of Canada. I therefore asked him what part of the earth the predictions in question applied to, remarking incidentally that on the same date the weather in England was not usually the same as the weather in Canada. This question staggered him, and when I spoke somewhat slightly of weather prophets in general he was quite hurt. His case may be unusual, but I question whether many of my readers have thought any more definitely of the nature of Noah's flood, or of any other ancient event whose record comes to us through the mind of primitive man.

In speaking of the inaccuracy and vagueness in thinking which a sound training in the sciences ought to remedy I do not imply that such a training will solve the riddle of the universe. There will always be mysteries, and, as the circle of knowledge enlarges, the bounding and boundless infinite Unknown will seem more awful than ever. The attitude of wonder towards Nature by no means marks the fool, while a dogmatic positiveness, on the contrary, usually indicates shallowness. These considerations, however, in no wise invalidate the practice of re-interpreting all old things in the light of all new things. It is, perhaps, rather illogical to speak of "old things" and "new things," because all things are both new and old. The practice I re

ferred to is perhaps better defined as the continuous co-relation of all particular items of knowledge, the continuous correction of the point of view by the bringing into vision of each new accession. And let it be ever remembered that our formulas and systems are not absolute but relative. By keeping this in mind much needless controversy can be avoided.

Speaking of controversies a protracted and foolish controversy has been going on between what we call Science and Theology. Theology deals with man's religious life, with his gropings after the things of the spirit; while Science, so-called, deals with material nature. But the facts of which Theology takes cognizance are just as *real* as those dealt with by Science, while the data of Science are just as *sacred* as those of Theology. Therefore the Theologian will do well to reverence the facts and study the methods of the

Scientist, while the latter dare not disregard as unreal or illusory, under penalty of violating his most fundamental principles, those facts which constitute the basis of Theology. Reconciliation is difficult, not because there is any inherent incongruity, but because the field is too large for a single mind to explore. Reconciliation will come in time, however, even though cherished and fond images are shattered in the process. Even now the shattering is proceeding at a rate which is alarming all those of little faith. But, as the historic vestures are removed, the eternal verities stand out in clearer relief, and faith, being the "evidence of things unseen," gladly joins the poet when he says:

"Our little systems have their day,
They have their day and cease to be;
They are but broken lights of thee,
And Thou, O Lord, art more than they."

SNOWFALL.

Down drops the snow, the fleecy hooding snow,
On town and wood and haggard, wind-blown space,
And hushes the storms, and all weird winds that blow
Upon the world's dead face.

Like the great rest that cometh after pain,
The calm that follows storm, the great surcease,
This folding slumber comforts wood and plain
In one white mantling peace.

So when His winter comes, His folding dream,
His calm for tempest-tost and Autumn-lorn;
'Twill gently fall, as falls by wood and stream
His snows this winter morn.

—Wilfred Campbell.



WILLIAM DUTHIE, OF COLLYNIE.

Scotland's famous breeder of Shorthorn cattle.

WILLIAM DUTHIE.

"When you visit Great Britain, you must come to Tarves and see the cattle." Such an invitation was proffered many times, and to many Canadians, during the summer of 1906, when the proprietor of Collynie and Tillycairn visited Guelph, and also judged the Shorthorns at the National Exhibition in Toronto.

And one is well repaid by such a visit. Kind, gentle, hospitable, and highly entertaining is William Duthie, and it is a unique experience to sit by his open fire of a Saturday, listening to the stories of Scotch life and character, disturbed only by the many calls to lunch throughout the long day and evening. The extra nourishment, however, stands one in good stead on the day which follows, for the Duthies live a strenuous life on the Sabbath Day. Family worship at home and Sunday School and Church Service at Craigmadam in the morning, Song Service at Tarves in the early afternoon, a drive through Lord Aberdeen's estate to hear a new preacher in the neighboring church at five, then home for a "bite," and perhaps off to church again for an evening service; this makes a busy day, especially if your host excuses himself occasionally, as if on travel, to deliver some flowers or to kneel for a moment by the bedside of some weary and worn-out neighbor's child, who is slowly coughing her life away.

On Monday morning again, however, everything is business. We hitch the horse to the "machine" and away we go to Collynie to see the cattle. And such cattle! Cruickshanks foundation, Duthie and Marr tops. What can be done by careful selection, good judgment in mating, and long years of patient waiting has been accomplished by William Duthie, and the lovers of the Red and the Roan, all over the world, now look upon this great Scotchman as the leader of them all. In 1907 his public sale of calves averaged about \$2,000 a head.

"And have you no ambition to own your farms?" I asked him once. "Why, no," he replied, "why should I? My landlord is kind and thoughtful, my rent is reasonable, and lease is free from any objectionable clauses. Collynie has been in our family, under the Lords Aberdeen, for many, many years, and I am perfectly willing to end my days as a tenant of the present overlord." Perhaps if he had sons to succeed him, he would feel differently; perhaps not. At any rate, he and his brother Adam, bachelors both, live happily with their widowed sister, all three being beyond the meridian of life. They are gracefully growing old in the home of their father and their father's father.

Canada as a Probable Source of Supply for the Imported Dairy Produce of Great Britain.

BY J. A. RUDDICK, DAIRY COMMISSIONER.

ASSUMING that Great Britain is prepared to take all the dairy produce that Canada may have to offer in the years to come, we may proceed at once to consider the Canadian end of the question.

As the quantity of any product which will be available for export will be determined by the two factors of production and home consumption, any discussion of this question will very properly include a consideration of the conditions which are likely to affect either of the factors mentioned.

That the greater part of Canada is well suited by nature for the production of large quantities of butter and cheese of a superior quality, is a fact so well established that it need not be enlarged upon here. The dairy industry has been extensively developed in Ontario and Quebec, and these two provinces have led all the others to such an extent as to practically make them the only ones worth considering in connection with the export trade. While it is true that the industry has been established in every Province of the Dominion, the Provinces outside of Ontario and Quebec do not, on the whole, produce enough butter and cheese to supply the needs of the people within their borders. There are particular districts to which this statement does not apply, such as Northern Alberta and Prince Edward

Island, where the local production is largely in excess of consumption.

The manufacture of butter and cheese may yet be further extended in every Province, and very largely increased in several. Northern Alberta is fast becoming one of the principal dairying districts of Canada, and there is every reason to believe that the prairie provinces will some day produce a surplus in excess of what will be required for the people of Western Canada. At present the butter and cheese produced west of Lake Superior does not supply the needs of that country.

There are several conditions which may have an influence on the amount of milk produced in Canada. The prices which may prevail for butter and cheese are highly important, from the farmer's standpoint, and it goes without saying that if we should have, in the near future, a succession of years in which the prices should be as low as they have been at times during the last decade, there would immediately be a pronounced decrease in the business of dairying.

It is claimed that when farmers become more well-to-do and free from the necessity for exerting themselves in every possible way to meet payments on mortgages, or to effect the necessary improvements on their farms, there is a tendency to give up

dairying on account of its exacting features, which compel attention regularly every day in the year, at certain hours. It is possibly true that in some districts this factor has had an influence with the farmers and induced many to give up dairying on a large scale. On the other hand, one can point to that district in Western Ontario with the County of Oxford as a centre, generally considered to be the home of dairying in this country, where the tendency seems to be quite the opposite. There is probably no section of Canada, or, for that matter, of any other country having the same range of products, in which the people on the land have made greater headway or are more prosperous and comfortable than they are in this part of Western Ontario; and yet it is a fact that the dairy industry is as vigorously prosecuted there to-day as it ever was. The farmers in Oxford and the adjoining counties make dairying the principal business of the farm, and no doubt that is the reason why the industry has met with so much success in these countries. There are other sections, some in Eastern Ontario, particularly the County of Dundas, which might be cited in the same connection. Speaking of Ontario only, it is safe to say that outside of a few specially favored fruit districts, the wealth and prosperity of the different countries is generally coincident with the extent to which dairying has been followed.

It is within the probabilities that the use of the milking machine may yet be the means of extending the production of milk in localities where at present the difficulty of securing milkers forms a very serious obstacle in the way of further progress, or even of maintaining the present status of the industry.

The milking machine has undoubtedly been very much improved during the last few years, and it is now being used quite extensively in Australasia.

The home consumption of dairy produce in Canada has been greatly increased of recent years by the additions to our population, and, judging from present indications, the increase from this cause will likely continue for many years to come. It is true, however, that a large proportion of those who settle in Canada at present are going on the land in Western Canada, and will eventually become dairymen, to a greater or less extent, although the tendency at first is to confine operations very largely to wheat growing. As a matter of fact, it takes time to acquire and build up a dairy herd.

The people of Canada have increased their purchasing power enormously in recent years, and this has had a very important effect on the home consumption of butter. Butter is one of those articles of food in which considerable economy may be practiced if necessary, but when times are good there is a tendency to spread the butter much thicker than is done when the family exchequer is low. It is to be hoped, and there is no reason to doubt it, that Canadians will continue to prosper and be able to live as well in the future as they have for some time past.

There is another very important condition which affects the consumption of butter, and that is the matter of quality. There is no denying the fact that first-class quality encourages consumption enormously. A person will eat two or three times as much of a choice bit of butter as he will of a sample which is strong flavored, stale, rancid or otherwise objectionable. The

extension of the creamery system and the general instruction in the manufacture of dairy butter have resulted in completely changing the character of the Canadian product as a whole during the last ten years; and further more, the facilities for the shipping and handling of butter have been greatly improved, with the result that the butter is better preserved than it formerly was. Fifteen or twenty years ago practically all the butter which was consumed in the winter months consisted of stock held over from the summer production, and which was generally more or less out of condition. Since the adoption of winter dairying, a fresh-made article is available at all seasons of the year, and the surplus

which is manufactured in the summer months is available for export instead of being stored to supply the demand of the winter months. All these things have an important effect on the consumption of butter.

The expansion of the condensed milk industry, the total output of which will probably exceed \$1,000,000 in value for the season of 1908, makes it necessary to take this branch of dairying into account in the future, because the milk which is turned into this channel is so much taken from cheese or butter.

The export of dairy produce from Canada reached the maximum in the year 1903. Since that year the exports have decreased, as the following table will show:

Exports of Dairy Products in 1908, Compared with 1903.

	1903.		1908.	
	Lbs.	Value.	Lbs.	Value.
Cheese	229,099,925	\$24,712,943	189,987,365	\$22,887,237
Butter	34,128,944	6,954,618	4,858,276	1,068,703
Condensed milk	3,083,810	242,539	472,824	43,874
Total values		\$31,910,100		\$23,999,814
		23,999,814		
Decrease		\$ 7,910,286		

Owing to the habit of estimating the progress of the dairy industry on the annual export figures, it has been assumed by many that this decrease in exports is a sign of decline in the dairy industry. The exports were a fairly accurate guide in those years when the home consumption was practically stationary, but under present day conditions we must look more deeply into the matter in order to get a grasp of the situation. It is well to bear in mind in this connection that we do not export one-third of the value of our total production of dairy produce, as

we shall show later. As against the decline in exports, a conservative estimate places the increase in consumption of milk, butter, cheese and condensed milk, due to increased population since 1903, as follows:

Milk	\$4,500,000
Butter	4,000,000
Cheese	200,000
Condensed milk ...	300,000
	<hr/>
	\$9,000,000

This estimate of the increased consumption does not take into account the increased purchasing power of the

people generally, which must amount to several millions more. Thus we see that the increase in the consumption exceeds the decrease in the exports by a large margin, and corrects the view that there is a decline in the dairy industry.

The total production of milk and its products, in Canada, for the year 1907, was approximately as follows:

Creamery butter and cheese	\$36,000,000
Dairy butter	22,000,000
Condensed milk	1,000,000

Milk for direct consumption 35,000,000

Total\$94,000,000

While it is clear that the growth of the dairy industry in Canada since 1903 has not equalled the increase in the home consumption of dairy products, there is reason for thinking that the shortage may be only a temporary one. In any case, Canada will continue to be an important contributor to John Bull's needs in the matter of butter and cheese for many years to come.



PURE BRED COLLIES.

The Skater.

BY C. G. D. ROBERTS.

My glad feet, shod with the glittering steel,
I was the god of the winged heel.

The hills in the far white sky were lost ;
The world lay still in the wide white frost ;

And the woods hung hushed in their long white dream,
By the ghostly, glimmering, ice-blue stream.

Here was a pathway, smooth like glass,
Where I and the wandering wind might pass.

To the far-off palaces, drifted deep,
Where winter's Retinue rests in sleep.

I followed the lure, I fled like a bird,
Till the started hollows awoke and heard

A spinning whisper, a sibilant twang,
As the stroke of the steel on the tense ice rang ;

And the wandering wind was left behind,
As faster, faster I followed my mind ;

Till the blood sang high in my eager brain,
And the joy of my flight was almost pain.

Then I stayed the rush of my eager speed,
And silently went as a drifting seed,—

Slowly, furtively, till my eyes,
Grew big with the awe of a dim surmise,

And the hair of my neck began to creep
At hearing the wilderness talk in sleep.

Shapes in the fir gloom drifted near,
In the deep of my heart I heard my fear ;

And I turned and fled, like a soul pursued,
From the white, inviolate solitude.

The New Entomology.

BY W. R. THOMPSON, '09.

IN the development of a science or an art, a period of crude simplicity is almost always followed by one of an artificial, technical or ornate character, and this in turn by a return to a simplicity, which differs from that of the first period in that it can command and utilize the knowledge of the past. In Art the second era is exemplified in the painting of the medieval ages, in Literature, by the poetry of the eighteenth century, and lastly, in Biology, by the great attention paid to purely taxonomic work up to the time of Vesal and Van Leeuwenhoek. This method of evolution is quite a natural one, and places at the disposal of future investigators an immense amount of empirical knowledge. Real advancement begins after the close of the intermediate period. At the present day, the change in Entomological methods, which is certainly coming about, appears to indicate that we are entering upon the most advanced era in that there is a return to the methods of nature.

