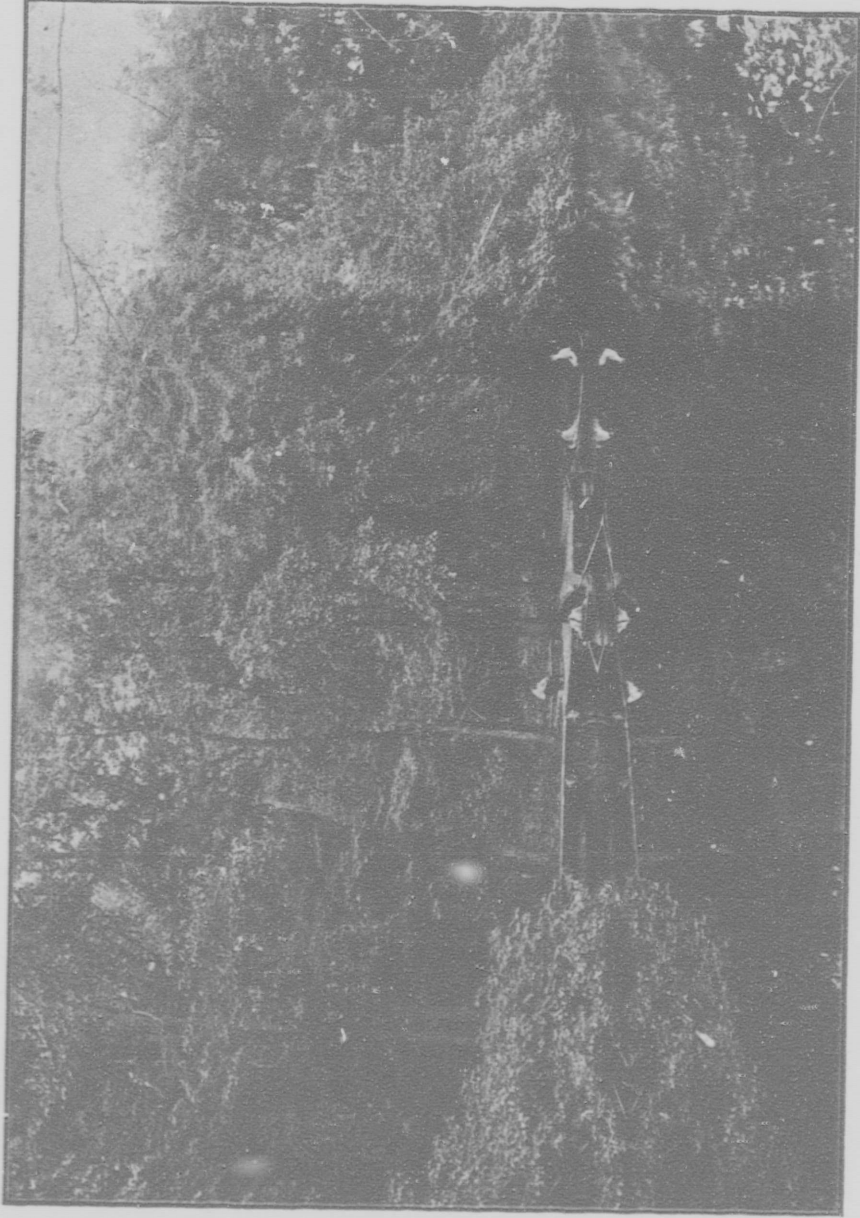


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“ Still glides the stream, and shall forever glide ;
We men, who in our morn of youth defied the elements, must vanish.”

The O. A. C. Review

Published monthly during the College Year by the Students of the
Ontario Agricultural College, Guelph.

THE DIGNITY OF A CALLING IS ITS UTILITY.

Vol. XVI. ONTARIO AGRICULTURAL COLLEGE, DECEMBER, 1903.

No. 3

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LABOR.

Strong weave the wroughten masses
Above th' abysmal roar,
Safe on the steel way passes
The wind-swift carriage o'er.

The columned building swarmeth,
With all the arts prepare;
There's nothing seen but charmeth
'Mid beautiful and rare.

Broad sweep the plains all crownèd
With autumn's gems and gold
That sturdy men embrownèd
Bear to the garner's hold.

Through poet's dream unfolding
An image sweet hath passed;
In glimpses but beholding,
Yet forms he it at last.

Fair is your work, O nations
Of mankind, boldly wrought;
The ages' generations
All mysteries have sought.

But manifold in feature -
Your marvels though designed,
Yet greater than your creature
Remains the moulding mind.

Then those are robes of glory
About that form of toil
With murky marks and gory,
From labor's rude turmoil.

He made the lovely image,
The path above the spray;
He fought the soil till grim age,
He fashioned forth the lay.

Then, idler, come before him,
And humblest thought thou bring.
Bend low and true adore him,
For work has made him king !

—From "Poems of the New Century," by
R. S. Jenkins, M.A., Trinity
College.

NOTES ON THE RECENT PROGRESS OF AGRICULTURE IN THE DOMINION OF CANADA.



Those who observe and think, nothing can be more manifest than the rapid development and progress of Canadian agriculture in recent years. Looking back over even a comparatively short period, we see that Canadian farmers have made a clear advance in technical skill,—their methods have been improving from year to year; they are more intelligent and refined than they were; and they live better, dress better, and look better—much better—than they did fifteen years ago.

The products of our Canadian farms have increased within the last decade far beyond our most sanguine expectations. The value of the grain, live stock, bacon, poultry, cheese, butter, fruit, etc., of the country has gone up rapidly, while there has been little or no rise in the price of these commodities. The following statement of the sums received for the live stock and farm produce exported in 1903, compared with the receipts from the same sources ten years ago, is sufficient evidence under this head:

	1893	1903
Animals and their products ...	\$31,736,499	\$69,817,542
Other farm products	22,049,490	44,624,321

SOME ITEMS IN THE ABOVE.

Butter	\$ 1,296,814	\$ 6,954,618
Cheese	13,407,470	24,712,943
Eggs	868,007	1,436,130
Grains	13,834,277	29,466,391
Bacon and hams	1,970,518	15,906,334

No less striking has been the increased interest in agriculture all over the Dominion. Our farmers have begun to realize in some measure the importance and dignity of agricultural pursuits; they have more respect for themselves and greater interest in their work than they had ten or fifteen years ago; and people of other classes think better of Canadian farmers and farming than at any time in the past.

(1) *The Ontario Agricultural College*—Which, by its class-room and laboratory training; its experiments; its bulletins and reports; its leadership in outside undertakings for the benefit of farmers; the public lectures and addresses of its professors; and the work of its ex-students—graduates, associates, and others—has stirred every part of the Dominion to increased interest and renewed activity in agricultural pursuits.

(2) *The Ontario Agricultural and Experimental Union*—Which, in connection with the College at Guelph, did pioneer work on experimental lines and is now doing as much as any other organization at home or abroad in testing varieties of crops, methods of cultivation and planting, kinds of manure, selection of seed, dates of seeding, etc.,—extended and checked by co-operative experiments at something over 3,000 places throughout the Province of Ontario, where the annual reports of these tests are issued from year to year and studied by farmers in all parts of the country.

(3) *The Farmers' Institutes*, a College extension movement—Which originated in the Ontario Agricultural College, extended till it covered the whole Province of Ontario, and then reached out to the other Provinces of the Dominion,—east to the Atlantic and west to the Pacific; a most excellent organization, which has done more than any other to awaken farmers, beget in them a desire for information, improve their methods, and arouse them to a sense of the dignity and importance of their occupation.

(4) *The Travelling Dairies*, another College extension movement—Which was proposed by the Minister of Agriculture for Ontario, and organized and managed by the Ontario Agricultural College, proceeding systematically till every part of Ontario was visited and a very great and easily noticeable improvement in the quality of dairy butter was made, and then being employed by the Province of Nova

Scotia, where very valuable work on the same lines has been done within the last two years.

(5) *The Dairy Schools*, at Guelph, Kingston, and Strathroy, in Ontario; at Winnipeg in Manitoba; and Sussex in New Brunswick, and Charlottetown in Prince Edward Island,—that in connection with the College at Guelph having been established in February, 1893, and the others at later dates,—all instructing and training makers for work in the cheese factories and creameries of the country; most of them giving instruction in farm or home dairying; and one or two devoting a considerable amount of time and attention to experiments in butter-making, cheese-making, and the curing of cheese,—the results being regularly published for the benefit of factorymen and farmers throughout the Dominion.

(6) *The Dominion Experimental Farms*, which, by distributing seeds and plants, studying methods of cultivation, testing varieties of crops, and publishing reports and bulletins based on experiments and investigations in the central, eastern, and western provinces, have furnished valuable information to farmers and have prompted them to experiment and investigate more or less on their own farms.

(7) *The Work of the Dominion Department of Agriculture* in securing cold storage transportation for farm produce by land and sea; starting cheese factories and creameries where specially needed in the more remote east and west; selecting and quipping stations for breeding and fattening poultry at convenient centres throughout the Dominion; organizing a sub-department for the improvement of seed by selection and breeding; and enacting laws and appointing officers for the inspection of fruit that is packed and offered for sale in either home or foreign markets,—all under the control and direction of the Minister and the Commissioner of Agriculture for the Dominion.

(8) *Winter fairs, provincial live stock sales*, and the recent extension of *inter-provincial trade in pure-bred stock*, all organized, controlled, and directed by the Live Stock Commissioner for the Dominion,—the first great Canadian Exhibition of fat stock, breeding cows, etc., having been held at Guelph under the authority and with the support of the Minister of Agriculture for Ontario; and similar exhibitions or fairs having since been held at Ottawa, Ont., Amherst, N.S., and Calgary, N.W.T., by the help of the Minister of Agriculture for the Dominion.

(9) *Fruit Experiment Stations*—which, at fourteen places in the Province of Ontario, have, for several years past, been testing varieties of fruit—old and new varieties—and publishing the results, in order that people throughout the Province may know the leading varieties of each kind of fruit and be informed as to those which are best adapted to the soil and climatic conditions of each locality.

(10) *Definite and specific instruction in creameries and cheese factories*, especially in the Province of Ontario,—for some time under the control of the Dairy Associations of the Province, but recently—and much more effectively—under the direction of the Department of Agriculture in Toronto.

(11) *Sending*, free of charge, direct to the Post Office address of all members of Farmers' Institutes and many other farmers, *agricultural reports and bulletins* as they are issued, especially by the Department of Agriculture in Toronto and the Experimental Farm at Ottawa.

(12) *The agricultural press of the Dominion*, which has shown much enterprise and undoubtedly has made a very considerable contribution towards the development of Canadian agriculture, especially in the live stock branch.

Among the agencies not included in this list, we should mention the School of Agriculture at Truro and the School of Horticulture at Wolfville, Nova Scotia; the Experimental Farm in Prince Edward Island, a number of small agri-

cultural schools or departments in the Province of Quebec; and the leading fairs or exhibitions at Toronto, Halifax, Winnipeg, and other points throughout the Dominion; and we should specially emphasize the initiative on several lines

by the Minister of Agriculture for Ontario, and the great influence which he has exerted by operating on and through the numerous associations under his control.

JAS. MILLS.

NATURE-STUDY AND COUNTRY LIFE.

"There was a child who went forth every day, and what he saw became part of him for a day, or a month, or a year, or a stretching cycle of years" (Whitman).

"It's the thousand winks of childhood that widen into one clear dream of age" (Blackmore).

IF every student and ex-student of the O. A. C. were thoroughly imbued with the "New Education" ideal, which aims at putting the pupil into sympathetic relationship with his surroundings, and would do his utmost to introduce this "New Education" into his home school, it would not be long before the standard of work done in the schools of this country would be vastly improved, and better educational results would become apparent all along the line.

We in our self-satisfied way forget, I think, that the conditions of our day are somewhat anomalous, especially in educational matters. Our primary and secondary schools have had their systems handed down to them from the universities, the schools of the few, and those few the leaders. The courses of study were primarily intended for the favored few, usually the sons of the influential, who were carefully trained for their future spheres of action, in the army, the church, or the bar. This education, however, well adapted for the governing class, did not meet the requirements of the masses, who had to toil for their living. Up to the present our school system has been based largely on this

medieval conception of the divine right of the rulers to rule; that the only system of study to be tolerated was the one adapted for the training of the ruling classes; and that as labor was beneath the dignity of a ruler, any study which had to deal with the common things of Nature, the special field of the laborer, was not given a place on the programme of studies.

The "New Education" assumes that the masses should be brought into sympathy with their life-work by a study of their surroundings. This new phase of study has been termed "Nature-Study." It is believed that while the study of Nature will add new interest to the life



A Black-ringed Caterpillar on a celery plant. Does it grow? I must find out how it lives. I must care for it and see what becomes of it.

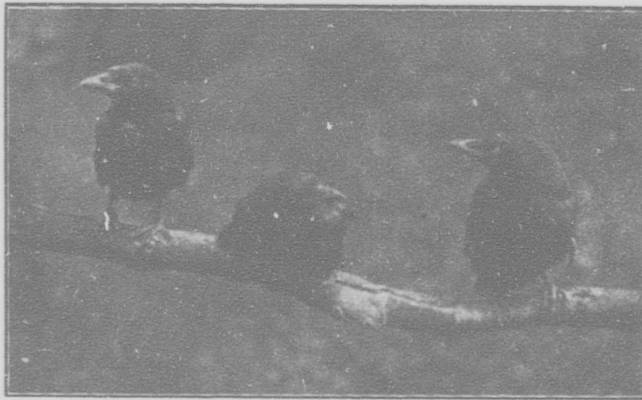
of the pupil, it will at the same time reinvigorate the other essential studies of the school. It is believed also that the study of Nature forms a suitable means of "Culture," and that it will bind more

closely than before the school and the home. It is often taken for granted, and not without reason, that the studies of the school are unpractical, and have little to do with real life; but when the parents see that the teacher and pupil are working together to understand the common things of Nature, a new interest will be aroused, and a bond will be established between school and home interests. The parents will soon come to see that school life is after all a preparation in the very best sense for life's work.

We are getting past the age when we consider the languages and the higher mathematics as the only means of culture. Our ideas are changing rapidly in this regard, and modern education teaches us

Nature furnishes the most interesting topics for the young pupil?

The question naturally arises: How would the introduction of Nature-Study into our schools improve rural conditions? In reply it may be said: (1) The child, instinctively interested in the simple natural objects about him, under careful guidance, would be led to investigate them and to ascertain their meaning. The child has an inbred spirit of investigation, and if this is properly and carefully directed, it will yield him results of great educative value. The main results will be the development of the power of observation and interpretation,—of an



Are these young or old crows? Where is the old crow's nest? What do they eat? Where do they spend the winter?

that any subject may be a means of culture if proper pedagogical principles can be applied. Professor Bailey says: "Classics and calculus are no more divine than mechanics and potatoes are." It is undoubtedly true, however, that under present conditions some subjects afford better means of culture than others, but this may be due to the fact that the older subjects are better understood than the more recently introduced subjects. From a pedagogical point of view the Doctrine of Interest comes in and asserts that those subjects which are the most interesting to the pupil should as far as practicable be used as study subjects. Who doubts that

attitude of inquiry into the meaning of the common facts in the field, forest, garden, or roadside.

(2) The child would acquire a stock of experiences, which, even if somewhat unrelated, would form the materials of thought and action in later life.

(3) The farm and its surroundings would become more interesting, and have a deeper meaning to the child. Country life would become more satisfying because the things of the country would become part of his life. The child observes, and interprets the meaning of every change which affects plant and animal life of the farm. He becomes a student and a phil-

osopher, able to relate cause and effect; and no person is content to separate himself for long from those things with which he has an abiding sympathy, and which form his normal environment.

(4) The information which he has gained in his studies of Nature would become of service to him when he leaves school to begin the more serious operation of farming. His studies of the unfolding of the plant from the seed, bulb, and tuber have made him familiar with conditions which govern growth; his garden plot has already made him an amateur gardener; and he knows the habits of the weeds

to call it—the education of the 3 H's, *Head, Hand, and Heart*, will give a child a broader and a nobler outlook upon life, and will make him live a fuller and a more useful life than was possible with the old-time training in the 3 R's—Reading, 'Riting, and 'Rithmetic.

Another question is often asked: How are we to place Nature-Study on the school programme, when every minute of the school day is already occupied? In answer to this we may say that Nature-Study is not a *new* subject, but it will



An ideal place for Nature-Study—the meeting place of water plants and animals with land plants and animals.

which come up, as it were, to compel him to stir the soil; he has become acquainted with the wireworm, the cutworm, and the borer; he knows the common diseases of plants, and the best way of preventing them; he knows the birds which help him in fighting insects; in short, his Nature studies would help him at every turn.

(5) Nature-Studies "make the lives of children more happy and interesting by opening up an easily-accessible and attractive field for the exercise of brain, hand, and eye."