For many years, the use of insecticides has been the main plan of treatment in regard to our insect enemies. It would not be correct to say that these have been studied to the exclusion of everything else, but it is certainly true that they have received by far the greatest attention. The value of insecticides at the present time is unquestionable, and it is unnecessary to point out here the many instances in which they are used to immense advantage. On the other hand, however,

there are many cases in which for various reasons, their use is impracticable. Practically all the instances of this may be summed up under the two headings, first, insects which are beyond the reach of insecticides at all stages in their life histories; and second, insects which infest wide areas in such great numbers that the expense and labor involved in the application of poisons renders their use out of the question. Under the first heading may be mentioned the Hessian fly, white grubs, wireworms, many corn insects, and the cotton boll weevil. Under the second are included the Texas cattle tick, and practically all forest insects. This list could be easily extended, but it will be sufficient to discuss a few of the above. In the control of such insects natural methods must be resorted to.

The natural checks to insect increase are, in brief, unfavorable climatic and meteorological conditions, fungous or bacterial diseases, parasitic and predaceous insects and insectivorous animals and birds. To these natural checks we may add certain cultural methods which are really modifications of the methods of nature. Over meteorological conditions we can have no control directly, but a study of the abundance of an insect pest as determined by weather conditions would undoubtedly be of great value. The only thing possible in regard to insectivorous animals and birds is to protect them. Whether the fungi, bacteria and insects can be handled with success is yet to be perfectly demonstrated, but the favor

able results already obtained lead us to hope for great things in that direction.

Many of the cultural methods are of the utmost importance in dealing with injurious insects. Such a simple method as late sowing is very effective against the Hessian fly. Rotation of crops is the most effective way of dealing with the corn insects. Fall plowing is one of the most important of the methods in vogue against white grubs and wireworms. Spraying methods have been found to be useless in combatting the cotton boll weevil, an insect of the utmost importance in the South, and cultural and parasitic methods are being developed to great advantage. Again, general clean cultivation as a supplement to the use of insecticides must not be neglected or the latter can never accomplish any real good. In connection with cultural methods it might be well to take up in more detail the case of the Texas cattle tick.

The Texas cattle tick, or fever tick, (which is not an insect but one of the Acarina, belonging to the family Ixodidae) is distributed over a great part of the grazing land of the Southwest. On account of the fact that it carries the germ of the deadly Splenic Fever, it is a most important pest. A few years ago a conference was held in Baton Rouge, Louisiana, for the purpose of considering methods for dealing with this tick. The magnitude of the undertaking may be realized when one considers that not merely control, but extermination, was contemplated. The reasons for this step are these:—The insect is distributed over such a vast area that ordinary methods are useless. Its weak point was found to be in its youngest stage. The full

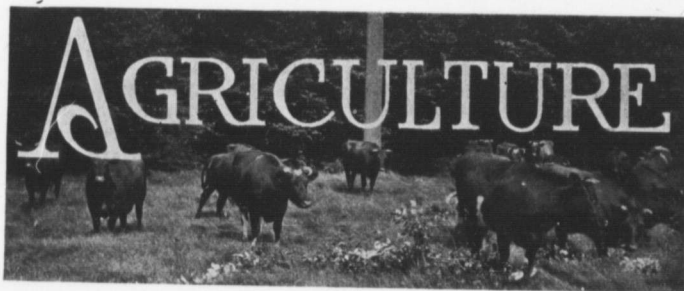
grown female ticks, when eggs are developed within their bodies, fall from the cattle and deposit these eggs upon the ground. The young ticks, upon hatching, crawl to the top of grass stems. When an animal brushes through the grass the young tick takes the first opportunity of transferring itself to the latter. Thus it is seen that if the infested areas were free from cattle for a sufficiently long time, the young ticks would perish. Also, the tick must be exterminated in the whole area which it covers, otherwise the roving herds would again distribute it. The difficulties in the carrying out of this plan, however, which necessitated a sort of rotation of cattle on different pastures, and the co-operation of all the cattlemen, have made it impossible so far to attain success. However, could the scheme be but carried out in a thorough manner there seems no reason why this pest could not be completely wiped out which would indeed be an unparalleled triumph for Entomological Science.

The latest development in Economic work, however, is what might be termed the Science of Parasitology. It has long been known that the animal and vegetable parasites of insects play a most important part in their control. The Science of Parasitology aims to utilize these for the definite control of man's insect enemies. The results so far obtained in this line are very favorable. In the case of the Hessian fly the efficiency and possibility of control of the parasites has been demonstrated by Webster of the U. S. Bureau of Entomology. Very promising results have also been obtained by W. Dwight Pierce in his work on the cotton boll weevil. The greatest work in this line, however, is that which is now being

carried on in the State of Massachusetts with the parasites of the Gypsy and Browntail moths. These two moths, accidentally imported from Europe, the Gypsy about the year 1868, the Browntail in the early '90's, have now become such terrible pests that the State of Massachusetts has been forced to spend hundreds of thousands of dollars in their control. The Gypsy has spread through a great part of Massachusetts and the Browntail is found as far north as Nova Scotia. The cultural and spraying methods employed only serve to lessen the spread of the insects. However, since these insects, in Europe, are far from being the plagues they are in America, and since the difference in climatic and topographical conditions in the two countries is not sufficient to account for the relative difference in their numbers, it is only reasonable to conclude that it is their freedom from insect parasites which permits them the unrestricted spread which they enjoy here. An investigation proved, as a matter of fact, that the insects are heavily parasitized in Europe, and with this fact as a basis the importation of parasites was taken up. Upon such a large scale is the work carried on that it is now recognized to be the greatest experiment in applied Entomology ever attempted. The work in the collection of the parasites covers the greater part of Europe and Japan. Considering the extremely complex nature of the problem, necessitating as it does, the working out of the life histories of several score species of insects, the elimination of their hyperparasites, careful work in the field to determine the relative efficiency of the different species and their relative adaptability to conditions in America, it is extremely gratifying to

note that satisfactory evidence of the establishment and efficiency of a number of the parasitic and predaceous insects has already been obtained. The eyes of the Entomological world are upon the Gypsy moth Parasite Laboratory, and the greatest credit is due to Dr. L. O. Howard and his staff for the splendid work that they are carrying on there. That success may attend their efforts is the hope of every Economic worker.

In conclusion, the writer would simply wish to state that the few ideas embodied in this brief article are not set forth with a view to the disparagement of the ordinary insecticidal methods. They furnish a ready and convenient aid against insect invasions, and as such hold a deservedly important place in Agricultural Economics. Their weak point lies in their superficial character and action. By the aid of insecticides we may control an insect pest, year by year in restricted areas but we cannot hope to exterminate it. The aim of all Economic Entomologists must be, if not to completely wipe out an insect pest, at least to thoroughly control it throughout the whole area which it infests. This may seem to some extremely visionary, but Economic Entomology is still in its infancy. The development of science is like that of a coral reef which slowly rises through the toil of myriads of little creatures, the results of whose individual labors seem insignificant, but which are in the aggregate, immense. Thus the patient and unremitting labors of men of science pile stone upon stone, each small in itself yet necessary to the completion of the wonderful structure of the Science of the Future.



The Chicago International.

The Ninth Annual International Live Stock Exhibition, held in Chicago from November 28th to December 10th, demonstrated fully by the magnitude of the exhibits and the large attendance, that the advantages offered by this great American exhibition are keenly appreciated. Further, that it is appreciated not only by the breeder and feeder of live stock, but also by the student of agriculture and the general public, who, as purchasers and consumers, are directly interested in the improvement of all classes of live stock.

This great exposition is justly termed International. In their search for the best the world offers for their purposes, the American breeders have drawn from Great Britain, France, Germany and Belgium. In the arena are exhibited representatives of the highest degrees of excellence from the most famous breeds of live stock produced in the above mentioned countries, along with the choicest that has been produced in the United States and Canada. The long line of stock paraded before the judges in each of

the innumerable classes were of such uniform excellence that the placing of the awards was necessarily a lengthy and painstaking task. Little wonder it in every case the decision of the judges did not always coincide with the opinion of the ringside talent. When the Purdue University fed Angus steer was placed second in his class by one judge, and later awarded the two-year-old championship over the steer who was formerly placed above him by a second judge—which award placed him in the running for the Grand Championship, which was awarded him later—nothing more was proven than the closeness of the competition, and the fact that in deciding the awards under such circumstances, where every detail had to be considered, experts evidenced a difference of opinion.

It is impossible in a paper of limited length to give a description of more than a few features found there. To the lover of live stock there was no more pleasing spectacle than the nightly parades of various classes of horses and cattle in the arena. Every

evening one or more breeds of cattle and horses were paraded, and as these aristocrats in the bovine and equine world entered the arena there was aroused an enthusiasm that boded well for the future of the American live stock industry.

The visitor from Ontario was struck by the preponderance of Percherons and Belgians over the hairy-legged draft breeds. These clean-legged breeds are becoming exceedingly popular in the United States, and were strongly represented at the exposition. Their most striking feature is their great substance, which in the premium winners was also combined with quality. It was noticed, particularly, in the Percheron classes that this year the judges were paying more attention to feet and legs than in previous years, a fact that met with hearty approval from the ringside. In the carriage classes, German and French coachers furnished practically all the entries.

There was no more spectacular feature in the exhibition than the six horse teams. Their appearance in the arena every night was always hailed with enthusiasm, and well they deserved it; of superb conformation, great size, and immaculate appointments; handled with remarkable skill by their drivers, they presented the ideal to be held up to the American breeders of draft horses.

The Canadian exhibit was not as large as would have been the case were it not for the quarantine imposed upon stock entering Ontario from Michigan. This prevented the breeders from re turning with their stock immediately after the exhibition, and many decided at the last moment not to exhibit. Those who were there ably upheld the honor of the Canadian breeder. Jas.

Leask brought forward a steer, Roan Jim, half brother to last year's Grand Champion, who came near duplicating for his owner the record of last year, but had to be content to be placed as reserve. Jos. Stone was the only other Canadian exhibitor of cattle and won several premiums. In the sheep sections, J. T. Gibson, with Lincolns; Sir Geo. Drummond, with fat South downs; and Jos. Bowman, with fat Suffolks, carried off all the premiums. While Jas. Robertson & Sons, H. Harding (Oak Park Stock Farm), and Haumer & Hodgson won several premiums in strong competition with Dorset Horns and Shropshires.

A feature introduced for the first time this year, and one which should prove to be of great educational value, was the competition, open to all comers, in judging the beef animals entered in the block test, upon the hoof. The competitors were to select the animals which, in their opinions, would present the best carcass when dressed. The animals were afterwards slaughtered and the carcasses judged, the competitors receiving their standings, as their placings coincided with that of the judges.

For the agricultural student and breeder of live stock the exposition contained a multitude of riches if he would but take advantage of them. There were brought together, to arouse in him an enthusiasm in his calling, to furnish him with ideals toward which to progress, the choicest that America possesses. After spending a day inspecting the animals to be seen there, the breeder could not but find that his respect for the dignity of his own calling had been increased. Which fact alone would repay the whole cost of the Exposition, for many

breeders to-day, though the numbers are becoming fewer, are inclined to disparage their profession and endeavor to induce their sons to enter other fields. So much for its value in the abstract. In a more concrete form the Exposition is of national benefit in that the breeder is enabled to readily see representatives of the breed or class he is producing, of the highest degree of excellence. Seeing them he

is able to compare his own animals with these typical specimens, and in all probability this will result in an improvement and a strengthening of his ideals. Also, he is impressed by the returns given by the animals in return for greater care and regard for their comfort, and will probably return to put some of his new ideas into practice.

H. Sirett, '09.

The Winter Fair.

The Provincial Winter Fair of the year that has just passed was in many respects typical of the trend of Ontario agriculture. True, the proposals for the erection of a new building have not matured and the Board of Managers has been compelled by the tardiness of the promoters to labor under the disadvantage of small show rings, inadequate quarters for all exhibits and miserable lecture rooms. In spite of the difficulties confronting them the directors have responded to the progressive demands of the times and have made the fair a greater educational event than ever.

The very noticeable lack of room this year could not be said to be due to an increase in the number of visitors but rather to an increase in the number of exhibits in almost every department. The showing of poultry was indeed a source of delight to the hundreds of poultry fanciers. No better individual birds have ever been seen in the Royal City. But the chief point in which the exhibit excelled over previous years was in the display of dressed

fowl. The classes in beef cattle, sheep and swine were also better filled. The animals were excellent objects lessons to the crowds that closely observed the work of the judges and eagerly listened to the reasons given for the placings. The special prizes given to amateur exhibits in beef cattle deserves special commendation. The result of this encouragement to our young agriculturists in the production of high class stock was manifested by an increased number of new competitors. It is to be hoped that the idea will be still further extended in the future.

Visitors in the past have always found the seed department situated in a secluded part of the upper story of the building. This year saw the removal of the department to the ground floor, where every person who entered the door could see the exhibits. The expected happened, and groups of inquiring men were ever to be seen examining the ears of corn, the bags of grain, and the mounted collection of weeds. Prizes offered for the best oats

from fields which won prizes in the standing field crop competition found seventy-six entries in the class. While Professor Klinck, of Macdonald College, with a number of assistants from the College, were engaged in the arduous task of choosing the best sample from many good ones, interest in the placing grew intense. After completing the work, the Professor explained the procedure of the judges. The fact that it was necessary to ascertain the percentage hull and the weight per bushel of a number of samples before the final decision would be given, speaks well for the quality of the oats.

The Board of Management also aimed at making a special feature of the lectures. For a number of years the addresses dealt, for the most part, with the breeding of live stock, proper type, feeding for profit, markets and how to supply them, etc. It was decided this year to secure competent veterinarians and well known men who have had practical experience in the raising of live stock, to speak upon the ailments common to our domestic animals. These lectures together with other live questions of the day were undoubtedly special features of the Fair. The innumerable questions asked of the speakers and the liveliness of the discussions were sufficient to prove that the innovation met with hearty approval.

Those who have long deplored the regrettable conditions which have kept the horse from being a feature of the fair were not entirely ignored. An afternoon in the lecture room was allotted to the discussing of common ailments affecting the horse. No further proof of the popularity of the addresses is necessary than that every chair was occupied and standing room in the doors and aisles was at a premium.