The education of the *brain, hand and eye*, or as Prof. J. W. Robertson prefers

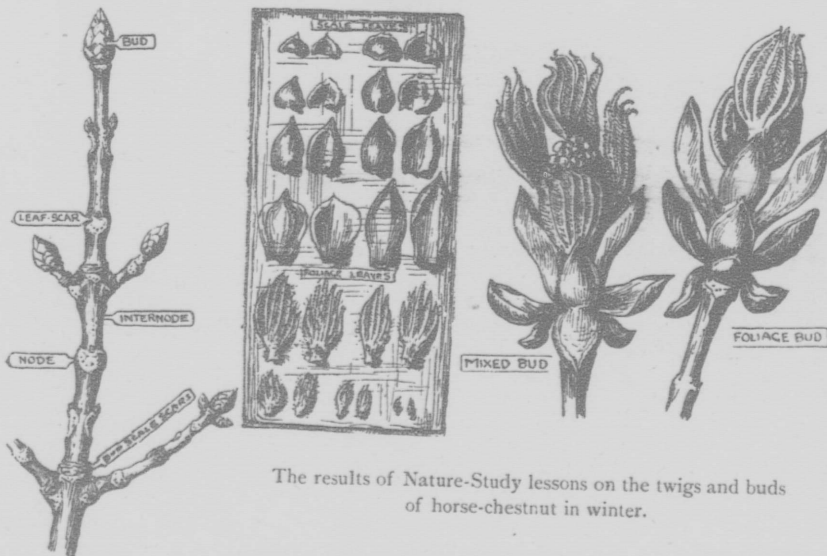
form the basis for kinetic work in most of the other school subjects. The programme of studies will have to be thoroughly revised, and a wise correlation of studies made. Conflict of studies will cease, and a unity will be organized among the subjects, which will lead up to the educated and cultured man.

There will be considerable overturning of present school systems before Nature-Study can take its proper place in school work. Education will become less bookish, and memorization of facts will not be accepted as education. The spirit of

Nature-Study will permeate the entire system of studies, and vitalize the whole.

The child who is a student of Nature will always take an interest in Nature literary masterpieces, and after an appreciation of Wordsworth and Tennyson, Thoreau and Burroughs, he may be easily led to study the subjective writers. Nature-Study should add freshness and vigor to the study of literature, and it should make clear many paragraphs which otherwise would be obscure. What is better calculated to cultivate the taste for

J. Brittain, of Woodstock, N.B., one of the MacDonald travelling instructors, says: "But we must not expect sudden results in education. Characters are not formed nor tastes developed and established in a few days or months. The best results will not appear for many years. Hitherto books have supplied the material for school training. Where Nature-Study has been given a place in the school curriculum it has been put there mainly to *satisfy* the demands of a few *without granting* them. The world is ready for the change, but the world doesn't know it is ready!



The results of Nature-Study lessons on the twigs and buds of horse-chestnut in winter.

the beautiful than the study of the trees, shrubs, and flowers? Every child should acquire to a certain extent the vision of the artist and the poet:

"One impulse from a vernal wood
May teach you more of man,
Of moral evil and of good,
Than all the sages can."

The MacDonald movement for the improvement of rural schools, initiated by Professor Robertson is, I believe, a far-reaching one. Already some of the travelling instructors among the schools are at work, and although obstacles meet them at every turn their reports are cheering. Mr.

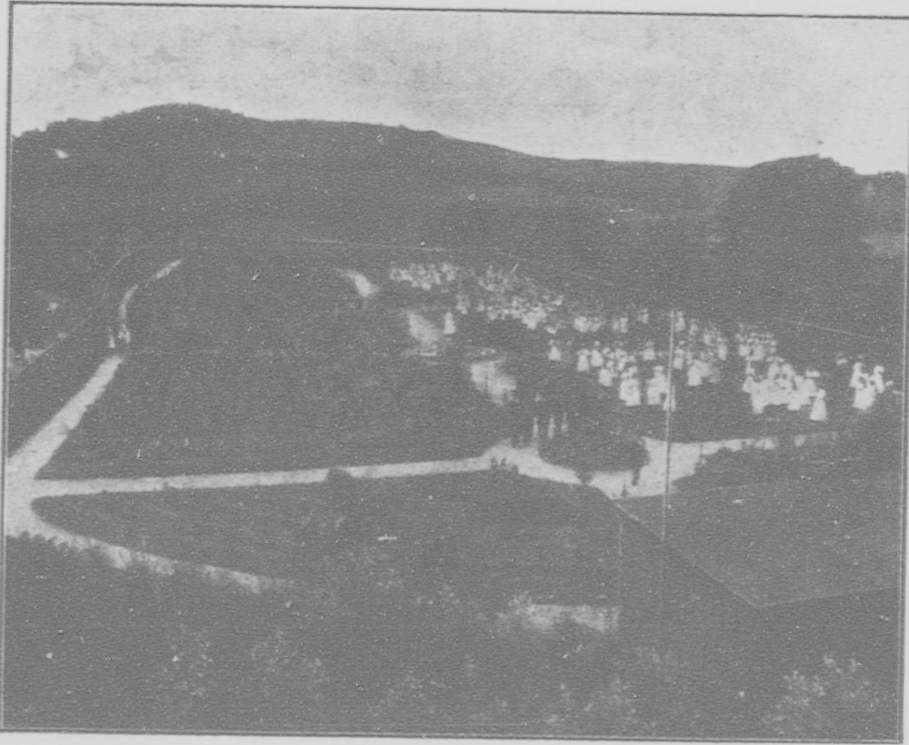
As obstacles to the progress of Nature-Study I may note that the people are not yet willing to pay for the work because they do not understand its value and significance. The education of the school teachers generally has been almost exclusively bookish, and they feel themselves hampered, if not by lack of taste, by lack of Nature-knowledge."

Mr. G. D. Fuller, B.A., the MacDonald travelling instructor for Quebec, writes: "It is hard to get at public opinion regarding Nature-Study, but while I have received quite as much encouragement from the public as I had expected they are still largely indifferent. I have found

that the pupils, particularly in the 3rd to 5th years of their school life show the greatest interest in it; and, in addition to the training in observation, the inquiring and investigating attitude of mind and the broader view of their environment, I find that without any straining after correlation (which I think very undesirable), it furnishes the very best material for such other school work as English, drawing, and painting."

excellent work in this line in previous years."

Mr. J. W. Gibson, MacDonald travelling instructor for Carleton County, Ontario, writes: "Whenever practicable we had field excursions, which I believe proved a real inspiration. Bulbs were planted, and the children are anxious to see them in flower by Christmas. . . . Speaking generally I can say that the work has progressed more rapidly than I



A German School-Garden, showing the walks, the nursery, the flower beds, vegetable plots, and wild-flower plantation.

Mr. P. J. Shaw, B.A., MacDonald travelling instructor for Nova Scotia, says: "Nature-Study is being received very favorably by many, and with great expectation by a few. The teachers I find quite responsive, willing, indeed anxious to co-operate with me and to do all they can to help the work along. All the teachers in my group of schools have taught Nature-Study before, and some have done

had expected. We have had some opposition, but the chief advocates here are clear-headed men and the leaders in every worthy enterprise. Hearty commendation is more frequent than condemnation. My highest expectations have been surpassed in the way the boys and girls have received the work. Both from my own observations and from the assurances of the teachers in charge I am able to say

that a new life born of a new interest and a new sympathy has come into the schools. This is evident not only in the Nature-Study work, as we are wont to call it, but in the regular work of the school."

What Nature studies should be taken up at school? In answer to this it may be said from the teacher's standpoint that those objects should be studied first about which the teacher is best informed, for his knowledge will lend enthusiasm to the lessons. If he understands plants then

when once their investigating spirit and their sympathies are aroused there will be no dearth of subjects of study.

Nature-Study when at its best is most spontaneous; the subjects are those which come most directly and intimately into the life of the pupils. Therefore those materials are the most appropriate for study which the "Rolling Year," as Jackman calls it, displays as the Pageant of the Seasons. In spring, the birds arrive and build their nests; the insects leave their winter-quarters; the pools teem with tadpoles; the buds open; the seeds sprout;



The Brook—A tireless worker, a joyful companion, and a refreshing neighbor to the plant societies on either side.

plants should form the material for the first lessons; if he knows the way of birds, then the first lessons should deal with birds; if he is acquainted with insect life, then insects should be first studied; if he is an enthusiastic geologist then the rocks and soils and brooks should form the basis for the first lessons.

The teacher, however, should hasten to investigate problems relating to many phases of Nature by himself and along with his pupils, for he will soon find out that children are keen observers, and that

and the brooks are swollen with the spring thawing.

In summer, Nature's industries are busy; plants are producing flowers and seeds; insects are everywhere abundant, the beneficial and the injurious, the slayer and its victim; the young nestling birds are growing; the tadpoles become frogs; weeds require attention; and the brooks chatter merrily. In autumn, the birds are migrating; the frogs bury themselves in the mud; the leaves color and fall; the fruits ripen and are scattered; the squir-

rels have their winter supplies of nuts; and the work of frosts becomes apparent. In winter, when Nature is reposing, the trees still invite study; and the story of their buds and leafless twigs are interesting; the winter birds compel our attention, likewise the frosts, the frozen pane, and the snow-flakes; the domestic animals and pets are worthy of study; the vegetables, like the carrot, turnip, beet, and onion, should be compared, and bulbs should be planted.

In my judgment, one of the best means of arousing a Nature-Study spirit is the making and the keeping of school gardens. Garden work can be readily correlated with the other subjects of the school programme, thereby it is doubly valuable. For many years France, Germany, Austria, and Sweden have had gardens in connection with their public schools, and are looked upon there with great favor by the authorities. In many districts in Germany the whole school curriculum is based on garden-making, and garden-keeping. Space will not allow me to say more here about this important phase of Nature work, but I have already

devoted an article to this subject in the *Canadian Horticulturist* for July of the present year.

It will very likely happen that many mistakes will be made at first by teachers and advocates of Nature-Study. These, however, will be gradually corrected as experience is gained and the aim of the study is better understood. The getting of information, it should be remembered, is not the chief aim, but the development of a personal interest in and sympathy with the common natural objects of our surroundings, by observing them and finding out their meaning. "The teacher and the way of teaching are more important than the subject matter."

Moreover, many well-meaning people will ridicule the Nature-Study movement, but this will cease as soon as the results of the "New Education" are shown in the production of more enlightened, contented citizens, better equipped for complete living.

W. LOCHHEAD.

RANDOM THOUGHTS ON ECONOMICS.



SINCE receiving your letter some time ago, requesting me to contribute something on Economics that might be of interest to agriculturists, I have not had many opportunities of giving the matter the necessary thought. The time which "the man behind the plough" has in these days to give to such meditations is somewhat fragmentary. The pressing questions of how to economize personally, and have one man do two men's work, are apt to crowd out questions of general and social economy, as, it is needlessly to say, will be recognized by all my readers. There is a personal economy, as well as a national, and

it is the power which too often exclusively engages our attention; for the two are not independent, and unless our social economy is right our individual economy will be largely nugatory.

I wonder if we often properly conceive economy. It means housekeeping, literally the law of the household; but the science of economics has been narrowed and restricted and abstracted, until there seems little connection between it and the older, broader, more fundamental significance. Sometimes a homely terminology is useful; and such, I take it, is "national housekeeping," instead of "political economy." It will help us if we thus think of the scope of political economy, and it will help us still more if we pursue all economic studies with the sin-

cere endeavor to understand completely all the implications of our business relations with one another in order that these relations may be so adjusted as to accord with truth and justice, and guarantee the sure and permanent progress of society. Let so much be premised.

Much has been said and written about the propriety of an ideal in political economy. Some have maintained that there is no more place in it for an ideal than in the study of plants and animals and rocks; some have combatted this notion and hold that in a science which deals with men's relations with one another, even upon the commercial plane, the entrance of the ideal is inevitable, because it actually does largely determine how men do deal with one another. Perhaps if we were to distinguish between the science and art of political economy this troublesome question would largely vanish. The art concerns itself with conduct, and into human conduct the ideal always enters. The science, too, takes cognizance of conduct, and, therefore, studies the outward manifestations of the ideal. In fact, the ideal hovers over all sciences, for example over Biology and Chemistry, for no true student of these sciences can long remain oblivious to the mysterious force which permeates all the world of nature, and guides those vast movements and evolutions which fascinate the observer:

"The one far off divine event
To which the whole creation moves,"

cannot be separated from the world of nature, studied by the naturalist, physicist and chemist. It needs the poet to supplement the scientist.

It seems to me, then, that the "ought" is to be studied in the science and applied in the art of political economy, as well as the "is"; for the "is" of to-day is the "ought" of yesterday, and the "ought" (or "ought not") of to-day is the "is" of to-morrow.

Some things to which the student of economics should give his attention at the present time might be mentioned.

One is the question of speculating, manipulating stocks, and so forth. There

is an idea prevalent that the manipulator is not wholly useless or baneful; and occasionally it may so happen. But the large truth was very aptly expressed by Goldwin Smith on a recent occasion, when he said, "The farmer does not corner wheat, but raises it." There are those who by their own endeavors add somewhat to the utility of the various objects by which our individual and social life is sustained. And there are those who prey upon these, and reap where they have not sown, and gather where they have not strawed.

The question might be put: Is society cursed with more or worse parasites nowadays than in some previous age? To answer positively would be impossible, and it has to be admitted that many ancient forms of parasitism have disappeared. But one ventures to state that in the older and more primitive structure of society each household was practically sufficient unto itself, and the middleman did not bulk large; whereas nowadays, when specialization and differentiation of occupation have gone so far, there are a thousand chances for the designing middleman to step in and levy toll upon commodities on the way from the initial producer to the final consumer.

Most treatises on economics have chapters dealing with production, distribution and consumption. In reality distribution is a part of production, for the wheat must be transferred from field to mill, and from mill to bakeshop, and from bakeshop to table, before it reaches the antipodes of the cycle in which it moves in its service of man. The distributing agencies are essential in the preparation of goods for man's use, and are not essentially distinguishable from the so-called producing agencies. The former concern themselves with the location of commodities, while the latter concern themselves with the form of the same; and it is as necessary to have commodities in the right places as to have them of the right kinds. For example, a fisherman is a distributor, and not strictly a producer. Yet, in the ordinary economic sense, he is a very essential producer. In fact, all producers

are in a sense distributors—directors of Nature's forces, not creators.

But, however illogical is the attempted distinction between distribution and production in economics, there is a very convenient, though vague, distinction between the distributing factors and those more strictly productive. And, as has been pointed out, the distributing factor of production is the one which has developed so marvellously during the last few decades, and it is this which has made us so dependent upon one another, and upon one another's honesty and generosity. One man corners oil and all suffer; another corners wheat and all suffer. The railroads, which are the modern highways of commerce, are in Canada under private control, like many of our waggon roads used to be, and the corrective of competition can, in the nature of the case, scarcely ever be maintained. So, in the transportation of commodities—in their necessary distribution—the country is subjected to exorbitant tolls by those who have cornered the highways of the nation. How great, then, are the modern opportunities for parasitism!

Let the reader now pause a moment and ask himself how the ideal, how people's conceptions of their duties and relationships one to another persistently intrude upon all our economic studies. How shall we comprehend men's economic relationships, in their totality, without very vitally considering what determines, governs and guides these relationships—men's ideals?

So much for cornering commodities and means of distribution.

As for stock speculation Ontario has witnessed, during the last few months, some deplorable evidences of its growth. However difficult to draw the line between legitimate and illegitimate investments, it cannot be denied that speculating in stocks is nothing short of gambling. One might as well at once throw the dice, or give the wheel a turn, or draw the card. The selfish desire to get something for nothing is the motive power of the whole business. Society cannot exist when such one-sided transfers multiply; it can only exist and prosper

when each individual, by toil of hand, head or heart contributes something towards the well-being of his fellows, and in return gets his reward—be it pudding, praise, or neither.

One hears of prominent church members indulging in this business of stock speculation. It is a dark day for the church when her supporters are so blinded by selfishness of heart or stupidity of brain that they cannot feel or understand how guilty and socially disastrous their conduct is. One thing, the study of economics will do, and it is no little thing: It will show people how extraordinarily absurd are the arguments sometimes advanced in favor of the many forms of stock gambling that are now current.

A curious question which sometimes suggests itself to the student of political economy is that of the utility of gold mining for coinage purposes. For various reasons—its rarity, its chemical properties, its occurrence in nature in a metallic form—gold has long been in use among many peoples as a sort of basis of value and exchange, though, indeed, it is everywhere recognized as having no more intrinsic life-sustaining power than paper. Now, if we were to calculate the amount of labor that has been expended in obtaining the gold coin in existence, we should find it very large indeed; and if we were to calculate the value of the functions performed by this gold we should find it comparatively small, and growing smaller every day. The greater part of modern commerce is managed without gold—by means of paper, banks, clearing houses, etc., and is managed very satisfactorily. And yet many people believe that without a gold reserve all this paper money would be useless. The facts are that the gold reserve is usually a very small fraction of the total currency in circulation, and that the value which people attach to it is of exactly the same nature as that attached to paper money—a value in exchange only, and attached by common, though unconscious, consent. Were the world suddenly left with nothing but gold coin, it would, like Midas, begin to realize how

long its ears had been. The only reasons why gold has the reputation of being "sound" are, that it cannot be coined in unlimited quantities, as is possible with greenbacks, and that it has chanced to be internationally acceptable. As soon as international honesty shall have become the rule rather than the exception, and as soon as people shall have recognized the nature of the value which they have attached to gold, then we shall be able to use paper currency with perfect safety and shall be freed from the furor of Klondyke rushes and all the newspaper nonsense about "our vast mineral wealth."

The word "wealth," Mr. Editor, suggests to me what has been often said, but will bear repeating. Wealth cannot be properly conceived apart from the *character* of the people who make use of it. In fact, what we often call wealth, if misused, is not properly wealth at all; it does not contribute to well-being. A people may be either blessed or cursed with material good things, according to whether they use or abuse them.

It is interesting and useful exercise to trace out the way in which national and individual character determines the Consumption of people, and this, in turn, determines the nature of their Production; for, as will be readily seen, the Demand governs the Supply. For example, if a boy spends all his pocket money upon fire-crackers, and thus cannot purchase a jack-knife, the manufacture of fire-crackers will be encouraged, and that of jack-knives discouraged. So if a nation spends its money upon larger fire-crackers of a more destructive character, the money used to purchase these is deflected from some other channel. The charcoal and saltpetre which explodes with loss of life might otherwise warm the shivering and help grow wheat for the hungry. Similarly some bauble manufactured with infinite ingenuity and pains is *consumed* in decking out supercilious vanity, whereas the labor spent upon it might be directed otherwise, with the net result that vanity would be less vain and nakedness would be clothed.

One is reminded here of what economic

fallacy, which, in spite of its patent absurdity to anyone who thinks upon the question, is quite prevalent. It is stated at times that such and such an expenditure is good for business—circulates money, gives employment, helps certain tradesmen, etc. And this statement is made irrespective of the *nature of the expenditure*; which latter is, in fact, the essential point of the whole question. Unless the expenditure results in the production of commodities that are socially useful, it is wasted. A transfer of wealth takes place, but no production; and it should be borne in mind that society exists by consuming the wealth it produces; Consumption is the end, the object, of Production. It is true, of course, that a transfer of wealth often relieves a congested condition of industry, and to effect this transfer a nugatory employment is sufficient. But why not effect the transfer by means of a socially productive employment, and have, as surplus, a net result in added wealth? This is surely the sensible way. Consequently those who try to justify a certain nugatory employment or investment on the grounds that it gives work, need to be reminded that there are many employments and investments which also give work, and which are not nugatory. These are justified by their fruit; the others condemned by their lack of fruit.

It might be remarked here that it is very humiliating to the farmer to realize that in spite of all he can do many of his best products, in whose evolution he has undoubtedly gained skill and character, go to the questionable satisfaction of overfed Luxury, and are wasted, or worse than wasted, in their consumption. The potential utility stored in them by their producer never becomes actual; like the fleeting minutes which slip away so quickly it is lost, never to be itself regained. When will it be otherwise?

Mr. Editor, the foregoing are a few random thoughts that have seemed to me worthy of emphasis, and I have given them to your readers in the hope that they may stimulate further thought along the same lines. I fear that I have already

consumed my allotted space, but I cannot conclude this letter without saying something of those more important aspects of life to which all our material economy is subservient.

Sometime ago I remember hearing the following question raised about some phase of institute work, "Is it worth while?" Of course this immediately led to the broader question, "What is worth while?" How many of my readers have consciously attempted an answer? Upon our answer to *that* question will depend what we are and do. All economy, good and bad, is determined by people's answers to that question. All *Demand* contains an implicit answer to it; consequently all *Supply* is governed by it.

What is worth while? Is it worth while to be honest, in speech and deed; to be generous; to be clean; to have love in the home; to be cultured and refined in taste; to be clear-headed; to possess much of this world's goods; to get rich quickly; to live in elegant surroundings; to work hard for small cash pay; to retire on a competence; to trifle with temptation? The answers are various. One man thinks

tippling is worth while, and drinks away a good farm and home, and finally a life. He has reward, and *his demand* has encouraged trade. Another goes to the fields with a song in his heart, and works late and early for wife and children, and home and fellows. He has his reward, and *his demand* has also encouraged trade. But how differently from the other.

So it is in life. What we are and what we do are interlaced. Impulses of all kinds—towards sin and towards righteousness—determine our several and joint activities. In this world of *sense* and *time* the warp of matter is shot through with the woof of spirit, and many a strange pattern results—patterns of glorious brilliancy or of sober steadfastness, patterns in divers colors, patterns beautiful and full of inspiration, patterns ugly and dispiriting, patterns faded and torn and incomplete—all these coming from the loom of time, and teaching the children of men lessons in economy; whereof, indeed, no one has yet caught the secret save he with mind and heart tuned to the music of the ideal.

W. C. Good.

FATHER EARTH.

BY REV. MARK GUY PEARSE.

(Especially for the O. A. C. Review.)

Old Father Earth was a grim old thing,
No trace of beauty had he;
Across his face ran the furrows deep,
As brown and bare as could be.

Now, it chanced one day that a tiny
seed
Went driven along that way;
A tiny seed in a great big world,
On a shivering winter's day.

This old Father Earth, beneath his crust,
A pitiful heart had he;
He whispered, "Little one, come, I
pray,
Find rest and refuge with me."

The little seed turned, and trembling said:
"I'm so very small, you see,
Whilst you stretch away for many a rood;
I'm afraid you won't care for me!"

"Not care for thee, little one? Ha, ha!"
And the old brown Earth laughed he;
"If I am so big, the more room there is
In my heart of hearts for thee."

"What will you give to me, Father
Earth,
Pray what will you give to me?"
Then the brown Earth folded the seed to
himself,
And answer made tenderly:

"All that I have I will give to thee,
All that I can be is thine;
For thee the very seasons are set
And the very heavens do shine."

"What will you do with me, Father
Earth,
Pray what will you do with me?"
"I will make thee root and flower and
fruit,
And thou shalt be fair to see."

Then to rest the little seed sank down,
In the love that held it tight;
He covered it up, and he tucked it in,
And bade it a sweet good night.

So the time slipped by, and Father Earth
Held his treasure faithfully,
Till the seed sent down a tiny root,
And thrust up its head to see.

And day after day the sun it shone,
And gently fell the shower,
Until at last in its stateliness
There stood the perfect flower.

But still the fair face is downward bent,
And it whispers tenderly,
"Though my head is in heaven, dear old
Earth,
I'm not going away from thee."

And the old brown Earth, he laughed
again,

"Ah, what hast thou done for me!
I was but a clod all brown and bare,
And now I am part of thee.

"A thousandfold thou hast paid me back
The little 'twas mine to give;
Uplifted, transformed, and crowned in
thee,
Thou hast shown me how to live."
—From "West Country Songs."

AN OUTING IN THE GEORGIAN BAY.



ONE of the pleasantest holidays that I have enjoyed in a long time was a two weeks' outing last summer along the north shore of the Georgian Bay.

On a Friday afternoon early in August our little party of seven left Collingwood, on one of the Northern Navigation Co.'s steamers, bound for the Sault and Mackinaw. Towards evening we called in at Meaford, then at Owen Sound, and after dark headed across the bay for the north shore. Next morning by daybreak our steamer, the *Collingwood*, and the *Britannic*, from Midland, were having a race for entrance to the beautiful channel at Killarney. The fine snap-shot, which our rival offered as she steamed in ahead of us compensated me, at least, for coming in second best.

At Killarney we got our first glimpse

of the rugged rocks, emerald isles, and tawny Indians, which lend a charm to that northern section. Certainly from here on the whole trip is a paradise for the camera fiend; and who would not be a camera fiend amid such surroundings? Without an apology for any such weakness I mounted to the upper deck with the first ray of sunlight, and began firing at everything in sight. "Old Probs" favored me that day with weather made to order, and just enough obscuring of the ethereal blue for beautiful cloud effects, so the fusilade was kept up the greater part of that delightful August day.

On our westward way with the mainland, or "north-shore" to our right, and the deeply indented shores of the Manitoulan Island to our left, we touched at one port after another, first to the right and then to left. Each affording something of new interest—the fishing at Killarney, the great lumber mills at Little Current, the mountains of ground rock from

Bruce Mines, the Gamey politician at Gow Bay, and the ever-attendant flock of gulls from one port to another, with islands innumerable dotted here and there, left no time for flagging of interest.

In my estimation, however, the most beautiful port of this beautiful northern waterway lies between Hilton and the "Soo." Here the rocks are, if possible, more rugged; the islands more numerous, and the bordering woods more stately and verdant than anywhere else. To our left now lies St. Joseph's Island, which has

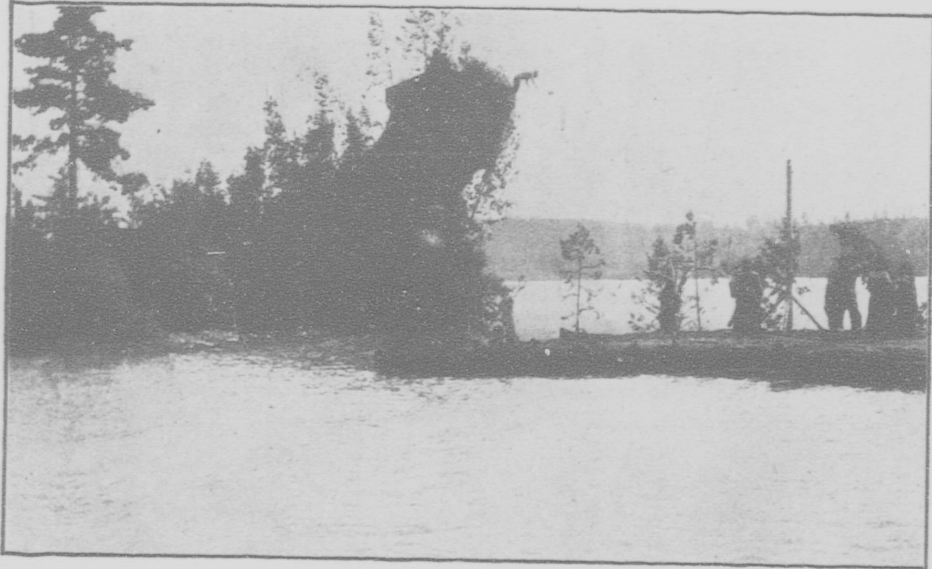
But we must give more than a passing mention to the Indian play. At Kensington Point, one of the most picturesque spots on the north shore, the great Hiawatha drama is played every afternoon for two months during the summer season. A little island about thirty yards from the shore forms the central stage, but the surrounding lake, adjoining shore and rocky promontory beyond all, form part of the wonderful stage setting. A more fitting surrounding for such a wild and weird play could not well



THE BRITANNIC AHEAD AT KILLARNEY.

been justly called "the Emerald Isle of the North." At Richard's Landing, its western capital, two of us got off to reconnoitre for a couple of days till the rest of the party should return from the Mackinaw. And what a glowing report we gave when on the Tuesday following they again pulled up to the dock. The accommodation was excellent, the fare sumptuous, the islands about were blue with berries, and the channels teemed with fish; boating, bathing, berrying, fishing, hunting, with a picnic every day and an Indian play thrown in. Of course they stopped, and we enjoyed it all, and more.

have been selected. The actors are mostly Ojibway Indians, fifty or sixty of whom are camped in their birch bark tepees upon the playgrounds. More than half of them take part in the play decked in their striking native costumes, with war-paint and feathers. The Indians seem to be born actors, and the spirit with which they enter into the scenes depicted in Longfellow's great poem, make it indeed realistic. The songs are weird and musical, and the dances beyond the imitation of the white man. Most of the characters were excellent. Hiawatha was a fine type of Indian brave, and Minne-



PAU-PUCK-KEWI'S LEAP IN THE HIAWATHA PLAY.



A FOREST ROAD ON ST. JOSEPH'S ISLAND.

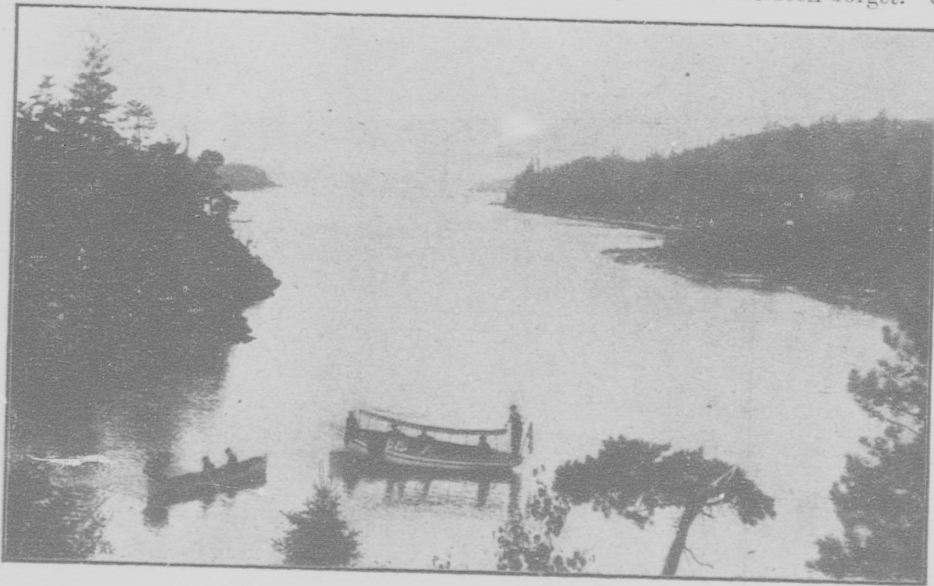
haha, a comely Indian maiden, but Pau-puk-kewis, "the mischief-maker," was a wonder for grace, agility and daring. The accompanying illustration shows him taking a headlong leap of about fifty feet to escape his revengeful pursuers.

So delighted were we with our day at Kensington that a second visit was made, and both times we snapped every plate our camera kit would carry.

Each day afforded some new recreation. One day we explored a dozen islands to the westward, and came upon numerous bands of Indians gathering the blue-berries, which were unusually abundant this

Another day, guided by our old friend, Bert Young, we found an inland lake, white with acres of water-lilies. Hauling our boat over the narrow neck of land separating it from the big lake, we waded into them, and how our ladies revelled in bloom that day! They decked the boat from stern to stern, and wished for more boats to fill.

At another time we enjoyed a dry land excursion, and took a thirty-mile drive on St. Joseph's Island. The beautiful shady road, winding through the natural forest of magnificent maples in the interior of that island, we will not soon forget. On



GOW'S BAY ON ST. JOSEPH'S ISLAND.

year. Our meeting with one of these bands proved most interesting, for in it we got acquainted with John Cabiosa, one of the most intelligent Indians it has ever been my privilege to meet. He it was who, until this year, had taken the part of Hiawatha in the play at Kensington, and he it was who entertained Longfellow's daughters, when they came to assist the Indians three years ago in the first presentation of the play to the public. He gave us a very interesting account of his connection with the play, and explained some of the magical feats we wondered at in witnessing them.

the edge of this woods we photographed the log-cabin home of one of the pioneers, which, for its general appearance of tidiness and thrift, might serve as a model in many parts of older Ontario.

I might write pages on the days we spent fishing, but as that would only spoil my reputation for veracity, and as fish stories are never believed anyway, I shall refrain and say nothing about the "speckled beauties" we caught in Blue Jay Creek, or the big bass we played in Manitou Lake, but will close with a photo of the party in Gow's Bay, where our largest lunge was landed. H. L. HUTT.

NATURE POETRY IN LAMPMAN.

Let us be much with Nature; not as they
That labour without seeing, that employ
Her unloved forces, blindly without joy;
Nor those whose hands and crude delights
obey

The old brute passion to hunt down and
slay;

But rather as children of one common birth,
Discerning in each natural fruit of earth
Kinship and bond with this diviner clay.
Let us be with her wholly at all hours,
With the fond lover's zest, who is content
If his ear hears, and if his eye but sees;
So shall we grow like her in mould and bent,
Our bodies stately as her blessed trees,
Our thoughts as sweet and sumptuous as her
flowers.

—Lampman.



IN these days when Nature-Study is receiving its share of attention in schools and colleges, it is pertinent to inquire, what, after all, is the aim of Nature-Study? Is it the pursuit of truth, or of beauty? Does it seek to instruct, or to inspire—to give knowledge of scientific facts, or to arouse admiration of nature's wonder and loveliness? Is its aim scientific or æsthetic?

There is possible, it is evident, a wide distinction in aims for the student of nature. Her secrets are manifold, and her mysteries, in their entirety, past finding out. The present writer ventures to suggest, however, that by whatever paths we approach our goal, the goal is, an eye to see nature's loveliness, an admiration for her wonders, a taste adequately to appreciate her beauties. Let these be developed or created among our people, and the whole purpose of nature study is accomplished. There is a danger of this purpose being obscured by the tendency, too common among teachers of this subject, to make it merely an approach to the sciences. We may thus lose sight of the great forest from the multitude of the trees that fill the eye. The wider aspects of nature, her landscapes, valleys, plains, mountains, and skies, may be ignored,

while we are botanizing. Wordsworth anathematizes—

The fingering slave,
One that would peep and botanize
Upon his mother's grave.

The true effect of the higher, more expansive outlook upon nature, he characterizes as "impulses of deeper birth."

The outward shows of sky and earth,
Of hill and valley, he has viewed;
And impulses of deeper birth
Have come to him in solitude.



ARCHIBALD LAMPMAN.

The difference between the scientific and the æsthetic appreciation of nature he expresses thus:

Contented if he might enjoy
The things which others understand.

This capacity for enjoying nature—feeling at home in her solitudes, and delighting in her varying phases and panoramic disclosures, is the characteristic quality of Lampman. His residence, during the productive period of his life, at Ottawa, with its strenuous climate, and its proximity to the wild nature that he

loved, was favorable to the development of his bent. His employment in the civil service left considerable leisure for the gratification of his fancies, and these led him to the woods and fields. On the city street, he habitually walked with eyes cast down, but in the woods his manner was alert and observant. In reading Lampman's nature poetry, one is constantly impressed with the conviction that his was a rare spirit, thrown into uncongenial and unresponsive surroundings, and seeking relief and rest in the sanctuary of nature.

Ah, I have wandered with unwearied feet,
All the long sweetness of an April day,
Lulled with cool murmurs and the drowsy
beat

Of partridge wings in secret thickets gray,
The marriage hymns of all the birds at play,
The faces of sweet flowers, and easeful
dreams

Beside slow reaches of frog-haunted streams;

Wandered with happy feet, and quite forgot
The shallow toil, the strife against the grain,
Near souls, that hear us call, but answer not,
The loneliness, perplexity and pain,
And high thoughts cankered with an earthly
stain;

And then, the long draught emptied to the
lees,

I turn me homeward in slow-pacing ease.