The judging-rings were among the chief attractions to the students. They laid aside their books and all thoughts of Christmas examinations for a time and wisely gave undivided attention to this important and helpful phase of their agricultural education. Happily the student body as a whole realizes the true value of the Winter Fair. It was pleasing to note that the unusually large number who entered the judging competition considered the prime object of the contest to be its educational significance, while the cash prizes were an agreeable remuneration for the exercising of good judgment.

The removal of the fair would prove to be a severe loss to the students and thus to the Province. We sincerely hope that Guelph will not fail to hold this one great event which places the city in a unique position among the cities of Ontario.

H. C. Duff, '09.



A Seed Talk.

BY J. BUCHANAN, B.S.A., DEPARTMENT OF HORTICULTURE, O. A. C.

For the Father of the Farm Boy.

FOR the farm youth who has the true agricultural instinct, there is a mine of knowledge at hand, and near the surface, into which he may delve with comparative ease and find much which will be as treasure to him. With a little wise direction and encouragement his interest may be so aroused that he will become a careful investigator of his natural surroundings and of the objects which he is daily handling. Then as one problem after another is investigated and a solution obtained, new questions will suggest themselves and his interest will naturally increase. At first these problems may be merely a source of entertainment to him, but in time much of the knowledge gained will become of great value, and in addition to this his powers of observation and his thinking and reasoning faculties will be greatly developed.

It would be no exaggeration to say that probably not one farmer's boy in one thousand, nor even one grown up

farmer in one thousand, has ever thoroughly examined a head of wheat; and yet how many millions of these wheat heads are grown, harvested and threshed on a farm each year. What better lesson in nature could a boy have than to cut a green head of wheat and carefully take it apart, observing the size and form of each individual part and the symmetrical and systematic arrangement of them; or what more interesting discovery could he make than to find that a wheat head is really made up of a large number of flowers, and flowers which are, after all, very much like the flowers on his mother's house plants or his father's potato crop, excepting that they are green in color instead of red, or white, or yellow.

On the farm, matters for interesting observation are numberless during the summer months, and yet I fear we are all too prone to let the boys continue to think that only at school can anything new be learned, and that the farm is rather a hum-drum place

where we toil simply because we have to earn our daily bread. The winter months also offer much opportunity for observation, a ripe head of wheat or barley taken from the mow in winter will prove quite as interesting as a green one taken from the field in summer. Moreover, there are many questions regarding farm seeds which can best be looked into during the winter when there is some leisure time.

Three times a day the boys are feeding oats to the horses. They know that the oats are covered with thin husks or hulls. Probably they know also that these hulls consist largely of indigestible material and have but little food value compared with the kernels of the oats; but have they—or have you—ever observed that some varieties of oats have much thinner



Fig. 1.

hulls than others, and hence a higher feeding value; or have you discovered that very often the heaviest, plumpest and finest looking oats have the thickest hulls, and hence the lowest feeding value? This is an interesting matter for observation, and also a matter of grave importance when viewed from the standpoint of dollars and cents. The average amount of hull on oats is about 30%, but some varieties have as high as 45%, and others as low as 20%.

Let the boys take a small handful of oats from the bin to-day and carefully remove all the hulls. This can be done by pinching the lower end of each seed between the thumb and finger, and thus squeezing out the kernel. When the hulls have all been removed, carefully weigh them and afterwards weigh the kernels and find the proportion by weight. If you find more than 35 per cent. of



Fig. 2.

hull, you had better change your variety at once and get a better one for next spring's seeding. If you have not a suitable balance for weighing small objects, take the hulls and kernels to the nearest drug store and ask the druggist to weigh them for you. An approximate idea of the proportionate thickness of hull in different varieties can usually be had without weighing, as the kernels are much harder to remove from thick hulled varieties than from those with thinner hulls.

In looking over a handful of oats

ently in another test. Try it for yourself.

Most of us are in the habit of running our seed grain through the fanning mill in order to blow out the lighter seeds and to screen out the smaller. Let the boys pick out fifty small, plump seeds and fifty large, plump seeds of oats, barley, wheat, or peas, and plant these in boxes side by side and watch the growth for a few weeks, so that they will fully appreciate the reason for carefully cleaning the seed grain. Figures 2 and 3 show the results of such tests, but do not be

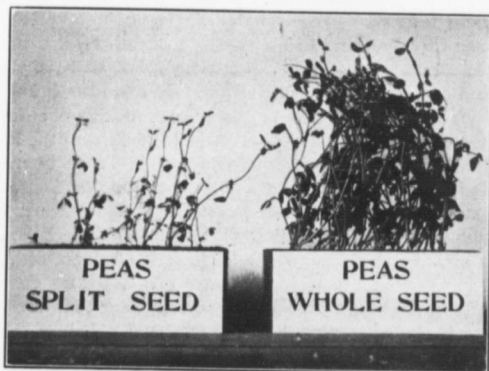


Fig. 3.

you may find a number of kernels from which the hulls have been removed in the process of threshing. It is claimed by some farmers that these naked seeds are not so likely to grow, or at least not so likely to produce strong plants, as the others. Pick out twenty-five of these and plant them in a box or flower pot, and in another pot plant twenty-five seeds with the hulls on. Allow all to grow for two or three weeks and observe the difference, if any. Figure 1 shows the result of this experiment in one case. It might turn out differ-

satisfied with pictures. Try the experiment for yourself and let the boys bring their schoolmates in to see it. Perhaps your next neighbor would also be interested and would like to discuss the matter with you. Figures 4 and 5 will suggest further tests that might be made to determine the value of different grades of seed.

The much discussed wheat and chess problem has been definitely decided but by few farmers, and should, if possible, be decided by all. Place a pound or two of the wheat left from last fall's

seeding on a table and carefully rake it over, a few seeds at a time, with the blade of your knife, in order to find out surely whether it contains any chess seeds. Many farmers sow wheat which contains a small amount of chess seed, without having noticed the chess, and are much surprised to find chess growing amongst the wheat. Some believe that chess seed will not grow, and that chess plants always come from wheat seed. By planting a row of chess seeds in the garden in the fall you can easily decide this matter. Allow the plants from these seeds to grow until they head out, in order to see whether they produce chess heads or wheat heads. Follow this up with any further experiments along this line which you may think of, and you will



Fig. 4.

probably arrive at a reasonable conclusion.

Does your boy fully understand why a miller will pay two or three cents per bushel more for some loads of wheat than for others? If not, ask him to examine a handful of wheat and note that some of the grains have a hard and somewhat transparent appearance while others look softer. Let him

select twenty or twenty-five of the softer seeds and chew them until they form gum, and then try the stretching qualities of the gum. When he has done the same with a quantity of the hard seeds he will find that they make a much more elastic gum. This elasticity is an indication of what the miller calls good quality in wheat, and the flour from such wheat will make bread which



Fig. 5.

risers well in the process of baking. The miller knows that a bushel of wheat which contains a large proportion of these hard grains will weigh more than a bushel containing many of the softer seeds, therefore he pays more for wheat which tests heavily. With this knowledge at hand, would it not be interesting to pick out a small quantity of these hard, flinty seeds and an equal quantity of the soft seeds and plant the two lots separately, in order to see whether they will produce seed of the same quality as the seed sown.

While we are in the habit of giving some attention to the selection of good seed of wheat, barley, oats, etc., for sowing, probably ninety-nine per cent. of us never think of applying the same principle to the handling of turnip and mangel seeds. We buy these seeds when we are ready to sow them, and put them into the ground just as they come from the store. Select a number of large seeds and a similar number of small ones of both turnips and mangels, and plant these in four separate boxes or pots and watch the growth. Not only will you observe a marked difference in the vigor of the plants from large and small seed re-

spectively, but you will also notice that, while each turnip seed produces a single plant, most of the mangel seeds will produce two or more plants. Let the boys cut open a number of mangel seeds and discover, if they can, the cause of this.

It is the firm belief of the writer that if Ontario farmers would do more towards encouraging their sons to take an interest in matters of the farm, and to investigate seed problems, etc., as suggested in the foregoing paragraphs, there would be fewer boys leaving their country homes. The boys would very soon begin to realize the unquestionable truth that farm practice offers as wide a sphere for the application of intelligence and skill as the practice of any other profession; and that farm life affords unbounded scope for the enjoyment of all that is most delightful, mentally, morally, and physically, and they would go forth to our schools and colleges, not with the thought of leaving forever the so called "monotonous hum-drum farm life," but rather with a determination to get the best all round training that the schools can give them, because they intend to return and engage in the grandest profession to which men are called.

The Union.

Again the annual meeting of the Agricultural and Experimental Union has gone down in the pages of history as an unqualified success. Keen interest, marked enthusiasm and excellent lectures characterized the sessions held December 7th-9th, 1908.

The far-reaching results of the Experimental Union need hardly be em-

phasized here, as it is recognized the world over, by all those directly connected with agriculture, as one of the most potent organizations toward advancing agricultural interests. By its means the united wisdom and experience of thousands of progressive farmers are brought to a common point for the benefit of all; the methods and



J. O. LAIRD, PRESIDENT FOR 1909.

varieties best adapted to the various climatic and soil conditions are made known; new varieties of seeds are introduced, many of which have added millions of dollars to the agriculture of this Province.

Professor C. A. Zavitz, in his admirable report on co-operative work in various field crops, stated that some 4,425 practical farmers had conducted experiments during the year now closing, and when we consider that some five hundred applications could not be filled, some idea of the rapid growth and development of the work can be realized, when in 1886 only twelve members composed the entire number of experiments.

The President, G. A. Brodie, in his opening address, reviewed the happenings of the past season which directly influenced the agriculturist. The money stringency of 1907-'08, while it was felt to some appreciable extent by the farmers, yet on account of the stability of agriculture, the stress did not make itself so evident as with the

commercial world. He spoke of the establishing of Rural Mail Delivery and Rural Telephones; the labor problem; the need of co-operation and many subjects of practical interest in connection with agricultural operations.

One of the most stirring reports perhaps was given by Professor E. J. Zavitz on the timely work as being operated by the Forestry Department. During the past season 400,000 young trees had been sent out for the purpose of forming a basis of plantations on small farms. It has also supplied public schools with collections of trees to be planted on school grounds. Yet the reforestation problem has received the greatest attention. In all some 125,000 acres of unfruitful agricultural lands as found in six different countries, has been located. Reclamation has already commenced in Norfolk County where crop growing and grain raising was an absolute impossibility on account of the lack of fertility in the soil. These large areas in some future time will be acquired and devoted to the production of timber. In this way acres now valueless may be turned to profitable account, and at the same time climatic conditions be improved and streams and rivers on which will depend our future; not only our water supply, but power will be conserved.

The Union was fortunate in having, at this time, Professor Carleton, Cerealist, Department of Agriculture, Washington, D. C. He addressed the members on a subject "Plant Introduction," new perhaps to many, yet highly appreciated by all. By means of some carefully prepared lantern slides of European scenes, the history of many of our cereals and fruits was revealed.

A vote of thanks was tendered Professor Carleton as a mark of esteem for his efforts in presenting such an interesting phase of our experimental work.

A talk by J. Eaton Howitt on the "Eradication of the Perennial Sow Thistle and other Troublesome Weeds," was attended by a very hearty discussion.

The Horticultural Department has done excellent service in carrying on co-operative work and in disseminating information in regard to fruit culture. Much of the comfort and pleasure added to farm life of late years is the result of the vast increase in the number of small fruit plantations which had their origin in the activity of the Horticultural Department through the Union. Professor H. L. Hutt stated in his report that experiments in fruit growing had been carried on through the Union for the past fifteen years, and during the past season plants were furnished to eight hundred and seventy-six experimenters. This year a slight departure was made in that seeds were sent out to many rural schools for gardening purposes.

Professor W. P. Gamble, in his report, on the committee on the Legislative Control of Feeding Stuffs, stated that during the past season a number of samples of commercial feeding stuffs had been carefully examined, with the result that saw-dust and other foreign undigestible adulterations had been found. This committee has worked diligently from year to year in their endeavor to protect the consumer against adulterations and misrepresentations of the same. Professor Gamble proposed that Professors Harcourt, Zavitz, and Day be appoint

ed by this meeting as a committee to interview the Government and impress upon them the necessity of enacting a law to control the sale of concentrated commercial feeding stuffs.

One of the most interesting features of the Union was an address by President Creelman on "Latin Agriculture." In his pleasing manner he described the rural scenery of Switzerland, Italy, and France, pointing out as he went along the various respective methods adopted in the tilling of the soil. While their methods are somewhat crude as compared with ours, the President stated that possibly their agricultural education was a step in advance; for there one branch of agriculture receives the whole attention of one College, whereas in Canada many branches are taken up. He concluded by saying that while he found Italy too cold in April and France too hot in May, and England too wet in June, Canada seemed to be just right when he arrived home in July.

"Seed Inoculation by Canadian Farmers," was the subject of an address by Professor S. F. Edwards. He stated that co-operative work with Legume culture was begun in 1905, and during that season forty-six cultures had been sent out, while last season, he stated, that two thousand one hundred and thirteen farmers had received cultures.

The Union is to be congratulated on the selection of men to fill the various offices for the ensuing year. The Review extends best wishes to the newly appointed president, J. O. Laird, whose photograph appears above, and vice president, G. S. Henry, as well as to the newly appointed committees, and trust that success will attend their efforts.



Market Extension.

BY J. W. CROW, B.S.A.

IT is significant that the factor which more than any other, is at present influencing the development of Ontario's fruit industry is neither supply, nor demand, but *distribution*. This Province possesses every natural facility for the production of a great variety of choice fruits, and a careful survey of the situation leads out to the conclusion that horticultural crops are destined to occupy a place of increasing importance in our agricultural economy. At the present time it can scarcely be charged that we do not produce enough fruit to supply our local markets, but it can be truthfully stated that production is not increasing nearly as fast as conditions would warrant. The reasons for this too slow development of the fruit trade are to be found in certain conditions which from time to time are very strongly in evidence on our local markets. Every fruit grower is familiar with the disastrous results which invariably accompany what is known as a glutted market. That this unfortunate condition is to a very large extent prevent

able is the firm opinion of the writer, as it must also be of anyone who will study the subject with reasonable thoroughness.

One hears the statement regretfully yet sincerely made, that certain localities capable of producing large quantities of fruit are unable to dispose of it at a profit because "the market is always overstocked at the time our fruit is ripe." It is undeniable that production is often entirely out of proportion to the needs of local markets. Some of us have never thought, however, of endeavoring to secure other markets than those immediately at our doors, and while our wide-awake competitors appropriate to themselves markets which rightly belong to Ontario, we foolishly allow our fruit plantations to fall into neglect and turn to some other line of farming which seems to hold out better financial inducements. Our most progressive shippers have hardly begun to realize the extent to which our fruits can be laid down successfully in distant markets. It may interest some to know that Ontario peaches

(which are *said* not to ship well), sold in London, England, this present season for ten cents each, having landed there in excellent condition. It is some years since Niagara district peaches were first placed in Winnipeg market in perfect condition after a lapse of eight days, and it is regrettable that more attention has not been given by Ontario shippers to this phase of market extension. Many still express doubt about the feasibility of placing our pears and even fall apples on the British markets, while the same classes of fruit are being continually and successfully disposed of in that market by British Columbia, Oregon, and California shippers. These fruits are also deposited safely in English markets from points as far distant as New Zealand, Tasmania and Southern Australia, from which countries they are carried in cold storage for an ocean voyage of seven weeks' duration. In the face of these and of many more similar facts, can it be denied that Ontario producers have magnificent opportunities in the markets of our own Northwest and in Britain? Shall it be said that Ontario's fruit men are behind the times and unable to cope with problems which other countries are solving to their own very great satisfaction?

This question of the extension of markets constitutes probably the most important problem facing us to-day. Its solution involves the planting in any given locality of *special varieties* selected with reference to their suitability for the market in question, as well as for profitable production in the said locality. It involves the planting of these varieties in quantities sufficient to guarantee *bulk shipments*, and if growers are to reap for themselves the

largest percentage of profit, it involves also the handling of the crop through a *distinct selling organization controlled by themselves*.

The key to the situation remains, however, to be discussed, and if the unfortunate experiences of the shipping season just closed can furnish any lessons which may point the way to better success in the future, it may be profitable to discuss them here. Peculiar weather conditions of this fall hastened the ripening of the apple crop. Apples were picked, packed, and shipped in unusually warm weather. As a consequence, fruit which under normal weather conditions would have reached Old Country markets in good condition was *received at Montreal in a slack and wasted state!* Needless to say, ruinous prices were received when this fruit was finally disposed of in trans-Atlantic markets. It is pointed out by Dominion fruit inspectors and others who examined the shipments, that the damage was done *before Montreal was reached*, and although cold storage facilities on the steamships were in very many cases taken advantage of, it was then too late to save the consignments. When one realizes that the temperatures taken at Montreal of the interiors of barrels ranged in some instances higher than 80°F., and in very many cases over 70°F., it will be plain that the statements made are correct. Many shippers suffered very seriously, but if their experience helps us to realize what handlers of perishable food products have long known, this lesson may be of value to us in the end. It is an established fact that the most important period in prolonging the "life" of fruits, vegetables and flowers, is the first few hours after picking; in meats,

the first few hours after killing, and in dairy and poultry products the short space of time immediately succeeding their production or manufacture.

Realization of the perishable nature of food products has led to very great changes in methods of handling these materials. Experienced shippers of this class of goods affirm most emphatically that immediate cooling is absolutely necessary in order to secure the greatest possible degree of keeping quality. High temperatures favor the development of disease, as well as detrimental chemical and physiological changes which finally result in decay, and the up-to-date shipper of perishable products simply proceeds to extract the surplus heat as quickly and economically as possible. Low temperatures prolong the "life" of fruits by retarding the progress of these diseases and the processes of decomposition. California fruit growers have set many a splendid example to their fellow-horticulturists, and in this matter of "precooling" they are again far in advance of most others. Large plants equipped with mechanical facilities for cooling air and circulating it through loaded cars are already in operation. Some of the newer plants at present under construction will be capable of cooling from twenty to forty carloads of fruit in four hours. They are located at central assembling points from which whole train loads of fruit are despatched to eastern markets. Some of them are owned by the growers who find that through the possession of such facilities they are able to ship very much longer distances and their fruit arrives in better condition. Icing charges, which approximate \$75.00 per car from California to New York, are also largely done away

with, as in moderately cool weather the cars cover the entire distance, occupying from eleven to fifteen days, without requiring to be re-iced in transit. The railways, too, are interested in the problem, and the Santa Fe and Southern Pacific roads are each establishing two large plants at different centres. They find that in addition to increasing the total quantity of business, the new system also permits of very considerable increase in the carrying capacity of cars.

The following is quoted from "The Fruit Trade Journal," New York, of October 24th, 1908, and is presented as showing the possibilities of fruit transportation under the new system. The pre-cooling idea has taken strong hold on the Pacific States and is being applied to the shipment of all classes of perishable fruits:

"The Northern Pacific Railway has just completed a test of a refrigerator car loaded with fruit, which will be of interest to fruit shippers. Northern Pacific car No. 98,558, equipped with Bohm ice tanks and double flax fibre insulation, was loaded at North Yakima, Washington, on September 23, with 504 boxes of pears.

"The car was iced on Sept. 22, the fruit was loaded on Sept. 23 and the car was then sent to the pre-cooling plant and pre-cooled, the temperature being reduced to 38 degrees. The car left North Yakima Sept. 24, and arrived at St. Paul at 3 o'clock a.m. Oct. 1. The temperature taken at St. Paul showed 34 degrees at the bottom of the car and 38 degrees on top of the load. There was, therefore, no change in the temperature of the car between North Yakima and St. Paul. The car passed Chicago Oct. 3 and arrived at New York Oct. 6. The temperature in the

car at New York registered 35 degrees on the floor and 38 degrees on top of the load.

"The ice tanks contained five tons on leaving North Yakima; four tons pass ing St. Paul and three tons and a half upon arrival at New York. The car was not re-iced between North Yakima and New York.

"The pears were sold at auction in New York October 8th, and the average price received was \$2.46 per box. The shipment was made by the Thompson Fruit Company, who have kindly consented to furnish information about the sale.

"The cost of equipping such cars is considerably higher than an ordinary refrigerator car, but the results obtained from this test indicate that it will pay both railway company and the shippers to put similar cars into service."

If we are to take our proper place as a fruit producing Province, it is certain that some such system as has been evolved in the west must be adopted here. The establishment of an efficient system of pre-cooling plants will do more than any other one thing to place Ontario's fruit industry on a safe and prosperous basis. The application of the scheme to Ontario's conditions will of necessity be slow and difficult, but it must come. In connection with the apple industry alone, it is beyond question safe to state that many thousands of dollars could have been saved this present season by the intelligent use of cold-storage and pre-cooling plants. Valuable experimental and demonstration work has been and is being done with tender fruits, notably in connection with the St. Catharines (co-operative) Cold Storage and Forwarding

Company's plant, and occasional small shipments of pre-cooled products have been made from other points as well. There would seem to be great need for more work of this nature, and it is hoped that the near future will see considerable advancement in our opinions respecting long-distance shipment of perishable materials and in our knowledge respecting the same.

It would be interesting to enter into a discussion of the influence which would be exerted on our local market conditions by the development of the system above described. We have yet much to learn regarding the holding of produce over a glutted period. Straw berries are said to have been held in cold storage for twenty-one days with out apparent deterioration in any particular. Canning factories would greatly benefit by the increased length of season, over which it would be possible for them to extend their operations on such fruits. Consumers generally would receive a more evenly distributed supply and dealers and growers would be saved from the too frequent losses occurring under our present system of non-storage.

It is hoped, however, that enough has been said to awaken interest in the use of cold-storage and pre-cooling as a means of distributing our fruits over a wider area. There is no question about the advantages which would accrue to the grower as well as to all others interested, through the placing on the market of adequate, regular and continuous supplies of high class fresh fruits. There should be no question ing of the use of every reasonable means in order to maintain such a supply in the largest possible number of markets.

THE O. A. C. REVIEW

EDITORIAL STAFF.

F. C. NUNNICK, '10, Editor.

S. H. GANDIER, '11, Associate Editor.

H. SIRETT, '09, Agricultural.

J. W. JONES, '09, Staff Photographer.

G. H. CUTLER, '09, Experimental.

G. H. UNWIN, '09, Artist.

A. G. TURNEY, '09, Horticultural.

MISS B. WILLIAMS, Macdonald.

O. C. WHITE, '10, Athletics.

MISS L. JULYAN, Assistant Macdonald.

S. KENNEDY, '10, Old Boys.

MISS E. M. WHITNEY, Locals.

P. E. LIGHT, '11, Locals.

C. F. BAILEY, '09, Business Manager.

Editorial

The earliest farmers in Ontario had to contend with innumerable and great obstacles; with the wildness of nature, the attacks of Indians and wild beasts

More Farmers Should Attend Short Course

upon the stock; the difficulties of obtaining implements and seeds, and with conditions very different from those which obtain at the present time. The pioneer farmer was compelled to employ the crudest methods. He cut down, heaped, and burned the small trees, and belted the large ones. He scratched the surface of the soil with a home-made plow and cultivated his corn with a wooden hoe. The crop that nature gave him was harvested in a careless manner and used wastefully. The same field was cultivated year after year until more land was needed; then he cleared another plot.

So long as land was so abundant no attention was paid to the conservation of the fertility of the soil. But now the time has come when such abundance of land is a thing of the past, and the questions of improved methods of farming, better varieties of seeds and breeds of stock, and the conservation of soil fertility must have their place in the deliberations of every progressive Ontario farmer.

It is well known, and we admit that it is not possible, for every young farmer in this Province to take a Two Years Course at the College, and for those who cannot take a longer one the Short Course was instituted. Few there are, indeed, who cannot arrange to spend a couple of weeks at the College during this time. The educational value of the Course is inestimable. It gives to the farmer a glimpse into those boundless fields of conquest

which are open to men who know what to do and how to do it. It gives the farmer a clearer grasp of what is meant by Scientific Agriculture by bringing him into closer touch with the College, with Experiment Stations, and with experimental work as conducted by the Union throughout the Province.

To every farmer, young or middle aged we would say, "Get out of the old rut; come up and get some new ideas, and then put them into practice. By so doing you will enable the Institution to fulfil to a greater degree the primary function of its existence."

The close of each year marks the retirement of the Editor of The Review.

The Retiring Editor

This year we lose in the person of A. D. Campbell, one of the most untiring workers and staunchest supporters that it has ever been the fortune of The Review to have.

It is, of course, natural to look forward to what we expect to do in the future. But in this instance it would be impossible for us to do so with that degree of assurance and brightness of prospect which we now can, if it were not for what has been done by those men who have served so faithfully in the past.

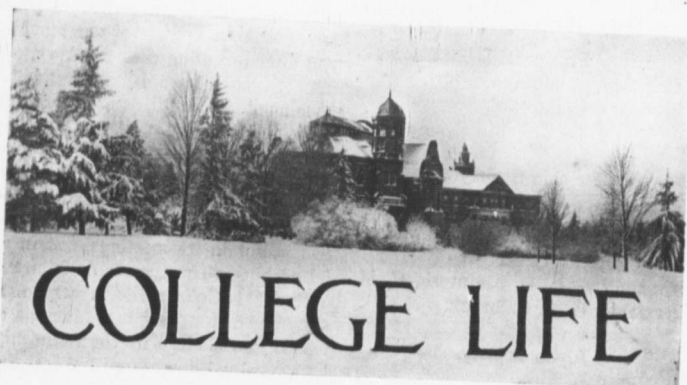
When Campbell became Editor a year ago he set before him high ideals, and be it said to his credit, he has never lowered those ideals but rather, has by consistent effort endeavored to raise the standard of The Review even higher than it has ever been before. His work has not always been pleasant, and perhaps few know the

merit due him, but Campbell has the satisfaction, however, of knowing that his work has been a success. We are confident, then, that a brilliant future is his in whatever vocation he may follow, for he has demonstrated by his strength of purpose, his soundness of judgment and his consideration for those with whom he came in contact that he is a man of great ability, and worthy of as unmitigated success in years to come as has been his during the two years he was connected with The Review.

In another column of this issue is mentioned the '06 Reunion, held in Guelph, on the evening of December 9th, 1908. We wish to

'06 Reunion call attention just here, however, to the spirit of loyalty, the feeling of pride and the optimistic views which were so much in evidence at this gathering. When we say loyalty we mean loyalty to their Alma Mater, to their country, and to each other. When we say pride we mean the pride taken in their calling, and indeed the pride of belonging to a class in which are so many strong men.

Taking into consideration the work being done by many of their fellows; the general influence toward raising the standard of agriculture in their own districts and the assistance to others which these men can give and are giving, the class has every reason to look forward to great usefulness in the future. To every member of the class The Review desires to extend its best wishes.



COLLEGE LIFE

College Clubs.

A Feature of Ontario Agricultural College Life which has made rapid growth during the past year is the formation of various circles, each one having for its aim the advancement of some very definite line of work or branch of science.

A Horticultural Club was one of the first to be organized. It meets every second Monday evening in the Horticultural lecture room. The program consists of papers on practical subjects, or are a technical treatment of some subject or subjects. The officers are:

President, A. G. Turney.
Vice-President, Maurice Middleton.
Secretary, J. Spry.

Some months ago, a number of the students, feeling that the regular College course did not afford them so extensive a course in Poultry Husbandry as they wished, decided to organize a Poultry Club. This organization meets every Saturday for practical work, and every alternate Monday,

when papers are given by various members. Much interest is being manifested and the club is becoming very popular. The officers are:

President, M. C. Herner.
Vice-President, J. M. Lewis.
Secretary, H. A. Dorrance.
Committeeman, H. A. McAleer.

One of the latest organizations to be formed is what is known as the Biological Club. Its object is to give its members an opportunity of meeting together and in an informal manner discussing any topics of peculiar interest to Biologists. This club meets every second Monday evening in the Biological Building. It has no officers, the person who gives the paper for the evening presides and its membership is limited to ten.

Literary Societies Organize.

The officers of the various Literary Societies for the ensuing term, are:

Union Literary Society.

Honorary President, Dr. Bethune.
 President, G. Manton.
 Secretary, C. Howard.
 Treasurer, O. C. White.

Delphic Society.