There is nothing particularly novel or original in Lampman's nature poetry. After Wordsworth and Tennyson, it would demand most exceptional genius to discover even gleanings in a field so well harvested. The distinctive features in his work are his freshness and manifest sincerity: his freshness in seeing things for himself and telling just what he saw, and giving to his work a local coloring; his sincerity in the unfeigned delight he experiences in being out of doors, in the cold and in the heat, in storm and in sun. Also, a delicate appreciation of colors in scenery and in landscape, and a power of vivid description, distinguish his work.

The local coloring imparted by Lampman to his poetry is his principal opportunity for originality, and he makes much of it. The characteristic phenomena of our Ontario climate were with him mat-

ters of observation and description. Here are bits of our summer:

From plains that reel to southward, dim,
The road runs by me white and bare;
Up the steep hill it seems to swim
Beyond, and melt into the glare.
Upward half-way, or it may be
Nearer the summit, slowly steals
A hay-cart, moving dustily
With idly clacking wheels.

Field upon field to westward hum and shine
The gray-green, sun-drenched mists of
blossoming peas;

Beyond them are great elms and poplar
trees

That guard the noon-stilled farm-yards,
groves of pine,

And long dark fences muffled thick with
vine;

Then the high city, murmurous with bells;

And last upon the sultry west blue hills,
Misty, far-lifted—a mere filmy line.

Across these blackening rails into the light
I lean and listen, lolling drowsily;

On the fence-corner, yonder to the right,
A red squirrel whisks and chatters; near

by

A little old brown woman on her knees,
Searches the deep hot grass for straw-
berries.

Every season of the year, almost every
month, has its sonnet or its ode. Here
is a representative winter scene:

The glittering roofs are still with frost;
each worn

Black chimney builds into the quiet sky
its curling pile to crumble silently.

Far out to westward on the edge of morn,
The slender misty city towers up-borne

Glimmer faint rose against the pallid blue;

And yonder on those northern hills, the hue
of amethyst, hangs fleeces dull as horn.

And here behind me come the woodmen's
sleighs

With shout and clamorous squeakings;
might and main

Up the steep slope the horses stamp and
strain,

Urged on by hoarse-tongued drivers—cheeks
ablaze,

Iced beards and frozen eyelids—team by
team,

With frost-fringed flanks, and nostrils jetting
steam.

The fugitive, mystic beauty of our
Indian summer is keenly appreciated:

The old gray year is near his term in sooth,
And now with backward eye and soft-laid
palm

Awakens to a golden dream of youth,
A second childhood lovely and most calm,
And the smooth hour about his misty head
An awning of enchanted splendour weaves,
Of maples, amber, purple, and rose-red,
And droop-limbed elms down-drooping golden
leaves.

With still half-fallen lids he sits and dreams
Far in a hollow of the sunlit wood,
Lulled by the murmur of thin-threading
streams,

Nor sees the polar armies overflow
The darkening barriers of the hills, nor
hears
The north-wind ringing with a thousand
spears.

He was never robust in health, and it
was his frequent practice to spend his
holidays north and west of the Ottawa,
on the border of the unbroken wilderness:

Far in the grim northwest beyond the lines
That turn the rivers eastward to the sea.

There he would drink long draughts of
the health-giving pine-scented air, and
would secure during these wilderness
sojourns a new lease of life. That he
valued these excursions to the limit is
shown by the many references to them in
his poetry. One quotation must suffice:

We run with rushing streams that toss and
spume ;

We speed or dream upon the open meres ;
The pine-woods fold us in their pungent
gloom ;

The thunder of wild water fills our ears ;
The rain we take, we take the beating sun ;
The stars are cold above our heads at night ;
On the rough earth we lie when day is done,
And slumber even in the storm's despite.

The savage vigour of the forest creeps
Into our veins, and laughs upon our lips ;
The warm blood kindles from forgotten
deeps,

And surges tingling to the finger tips.

The deep-pent life awakes and bursts its
bands ;

We feel the strength and goodness of our
hands.

The following passage in his "Winter
Hues Recalled" is so characteristic of his
method—employing the occasion of some
country jaunt to furnish poetic material—
and at the same time shows so well his nice
perception of colors in landscape, that I
cannot forbear quoting the whole—

Ere yet I turned

With long stride homeward, being heated
With the loose swinging motion, weary too,
Nor uninclined to rest, a buried fence,

Whose topmost log just shouldered from the
snow,

Made me a seat, and thence with heated
cheeks,

Grazed by the north-wind's edge of stinging
ice,

I looked far out upon the snow-bound waste,
The lifting hills and intersecting forests,
The scarce marked courses of the buried
streams,

And as I looked lost memory of the frost,
Transfixed with wonder, overborne with joy.
I saw them in their silence and their beauty,
Swept by the sunset's rapid hand of fire,
Sudden, mysterious, every moment deepening
To some new majesty of rose or flame.

The whole broad west was like a molten sea
Of crimson. In the north the light-lined hills
Were veiled far off as with a mist of rose
Wondrous and soft. Along the darkening
east

The gold of all the forests slowly changed
To purple. In the valley far before me,
Low sunk in sapphire shadows, from its hills,
Softer and lovelier than an opening flower,
Uprose a city with its sun-touched towers,
A bunch of amethysts.

I need not apologize for frequent and
lengthy quotations from our author. He
is his own best interpreter.

J. B. REYNOLDS.



SOME PHASES OF MODERN DAIRYING. 17



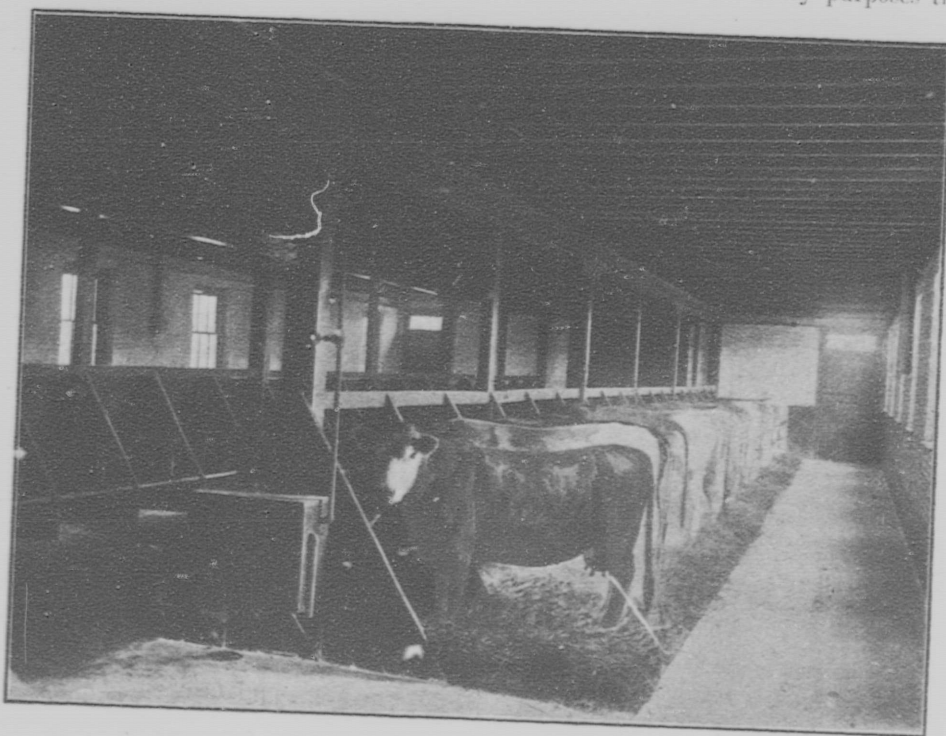
THE dairy industry of Canada is a source of national pride. Every Canadian, and he is a citizen of no mean country, takes credit to himself as belonging to a nation, which, in addition to supplying the people at home with dairy products, exports about five dollars' worth of cheese and one dollar's worth of butter for every head of its population. Canadian cheese is now

one of the greatest tributes that has been paid to dairying in Canada, as the Scotch are usually credited with having "a good conceit of themselves."

IDEAS AND METHODS CHANGING RAPIDLY.

Many of the old ideas and methods regarding dairying have been replaced by newer and more modern ones. A few of these may be mentioned:

It was once thought necessary in order to get pure milk for dairy purposes that



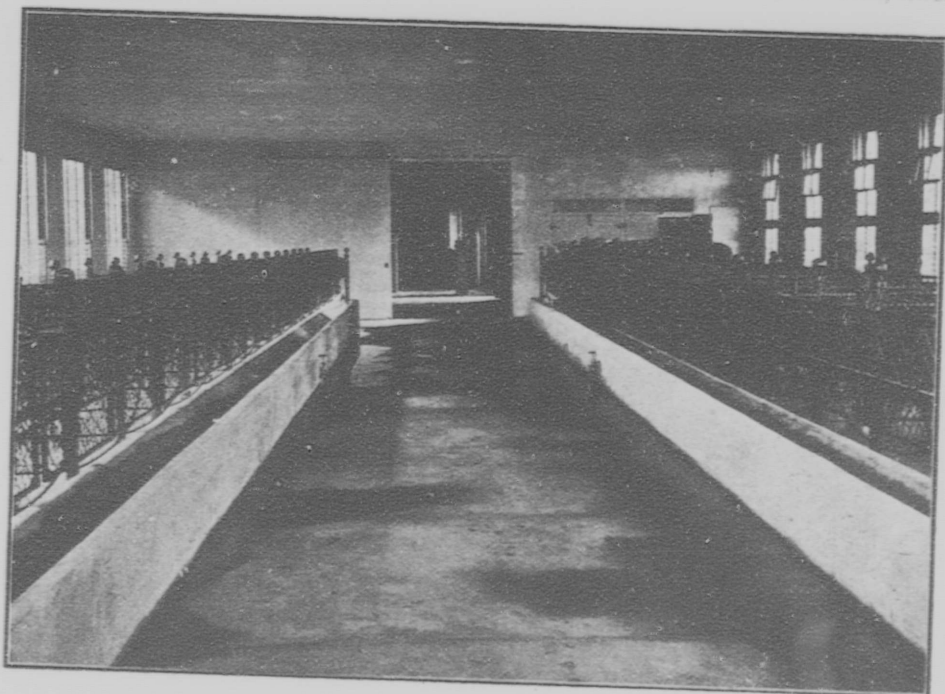
WHERE COWS ARE CLEAN AND HAPPY.

the standard of the world. Our instructors are sought for by every cheese dairy country. When the governors of a famous Scotch Dairy School wished to secure a competent instructor in cheesemaking and an efficient head of their institution they sent to Canada. This is

it must be exposed to the air soon after milking, in order that the oxygen of the air might purify the milk. A great many inventions have been placed on the market for dairymen to aerate the milk. Almost every conceivable kind of an aerator has been tried from squirt-guns to the

most elaborately constructed devices for oxidising and purifying milk. What connection there is between oxygen and pure milk has never been shown, though many believe in it. The modern method of handling milk is to cool it as rapidly as possible, and with as little exposure to the air as possible. It was found that milk exposed to the air in barnyards near milking places, etc., was contaminated so much with germs which produce bad flavors that aerating as commonly practised was worse than useless. About the

Another idea exploded is that cream may not be got from milk except as a result of long setting in pans, or cans. During the last thirty years the evolution of the cream centrifuge has changed all this. Instead of waiting twelve, twenty-four or thirty-six hours for the cream to separate, the modern dairyman commences the separation as soon as, or before, all the cows are milked. By the time the cows are milked most of the cream has been recovered from the milk and the skim-milk is in a warm, sweet



SANITARY STABLE.

only good that aerating does at any time is the cooling which takes place as the result of exposing milk to air which is lower in temperature than the milk. In hot weather, this amounts to very little. Also in the case of food taints, caused by volatile oils from foods, exposure of milk to the air may allow some of these flavoring substances to pass away. Modern dairying teaches milk producers to produce clean milk, then cool it rapidly to from 50 to 60 degrees F.

condition for live stock. The growth of the hand separator business is something enormous. At the dairy convention of Iowa, held recently, "There was only one power separator in Machinery Hall, while the exhibits included 33 hand machines, made by ten different manufacturers. How things have changed in the past six years." The same is equally true for Canada. A few years ago it was all power separators, now not more than possibly twenty power machines are sold

in a year, while hand separators are sold by the thousand. What the ultimate effect of these hand separators will be upon the dairy industry no one can tell. It looks as if the farmers were resolved to have hand machines, and as if the manufacturers and the agents were also resolved that the farmer shall be supplied with what he wishes in this respect. It also looks as if the creamery industry of Canada will develop along the line of cream-gathering rather than whole milk creameries. While many consider that this is a mistake, looking to the making

proper ripening of cheese that they be kept at a temperature of 65 to 70 degrees. Factory men went to considerable trouble and expense to heat their cheese-ripening rooms in the spring and fall of the year. Heaters, ranging from a rusty old box stove, propped up with bricks in lieu of legs, to elaborately constructed furnaces were to be found in nearly all our factories. Modern dairy science tells us that the ripening of cheese takes place practically regardless of temperature down to at least several degrees below freezing. Whatever may be the cause of cheese

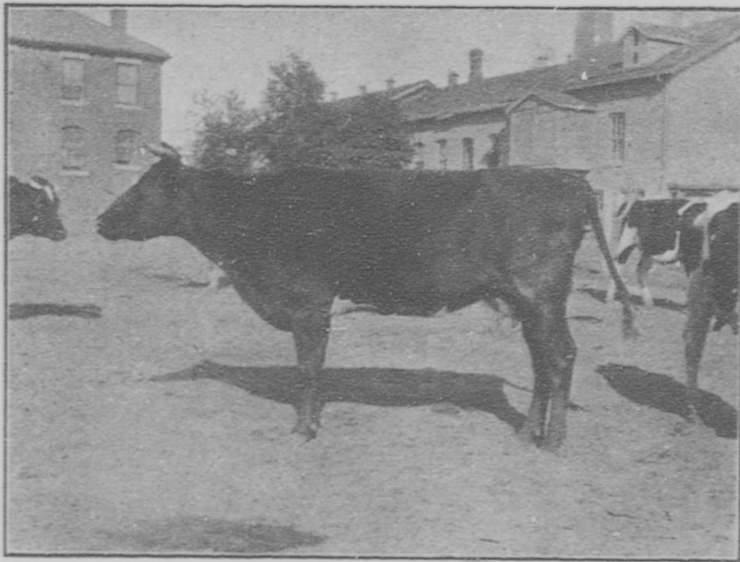


FIGURE OF DAIRY COW.

Record about 3,000 lbs. milk per year.

of fine butter, if the cream-gathering system has come to stay, those in charge of the development of the Canadian butter trade should try to overcome the difficulties in the way of making fine butter on this system. It will take much longer to establish a reputation for uniform Canadian butter by this plan, owing to the difficulty of getting the cream delivered in a sweet, clean condition. It can, however, be done in time.

One more exploded idea. A few years ago it was considered essential for the

ripening, it would seem as if temperature affects the change as regards time, only in the early stages, and that after the first month there is little difference in the rate of ripening whether the cheese be at or near freezing point or at a much higher temperature. In some experiments conducted at the Dairy Department of the College this past year, cheese ripened at 26 to 28 degrees F., were in nearly as mellow a condition at the end of six weeks as were those ripened at 40 to 50 degrees. The lower temperature for

ripening gives a practically uniform quality of cheese, which is very important in modern cheesemaking.

IMPROVEMENTS NEEDED.

The chief weaknesses of modern dairying are:

1. The large number of unprofitable cows kept by farmers who do not realize the great difference there may be, and is, in cows. The application of the scales and test for fat to the product of individual cows would be a revelation to most dairymen. A cow which produces less than 6,000 lbs. milk, or 250 lbs. of butter, is likely to be an unprofitable animal.

its products. There is no reason why cows should not be kept in reasonably clean stables, and be clean at all times, if the producer of milk will provide proper stables with cement floors, use whitewash and broom on the walls and ceilings, and curry comb and brush on the cows. Some of the stables and cows used for the production of milk for a special city trade are models of comfort and cleanliness.

Greater cleanliness is needed in the stable.

4. In co-operative dairy work the chief needs are: Larger and better factories; in some places cleaner and better men, who receive higher wages; more co-opera-



GROUP OF PURE-BRED HOLSTEINS.

Better cows are needed badly in some sections.

2. Cheap feed for the production of cheap milk in large quantities will bear some study on the part of most of the farmers. Grass, corn silage, clover, mangles, oats, bran, oil-cake,—are foods which are likely to prove economical producers. Cheaper milk-producing feed is needed.

3. Lack of cleanliness in the stable and in handling the milk are other weaknesses. Milk is so easily tainted from impure surroundings that any neglect on the part of the cow owner to provide clean and healthy surroundings for the cows, soon manifests itself in the flavor of milk and

tion on the part of the milk producer and milk manufacturer; pasteurization of the milk or cream used for the manufacture of butter, in order to secure more uniform quality and better keeping quality; better transportation facilities, especially for butter, which is carried at too high a temperature on both the railway and steamship lines. Butter should not be above 20 degrees F. during transportation.

These improvements, together with a preference of 10 to 25 per cent. on the markets of Great Britain, would make dairying the greatest industry in Canada, if it is not so already.

H. H. DEAN.

THE MELONS AND MELINDA.



OUR STORY TELLER



JOSH GRAWBURG'S farm stretches back from the Catfish Creek, where it dawdles into Lake Erie. His frame house, broadhipped and verandah-girt, faces the creek, the road between, and the sunrise. On its left an orchard, in spring and fall fruitfully suggestive of Hesperides, slopes to the road as well. In the field on the

right last year stood a heavy crop of corn, within the shady depths of which, near the house, reclined numerous water-melons, the prize crop of the township.

"Old Josh" is a well-known character along the north shore for many miles; prehistoric almost, reckoned by the growth of the community since he helped his pioneer father to replace forest with farm. He is as tough as a rawhide, and as leathery, though his shoulders are bent like the now discarded cradle which helped to shape them so. And his eyes still sparkle above his whiskers like the dew in a lowland meadow at sunrise.

Melinda, the old farmer's daughter, is twenty-one. At twenty she was the belle of Bugwash village, and the family and treasure of her father. Melinda is modern, moreover. Her hands and feet are smaller and better clad than had those women of the first days who led slaves' lives for posterity. Her spirit is the

same, however. As for her girlish deeds and graces—but ask Mr. Rube Haycock, next farm but one, and he will give you all the eulogy of Melinda that any young wife has a right to expect.

With the blossoming of the melon vines, came one Stimson Stott, Esq., from the Model School, to teach in the village. How he came and went, as gayly colored as the coon-fruit in question, and as ephemeral in his local history, is best told in the words of Josh himself, addressed, on the occasion of Melinda's wedding, to a few old neighbors, who were gathered with him in the horse-shed behind the church.

"You know, Rube'd ben a-comin' purty reglar to see Lindy fer quite a spell 'fore the dood turned up. Wal, I dunno jist what happened, but 'long last summer the dood he tuk to comin' back to see me powerful frequent on School Trustee business, an' somehow 'twasn't long 'fore he wuz a-persecutin' the discussion uv said business mostly with my gal. Guess Rube he got huffed considerable. He left off comin' anyways. I callated to jist chaw wood an' say nothin', an' I did. Guess mebbe Lindy wuz a-thinkin' same's me all the time.

"'N' then them mel'ns got dead ripe, jist a-waitin' for a frost to make 'em tasty. 'N' one night the dood comes up an' tells me some o' the boys hez laid a plan to coon-hunt the hull bunch that same evenin'. Wal, I callated to see any fun they wuz a-goin', and so I loads my shot-gun with salt, and sets out on the side of the house on the v'randy. The dood sot 'round in front with Lindy, and I c'd tell as he wuz makin' a strong impression on her confidin' natur. Guess he seen the happy day a-comin' all right. I c'd hear the bell on ole 'Spot' down in the pasture behind the corn, grazin' peaceable in the moonlight, 'n' Dan'l Tucker's collie wuz howlin' like a hull camp meetin' over t'other side o' the orchard. 'N' then when I wuz jist cussin' my rheumatiz an' the dood in the same breath, 'long about ten o'clock, I hears an all-

fired racket in the corn, 'side o' the pastur. The cows wuz in the corn! That bell-cow wuz rarin' and tearin' 'round like all possessed, 's if she'd never git another chanst uv a mouthful. I drops the gun an' spurns the yearth like Sam Hill tell I finds the cows layin' down in the fur cornder of the pastur, and no bell soundin' at all. I couldn't make out how it had stopped so suddent. When I gits back to the v'randy there laid the cow-bell beside my gun an' no sight nor sound uv the young folks. Swat me deaf, that bet me clean out! 'N' then I sets to thinkin', an' perceed to make a easyool inspection of that there mel'n patch. I'll be teetotally dodgasted ef there wuz one left that a hen couldn't uv et! 'N' at last, gosh ding my eyes, 'f I didn't find Mr. Dood a-layin' on his back anunder one span uv the fence, packed down so tight that I c'd scassly make out his head 'n' heels in the thistles thet growed luxuriant 'round. Ez fer noise, this wuz the only time I ever seen him without hearin' 'im too, an' the reason wuz in his mouth in the shape of a mel'n rine, tied ingenious to the back of his neck with his yeller tie.

"I sez to 'im, sez I, 'Shockin'!' I sez. 'However in this world did you git into this perdicermunt?' I sez. 'N' 's soon's the pore feller got clear he sez he callated he'd ben an' got himself into it. 'N' then he walked off silent an' haughty, an' I haint seen him sence. Wal, I wuz more dumfounded 'n' ever, an' I sot on thet fence a mite, wonderin' about it. Seemed

zif the boys had a-bin stealin' mel'ons while I wuz a-chasin' cows, with the fence corner raised on a stove wood stick, an' a-rollin' 'em out anunder. Guess the dood must uv interfered some, an' the fence fell on 'im accidental when the boys left. Wal, jis' 's I got back to the v'randy, danged if there wuzn't Lindy an' Rube a-settin' there big's life, an' lookin' zif they'd a-ben talkin' over the op'ry all evenin', real pleasant. I begun to smell a rat in the woodpile.

"Sez I very stern, I sez, 'What's this mean?' very sharp, I sez to Lindy. 'Call off yer dog,' sez Rube, 'n' I c'd 'a' swore he wuz a-grinnin', only it wuz too dark to make sure. 'Explain yer meanin',' sez I, indignant. 'We're engaged,' sez Lindy, serious, but I c'd 'a' bet she wuz a-grinnin' too, 'f there'd 'a' ben a light.

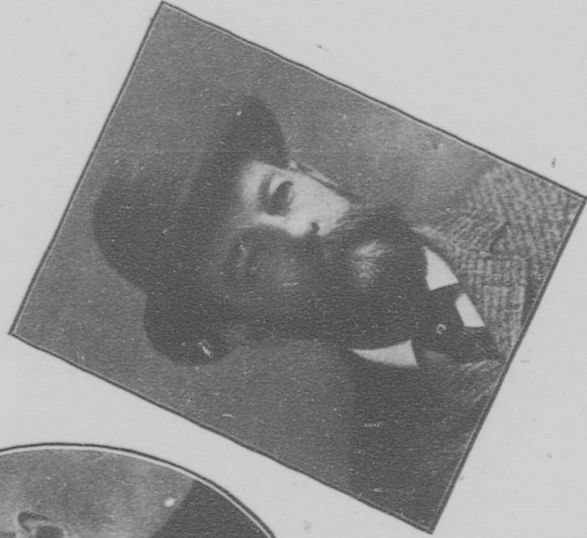
"'Look a-here,' sez I, 'how'd my friend Stimson Stott git anunder thet fence?' I sez, imperious. 'Guess,' sez Rube, sad like, sez he. 'The fence must 'a' fell on him, ef thet's where he wuz,' sez Lindy. 'I missed him,' sez she. 'Pears that way,' sez Rube, thinkin' hard. 'He'd orter keep out o' the grass when the doo is on,' he sez.

"Wal, we had to git another noo teacher 'count o' the loss o' my mel'ons, an' I ain't never got no sense out o' them two yit 'bout what they seen that night. All they sez is, 'Guess agin,' sez they."

And Old Josh bit off another piece of "chewing."

AUSTIN L. MCCREDIE, '06.





HON. SIDNEY FISHER.



MR. HODSON.



HON. JOHN DRYDEN.

THREE LEADERS IN AGRICULTURE

Agricultural Department.

EDITED BY J. C. READEY.

CHRISTMAS IN THE COUNTRY.



WHAT! Christmas again!

Can we believe it! Another year has overtaken and hurried past us like a summer cloud casting gloom and refreshment in its path, and becoming dissipated in the great unknown, leaving nothing but its effects to tell us that it has existed.

With some the past year may have left sad recollections; to all of us it has brought joy and privileges. Softened, and perhaps humiliated by trouble and disappointment, enobled by the consciousness of duty performed, we should be better qualified than ever to anticipate, and participate in, the festivities and good-will of the universal holiday.

On the farm, where social events and holidays are less common than in the city, the Christmas season is a particularly joyous one. Aspect, atmosphere, and association all combine to stimulate the feeling of good-will. Before the farm home lies the broad expanse of a snow-shrouded landscape, the vital parts of a sleeping Nature, protected by their winter garments. Far and near the neighboring chimneys peer above the sturdy evergreen groves pouring their indications of comfort and good cheer into the dry, frosty air. Here and there clumps of woodland, remnants of pioneer times, thrust their well-tried forms between the arctic breath and the home of the sturdy habitant. The harmony of voices has been changed to a sombre silence, startled only by the sharp cracks of Jack Frost as he exerts his prodigious expanding power. The burdened evergreens, once the home of the songsters, droop to hide the feet of their denuded neighbors, leaving the tall, weird form of the maple to frown before the sloping rays of a meagre December

sun. Stretching in all directions the piles of snow, streaked with the black outline of the fences, transform the landscape into a vast geometrical problem. The ponds have changed their sluggish greenness, and contracted outlines for a clear, silvery expanse, and the streams have been hushed by an icy hand, and forced to stop their noisy chatter. Everything is bright and invigorating. The air is pure, clear and frosty, free from the taints of the workshops of men, unlimited as the universe itself, filling us with buoyancy and exhilaration.

To such a scene the Canadian farmer's family awakens on Christmas morning. Early the repose has been broken, as the younger members, impatient for the morning light, scamper out to search the stocking, large and small, for the gifts of a mystic Santa Claus. Besides, friends are expected for the day, and everything must be ready to receive them. After a general exchange of good-will, and after the first outburst of joy and affection has been assuaged, the farmer's next thought is for the stock. Sunday and Saturday, holiday and work-day, much time must be spent with the farm animals. On Christmas the pleasure of feeding and tending the stock is greater than usual. More leisure may be taken, and the noble animals, as they receive the daintiest feed and an extra amount of petting, press against their master, and seem to understand and reciprocate the good-will. Morning, noon and night the work must be repeated, and is as often rewarded by the consciousness of kindness bestowed.

The family scenes would be hard to paint. What artist would dare to enter into the hearts of fathers and mothers on such an occasion. How dare he handle these sacred things, the heart-rays of love and satisfaction in the sunset of life growing more and more intense because less

and less clouded by the vicissitudes of the busy, busy world.

In many homes the scenes will be those of reunion. Friends will gather from near and far, sons and daughters, parents and children, to bask in the sunshine of affection and sympathy, and to radiate the bountiful warmth of the season's message. Nor is the recreation a less prominent part. From morn till night the ring of the skate, the jingle of the bells, and the affected screeches of charming youth resound and re-echo through the air, telling of light hearts and healthy bodies. Away from the stifling air of crowded rinks, free from the expense and disappointments of the livery-stable, with a straw-lined sleigh-box, and a stout team, the youth and beauty of the farm-homes are within realms of delight known to no others. But the climax is not yet. In the even-

ing the jingle, jingle, jingle of the bells coming up the drive announces the arrival of load after load of guests. Oh the heart-throbs, the anticipations, the exhilaration when youth mingles with youth in unmixed pleasure. Cordially the guests are received, and before long all are lost in the giddy whirl of light and beauty. And so the evening passes. Lunch such as only a farmer's home can supply receives ample attention, but the interruption is short, and the whirl begins again. But all too quickly the hours scamper on, the guests disperse, and the morning light breaks. Over the land the halo of good-will lingers, youth and manhood turn again to the responsibilities of life, refreshed, strengthened and ennobled by a realization of the message, "Peace on earth, good-will to men."

J. C. R.

OUR CANADIAN WEST.



It is now nearly a quarter of a century since some of the early graduates of the O. A. C., leaving the comfortable homes of the older provinces behind them, set their faces westward, and cast their lot among the pioneers of what at that time was a great lone land, stretching from the Red River of the north away over the boundless prairies toward the setting sun. To these pioneers Canada owes much, for at that period a steady stream of the most progressive of the young men of the eastern provinces was pouring across the international boundary to take prominent part in the wonderful development that was taking place in the United States.

The young man, however, who refused the allurements offered him on the other side of the line, and who staked his claim in our own west, has to-day the satisfaction of witnessing the fruition of his hopes. The attention not only of the

older provinces, but of the United States and of Europe, is now being directed toward the Canadian West, the "Granary of the Empire." Twenty years ago Canada had little to offer the young man of education and enterprise; stagnation was in her blood, while the Republic to the south was rushing forward with gigantic strides. With the opening of the west, however, hope began to dawn, no longer was there a whisper of annexation; opportunities opened for the best brain and brawn the old Dominion could produce; a new life-blood began to tingle in the veins; men and capital began to move westward; railways stretched their steel arms across the prairies, the husbandman tickled the fertile earth, and the stream of golden wheat that poured eastward on its way to the Empire's markets grew larger and larger, till it flooded the fleets on our inland waterways, and overtaxed the whole of our transportation system.

So great was the stimulus given to trade and commerce by this flood of wealth created by a handful of settlers



A CANADIAN FOREST ROAD IN WINTER.

scattered over these immensely fertile lands that the Canadian manufacturer, taken by surprise, was unprepared to meet the demands, and our ever elert American cousins, seizing the opportunity, participated largely in the trade development that has taken place as well as in the great land movement.

To-day the west affords an unequalled opportunity for the *young man*, and it is gratifying to observe how many are realizing this fact. Already there are upwards of 150 ex-students of the O. A. C. residing in the west.

In the older provinces the values of

one or two crops. It is not necessary to explain to the students of the O. A. C., however, that exclusive wheat raising is not conducive to the best interests of a country, and this fact is rapidly being recognized by the western farmer. Mixed farming is already practised in many progressive districts, and even in the more exclusive wheat centres, crop rotation and seeding down to grass in order to maintain the supply of humus, and assist in the conservation of soil moisture is being more generally practised year by year. With the introduction of a grass rotation, the building of fences and the improve-



A FAIR HARVESTER.

agricultural lands have long since reached their limit, and the young man buying a farm in the east assumes a debt that will take half a life time to clear off, whereas the richest and most productive of virgin soil can yet be acquired free or bought at nominal prices in the west, that is certain to bring wealth to the owner through its increase in value alone.

Wheat is king in the west. With ordinarily favorable seasons wheat will produce greater returns for the capital and labor invested than any other branch of agriculture. It is not uncommon for a man to clear the price of his land out of

ment of farm buildings, live stock raising becomes more popular and profitable.

Another noticeable feature in the development of the agriculture of the prairie is the greatly increased attention being given to tree planting for the sheltering and beautifying of the home. Within these shelters can be grown a great variety of hardy fruits, and although we do not grow peaches and apples in great abundance as yet, one Manitoba farmer ripened in his orchard over 35 varieties of standard apples this past season, to say nothing of crabs, plums, etc. And while the rest of our farmers are preparing to

do likewise they simply sow an extra acre or two of wheat with the profits of which they can buy all the apples they require from the old orchards of their forefathers, and buy them too with the three x brand which insures against worm and scab.

Space precludes reference to the great ranching industry, to the dairy industry or to the pure bred stock industry, all of which are rapidly developing. Both in Manitoba and the Territories there are live stock, dairy, horticultural and poultry

associations, agricultural societies and farmers' institutes, and soon we will have our own agricultural college.

The possibilities and opportunities of the great west are simply beyond description, and must be seen to be appreciated, and it can truly be said that no Canadian has completed his education until he has seen for himself the "Granary of the Empire."

GEORGE H. GREIG,
Secretary O. A. C. Union, Winnipeg.

PERMANENT PASTURES AT GLENHODSON.



THROUGHOUT Ontario, especially the Eastern portion of the Province, there are many side hills, some of which are steep and rugged. On Glenhodson there are forty acres of land of this description. The hills are very abrupt, rising to seventy feet above the valleys at their base. The land is rich, clay loam, quite dry, and

the section is somewhat deficient in rainfall. My forefathers cropped this land in regular rotation, and obtained from it fairly good average yields, but at considerable expense of labor and machinery. When this farm came into my possession, about seven years ago, I decided to establish permanent pastures, if possible.

Having heard that Prof. Roberts, at that time director of Cornell Experiment Station, had been successful in clothing similar lands with grass, some eight years ago, I visited that station, and went over the experiment pastures, which were heavily clothed with suitable grasses. On adjoining lands, of similar soil, the growth of grass was very poor, especially on the face of the hills. It was evident that Prof. Roberts was obtaining as much from one acre as his neighbors were from three acres. This result was undoubtedly due to his better system of management, which he described to me as: First, a

very thorough preparation of the soil; second, a careful choice of grasses; third, frequent top dressings.

Seven years ago this fall twenty acres of these side hills at Glenhodson were ploughed immediately after harvest and thoroughly harrowed. Once a week thereafter the soil was cultivated, principally with a rigid tooth, wooden frame, Bell cultivator. The first time the broad teeth were used, but the next and subsequent cultivations were given with the narrower teeth. At each succeeding cultivation the teeth were set a little deeper, until finally the soil was moved as deep as the strength of three heavy horses would allow. The cultivator used was one of the narrowest width. The first week in October the land was ridged and laid by for the season. Early the following spring the entire area was seeded with a mixture of: 12 lbs. lucerne, 6 lbs. of timothy, 3 lbs. white clover, 10 lbs. orchard grass, and 10 lbs. blue grass per acre.

On sixteen acres two bushels of barley were sown per acre. Four acres were left in strips at intervals throughout the fields on which no barley was sown. That portion sown with barley yielded over forty bushels per acre. When the crop was harvested considerable lucerne was found in the butts of the sheaves. On the 1st of October the entire twenty acres was a mass of lucerne, knee high. Every por-

tion of the field was thickly covered, even the brows of the hills. No animals were allowed in the fields that fall.

The following spring we found that a portion of the lucerne had been killed, but the other grasses and the white clover were quite thick and vigorous looking. On the 20th of May the dairy cows were turned into this area, and continued there the greater part of the summer, care being taken that the grass was not eaten too short.