President, J. M. Lewis.
 Vice-President, W. E. J. Edwards.
 Secretary, M. C. Herner.
 Committee, A. D. McIntosh, C. M. Learmonth, G. A. Galbraith.

Alpha Society.

President, R. B. Cooley.
 Vice-President, S. Gandier.
 Secretary, Mr. Martin.
 Committee, E. Robinson, C. Schar-
 tow, I. B. Henderson.

Observations on Y. M. C. A. Work.

As a member of the retiring Executive of the Young Men's Christian Association, the writer looks back over the work of the Association for the past year with a sense of satisfaction, and yet with a tinge of regret. The Executive has endeavored to make all its activities beneficial, rather than spectacular. The speakers at the week night meetings, and the subjects they discussed, have been particularly chosen to instil into those who attend the meetings noble purposes. Such men as Professor J. B. Reynolds, Professor G. E. Day, W. H. Day and J. W. Crow, of the College staff; and L. S. Colton, of New York; L. Billings, of Montreal; C. M. Wright, of Toronto; Dr. Russel and Dr. Waters, from India, have addressed the meetings during the past year, and large numbers of students have been present to hear them. One hundred and fifty students

have been enrolled in systematic Bible study with an average of one hundred and fifteen meeting each Sunday morning. Seventy have been enrolled in Mission study, and the sum of one hundred and seventy dollars has been raised for missionary purposes. This looks like a prosperous report, and we believe it is, yet the most lasting good the Y. M. C. A. may hope to accomplish is not in its meetings, but in its friendships. The success or failure of a student's College life is very often determined in a few days after his entrance into College by the friendships he forms, and one cannot but feel that this is one place where the Y. M. C. A. fails to accomplish its best work. In a rather formal and organized way it makes an attempt to welcome the Fresh men, and to assist them in forming desirable friendships, and undoubtedly opens the way to the accomplishment of a great work in this connection. The lasting results of such work, however, cannot be obtained by organized effort, and it seems that in the past the work has ceased just at its beginning.

The new Executive is anxious to extend its influence in this direction, but any efforts it may make will count for little if the individual members of the Association do not co-operate with them. Consider for a moment, what your friendship means to that small circle of companions in which you move. The influence of friendship is self-evident. Character is contagious. Catch it from others, and let others catch it from you; and let it be a character which befits a true Canadian citizen. If each member of the Association will consider this seriously for a moment, and act upon his convictions, the already high tone of life at the College will be lifted higher, and the

Y. M. C. A. will accomplish a work during the coming year of which any Association might be proud.

Officers of the Y. M. C. A. elected for the coming year:

Honorary President, Prof. J. B. Reynolds.

President, W. R. Reek, '10.

Vice-President, R. B. Coglin, '11.

Secretary, P. O. Vansickle, '12.

Treasurer, H. S. Ryrrie, '12.

Chairman of Mission Study Com., R. Austin, '11.

Chairman of Bible Study Com., R. L. Moorhouse, '10.

Chairman of Music Com., A. Polard, '12.

Librarian, F. A. Barnett, '12.

Toronto Debating Union.

During the winter term of 1908, this College was admitted to the Inter-Collegiate Debating Union of Toronto, the other Colleges of which union are, Mc Master University, Victoria College, University College, Osgoode Hall, Wycliffe College, Trinity College and Knox College.

The first debate in which this College, as a member of the union, took part was held in Toronto with University College on Friday, December 4th. The subject debated was: Resolved, "That the Maritime Provinces erred in joining Confederation."

Mr. A. MacLaren and Mr. A. G. Turney, supporting the affirmative side of the question, represented this College. The speakers on the negative were Mr. A. Dewar and Mr. R. B. Whyte. The judges, Rev. Canon Welch, Professor Brett, of Toronto University, and Mr. Armour, of Toronto, decided that the affirmative did not succeed in proving their side of the debate.

The debate was very keenly contested by both sides and we have every reason to feel proud of the excellent showing made by both speakers from this College. One of the judges in addressing the meeting said that it was almost an impossible proposition to prove the affirmative of the question.

Although this College went down to defeat in this, the first contest, no regret for having entered the union need be felt. By belonging to this union we are in the strongest College debating league in Ontario, and as our representatives proved at the 'Varsity debate that they were not by any means outclassed, only good can result from remaining a part of such a union.

Inter-Collegiate Debate with Woodstock.

The first Inter-Collegiate debate of the season was held in the College gymnasium on November 27th, between Woodstock College and this College. The subject was: Resolved, "That the Maritime Provinces erred in joining Confederation." Ontario Agricultural College had the affirmative and was represented by Messrs. J. W. Jones, '09, and S. Todd, '10. Messrs. Quinn and Chapman, of Woodstock, upheld the interests of the negative. The judges, who were Dean Ridley, of Galt, C. L. Brown, M. A., and Professor J. B. Reynolds, gave their decision in favor of the negative.

The Stock Judging Team at Chicago.

For the past three years it has been our pleasure to record in the January issue an account of a victory won by our Stock Judging Team at the International Fat Stock Show at Chicago. This year we have another and sadder tale to relate. What was considered

as good a team as those of former years, journeyed to the Windy City, but defeat alone came their way. The members of the team were H. C. Duff, H. Sirett, N. D. McKenzie, A. Knight, and P. H. Moore.

Experimental Union Banquet.

This annual event was held in the College gymnasium on Tuesday evening, December 8th. Upwards of five hundred people sat down at the large banqueting board, where, as usual, a sumptuous repast was provided.

Mr. J. S. Willison, of "The News," Toronto, was the guest of honor, and during the evening delivered an able address on "The Obligations of Canadian Citizenship." Dr. Bethune proposed the toast to the students and ex-students. Mr. C. D. Jarvis, B. S. A., of Storres Experimental Station, responded for the ex-students, and Mr. P. E. Angle for the College students, while Miss Rutherford represented the girls of Macdonald Hall. Miss McKenzie, the talented elocutionist from Macdonald Hall, gave, by request, her popular selection, "Her First Pudding,"

while the whole evening was enlivened by the rendering of several numbers by the College orchestra.

Christmas Chapel Services.

On Sunday afternoon, December 20th, a special Christmas service was held in Massey Hall. The preacher, Rev. James Ballantyne, of Knox College, Toronto, preached one of the ablest sermons which has been delivered in Massey Hall during the past year. Special music was furnished by the choir.

The order of service was as follows:

1. Psalm.
2. Invocation.
3. Hymn 30.
4. Lesson.
5. Anthem—"The King of Love My Shepherd is."
6. Prayer.
7. Offertory.
8. Violin solo—Miss E. Rogers.
9. Sermon.
10. Octette.
11. Anthem—"Nazareth."
12. Hymn 519.
13. Benediction.



STUDENTS READY FOR WORK.

Athletics

First Year Indoor Meet.

SATURDAY, December 5th witnessed the fourth annual indoor meet held by the Freshmen, and it was in every respect quite up to the standard of last year. This is the second meet held under the superintendence of Mr. Reeds, and it is much to his credit that both of them have far surpassed any similar meet held before. The entry list was larger than in previous years, and in every event the honor of first place was keenly contended. This was especially so in the high kick, bar vault, and rope vault, the last named event being won by Pate, after one of the best exhibitions of rope vaulting ever seen here. Mc Rostie proved himself the best all round man, securing a place in a large proportion of the events, and he won the individual championship with seventeen points, Cooper obtaining thirteen, and Pate eleven points. At the conclusion of the meet a quarter-mile swimming race, open to the College, was held, and was won by Jack Harries, his time being eight minutes, thirteen and two-fifths seconds. Ryan followed closely in second position, only a few strokes in advance of Marryatt, who swam a strong race through out.

Inter-Year Baseball.

Comparatively speaking, indoor baseball is a new game at this institution, but though its existence has been of short duration it has gained many ardent friends, and that its popularity is

rapidly increasing was evidenced by the unusual interest taken in the preliminary fall series of the Inter-Year games. The second, third, and fourth year teams were very evenly matched, and a great deal of rivalry existed between them, so that whenever they met a battle royal resulted.

The first game brought together the third and fourth years, and until the eighth innings the juniors held their opponents down to a few runs. In that innings, however, the seniors wakened up, and started a batting rally that did not end till eight runners had crossed the plate. Another three runs in the ninth almost tied the score, but the early lead obtained by the juniors was too great to be overcome, and their first defeat, by a team now in the College, was chalked up against the boys of '09. The second game of the series between the first and third years proved an easy win for the juniors, the score being 35-1. In their game against the fourth year, however, the Freshmen showed great improvement over previous form, and held their opponents down to a score of 13-12 in six innings. The meeting between the seniors and Sophomores resulted in another close, and exciting game, but Coke was steady at critical stages, and fanned the second year batsmen when hits meant runs, so that his team were able to pull out a 15-12 victory. The finest exhibition of baseball seen here for some time was witnessed when the

second and third year teams came to gether. A win for the Sophomores would have placed them on an even basis with the juniors, and they all but accomplished their end. The fielding on both sides was very sharp, third baseman Hoffman being especially noticeable in this respect, he being responsible for many put-outs credited to the second year. Third year were slightly superior at the bat, but the base throwing of the Sophomores evened up such advantage, and the end of the ninth saw them a tie. An extra innings was played, but both sides were retired in one, two, three order, and the winners were left undecided. The final game of the series between first and second years was won by the second year in rather easy fashion.

With such a good quality of ball as has been played in the preliminaries, the championship spring games should prove the best ever held, and the result of the coming series will be watched with intense interest by all those students who closely follow the game.

Basket Ball.

Our first basket ball team engaged in its only game of the fall term on Friday, November 27th, the opposing line-up being a team from Woodstock College. For a few moments the visitors appeared to have the advantage, but by good passing on the part of our forwards, and some accurate shooting by Learmonth, College forged ahead. Play was very fast at this stage of the game, Woodstock securing several baskets, but their frequent fouling enabled College to score point after point on free throws, and at half time there was little to choose between

them. The second half, though not so fast as the first half, witnessed better basket ball, there being less fouling and more combination work on the part of both teams. Though in this half Woodstock never headed College, they were dangerous at all stages, and the winners were not assured of their victory till the whistle blew announcing the end of the game. The score at full time being 25-19.

College team was as follows:—

Guards, E. W. White, Hoy; forwards, Irvine (Capt.), Learmonth, R. R. Moore.

Inter-Year Series.

As in baseball, so in basket ball, a preliminary fall series is conducted which is not a part of the championship series that is decided in the spring term. These games are held partly to fill in a time that cannot very well be taken up by any other College game, it being too late for football and too early for hockey, but their primary object is to give training to the different teams, especially to the first year who usually have to develop nearly their whole team from raw material. This training prepares the way for some good, lively contests in the spring and it is then that the real struggle for supremacy begins. But as is nearly always so in Inter-Year games, great rivalry exists, and when this is the case good games result, whether they be merely for recreation purposes, or for the deciding of a championship. The past series was characterized by lively contests, and scores that give little indication as to which team will likely be returned the winners at the conclusion of the final series.

The opening game between the fourth and second years, was played

four men a side, and the result, 44-21, in favor of the seniors about indicated the merits of the two teams. The loss of a man from each forward line, broke up the combination to a great extent, and neither team exhibited its true form. The second game of the series in which the Freshmen and juniors were the principals, was won by the juniors, score 36-19. When it is taken into consideration that it was the Freshmen's first game, we will realize that before the year ends they are likely to be important factors in the race for the championship. The second year almost duplicated the score of the third year against the Freshmen, it being 33-16, but had the first year played up to the form they showed in their initial game the result might have been reversed. They were decidedly off color, and as the following game between the second and third years would indicate so also were the Sophomores. The latter game was very close, the juniors at no time having a distinct advantage, but they were always able to maintain a slight lead and won out by two points. The seniors in their game against the Freshmen were crippled by the loss of one of their best men, and did not win as easily as it was expected they should. The Freshmen realizing the weakened condition of their opponents put forth every effort to capture the game, but the more experienced seniors were always in their positions, and the best the Freshmen could do was 21 goals to their opponents' 26. Owing to the nearness of examinations the final game between the third and fourth years was cancelled till the new year. It should prove a close game as neither team have suffered a loss thus far.

Hockey Notes.

The beginning of the New Year, and the permanent setting in of good Canadian winter weather, naturally turns our attention to the hockey situation at our College, and we wonder what the prospects are this year for a good team, and a good league in which to place that team. Naturally also the old question of a covered rink arises. We are still without one, and so are handicapped to that extent at the very outset. But our hockey directors have not been idle, and in order that the team may derive as much as possible of the benefits afforded by a covered rink, and good ice, they have again secured the use of the Royal City rink for two practices a week. It is their intention to have the Inter-Year series played as early as possible in January. This will be splendid training for the already recognized good hockey players, and it is expected will unearth some first-class material from the Freshmen year.

The Athletic Association for various reasons, decided to withdraw from the Inter-Collegiate Union, and to enter the Intermediate Ontario Hockey Association. It is likely that we will be grouped with Galt, Preston and Paris, and whether we win or lose, we shall at least have the opportunity of playing a number of games, and in this alone there is greater incentive for men to get out and train for the first team, than there has been in previous years, when we were certain of only a game or two. That our manager and captain, Messrs. Edgar and Hoffman will do their utmost in the interests of hockey is assured, so it only remains for the remainder of us to do our part; then let us be up and doing.

Our Old Boys

K. G. MacKay, B. S. A., '06, writes from 6,400 feet above us, stating that he is enjoying a holiday in the far famed Himalaya Mountains. During his final year Mac volunteered for the Foreign Field. After graduating in Dairying he spent two months in Chicago University before starting for Central India, where he was given charge of a large herd of common and buffalo cattle; and the task of learning the language, and of trying to understand the thoughts, the manner of life and the religious customs of the people. "K. G." has spent the last two years at Neemuch, but after vacation he is to be located in Rasalपुरa, where he is to have supervision of the industrial work. About two hundred orphan boys were gathered at this station during the last famine, and are now being given a good general education. Mac's geniality coupled with four years' training on College Heights is standing him in good stead.

T. R. Arkell, B. S. A., '88, has accepted an appointment to the staff of the Ottawa Citizen, as editor of the Agricultural Department.