In the fall of that year a portion of this ground was top dressed with well-rotted stable manure, at the rate of ten loads to the acre; a portion with fresh manure, and a part was left undressed. The following year, that acreage not dressed did not yield nearly so much grass as the other, nor did it withstand drouth so well. The fresh stable manure gave as good results, load for load, as the other. It has proved most satisfactory to apply at some time during each year a light dressing over the entire area. Five loads per acre have given very good results; this pasturage is becoming better every year, and capable of carrying more stock. On land of this description in this section lucerne is not desirable as a pasture plant, but the orchard grass, blue grass, and white clover are giving excellent results. The lucerne has entirely disappeared, except on the face of the blue

clay knolls, which cover an area of from two to three acres. Here the lucerne has been very persistent, and is as thick as and more growthy than it was the first year it was sown. This may be because the soil is suited to the plant, or because the other grasses refused to grow on these knolls, and left the soil undisputed.

We have never been able to grow lucerne in connection with other grasses, and have it last for a number of years, but have succeeded very well on dry, deep loam, where the lucerne has been sown alone and where animals are not allowed to pasture.

The best practice is to cut lucerne as soon as the first blossoms appear, and again a second time at the same stage of maturity. Immediately after the second cutting a top dressing at the rate of six loads per acre of fresh stable manure should be applied.

I wish to emphasize what I have already said; it is a better practice to apply the manure each year, at the rate of five or six tons per acre, than to leave it undressed for several years, and then put on a heavy coating.

That portion of the field which was seeded without barley has never given better results than that portion which yielded a crop of forty bushels of barley per acre the year the seeds were sown.

F. W. HODSON.



Horticultural Department.

EDITED BY T. C. BARBER.

FLOWERS AND FOLIAGE FOR CHRISTMAS.

The happy sounds of Christmas-tide
Are heard again by all;
Old customs of the country-side,
And the merry sleigh-bells tinkling call.

Bright hours! that pass like flowers away,
Or the stories of yule-tide told;
So swiftly each new Christmas day,
Is gathered with the old.

Then heigho! for the winter snow,
While yule-fires bright are shining,
And evergreen on the wall is seen,
With flower and foliage twining.



THE demand for flower and foliage for each succeeding Christmas-tide is decidedly on the increase, and it is seldom that the supply is equal to the demand, notwithstanding the enormous increase in the number and extent of florists' establishments all over our fair Dominion during the last few years. Not only are plants and florists' flowers very much more used for decorative purposes than they were in the festive seasons of bygone years, but they have also very largely supplanted the use of Xmas cards as mediums to convey to friends and loved ones our festive greetings and good wishes, for a Happy Xmas and a bright New Year.

And what more appropriate gift at Christmas-tide can there be! carrying with them as they do, recollections of the sweet fresh odors and bright colors of bygone summer days, whether it be to cheer the sick and afflicted, or to brighten the surroundings of the festive scenes of Christmas merriment.

Amongst florists' flowers there are none more popular, especially at this season of the year than the queenly rose, the deliciously perfumed carnation, and the sweet-scented violet. The two last men-

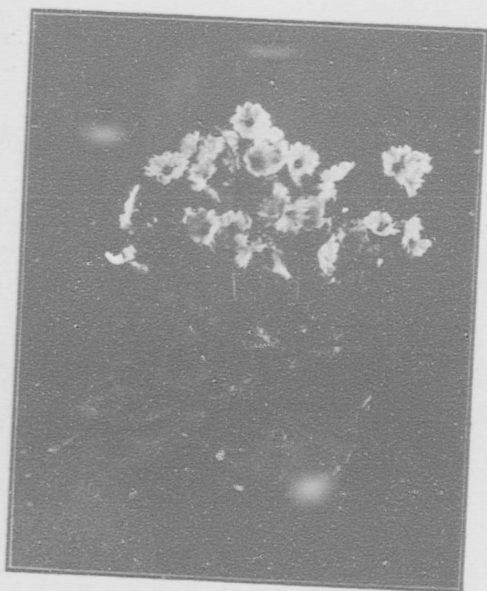
tioned kinds have of recent years become very popular, more particularly the violet; many florists making its culture almost entirely a specialty, and seldom is there a surplus of this modest little flower, that a few years ago was only deemed fit for an odd corner in the too often neglected hardy perennial border; whilst now vast stretches of glass, wholly devoted to their culture, will not supply the demand, more especially at Christmas



OUR COLLEGE FLORIST

time. Those of us who have inhaled the delicious odor of the old-fashioned violet growing wild in the hedgerows and on wayside banks in the old land can doubly appreciate perhaps, these new and improved types of one of the most popular and memory-cherished flowers of our childhood days, memories that return more vividly as each Christmas and New Year season approaches.

The brilliant and conspicuous bracts of the poinsettia pulcherrima (or euphorbia pulcherrima) are also most suitable for



PRIMULA OBCONICA.



ANTHERICUM PICTURATUM.

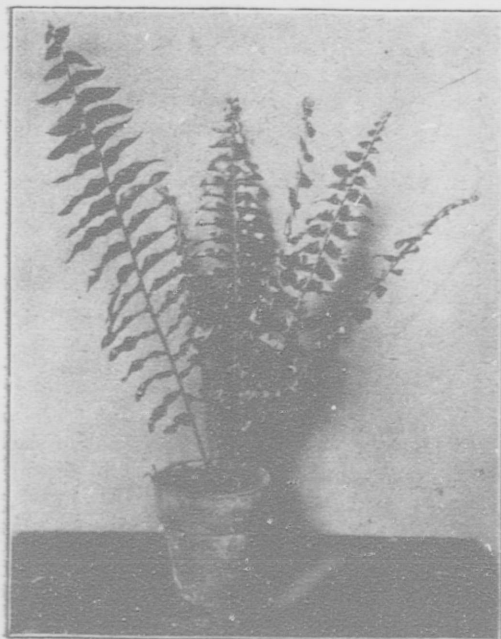


POINSETTIA PULCHERRIMA
AND
STEVIA SERRATA.



REX BEGONIA.

holiday decorations, their intensely dazzling crimson scarlet color making them most acceptable and seasonable for brightening up the otherwise rather sombre appearance of evergreen usually used for Christmas decorations. The accompanying cut gives a very good idea of a cluster of poinsettia bracts, except for the brilliant crimson coloring, which latter we must leave the readers to draw upon his imagination to supply, or pay a visit to the tropical house in the horticultural



NEPHROLEPIS BOSTONIENSIS.

department, where numerous specimens of them can be seen dotted here and there amongst the foliage. The poinsettia is a native of tropical America and other tropical countries, where oftentimes it is regarded almost as a nuisance. The sprays of tiny white star-like blossoms, as seen surrounding the poinsettia in the engraving, are sprays of the stevia serrata, a most useful flower for relieving and shading blossoms of any kind that would otherwise look rigid and formal without relief and shade of some kind. This stevia can be grown out of doors during the hot

summer months with very little trouble, and is one of the plants that an amateur plant lover can grow with very little difficulty. A small-rooted cutting of this stevia potted into a six or seven-inch pot early in June, and the pot plunged out of doors in the open, will make a fine plant by the end of August for flowering in the window in winter. It should be taken into the house before early frosts appear.

Several varieties of the begonia are largely grown for use at Christmas time; *B. rubra*, *B. incarnata rosea*, *B. coral*, and *B. Gloria de Lorraine*, are amongst the most useful varieties as cut flowers. The last named variety, with its pretty rose-pink blossoms, and its miniature habit of growth, makes it a delightful variety for mixing with and brightening up the dwarf varieties of ferns, so largely used in the make-up of fern pans, the latter being one of the latest and most fascinating fads for Christmas table decoration. Most of the varieties of begonias mentioned, with many others, can be seen at the college green-houses, now in full flower for the winter season.

Palms and ferns also play an important part in Christmas decorations. Amongst the best and most suitable palms are the Kentias, the varieties *Kentia Forsteriana* and *K. Belmoreana*, being two of the most graceful and enduring palms for house decoration.

Several types of the Phoenix, or Date Palms, are also very pretty and desirable plants for decorative purposes; more especially when the plants are small. *Phoenix rupicola* and *Phoenix dactylifera* (Date Palm) being possibly the two best varieties.

There are numerous varieties of ferns, more or less adapted for table decoration, or for use in jardinières, etc., the best for general decorative work is the Boston fern, or *Nephrolepis Bostoniensis*, its long arching fronds making it particularly adapted for jardinières, mantle-pieces, etc., whilst its pretty fronds when cut, make most beautiful tracings when trailed artistically over a table-cloth of snowy whiteness. The popularity of this fern however, bids fair to be outdone by its new rival, the

Nephrolepis Piersonii, a new and beautiful type of this fern, but which is at the present time too scarce and expensive for general use. A specimen or two of this new variety can be seen in the tropical house, but the plants are not at present very large. The *Aspidium coriaceum*, or leather fern, as well as the *Pteris cretica*, or Cretan fern, are also ferns well adapted for house decorative purposes. The cuts of the varieties mentioned give very good illustrations of their habit of growth.



ASPIDIUM CORIACEUM.

Pteris cristata, *P. Wimsetti*, and the common *Pteris serrulata* (spider fern), are also small dwarf growing green-house ferns, suitable for fern pans, or as pot plants for the centre-piece of a table.

The delicate, glossy, green climbing plant, *Myrsiphyllum Asparagoides* (*Smilax*), must be mentioned, as there is nothing to surpass this green-house climber for festooning mirrors, mantels, or candelabra, as well as for many other uses.

I am afraid that I have already taken

up too much space with my descriptions of florists' flowers, but I feel that this hastily-written paper would be incomplete were I not to make some mention of varieties of plants, flower, and foliage, that are more easily obtained than those I have described, provided a little forethought and preparation is made use of before winter sets in.

I have reference more particularly to a few of the commoner kinds of plants that can be grown by any amateur plant-lover as window plants.

Take, for instance, the Roman Hyacinth. If a few bulbs of the white flowering variety of these are purchased and potted early in September, and the pots plunged in the ground until about the middle of October, and then taken into the window, there is no reason why they cannot be had in flower before Christmas time, their beautiful waxy white, sweetly-scented flowers being particularly acceptable either as a pot plant or for cut flowers. I have known many instances of amateur plant growers having an abundance of these beautiful flowers in their windows at Christmas time, grown and cared for entirely by themselves. Other varieties of window plants that can be easily grown and that are suitable, particularly for table decoration, is the *Anthericum picturatum*, the *Rex Begonia*, and the *Primula obconica*. Seeds of the last named, sown early in spring-time, and the plants grown on in pots in the window, will usually flower very nicely by Christmas or New Year's.

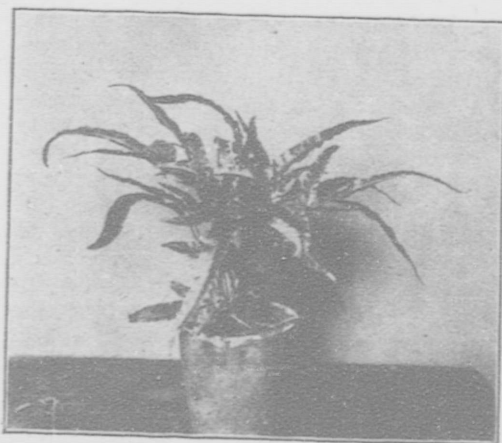
Another plant very easily grown in the window is the *Tradescantia*, or spider wort, or Wandering Jew, as it is sometimes called. This grows readily in the window in a hanging pot. A warm, partially shaded window, suits this plant best; it likes a plentiful supply of water at the roots. The variegated varieties of this plant are the prettiest.

The *Asparagus Plumosus*, or as it is sometimes erroneously called, the "Asparagus Fern," is one of the easiest grown plants possible for the house or window; its delicate half drooping foliage making it a particular desirable variety to relieve

the stiff-looking outline of many other flowers. For table decorations it cannot be excelled, even by the delicate Maiden Hair Fern.

There are many other plants suitable for home culture that could be named, but I must of necessity omit them, as this article is already too lengthy.

I cannot close, however, without mentioning a few of our native ferns, the fronds, or growth of which are decidedly adaptable for decorative purposes at any time during winter, and which can be had in most country places in abundance. The variety, *Polystichum acrostichoides*, or as it is commonly known, the "Christmas



PTERIS CRETICA.

Fern," is one that not only from its name, but from its evergreen hardy nature, also makes it especially suited for decorative purposes. The common Polypody, usually found growing in rocky or stony ground, is another pretty little native fern. Plants of both of these could be dug late in the fall, and the roots packed in shallow boxes in the soil they were found growing in. If given plenty of water so as to keep the soil moist, the leaves or fronds, will keep quite fresh and green until late in the winter.

Autumn leaves are also amongst the prettiest material that can be had for Christmas decorations. When pressed and preserved, these leaves can be had at

Christmas in all their brilliant autumn tints, and the rarest florist flowers cannot equal their rich coloring and gorgeous beauty when tastefully arranged amongst a few of the bright evergreen fronds of our native Canadian ferns.

One of the daintiest and most naturally artistic table decorations amongst the many that I have seen, was one which had only a very fine specimen of *Tradescantia Zebrina* for a centre-piece. The pot was raised an inch or two from the level of the table, on a block of wood placed under the tablecloth; the dark creeping stems and foliage hanging gracefully over the snow-white tablecloth. From this to several different points of the table were laid tracings of fern fronds of the varieties I have mentioned, dotted and spangled here and there with beautiful autumn leaves of almost all forms and shades of coloring, making a most pleasing effect without the aid of a single spray of blossom.

I must apologize for trespassing so much on the space of *THE REVIEW*, but trust that my remarks may, perhaps, be of some assistance in helping its readers somewhat as to their selection and arrangement of Christmas and New Year's decorations, with the wish that all may spend a happy and enjoyable Christmas. The poet Longfellow's verses on "Flowers," are particularly appropriate for Xmas-tide. A verse or two of them may, perhaps, not be out of place in closing:

Stars they are wherein we read our history,
As astrologers and seers of old:
Yet not wrapped about with awful mystery
Like the burning stars, which they beheld.

Wondrous truths, and manifold as wondrous,
God hath written in those stars above:
But not less in the bright flowerets under us
Stands the revelation of His love.

In all places then, and in all seasons,
Flowers expand their light and soul-like wings,
Teaching us, by most persuasive reasons,
How akin they are to human things.

And with childlike, credulous affection
We behold their tender buds expand:
Emblems of our own great resurrection,
Emblems of the bright and better land.

W. HUNT.

THE SURPLUS AND BY-PRODUCTS OF THE PEACH INDUSTRY—III.

DRYING.



CANADA to-day is dependent almost entirely upon other countries for her dried fruits. This should not be in a favored country like ours, where nearly all classes and varieties of fruit suitable for drying can be grown successfully. True, our climatic conditions will not allow us to compete favorably with those countries that dry their fruits by means of the sun's rays and in the open air; yet, in the mechanical evaporation, we have at our disposal by which we may materially increase our home production of this commodity, and relatively decrease our foreign importation.

Peaches are dried by three methods, viz., sun-drying, house-drying, and machine-drying or evaporating. The selection and preparation of the fruit is practically the same in all cases, but the after treatment differs in many respects. A full discussion of these methods would require a series of articles; so, in order to keep this short article within its allotted space, I shall condense it and treat the subject in a general way rather than attempt a lengthy discussion of details.

SUN-DRYING.

This process is not practicable in Canada, although in some of the peach sections, with proper care and attention at night, it might be practiced to supplement the work of the evaporator. In reality, it can only be depended upon in countries that have long seasons of warm weather, and where the air is dry and the nights dewless.

HOUSE-DRYING.

Every peach grower whose means and limited acreage do not warrant the necessary cost of a mechanical evaporating

plant should have one or more simply constructed drying houses. These may be built by any ordinary carpenter in a few days. All that is required is a room, ceiled closely, with rests for fruit racks having slatted bottoms arranged all around the walls. A good large stove in the centre of the room, keeping the temperature up to 150 degrees, will dry the peaches in about two days.

EVAPORATION.

Probably the most economical and profitable process known for the preservation of peaches is that of evaporation. Peaches dried in a well managed, up-to-date evaporating plant are said to be more nutritious and digestible, to keep better and longer, and to command a better price in the market than those preserved by the sun and the older methods of drying. In order to retain the natural richness and flavor of the fruit, and to insure its preservation, it is necessary to keep the temperature in the evaporator as high as possible without injury to the fruit, and to keep a continuous, rapid circulation of air throughout the compartment.

The peaches should be cut evenly in halves, and the pits removed. If the market price and demand for peeled peaches over unpeeled is sufficiently more to pay the grower for the extra trouble and expense of peeling, they should be peeled. As a rule, most of the dried peaches found on the market are unpeeled. Place evenly on trays or screens with the cut side up.

Whether or not the trays should be submitted to the fumes of sulphur is a matter of taste and opinion. Sulphuring is a bleaching process, and greatly improves the color, especially of old off-colored fruit. Peaches require usually about two hours fumigating. The time allowed should only be long enough to fix the color, as any exposure beyond this will injure the quality of the fruit. To bring about this condition some growers use a

small quantity of sulphur, and expose the peaches for two hours and more, others use a comparatively large amount, and expose relatively only a short time. The exposure differs with the variety and with the same variety in different conditions, and must be learned by experience.

When properly fumigated, the peaches are placed in the evaporator. To secure the best flavor, see that the green fruit is always nearest to the heat, and that the dried fruit comes out at the top. We

lowed to over-dry. It is then placed in bins or on the floor of the fruit house, turned over occasionally, and allowed to remain until it has passed through the sweating process. It is then graded into various sizes and conditions of color, and packed into clean uniform packages. The best grades are "facèd" in the boxes. Some fair specimens of the fruit to be packed are flattened by runing through a wringer or specially constructed pair of rollers. The flattened fruit is placed in



NOT A WINTER SCENE—NOT PEACH TREES.

shall consider this point more fully under the heading of Evaporators. The temperature is kept at 200 degrees. In some evaporators a lower temperature is maintained. The important point to observe in this respect is not the amount of heat, but uniformity. The time required for the peaches to dry properly can only be determined by observation and experience and the degree of heat. The average time is from eighteen to twenty-four hours.

The fruit should be removed from the evaporator while quite pliable, and not al-

the box cut side down. The box then is filled to the top, the bottom is nailed on, the package inverted and the bottom becomes the top.

The proportion of evaporated from fresh peaches varies with the variety, from five to eight pounds to the bushel is a fair estimate. Peaches should be quite ripe to dry nicely. Early varieties are not satisfactory, as they are too watery, and not well enough matured near the pit.

A. B. C.

(To be continued).

O.A.C. REVIEW STAFF

1903 - '04



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 2-R. J. DECHMAN, '05, Assistant Editor.
 3-J. C. READEY, '04, Agricultural Editor.

4-T. C. BARBER, '04, Horticultural Editor.
 5-C. J. BRAY, '04, Personal and Exchange Editor.
 6-A. A. J. LOGSDAIL, '06, Local Editor.

7-H. S. STAYNER, '06, Athletic Editor.
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THE O. A. C. REVIEW

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If you do not receive your REVIEW within the first week of the month kindly notify the Business Manager.

DECEMBER, 1903.

Editorial.



ONCE more the sleigh-bells and the whitened fields announce the advent of Christmas and the close of another year. Soon we shall hear again the cheerful sound of trunks being dragged along the corridors, pleasant to us because it means the beginning of the joy of "going home" again at this the happiest season of the year, which now, at the time of writing, gives promise of being made completely perfect by snow and ice and nipping winds.

What a merry, happy time it is! For once we dignified Canadians, usually fearful of expressing any feeling, seem to lose our self-consciousness and give ourselves up to the unconventional gaiety of the time. No one minds now being caught "gaping" in the shop-windows in search of the Christmas gift; and the most dignified goes hurrying along the street at dusk embracing all sorts of oddly-shaped bundles, which must be smuggled into the house and kept concealed until the mysterious visit of Santa Claus.

What a merry, happy time it is for those whose hearts are light. But what a bitter time for those in want, for those separated from home and friends, and for those in

trouble. We have just had a strong reminder that there are many who grieve while we are filled with pleasant expectations of a happy holiday time. Let us be as happy and full of glee as we can be, but let us also be so filled with the spirit of the season, "good-will to men," that we may do something, say something to bring some of the Christmas joy into the hearts of others not so fortunate as we.

A. G. R.

✽

The Story of Our Paper. This issue is the 15th anniversary of our paper and we should look back over its progress, and

dwell a little on its history. It is not a long story, as definite knowledge is meagre, and our early predecessors neglected to preserve copies of the first few years' publications; besides we should not like to boast too much.

In 1888 the first issue of THE REVIEW appeared, under the management of H. H. Dean, now Professor of Dairying at this College. One can imagine a little coterie of enthusiasts meeting together to discuss the founding of the paper. Doubt and fear were probably present, but after much discussion it was decided to launch the

new venture. But under what name? An hour filled with many suggestions and stormy arguments followed with no appearance of a satisfactory decision. Finally C. A. Zavitz, our Experimentalist, moved that the new publication be called the O. A. C. Review, which motion was immediately seconded, and in a trice unanimously carried. Thus sprang into being the O. A. C. Review.

The first number appeared as a small sheet, the earnest production of an anxious but enthusiastic staff, and entirely creditable as a beginning. Since then THE REVIEW has grown until it has become a magazine of 80 pages, and in this special number, of over 100 pages. Slowly at first it grew, but we must remember that it takes considerable time and work to establish a venture on a sound basis, and to those who stuck by the paper in its struggling days all honor is due. A few of these, besides the two mentioned, were: H. L. Hutt, now our Professor in Horticulture; G. E. Day, now our Professor in Agriculture; G. C. Creelman, J. C. McDonald, H. R. Ross, N. Monteith, R. S. Shaw, A. M. Soule, J. Atkinson, J. J. Ferguson, and many others who are today prominent in the different branches of agriculture. To these men the O. A. C. is indebted for founding our paper, for working for it and sticking by it in its struggling period.

In the last four years our paper has increased by about 60 pages. It has taken tremendous strides, ever increasing until we begin to wonder where the limit will be. In illustrations, especially, our paper has advanced wonderfully. In the December number, 1901, a small beginning was made, the staff nervously deciding that they could afford two small illustrations. In this number we are spending over \$100 in illustrating. Last and greatest from the financial and ground-rock point of view has been our rapid increase in advertising patronage. In the last year the amount of advertising has doubled. Why is this? Because manufacturing concerns have begun to see that our publication is a matter of consideration; that

what we lack in circulation is made up by the right class of subscribers; and that we insert only the "ads" of reliable firms.

Such is a retrospect. What is the prospect? This must be in our case altogether dependent upon circumstances and is risky to outline, but if we are permitted to look into the future, we should proclaim boldly that this must be only a beginning; that in the near future THE REVIEW will become the official organ of the Experimental Union, later that of the Farmers' Institutes, and then necessarily a paper for the agricultural people at large. No man can say that this is an impossibility; no man should say that it is an irrational expectation; for what better point of dissemination of agricultural knowledge is there than from an agricultural college. When this time comes we shall see a periodical published to carry knowledge and pleasure to its readers, not for the sake of remuneration but for the desire of giving instruction. We believe that the future has in store great possibilities for the O. A. C. REVIEW.



A Glimpse of the International.

From Nov. 28th till December 5th one of the largest shows of live stock in the world was open, and was offering golden opportunities for pleasure and education to all who wished to avail themselves of the privilege of attending. Those who have never attended the International or some such similar show have but a vague idea of the proportion and general excellence of the exhibits. Our friends across the line are to be congratulated on the promptness, precision and general satisfaction which characterizes the management of this great show. No suggested improvement for the comfort of the animals, for the fairness of the awards in the many classes of live stock, or for the educational opportunities seem to be denied consideration. We hope to

see the show receive the support which it deserves from the people of Canada.

No class of animals which are of interest to agriculturists generally were overlooked. The born horseman had ample opportunity to feast his eyes on the scores of animals of the different breeds. Clydesdales, Percherons, Belgians, and among the lighter classes the German and French Coach and Standard Bred horses. The admirer of the broad, thick, low-set beef animal could not fail to be satisfied, no matter what his favorite breed might be. The large share of the sheep exhibit come from Canada, and was acknowledged to be a credit to our breeders. To the Canadian visitor the swine department was remarkable for the absence of all animals of the approved bacon type. The Americans, however, are beginning to realize the value of such an animal, and before long the improved Yorkshire and Tamworth will take their place along with the thick fat breeds.

The success of Canadian breeders is very gratifying. An outstanding characteristic of Canadian stock is their superior quality, a feature brought out more

conspicuously when placed beside their coarser American competitors. Altogether the show has been a grand success and a visit will well repay the time and expense involved.

J. C. R.

**Look up our Bulletin Board
amongst advertisements
at back of Magazine.**

An Explanation.

We regret that owing to some unavoidable delays we are unable to present to our readers the article by Lally Bernard, intended for this issue. We hope, however, to have this at a later date, and good things always keep well. Already arrangements are being made for a series of articles by some of the leading thinkers and writers of Canada, and we expect to announce in our next issue a plethora of good things for REVIEW readers during the coming College term.

Our Old Boys Page.

D. N. Johnson is running a farm on his own account, near Vars, Ont.

Geo. Stauffer, 00-02, is farming at home near Stouffville, in Markham township, Ont.

Mr. Stanton has left the Poultry Department at the college, and Mr. Crane has taken his place.

Bert Baker, 00-01, was married in September to Miss Martin, of Bloomington, Ont. THE REVIEW wishes them joy.

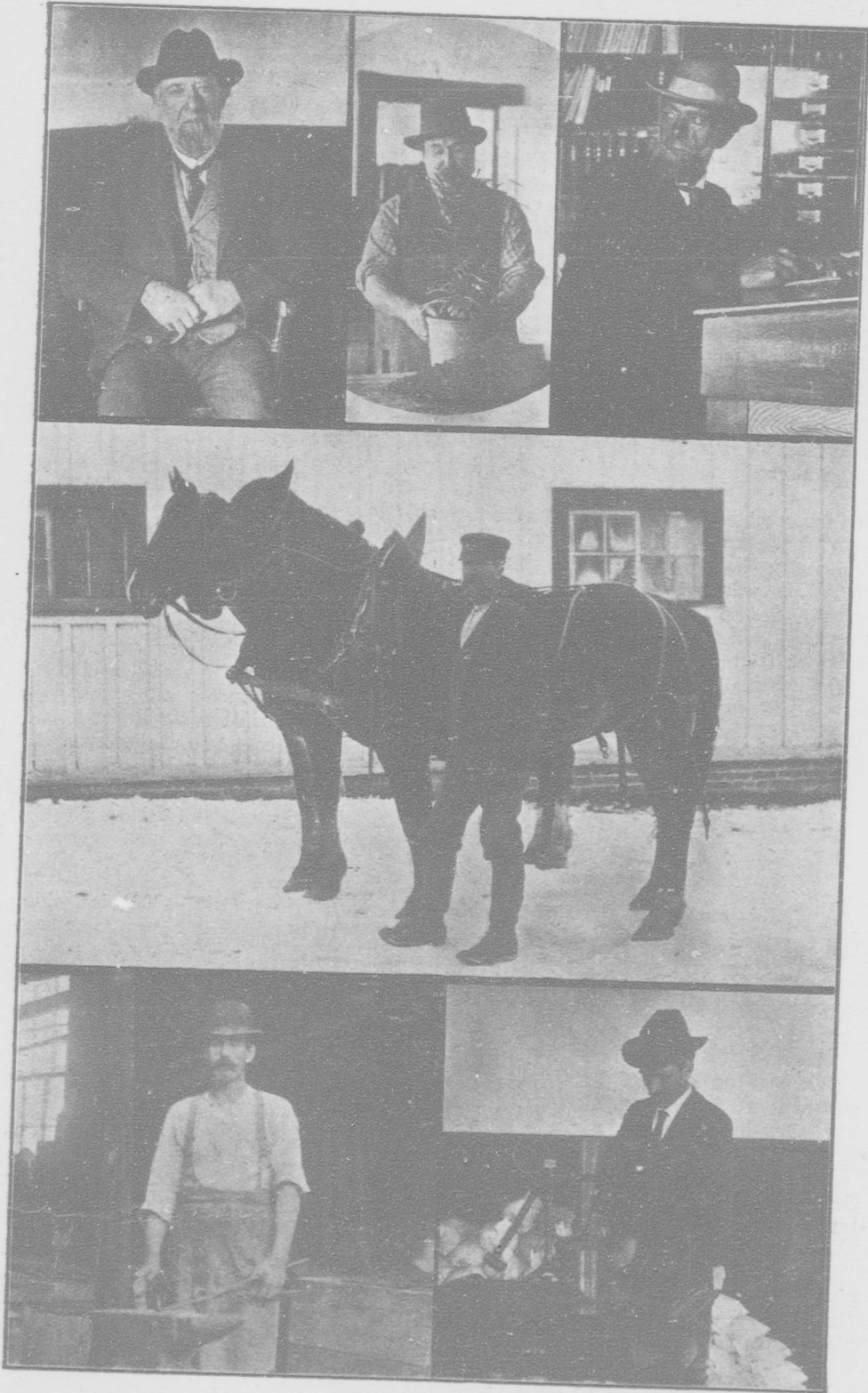
Andrew Goodchild (1899-1901), is engaged in mixed farming at Craigeith, Ont. His cattle are mostly pure-bred Herefords.

J. H. Davison (1901-1903) is looking after a fruit and poultry farm near Duncan's Station, B.C. He likes the country very well out there.

R. S. Smith (1900-1902), is at Emo, Ont., in the Rainy River valley. He arrived there about six weeks ago, and intends to take up land.

T. D. MacDonald (1901-1903), is at home on a two hundred acre farm near Olinda, Ont., trying to put into practice what he learned at the O. A. C.

P. G. Mills, who took third year work at the College here, has decided to remain where he is, in North Alberta, where he will engage in general stock-raising.



"FOR AULD LANG SYNE."

A. S. Pipes, '03, is at present travelling through the western agricultural districts of Canada and the United States. He writes that he is "still well and able to kick."

H. C. Teeple (1901-1903), is working on his father's farm at Jaffa, Ont., and says he finds a much greater interest in his vocation since his course at the O. A. C.

H. W. Houser (1900-1902), is engaged in general farming on the old homestead at Campden, Lincoln County, Ont.

Mr. McLean has resigned his position as Dean of the college, to take a course at Ames College, Iowa, and Mr. F. H. Reed, '05, has been chosen to fill the position of Dean. "Frank" has the hearty congratulations of THE REVIEW, and we wish him success in an "unmerciful" office.

Mr. Tennyson Jarvis, at present assistant in biology at the college, has been offered the position of biologist for Orange River Colony, South Africa, at a salary of \$2,000 and perquisites. It is probable that Mr. Jarvis will accept the



MR. MARSH AND GROUP.

Mr. Marsh to right of doorway; Mrs. Marsh in doorway; Miss Tims, the lady assistant, before window to right; Messrs. Johnson and Willson, lay helpers, on right and left of Miss Tims respectively; Gold miner on extreme right.

Strikes and shut-outs never put him out of a job, he says.

David A. R. Cameron is in the dry goods business with one of the largest firms at Niagara Falls, Ont. He expects to leave there in the spring to take a good situation in Buffalo.

G. C. Creelman, superintendent of Ontario Farmers' Institutes, is seriously ill at his home in Toronto. Physicians are in constant attendance. He attended the National Live Stock Exhibit at Chicago and while returning caught a severe cold.

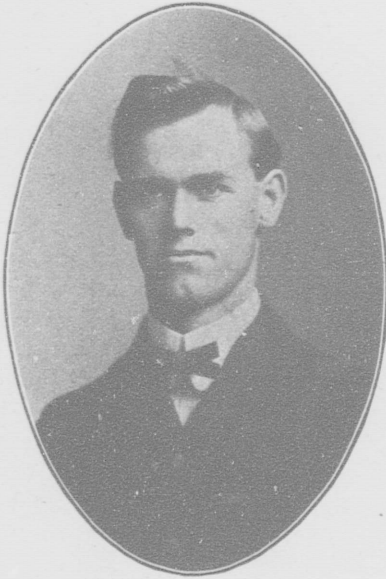
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position; and we feel that we express the sentiments of students and ex-students, when we say, that although we are sorry "Tenny" will have to leave the college, still no one deserves the position more, and we should be glad to see him accept it.

Farthest North.

We have the pleasure of reproducing in this issue a photo of St. Peter's Mission at the Hudson Bay post, Hay River, Great Slave Lake. This post is 900 miles north

of Edmonton, and has a mail twice a year. Mr. Thos. J. Marsh, English Church missionary there, is an ex-student of '84-'86, and has the honor of representing the O. A. C. at a point farther north than any other ex-student in Canada. Mr. Marsh was back in Ontario in "the good old summer time," but has since returned to Hay River.



W. L. CARLYLE
Professor of Animal Husbandry, Fort Collins,
Colorado; re-elected President American
O. A. C. Union.

The American O.A.C. Boys' Banquet.

The fourth annual banquet of the American O. A. C. Boys' Union was held on the evening of December 3 in the Sherman House, Chicago, when some twenty-five ex-students and students spent a very social evening together. After the good things furnished by "mine host" had been disposed of, the remainder of the time was spent in speech-making and story-telling. Many stories were told which recalled vividly to the memories of all the happy days spent at the old Alma Mater. Prof. Carlyle referred to the O. A. C. as the mother of all the agricultural colleges of this continent, and pointed out that it was one of her gradu-

ates, Prof. John A. Craig, of Texas, who first started to teach stock-judging while at Wisconsin. Other speakers referred to the staple sort of work this College had always and was still doing, and to the men she turned out. They are found everywhere, and are known by their good work.

All spoke tenderly of the late Prof. Panton and his work, which is bearing fruit manyfold, though he is gone. The president asked Mr. Cumming to tell the members of the Ontario Experimental Union that when they were erecting a Panton memorial that they were not to leave the American O. A. C. boys out.

President Carlyle then told how the Union had expected to have Dr. Mills present this year, but he was unable to be there, owing to so much extra work in connection with the MacDonald Institute, but he would ask Dr. Reed, Mr. Cumming, and all the students to simply bring



PROF. A. S. FERGUSON
Re-elected Secretary American O.A.C. Union.

him next year. They had long wanted to have him at this annual banquet, but next year he must come, or it would be the duty of those gentlemen to bring him.

At the close, the present officers, viz.,

Prof. Carlyle and Mr. Ferguson were unanimously elected president and secretary, respectively, and the students present thought it was well.

with "Hello, Gunn, old man." I turned to find Ives Pope, '01, and Renah Burnett, '01, and was indeed pleased to see them.

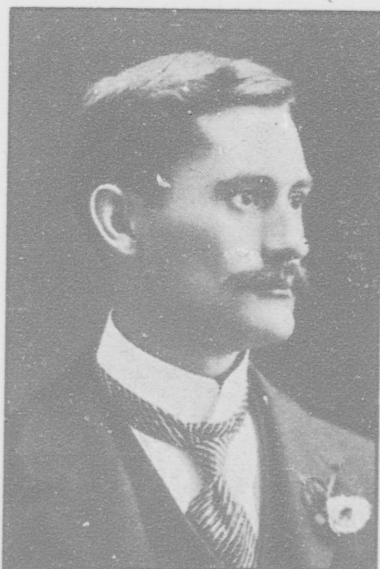
The Old Boys Met by W. H. Gunn on His Trip West.