G. B. Curran, B. S. A., '08, has been appointed editor of "Farm Crops," of Winnipeg, Man.

Mr. F. B. Smith, Director of Agriculture in Transvaal, paid the College a visit lately. He reports that W. J. Palmer, B. S. A., is accomplishing good

results as Director of Agriculture in the Orange River Colony.

J. A. Stead-Burns graduated in 1894, a specialist in Chemistry. He went to Germany to continue his chemical research work, but returned to College some few years later. He is now studying theology in the University of Manitoba.

Upon the completion of his ten years service as chief Chemist for the Department of Mysore, at Bangalore, in Mysore, India, Dr. A. Lehman accepted a life pension and returned to America. He has since been offered and has accepted a position in the Department of Animal Chemistry at the State Experiment Station at Worcester, Ohio. The doctor assumes his duties on the first of January, 1909.

W. B. McCallum, better known as "Billy," graduated in 1894, and received his Ph. D. degree from Chicago, in 1904. He is on research work for the United States Government at Tucson, Arizona, investigating the flora of that region.

Mr. C. Simpson Garland, an associate of '83, visited College in November. He has wandered from the paths of agriculture to those of finance, being a stock broker in Montreal.

Norman J. Shopland, an associate of '07, is now resident at Sandwick, B. C.,

Fred J. MacDonald, of the class of '92, is in the railroad contracting business, and has on hand a large contract from the C. P. R. on their new road in Vancouver Island.

Adam Davis, B. S. A., '98, is engaged in mining in the Cobalt.

T. Floyd-Jones, an associate of 1897, is a contractor in Seattle.

B. C. Old Boys' Reunion.

We met the B. C. Old Boys—we talked, yarned, and did ourselves proud at the banquet board on the first day of October, 1908, and all this transpired in a dining hall on Hastings Street west, in the city of Vancouver, B. C.

Logan presided and told stories as he did in days of yore. Newman, from Ottawa, gave a reminiscence—he has many such—of a debate at the Dairy School in years gone by, the subject of which was "Local Option," and in which a fair young lady told of an horrible example: "He was a young farmer—one of the best in Puslinch—a noble fellow, hale, hearty and prosperous, but alas! He took to drink, and he is now in British Columbia.

Dr. King told the snoring story—it is said to be familiar to many of the Old Boys and F. S. Jacobs—philosophical "Jake"—sometime auctioneer, cynic, expressed his views on the big subject of the evening, "British Columbia as I see it on my first visit."

The News-Advertiser, of next morning, contained the following note:

"Twenty-five British Columbia residents who acknowledge the Ontario Agricultural College as their Alma Mater gathered round the festive board on Thursday night on the occasion of

the second annual banquet of the old boys of the O. A. C., and after doing full justice to an ample spread, whiled away the pleasant hours in reminiscence stories of ye olden days.

Officers were elected for the ensuing year as follows:

Hon. President, Dr. Jas. Mills, of the Dominion Railway Commission.

President, T. F. Paterson.

Vice-President, H. G. Wade.

Second Vice-President, R. D. Craig.

Secretary-Treasurer, W. H. Gunn.

Mr. F. M. Logan, manager of the Hygienic Dairy Company, was master of ceremonies, and the toasts, eloquently proposed and responded to by the different speakers, were:

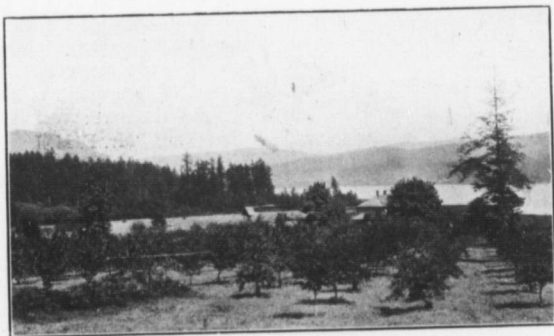
"The King," Mr. F. M. Logan; "Our Alma Mater," Messrs. T. R. Pearson and R. D. Craig; "Our Guests," Messrs. T. F. Paterson and L. H. Newman; "The West," Messrs. W. H. Gunn and H. G. Wade; "Our Profession," Messrs. R. J. Deachman and R. W. Hodson; "The Press," Messrs. E. C. Mahoney and F. S. Jacobs; "The Ladies," Dr. A. A. King, and Mr. E. McMaster.

The following ex-students of the O. A. C. are at present residents of the Province:

Armstrong, F. A.; Atkinson, W.; Aldwinkle, E. H.; Bodwen, G. G.; Bapty, Dr. W.; Craig, R. D.; Clarke, J. F.; Chadsey, E.; Chadsey, F. C.; Deachman, R. J.; Derrick, A. A.; French, P. E.; Gadd, Thomas; Gunn, W. H.; Goulding, George; Halse, G. H.; Higinson, W. H.; Hansen, E. F.; Honsberger, J. G.; Hadwin, G. H.; DeHart, J.; Hunter, H.; Haslam, C. T.; Hodson, R. W.; Johnson, P. B.; Kipp, A.; Knight, Dr. A.; Knight, G. E.; King, Dr. A. A.; Livingston, J. M.; Logan, F. M.; Langley, R.; Moffatt, T.; Mus

grave, J.; Mahoney, E. C.; Middleton, M. S.; Middleton, W. A.; McDermid, D. A.; McDonald, C. N.; McKray, C. N.; McGillivray, J. W.; McGraney, P.; McKillican, W. C.; McMaster, E.; Marsh, A. M.; Perfect, J. O.; Patterson, T. F.; Pearson, T. R.; Polson, T. C.; Palmer, F.; Robinson, W. G.; Russell, G. H.; Suckling, A. P.; Shopland, Norman; Wells, A. E.; Webster, J. L.; Wilson, Murray; Wade, H. G.; Wright, C.

Georgia Agricultural College at Athens; R. S. Shaw, Director of the Experiment Station, Lansing, Michigan; F. B. Linfield, Director of the Experiment Station at Bozeman, Montana; W. N. Hutt, Professor of Horticulture at the Carolina Agricultural College; H. A. Morgan, Director of Experimental work at Knoxville, Tennessee; G. I. Christie, Director of Extension work at the Agricultural College at Purdue University, Illinois, and H.



HOME OF G. H. HADWEN, DUNCAN, B. C.

The Secretary, Mr. Gunn, 137 Water Street, will be pleased to hear from any others who are now or intend in the future to become residents of the Province.

At the meeting of the Association of Agricultural Colleges and Experiment Stations, held recently at Washington, a number of graduates of this College who have made names for themselves in the agricultural world were found to be prominently identified with the work of the association. President Creelman and Professor Zavitz represented O. A. C. at that meeting. Among others in attendance were Messrs. A. M. Soule, President of the

A. Craig, Superintendent of Farmers' Institutes, Edmonton, Alberta—Mr. H. A. Craig was accompanied by his wife.

While in attendance at this meeting, President Creelman met Mr. B. M. Eftyhithes, B. S. A. He looks well and reports a good business in the chocolate trade.

W. S. Jacobs, '07, writing from Fayetteville, says, While at the State Fair last month we met an O. A. C. Old Boy, W. T. Newman, by name. He took the Dairy Course in '97-'98, and worked in the City Dairy, Toronto. From Toronto he went to Sault Ste. Marie, where he made such a success

of the business that he was chosen to fill a larger place in Memphis, Tenn. He has forsaken the dairy business, and is now general manager of the Puritan Grape Juice Co., of Memphis. While in Tennessee his wife died, but he married again last year, this time to a lady from Louisiana.

Cupid, who, judging from the October number of The Review, was extremely busy among the O. A. C. boys during the summer months, still continues to do his binding work. H. A. Craig, of the class of 1906, Superintendent of Fairs and Institutes of Alberta, being the last to be successfully conquered. Although Horace often attempted to mislead those with whom he came in contact by telling them that his wife and family were in the East, yet his silent and meditative manner at times indicated clearly that he was making rapid progress towards the matrimonial goal. He reached the goal at Saskatoon on Wednesday, November 11th, at 10 a.m., when he entered partnership for life with Miss Mabel Alcock, daughter of Mr. and Mrs. Alcock, of Saskatoon. After the ceremony the happy couple took a pleasant trip to Washington, New York, Boston, Ottawa and other eastern cities. They will return to Edmonton early in December where they will reside. Mr. and Mrs. H. A. Craig have our very best wishes for a long and happy life.

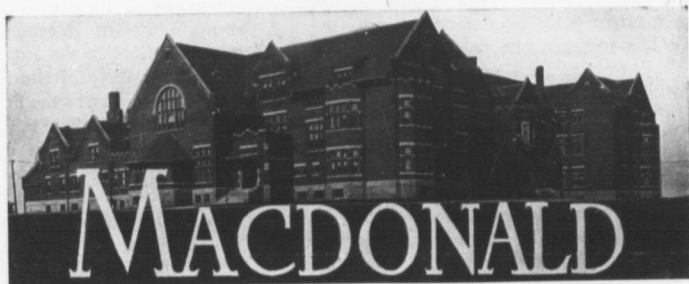
'06 Reunion.

In April, 1904, when the class of 1906 were having their Sophomore banquet, it was decided that they should meet again four years hence.

Accordingly on the evening of Wednesday, the ninth day of December, 1908, there met together in the Royal Canadian Cafe about forty of the Sophomore class of 1904. It was the first re-union of the kind that has taken place here at Guelph, and before dispersing they decided to meet again in four years time.

Frank Hart, B. S. A., was chairman, and President Creelman was the guest of the evening. The President spoke in a very happy strain recalling many of the pranks played by Naughty Six, and of the pleasure it afforded to look back to things which made one glad again, and occasionally to things of which one scarcely cared to boast. He also spoke in a very optimistic manner of the future when more boys would take a scientific interest in the farm and predicted that the day would come when this institution would be an Agricultural University, and that many of the men who come here will have had a previous training in agriculture in the High School, extending over a period of at least one year and possibly two years.

Every member present spoke in turn, recalling incidents that had taken place at some time or another during their College career, and telling stories. They had come together to enjoy themselves, and they certainly achieved their purpose, but despite the merriment there was in all that was said such an undercurrent of optimistic cheerfulness and a desire to be of service that made one feel a greater respect for his kind. The dominant sentiment seemed to be one of usefulness to others and to the nation rather than one of self-aggrandizement.



Home Value of Sewing

BY ETHEL FONDA.

ONE criticism often made when Home Economics Schools are discussed, is that they teach only theory; that they leave the actual work to be done by the students after they go home from school, and that sometimes, no practical application is made at all. This criticism can not be made when speaking of Macdonald Institute, as it emphasizes in every line of work the practical side, by really doing work that is necessary, or by making articles that are useful. The Domestic Art Department is no exception to this rule, and the various exhibitions held from time to time give ample evidence that many useful and wearable garments are made. The question often asked during exhibitions, "Are these for sale?" shows us that the visitors appreciate the skill and the thought which are expressed in attractively finished hats and dresses.

The girls who come for the Home maker and Short Courses are the ones who have the most work in sewing, although any of the Normals or House

keepers are gladly welcomed when they can find time for a sewing option. Since they come from so many schools, and have had such varied training, one sewing course would not be of benefit to all. For the girls who have had little or no training in this line before coming here, there is plain sewing, which teaches the simple stitches, and the making of very simple articles, such as bags, etc. For those who know how to sew by hand, there is a course in under garments, teaching the use of the machine, and the principles of fitting and cutting garments. For the girls who have more experience, a more advanced course teaches the making of shirt waists, including a plain waist, one made by hand, a tailored waist, and lastly, a fancy one. The course in skirts includes a plain skirt, one made of wash goods, and yet tailored, and a skirt of woollen material. In millinery, enough practice is given to enable the pupils to cover a buckram frame with velvet or silk, to cover a wire frame with straw, and make a lingerie hat. The trimming is supervised,

and various bows, bandeaux and bindings are taught. Embroidery, a fascinating subject, has the emphasis laid on white work, and quite a variety of stitches are taken up. Dressmaking gives the girls who are proficient in sewing, a chance to get many new ideas and methods which the changing styles make necessary. There is also a special course for lovers of sewing, which is intended to help the girls in the many kinds of home sewing, and gives, in the three months, instruction in dressmaking, millinery, embroidery, textiles, laundry work, and color work. Thus the work, as outlined, gives each girl a chance to go ahead according to her ability. In the Short Course, only plain sewing is required, and in the Homemaker Course, under garments and shirtwaists as well. This, you see, leaves all of the advanced work for options, and full classes testify to their popularity. Often two, and sometimes three courses are taken at once. Undergarments and millinery is a popular combination. Owing to the greater skill required for the making of garments, no other sewing course is permitted until plain sewing is completed or credited.

When the girls leave us, after one or more terms, what have they learned that they did not know before? What knowledge have they gained beyond the mere making of garments useful as that knowledge may be? What is it that makes the girls exclaim, "Mother won't know me when I get home?"

The girls begin, after almost the first lesson to buy materials. They learn how to buy goods, not by advice merely, but by experience. They learn the difference in the grades of cotton, not only by buying those grades, but by comparison with what the other girls

have. They learn the wearing qualities of lace. They become acquainted with the cost of home millinery, versus ready made hats. They find wherein the profit in millinery lies, and how they can renovate their last year's hat, and have it look up to date again. The various ways of trimming gowns and dresses are criticized for ease in making, and for effect. The numerous style books in the department are great aids in choosing stylish and becoming ways of making dresses. And this is a great need. Time was when the styles were more rigid than now. In other words, large and thin, tall and short, wore gowns built in the same lines. Now that there are so many ways of making gowns, and when all are really up to date, perhaps it is harder to make a selection. The slender girl often makes the mistake of trying to wear severe gowns that make her look still more slender, while often her shorter sister wears furbelows and flounces that make her look the same size as the Dutch gentleman who was described as five feet four one way, and four feet five the other.

Just as the grace of a dress depends upon its lines, so also the harmony depends upon its color schemes. Many girls make the color only a secondary consideration. But color adds so much or detracts so much from the tout ensemble that it should come first. The general harmony of the waist and skirt, or suit and hat, should be of primary consideration, not merely noticed before leaving one's room. In this as in many other subjects, we are grateful for the valuable assistance of the manual training teachers of the College. They have aided in emphasizing the beauty of harmony in color, and in speaking on dress, give the key note

of a costume as general suitability and simplicity.

From the sewing work also, there comes an appreciation of the labor and skill that go into a beautiful gown or a dainty bit of lingerie. The value of time is discovered. Students wrestle for hours to make a good button hole, and are horrified to find that button holes in the sweat shops are made for nine cents a hundred. Let us hope that after learning of some of the sweat shop conditions the girls will be still more anxious to make their own clothes, or at least be willing to pay for the labor in proportion to the time and skill used.

One goes to the stores and sees piles of waists, or skirts, or almost anything you like, each one in the pile so similar to the others that they cannot be told apart. A woman brings home a waist, for example. After putting it on she sees that it almost fits but is not enough out of shape to alter. Yet it neither has fit enough to give it style, nor has it any individuality. She may meet a dozen women with waists just like hers. Often the material is not so good as that which would be bought by the yard for a shirtwaist. In making it at home, good quality, a better fitting waist (insuring a longer life to it), and usually a better made waist is the result. A dressmaker—but what a bother if she must come to the house! What a nuisance to go for fittings! Usually a home has two women in it, and many are the pleasant hours that they can spend together, with sewing work to keep their hands busy. The girl who appears in a dainty, well-planned, well-made gown cannot fail to feel proud of it. She has a right to be proud, for pride is not conceit. And isn't her mother proud of her also?

"So let us then with care now ponder
What our weak skill originates;
To her no reverence can we render
Who never plans what He creates."

A Recollection of My First Experience in an Ice Boat.

The Bay of Quinte is beautiful at all times, a fitting background for the graceful fleeting sail; joyous in the brilliant summer noon-tide with the winged zephyr out in full career, exquisite in the mystic moonlight when the gentle breeze scarce lifts the sleeping foam—beautiful at all times. Aye, but it's oh for the touch of an eastern blast on New Year's Day in the morning!

It is Jan. 1st, 1908, and Belleville and the inhabitants thereof awake to realize that never could have dawned a more ideal winter day. The spirit of the coming year tingles in the air—who can resist its message? Apparently not the four sedately toqued and sweatered young Canadians who set off with their skates upon their shoulders toward that nearest glimpse of the bay.

Here, revealed beyond the shelter is the pier, the grandeur of the wonted scene strikes like a revelation upon even their accustomed senses—one vast expanse of, gleaming, jewelled whiteness, the farther shore piled high yet joining in till all is one great stretch of glittering glory on to the far horizon. We know it well. How shall we dare describe it? Soon they are off into the midst of it, gliding quickly over the glassy surface till upon rounding the peninsula of the Bridge Road a strange craft looms suddenly before them. "It's Joe in his

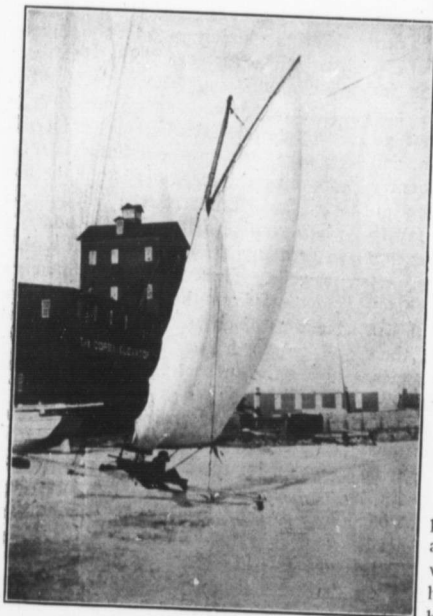
ice boat!" A call, an answering whistle and with few preliminaries in they pile, skates and all, their original intentions utterly renounced.

And now for worlds in which to try to paint that unimaginable feeling! Skimming, flying, rising, falling, stretching, dwindling, soaring—onward, ever onward, whither, who may

"In tempestuous glee
Over the far-off woods with tramp and surge,

Huge and deep-tongued, goes roaring
like the sea."

One last long breath and then on earth once more—at least on solid ice—they stand, supported on their trusty skates. "Where have we been?" "Hurrah!" "I feel so queer!" "Again, again, oh, do let's go again!" But alas the hours have sped too fast, the city clock can be heard through even that far waste of silence. They find themselves a good two miles from shelter with every moment precious. "What can't be cured, must be endured, and in spite of crossed desires the gay quartette makes record time upon the homeward route, rejoicing in the might of well-filled lungs, and gladly planning many future sails.



AN ICE BOAT.

tell? Who may tell, or who may care? Now upon the starboard tack, now upon the larboard, faster, fleetier, swifter-going, onward, ever onward! knowing neither care nor joy, knowing neither thought nor will. Borne lightly, heedlessly, by that "great wind" which

away from our own neighborhood, and have associated with people of other districts, we usually consider our neighbors—most of them, at least—the most congenial, happy, contented, and it might be said "model" people in the world. Go where you will, you will find kind,

Influence of Environment.

B. D.

Those who do not enjoy the privileges of a fairly full purse, and are obliged to remain all ways within the limits of their home surroundings, are apt to become "narrow minded," or as we might say, "living in a rut." Until we have gotten

amiable people. It is not until we have partaken of such kind hospitality as is meted out to us on all occasions in going from place to place through out this beautiful Ontario of ours, that we realize how many noble characters are to be found in rural districts. Brought up amidst the beauties of Nature, there seems to be a flame kindled within the heart which bursts forth in many kindly acts to brighten the path of those with whom they come in contact.

The organization which has as its motto "For Home and Country," and which brings together women of all classes—rich and poor, Protestant and Roman Catholic, from city and country—to study subjects pertaining to all branches of the home, cannot fail to create a more kindly feeling and sympathy for those around us.

As the years roll by, we find many changes in the homes of our land. Not many years have passed, since there were to be found in many homes, rooms used only for "company"—rooms in which everything was so stiff, that one invariably felt nothing must be touched for fear it might not be replaced at *exactly* the same angle again; cushions so elaborate that one did not dare to rest an aching head; the walls lined with pictures of the family, and their grand parents on both sides of the house; windows closed, and blinds down, alas! every thing which would make one long to fly to the woods where nothing but harmony and grace reign. Then, again, what a bother it is to some people to have guests in the home! From the first intimation of their arrival, all is excitement and worry, cook books must be consulted to get the most elaborate menu—to them eating is of

greater importance than the entertaining or comfort of the guests. The time is all spent on preparation of the food, and little or no time left for a social time with the friends. How much more would we appreciate "dropping in" unexpectedly at the meal hour, and partaking of the food which is considered good enough for the family, when there are no guests in the home."

Times are changing, and to-day people are beginning to adopt the "simple life," which includes simple food, simple clothing, simple home decorations, and the systematizing of work. When this state of affairs becomes universal, we may look upon our homes as approaching the ideal. It is not the outward appearance of the building in which we live that makes the home of so great importance, but the life within its walls. There is such an influence radiating from the home life on the building of character, that we should all put forth our best efforts, even under the most trying circumstances to improve our environment.

Although our position in life is not always an enviable one, still opportunities for improving it often come to us, we let them pass, hoping that they may present themselves at a more convenient season—that time does not always come to us again. One of the greatest comforts in life is to be content with what we have—whether it be small or great—and to strive to make the life within the home such that the boys and girls will grow up with a right ideal of home before them.

A Visit to a Coal Mine.

We had planned to go down a coal mine and actually had our passport, before we fully realized that we were embarking upon a journey fraught

with peril; at least so it seemed to our amateur minds. However, we were not to be balked by our uncomfortable thoughts, and one fine morning found us actually at the pit head, ready to descend.

Acting upon the advice of our friends we wore our oldest and shabbiest clothes, and we did not regret it.

The cage that took us down was so low that we were obliged to bend our heads to fit in, and all the while dirty water dripped down our backs.

There was a drop of about eight hundred feet before we reached the bottom of the shaft. We stepped out of the cage into a little world complete in itself. Electric lights served instead of sunlight, coal cars trundled past us as if by magic and the shouts of the men as they guided them, filled the air.

Our guide led us out of the din into a quiet room, known as the pit bosses' room, and here we were requested to "get our pit eyes." This consisted in sitting in inky blackness until we became accustomed to it sufficiently to grope our way around. We stayed about ten minutes and were then given a little electric lantern to carry. These lanterns have been used only within the last few years, and are taking the place of the ordinary uncovered candle which has been such a source of trouble.

We walked on for some time, until finally we came to a door blocking the path. When we opened it we found a similar one about twenty yards away. This, the guide explained, was to direct the currents of air so that all the slopes would have fresh air continually.

We were getting a little weary by now, and wondered just why we had come, when suddenly the tedium was

dispelled by a shriek from the girl in front. Of course we thought that at least the pit was on fire, and were rather cross when she explained that a large rat had run across her path. We wondered how these rats could exist in a coal mine, but our facetious guide remarked "that they had crumbs from their master's tables."

At last our patience was rewarded, and we came to one of the workings. Here we saw one of the machine picks in use. This machine is shaped rather like a cannon. There is a small platform where the man sits and guides it, and then the pick runs in under the wall of coal and clears out a large space. When this hole is the right size the pick is stopped and the shot firer puts in his gunpowder, and the whole wall is blown down. We each took a piece of coal away with us, and started back again. This time we visited the stables, and although most of the horses were out, we saw the stalls. Each stable has accommodation for about fifty horses and the stalls are large and airy. There was one old white horse, that the stableman told us, had been down in the pit for twenty years, and he was to be pensioned off very soon. I very reluctantly left the horses, and told the stableman that if he ever needed help to send for me.

In a few minutes we heard a car coming towards us, and we got as near the sides as possible. It passed, with a great deal of shouting and cursing from the small boy who drove, but this did not seem to affect the horse in the least, for he ambled on at his own rate. We noticed a leather protector on the horse's head, and we were told that this was to keep him from break

ing his forehead if he struck it against the roof.

It seemed to us only a few minutes more before we had reached the pit bot tom again, but this time it wasn't half so terrifying, for now we were old pit hands.

Oh, the joy of being in the sunshine once more, and we all vowed that, al though we had enjoyed our morning in the pit, we would not care to go in for mining as a profession

—C. F. M.

Camping in New Brunswick.

By Quispamsis,

The boat leaving St. John for Fred ericton, on a Saturday afternoon, in early August, was the meeting place for fourteen care-free people from dif ferent points of the city and suburbs. All carried suit cases, sweaters and sundry other things. There were merry greetings, then inquiries to find out if all the expected boxes and par cels had arrived. The weather was perfect, and the two hours or more on the river were looked forward to with much pleasure.

Leaving St. John from the north end just above the Reversing Falls, where the St. John empties into the harbor, the boat wound through the narrows, shut in by hills on either side, and then out into Grand Bay, a beautiful stretch of water three miles wide. This is the junction of the Kennebecas River with the St. John. West field Beach was soon reached, where many yachts, made a pretty sight, get ting under way for the usual Saturday afternoon races.

Soon after the wharf was reached, where the "Hobos" were to disembark, and they were safely landed with all their belongings. Two big teams were

waiting here, and they packed in, girls, boys, boxes, bags and all. The start was then made for their final destina tion, a wee lake on a mountain top, five miles from the river. As they drove up the long hill from the shore, a magnificent view of the river and surrounding country was seen. The river, about a mile wide, stretched away like a ribbon through the land scape of villages, farms and wooded hills. After three miles of hills the



A ROYAL SPORT.

last house was passed, and from there the way, rising always higher, led through the woods, over what was a road, in name only. This ended in a little clearing in which stood the substantial camp, built almost on the water's edge. The first glimpse of the lake was very lovely. It lay calm and still, completely shut in by hills and woods. A large bluff rising close behind the camp.

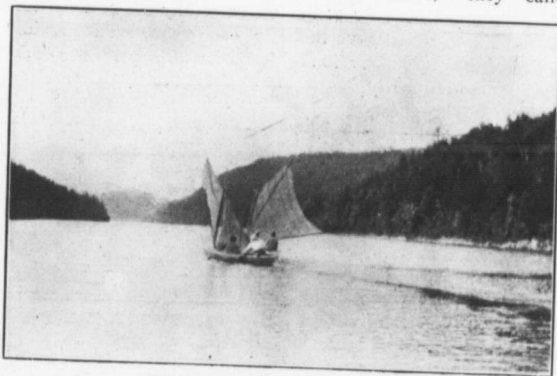
The party was greeted by the old captain, owner and sole inhabitant of

that quiet place, who had everything in readiness for their comfort. Everyone got busy, and soon supper was ready, which was much enjoyed off the long board table. The evening was then spent on the water.

Next morning the girls divided up

"These are the best cooks we have had yet."

Very happy days were spent, and the two weeks went all too quickly. The fishing was fine, and the trout caught the sweetest ever tasted. "Sweet eaters," they called them.



SCENE IN NEW BRUNSWICK.

into parties for the duties of house keeping, agreed by all to be made as light as possible, and the boys planned their share of the work. Two Macdonald graduates were among the campers, so great things were expected the days they were on duty together, and they certainly did give them good things to eat, and probably a better combination of food principles than they realized. The boys were good enough, though, to declare each day,

There were walks in the woods, boating in the moonlight, or music on the shore, and a race, most every afternoon in the little sail boats, while the girls stood on the wharf and cheered the victors. Pranks, practical jokes and mosquitoes helped to keep all lively, and there was never a lack of some thing to do. All were sorry when the day came to leave, and "Hobos' Retreat" was declared to be the best place of all to spend a vacation.

Among Ourselves

To our deep regret Miss Lucie Bailey was unable to complete the term's work, but returned to Toronto some three weeks before the end to undergo a slight operation. We shall all be

glad to have her back in January, and wish her every success in the tedious task of "making-up."

Miss Doak, one of our last year's

girls, paid a short visit to the Hall on Saturday, December 5th. She was warmly welcomed by her many still present friends, and entertained at tea in Miss Tenant's rooms in the afternoon.

On Friday evening, December 11th, the Seamstress Class of 1908 gave the first sleigh-ride of the season, as a fond farewell to an assorted party of their friends. The guests assembled in the Hall at 7 o'clock, and soon after the two large vans of warmly packed humanity were off into the stilly (?) night. Along the Three Mill Road to Waterloo Avenue, through the town, out again over our own College Highway, up to the Dairy, around the track, and back in front of the main building. Thus they "took the air," and reached the Hall in safety shortly after nine o'clock. Here a light supper of basting threads and minced embroidery needles was presided over by Miss Greist and Mrs. Fuller, after which the party divided into smaller groups and remained in earnest conversation until the 10 o'clock gong rang out its genial wish—"Good-night, and happy dreams!"

This was indeed the first, but by no means the last, of the winter's festivities, and we hope that the next three months will witness as perfect weather as was enjoyed last year, and that these columns may have several such jaunts into our glorious white-clad country-side to report.

Our warmest gratitude is extended to the O. A. C. Athletic Association for the dainty Christmas cards which

they so opportunely provided to meet the season's needs.

News of Sport.

The snow is here again and snow shoes are in great request, while skates must be sharpened at once, but before we are really out-of-doors for the winter the gymnasium provides ample scope for all superfluous energy. Not



READY FOR A TRAMP.

only have we many new appliances for muscle culture, and have learnt in our gymnasium classes many movements for use upon all occasions, but we have a brand new game, and an old familiar one, to fill the vacant moments and preserve our precious health. Mr. Reeds, the College Athletic Instructor, has kindly put up the net for "volley ball," a most thrilling and extremely graceful form of exercise, and has also had the floor marked out for basket-ball, which has as usual many enthusiastic devotees. Indeed there are more than the usual number of fresh supporters this year, and we hope that early in the new term a club may be formed and regular practice undertaken, to continue throughout the season.

The Women's Institute Meetings.

It is indeed an appropriate place to come to discuss matters of education, this Massey Hall of ours, with its in

valuable store of treasured knowledge, and its air of quietude. Following their custom, the Women's Institute meetings were held here Wednesday and Thursday, December 9th and 10th. The object of the meetings was to discuss the "Education for the Women of our Country." Progress of the branches was reported upon, and business settled. The Question Drawer was opened and satisfactorily closed by efficient answers. Information along varied subjects was given by addresses from "The People Who Know." Among these were Mr. C. C. James, Professor Harcourt, Miss Van Rensselaer, who is aiding in the direction of a Home Economics Department at Cornell University, and Miss Watson who gave an interesting address on "How Macdonald Institute can Help the Women's Institutes."

The only special exhibition of work made for the Women's Institute was that of the Domestic Art Department. This consisted of work done by the advanced Short Course Sewing Students, and of the Short Course in Domestic Science and Homemaker Students, who came to the department twice a week for instruction. The work shown was that done in the last three months. The amount of work done has been very satisfactory, and as the quality has kept pace with quantity, we feel quite confident that the girls who have worked so earnestly and well, will feel great pride in the finished articles they are able to take home.

Y. W. C. A.

On the evening of November 29th, our Y. W. C. A. was greatly favored by the presence of Professor J. B. Reynolds, who gave one of the most appreciated addresses which the girls

have had the pleasure of hearing this term. The subject chosen by Professor Reynolds was "The Teachings of Christ," handled in his usual brilliant and enlightening style. Miss Elfreda Rogers and Miss Jean Flavelle accompanied the hymns and Miss Flavelle played the obligato for the solo, "O Loving Father," which Miss Sidney Aird sang so beautifully.

At the meeting on the following Sabbath evening Miss Louise Julyan read some of Jean Ingelow's "Heart Songs."

Mrs. Watt addressed the meeting on the evening of December 16th, and her discourse was much enjoyed by those present. Mrs. Watt spoke on Missions and gave many helpful hints to her listeners. Miss Aird sang an exquisite solo, for which Miss Jean Flavelle played the obligato.

The meeting of December 13th was addressed by Miss Miriam Ames, upon "A Girl's Books and Correspondence," the subject being presented in an interesting manner. Miss Marion Rutherford accompanied the hymns.

Literary.

The Literary Society held on the 29th of November, in the drawing room of Macdonald Hall, was opened by the President, Miss Rutherford, calling for the minutes of the last meeting, which were read by the Secretary, Miss Rogers. After the business part of the meeting was concluded Miss Ina Harris played "Carnival Dance," by Gilder, in a very effective manner. The main feature of the program was an interesting and instructive talk by Miss Greenwood, given in her usual charming style. Her subject was the poetry of Robert Louis Stevenson, and the fact of its being rather an unusual subject made it even more interesting.

The closing number of the program was a piano solo by Miss Leslie Sutherland, who played very sympathetically.

Owing to the proximity of the examinations, the President of the Literary Society put the matter of arranging and presenting the next program of the Society into the hands of Short Course students. Needless to say, they rose to the occasion and on Saturday evening, December 12th, presented one of the most interesting programs of the year.

Miss Greist acted as President, pro tem, and Miss Helena Mackenzie occupied the Secretary's chair. The meeting was opened by the reading of the supposed minutes of a very imaginative past meeting. After this Miss

Josephine Kilpatrick played, in her usual capable style. "The Lady of Shalott," was the reading given by Miss Elizabeth Robinson, and it was followed by a much enjoyed vocal solo by Mrs. Fairbairn.

Several cleverly acted charades were acted by Misses Casey, Vallier, Aird, Sutherland, Campbell and Mackenzie. The words matriculate, manifold and scintillate, being among the words acted. Misses Kilpatrick, Jarvis and Robinson were then called upon to give stump speeches, but only the former complied with the request. A well rendered solo by Miss Jessie Auld closed the evening. Much thanks is due to the Short Course girls for their interest in, and their endeavor to help on the work of the Literary Society.

Much Ado About Nothing

War Is Declared!

The strange peace between the inhabitants of the aerial regions of the Hall and the dwellers upon terra firma which had existed in defiance of all natural laws, since September 19th, was at last, on November 23rd, disturbed by the bold action of those in the heights.

During the morning, rumors of a most unsettling nature had been circulating throughout the community, and when at noontide these were verified, open war was finally declared.

The night drew on, the dusky warriors above sped to their appointed posts, each an integral part of the great scheme of defence, and well satisfied that with every accessible point so fully guarded, the citadel was secure.

Little knew they what plans were developing below.

Under the cloak of darkness, the assembled forces gathered silently. The first cannon rent the quivering air (the ten-o'clock gong sounded!). A mad rush across the farthest draw-bridge—the complete surprise of the defenders—thus was the breach effected. Once in actual conflict, a desperate struggle ensued. Outwitted and outnumbered, the valiant defenders strove with might and main to repair the mishap, but all efforts were of no avail.

At last a truce was signed and the bravely opposed legions though mutilated and exhausted, repaired to the lofty torture chamber and joined hands in a stately minuet.

N. B.—This is an account of a pillow fight.

Mr. H.—“How do you do Miss —, Pleased to meet you.”

English Girl (unaccustomed to Canadian phrases)—“Eh, eh, It is nice, isn't it?”



Just Before Exams.

Miss R.—“When I went over to Massey to-day it was simply one mass of men.”

Miss F.—“Yes! That is why it's called Massey.”



We are glad to learn that Miss H— has received such a beautiful Xmas present. She is the proud possessor of a lovely table cloth, exquisitely ‘uten siled.’”

Snatches from the Sewing Room.

“Gee, but I laughed! And Dutch said——”

“Spring is co-o-ming.”

“Be jabbers, you *do* look thin in that skirt.”

“I'm afraid you will have to rip it out again.”

Wow-wow-wow-wow—



11 P.M

Homemaker—“Don't you simply love Dante?”

Normal—“Well, I find him rather deep, don't you find him very difficult to understand?”

Homemaker—“Oh, no! I think his ‘Paradise Lost’ is simply glorious!”

A SNOWSHOE SONG.

Hilloo, hilloo, hilloo, hilloo!
Gather, gather ye men in white;
The wind blows keenly, the moon is bright,
The sparkling snow lies firm and white:
Tie on the shoes, no time to lose,
We must be over the hill to-night.

Hilloo, hilloo, hilloo, hilloo!
Swiftly in single file we go,
The city is soon left far below:
Its countless lights like diamonds glow,
And as we climb we hear the chime
Of church bells stealing o'er the snow.

Hilloo, hilloo, hilloo, hilloo!
The moon is sinking out of sight,
Across the sky dark clouds take flight,
And dimly looms the mountain height,
Tie on the shoes, no time to lose,
We must be home again to-night.

—Arthur Weir.



We saw a thing of greenish hue,
And thought it was a patch of grass,
But when to it, we closer drew,
We found it was the Freshman class.

Let us all be up and doing,
Everyone we can, and thus,
We shall keep them from pursuing
Clever schemes for doing us.

W. H. Smith—"It is necessary to be conversant with the deficiencies of certain technical terms, that are frequently used in discussing diseases of the domesticated animal, if we would successfully combat the ailments.

Look always on the bright side of life. Nevertheless, when a boy's face shines with soap, look behind his ears for dirt.

A joke is something witty and sporty. Will some of our sporty wits kindly effervesce?

Mary had a diminutive canine,
It was a clever little pup;
It stood upon its hind legs,
When you held its front legs up.

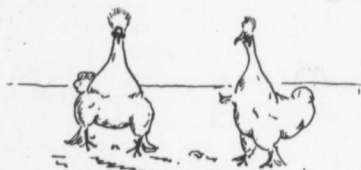
Fairhead (after banquet)—"Oh! If I could only hibernate."

The world is old, yet likes to laugh,
New jokes are hard to find;
A whole new editorial staff, can't
Tickle every mind.

So if you meet some ancient joke,
Bedecked in modern guise,
Don't frown and call the thing a fake,
Just laugh—don't be too wise.

Stafford, to the fellows at the supper table, concerning his room-mate—"I really do not see how Geo. Manton puts in the time. He never does any work. Say George! Why don't you learn to smoke so as to while away some of the long hours?"

Manton—"The time *would* hang heavy if it wasn't for my parrot."



The 'Silkies' 'sit up and take notice'.



The big game is rather bored.



Demonstrat Jacobus -



Ye Porter Pouts



Good old Borking.



What is it?



"Don't talk to me!"



The Fan-tail "a Retrospect"



Oriental Frill



Binkum challenges the world!

REMINISCENCES OF THE WINTER FAIR.

Chemistry—"Gentlemen, some of our best brands of collars are made of celluloid, which is a composition made from cellulose."

Freshman (anxiously)—"Will cellulose dissolve in rain water?"

Scene, Dining Room—

Senior—"Listen! Is that Ross Creelman's long-eared Freshman practising a new yell?"

Soph.—"Oh, No! It's only Birdsall smiling."

Professor Dean (Dairying)—“Such men have bubbles in their think tanks (and possibly water in their whey tanks).”



*An Old Boy—Hello! John, I guess you haven't seen me for a long time.
John—(Slightly deaf) That's yer!*

Disappointment.

A bee slept in a honey flower intending to take a drink of nectar in the morning. But a spider awoke earlier, and took her in. The spider hung his net on the flowers and said, she has made me a good supper, as sure as eggs are eggs. But, alas! A frog walked around after dinner, and grabbed him by his legs.

The frog ran home, and told his wife that he had a spider for her tea. But a duck dived down and grabbed his neck, a nice fat frog, said she.

I've got you this time, said the duck, I reckon. I've struck luck to have caught such a big fat one. When up I came with a smiling face and pop! bang! went my gun. So the duck died. I picked her up and I found her plump and fat, and said with a smile, my wife and I will sup, on Sunday, on that. But we didn't after all, for the duck got away inside our neighbor's cat.

Awake! Thou Slumbering Juniors!
Tell me not, in mournful numbers
Life is built of empty dreams,
For the student lad who slumbers
May not be just what he seems.

Life is real, life is earnest,
A diploma's not its goal,—
To remember all thou learnest,—
Or to find a kindred soul.

Lives of Seniors all remind us
We can make remembrance call(—)
Call to other men who know us—
How we 'sieved Macdonald Hall!

Let us then be up and doing!
With a will command our fate!
Still achieving, still pursuing,
Learn to chase and never wait.
S. J. Neville, '10.

Conversation at a table re challenge
to a hockey match.

Stafford—"Well! I won't play on that team."

Several voices—"I never played hockey before."

Shaw—"Reek skates with the 'girls.'"

Irvine—"Anyone who skates with the 'girls' can play hockey."

Moorhouse—"Why won't you play on the team, Staff?"

Stafford (excitedly)—"I skated with hockey stick for eight years, and never got hurt; but I skated with a 'girl' fifteen minutes, and was ruined."

Innes—"A man is known by the company he keeps."

Hutchinson—"I guess I'll change my room!"

"Here's where I lose a little ground,"
said the Freshman, as he stepped into the bath tub.

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Amateur Gardening.

Tell me not in mournful numbers
 Gardening's an empty dream;
 If you coo to your cucumbers
 They will promptly put on steam.

Shun the gardening that's faddish,
 Cultivate the saner way;
 Coltsfoot planted with horse radish
 Never will evoke a neigh.

Never try if you can wheedle
 Garden sass out of its bed;
 Don't sew string beans with a needle,
 Thinking that they will grow thread.

Grieve not when your sweet potatoes
 Greet you with a bitter smile;
 Fret not over slow tomatoes—
 They will ketchup after a while.

When the oyster plant is growing,
 And the egg plant is, as well,
 Each from each you may be knowing
 By the cackle, or the shell.

Four o'clocks at times need winding,
 And you set them by the stem;
 Watch your carrots—you'll be finding
 That at times you have a gem.

Brussels sprouts your patch may car
 pet;
 Watermelons sometimes leak—
 Use your pumpkin, and be sharp, it
 Helps to pump out every week.

Any crop will come up faster
 And be nicer to the view,
 If with mustard you will plaster
 Acres while the ache is new.

Lives of gardeners remind us
 We can make our lives to match,
 And departing leave behind us
 Footprints in the garden patch.
 —Chicago Evening Post.

HONOR WHERE HONOR IS DUE.

We have used Herbageum for our sheep for several years, and find it a splendid appetizer, and would prefer it to any other preparation we have ever used. For lambs we feed it from the outset, and continue it until they go on the grass, and we always feed it to our show sheep. We have also used it for our calves with separated milk, and consider it without equal.

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