(We hope that the writer of this interesting article, and the readers of The Review will pardon us for the way in which this letter has been mutilated. It was unavoidable, owing to lack of space. Mr. Gunn went west in the spring to take charge of the Egg Department in the Government Cold Storage Plant at Calgary and regain his health after a severe attack of pneumonia.—Ed.)

After stepping from the train I stood a few minutes gazing at the mountains and looking around at the motley crowd of immigrants that were about the



PROF. J. H. GRIDALE, B.S.A.
Agriculturist C.E.F., Ottawa.



G. H. CLARK, B.S.A.
Chief of Seed Department, Ottawa Experimental Farm.

station. I felt myself a stranger in a strange land, but suddenly got over this feeling when I got a slap on the back,

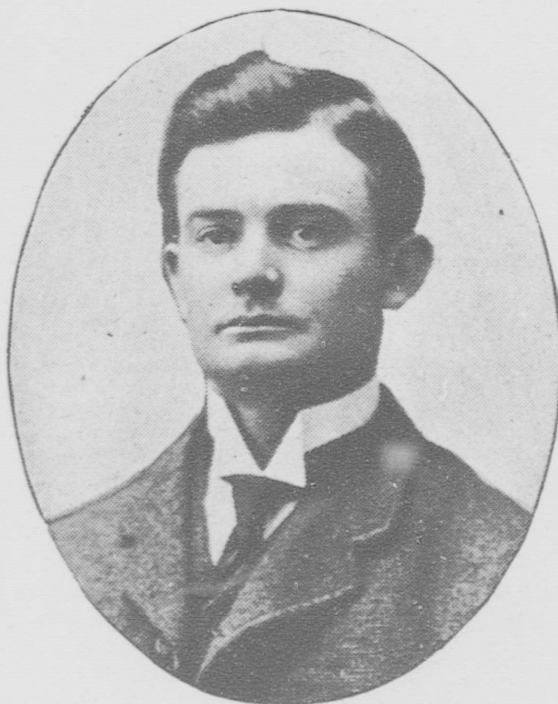
Jack Weir, '02, was in the city, so we soon looked him up. Pope was in town waiting for several carloads of "doggies" that were coming from the east. He has a large ranch of 37,000 acres, sixty-five miles north-east of Calgary, in the Knee-hill district, and this year has a thousand head of stock on it. "Renah" is his chief "cow-puncher," and also has over a hundred head of young cattle. That day E. C. Hallman, '02, and his brother Herbert came in to town, and we met Proctor Burwash, '99, so we had quite a reunion. The Hallmans have a ranch near Airdie, about twenty-five miles north of Calgary. They are horse-ranching, and have some splendid foundation stock of heavy horses. This fall they built a fine new residence to take the place of the old "shack," and E. C. is now looking for a good *cook-stove*.

E. L. Richardson, '96, is assistant secretary for the Board of Trade, and also manages Mr. C. W. Peterson's large ranch a few miles south of Calgary. At the cold

storage I was surprised to find J. R. Flan, of New Zealand, who took the dairy school course last winter; he was butter-maker in the creamery department.

At the pure bred stock show and sale held there in May there was another reunion of the boys. Prof. Day was out

In July, G. H. Clark, '96, of the seed department, Ottawa, and W. W. Hubbard, '82, of St. John, N.B., combined business with pleasure, and travelled together through the west. With C. L. Richardson they called on me at the cold storage. It is a pleasure to meet with students of former



E. C. DRURY, B.S.A.
Crown Hill, Ont. Elected Pre ident of the Union
for '03-'04.

judging. W. J. Black, '02, of the *Farmers Advocate*, was there reporting for the paper. J. B. Anderson, '00, was out travelling the west for the National Separator, of which he has the western agency. G. H. Greig, '80, secretary of Agriculture for Manitoba, was also there, and Mr. Day, nephew of Prof. Day.

days, and hear them relate the things that happened in their "time." J. D. McLaurin, '96, was superintending some construction work in Calgary. Since leaving the college and going west he had the misfortune to have one of his legs badly fractured by being thrown from a horse. Blood poisoning set in, so that it

was necessary to have it amputated just below the knee. He is chuck-full of pluck, and was not in the least disheartened by this mishap, and it is his intention shortly to start ranching.

Malcolm Geddes, '95, has opened up

seeking. He has two splendid sections for grazing purposes. "Sport" Clark, '99, was with Pope during the haying season to get some experience ranching. He has returned, intending to take out some stock and start up next spring. "Sport"



PROF. C. C. JAMIES

Deputy Minister of Agriculture for Ontario; formerly
Professor of Chemistry, O. A. C.

an office at Calgary for the *Farmers Advocate*. Joe Cleal, '04, responded to the advice, "go west, young man," and was out and bought two sections of land near E. C. Hallman. Joe and his cayuse "Buck" covered a lot of country land-

said he would be at Guelph for the "round-up" this month. L. A. LaPierre, '03, who went to work with the forestry department, Indian Head, took ill while there and took a trip out to Calgary before returning east. It is only when one

gets out and meets our ex-students that he realizes how wide is the field of labor for which the course fits one. Graham, of the firm of Shaver & Graham, undertakers at Calgary, was an old-time O. A. C. student.

After my work was finished at the cold storage, the end of October, I decided to go through to the coast, and return home around by California. I stopped off at Chilliwack, B.C., for three days with the Higginson boys, W. H. and J. A., '99. They are both farming, each having a splendid farm. This month W. H. is east. He came alone, but is to have company on his return trip. I was not sworn to secrecy, so may tell that Jim has also decided there is something in life worth living for, and will likely be joining the ranks of the benedicts before long. There is quite a number of ex-students in the Chilliwack valley. F. C. Chadsey, '99, has a private dairy at Sumas. Fred. has also a conservatory and a beautiful collection of plants. J. W. McGillivray, '93, has charge of the Chilliwack creamery. A. Kipp, '93, and G. E. Chadsey, '93, are both successful farmers. F. A. Wiancko, '95, has charge of the Eden Bank creamery. A. E. Wells, '91, is farming there, and has a beautiful large farm, with splendid buildings. He has farming down to a science. From Chilliwack I went down to the coast, and over to Victoria. My time was limited in Vancouver, so that I did not get time to call on J. M. Livingstone, '00, as I intended. He has a position with the International Ice Co. there. From Victoria I went by boat to San Francisco, and after spending a few days there seeing the sights, I went by the coast line of the Southern Pacific to Los Angeles. From Los Angeles I went to Pasadena, where I met Roland Craig, '97, and had a very pleasant visit with him for five days. He is there working for the U. S. Bureau of Forestry. He has now charge of a party, and is working on forest extension work in the San Bernardino Mountains. The party was

leaving for the mountains the day after I left.

From the old boys I met, I learned of the whereabouts of many of the other ex-students, so made note of them that I might have them inserted in the personal column of THE REVIEW, as this column is always interesting to ex-students:

F. F. Patterson, '93, is in the lumber business in Vancouver, B.C.

A. G. Hopkins, '97, is Provincial Veterinary Inspector for British Columbia.

J. D. Honsberger, '90, is fruit-farming, at Vernon, B.C.

G. H. Hadwin '88, is assistant commissioner of live stock. His headquarters are at Duncan's Station, B.C.

J. A. Mooney is farming at Valley River, Man.

Old Boys at the O. A. C. During Experiment Union and Winter Fair, Dec. 7th to 11th

H. Thompson, J. R. Hutchinson, C. E. Baur, J. R. Murray, T. C. Elford, G. F. Marsh, J. W. Salkeld, A. F. Eddy, A. H. Crearer, A. B. Clarke, W. W. Hubbard, N. Monteith, H. A. Lester, Elmer Lick, Geo. S. Henry, T. H. Mason, A. Shantz, L. H. Burns, J. R. Dennis, N. Ross, J. C. Cote, T. G. Raynor, George Robertson, P. Hodgetts, A. J. Wagg, W. Semple, A. J. Davis, J. A. Carlton, Geo. Clark, J. J. Davitt, W. B. Roberts, Geo. Robertson, B. Waters, Geo. McCalla, E. Bowman, L. D. Simpson, G. H. Hutton, F. S. Simpson, W. J. Brown, A. H. Christian, J. C. Macdonald, W. J. Black, W. Wilson, F. S. Jacobs, N. F. Wilson, G. Bain, I. Cressman, G. Greig, E. C. Drury

ENTERED IN '99.

A. W. Partridge, J. O. Laird, H. A. Craig, A. C. Calder, M. E. Snyder, C. E. Craig, J. Smuck, F. W. Broderick, F.

A. Eason, D. H. Horton, C. Shuh, F. E. Miller, P. Reed.

ENTERED IN '00.

H. W. Houser, R. Hopkins, J. M. McCallum, J. H. Stark, R. H. Paul, F. L. Clarkson, M. F. Coglon, A. P. Ketchen, R. E. Gunn.

ENTERED IN '01.

C. E. Fawcett, A. J. Ross, R. R. Cameron, E. Clark, J. J. Groves, R. S. Murray, H. Groh, L. D. Hankinson, C. Nicholson, B. Hogeboom, H. H. Thompson, S. M. Pearce, E. D. Eddy, W. E. Mason, J. R. Watson, R. Robinson, G. R. Bell, A. Middleton, L. Muir.

The officers of the Experimental Union for 1904 are:

President, E. C. Drury, Crown Hill.

Vice-President, T. C. Elford.

Secretary, C. A. Zavity, O. A. C.

Treasurer, H. L. Hutt, O. A. C.

Board of Control, Dr. Mills, G. C. Creelman, Geo. Carlow, N. Monteith and R. J. Deachman.

The *Guelph Mercury* is offering a handsome Premium Picture of the O. A. C. with a yearly subscription to the *Weekly Mercury*; subscription price, \$1.00. This picture was published in the November issue of our paper. It is 11 x 23½ inches in size, suitable for framing, and beautifully worked in three colors. This would make an attractive picture for any farmer's home, and would serve to remind them of the progress of agricultural education in Ontario.

The late Peter Scott.

Peter Scott was born on September 19, 1872, and first came to the O. A. C. in 1895. Owing to illness he was unable to complete his first year work, leaving at Christmas. He then bought a farm, which he worked on until the fall of 1901, when he rented it, and returned to the College. In April last he successfully com-



PETER SCOTT.

pleted the two-year course with honors, and received an Associate diploma. He spent the summer with W. C. Good, former assistant in chemistry at the O. A. C., and returned to his farm at Waubuno in September. On November 19 he was taken with appendicitis and died at his father's home on November 24. Scott was one of the best all-round men of his class, an industrious student, a successful athlete, and an active worker in the Y. M. C. A. To those of us who knew him the news of his sudden death came with a shock, and THE REVIEW can assure his sorrowing relatives, that they have the sincere sympathy of the students.

Book Reviews and Exchange Column.

Ranching With Lords and Commons



WE are indebted to the William Briggs Co., of Toronto, for a copy of that excellent book, "Ranching with Lords and Commons." This book deals with the ranching conditions of the west in its early pioneer days, and gives an interesting account of the struggles involved in laying the foundations of what now promises to be one of Canada's greatest industries. History is being rapidly made in our Canadian west, and books such as this bring us more closely in touch with the history of our country and the story of its rapid development. It is hard to realize that within the memory of men now scarcely past the prime of life that a journey of several days away from the line of railway was necessary to reach the now easily accessible ranching lands of Southern Alberta; yet such is the case. In a few short years this story will cease to be told by the living, and unless the present actors in the drama leave on record their history of the country much that is interesting in its development must remain forever unrecorded. John R. Craig lived in the midst of these scenes, and the book is an interesting record of his own experiences. It is a novel with the merit of truth, a story that forms a part of current history. Told in the easy style of one thoroughly familiar with the scenes he depicts, it will prove an interesting record to those in love with the beauty and freedom of our western plains, and of the frontier life which it so clearly illustrates.

Exchange

Acadia Athenæum is worthy of note this issue, in matter and style. "Visitation vs. Morality" is exceptionally well-

handled, and is well worth reading. A clever parody, "Chipman Hall," we reproduce in part:

Comrades leave me here a little,
Ere as yet 'tis time to sup;
Leave me here, and when you want me,
Send the automobile up.

Here beneath the elms I wandered,
Nourishing a youth sublime,
With the Mother Goose of science,
Or a doubtful Browning rhyme.

When the orchards rich behind me,
Minus certain fruit reposed;
When I clung to my old meal-sack,
For the promise that it closed.

When I'd stripped the plum and pear trees
Far as human eye could see,
Saw the vision of the Landlord,
And the shot-gun that would be.

McMaster University Monthly is up to its usual high standard. "Matthew Arnold as a Poet," and "Milton's Great Sonnet," on the massacre in Piedmont, are especially worthy of mention.

Acta still leads. It is especially well illustrated this time, and contains some good articles. "The Treaty-Making Power," by Henri Bourassa, M.P., is the leading article of this issue, and is a forcible plea for Canadian autonomy in which the author deals at some length with our attitude towards Great Britain and our present fiscal problems.

"What has become of Sam Adams? Wasn't he studying with the class last year?" "Ah, yes; Adams—poor fellow. A fine student, but absent-minded in the use of chemicals—very. That discoloration on the ceiling—notice it."

"Yes."

"That's Sammy."—S. A. Record.

Lives of football men remind us,
That they write their names in blood,
And departing leave behind them,
Half their faces in the mud.

—Ind. Collegian.



KNIGHTS OF THE KINGDOM OF DCGDOM

Could Do No Better

There once was a miserable debtor
 Who sat down to write a long letter,
 When he picked up the ink
 His heart it did sink,
 For he spilled some all over his sweater.
 —McMaster University Monthly.

**Acknowledgments.**—*November Exchanges*

The Argosy, Acta Victoriana, Vox Wesleyan, Vox Collegii, The College

Paper, The Industrial Collegian, The Rocky Mountain Collegian, The Smith Academy Record, Ontario Normal College Monthly, The Exponent, The Trinity University Review, Queen's University Journal, The M. A. C. Record, University of Ottawa Review, The Weekly Sun, New Glasgow Times, Cornwall Freeholder, The Saskatoon Phoenix, The Prairie Witness, The Acadia Athenæum, The McMaster University Monthly, Boys and Girls, a Cornell periodical, edited by Miss Van Rensselaer.

College Reporter.

Christmas

The happiest time of the year has come. The weary, jaded student may now throw his books aside, and find relief in holiday festivities. The freedom from work and the relaxation for two short weeks, is very grateful. It is not only pleasant, but it is necessary if we are to do the best work. The man who works constantly at high pressure, who has no relaxation, is sure to reach the limit of his power very quickly. All students, new students especially, find that study must not be continuous if they are to develop in the best possible manner. Make the happy Christmas time free from care and worry, and cause gladness and brightness in the world by helping others to be happy.

**A Retrospect**

The period near the closing of the Old and the opening of the New Year, is particularly appropriate for self-examination. It is at this time that we may see the result of a year's endeavor, that we may note the failures and their causes, may realize our successes and observe how they were attained. This is the time, too, in which we lay our plans for the coming year. By noting our achievements, by observing how we have succeeded, and why we have

failed, we may plan intelligently for the future, because knowledge comes largely by experience and observation. This time, the turning of the year's page is best adapted to the discovery of our real position.

In this feverish, strenuous age, in our busy college life, we do not appreciate the importance of the command, know thyself. A continuous stream of events so fills our lives that the study of self, to reveal the strength and weakness of our own individual character, is not considered. We study the character of those we meet, and compare it with our own, to the great disparagement of the former. The fact is, that we really are unacquainted with ourselves. We must know ourselves, our strength and weaknesses, and only when we do can we advance.

Let us, as College men, look at the various phases of character developed by our surroundings. Are we stronger men morally than we were a year since? Are we able to exert stronger influence for right? We must either become stronger or weaker, we cannot remain stationary. If we are not stronger we should discover and remove the weakness, for it is true that moral and spiritual strength gives a man the greatest power to influence his fellows. Our good influence over men is the im-

portant factor of true success, and therefore we should seek to exert the strongest and best of influences.

Have we gained mental strength? Assuredly yes. But have we made the greatest possible advance? Mental strength lies, not so much in the ability to acquire facts, as in the power to grasp a difficult situation, in the power to make use of knowledge in the exigencies of life. To develop the thinking and reasoning power is equally, if not more important than to develop assimilative power. The thinking and reasoning mind can always face a hard proposition with greater ease than can one which is merely a storehouse of facts. In our self-examination, we should discover the kind and quality of our mental power, and strengthen it wherein it is weak.

Our physical development should receive due attention. The moral and mental characteristics depend largely upon the physical well-being, hence the importance of bodily strength. We too often forget this important factor, and it would be well to inquire if this neglect does not account for many failures in our life.

If we make a careful and thorough investigation of our character, of our successes and failures, we cannot fail to be benefited, assuming, of course, that we do not fail to act. Our discoveries always show room for improvement. Continued study of one's own character would work wonders in upbuilding our manhood. Discovering the cause of success or failure of plans, prepares one to avoid mistakes in the future, for the imprudence of passing over the causes of previous success or failure is self-evident. Let the dead past bury its dead by all means, but we should not hesitate to learn wisdom not only from our own experience, but from that of others.

The College Y. M. C. A.

No student will deny the increasing importance of the work done by this organization for the uplifting of humanity. Its work is not only to carry the Gospel to

the heathen, and to raise the fallen of our cities, but it is to develop men. Nowhere does it have greater opportunity to do this than in College. It is here that it comes in contact with the best men, the thinking, reasoning, strong young men of the nation; the men who shall be leaders, who shall mold public opinion. This gives the importance to Y. M. C. A. work in colleges.

We readily concede the importance, though all do not admit their personal duty to this work. But it is impossible for us to shift our responsibility. There is something which each one may do better than any one else. Wellington was the only man who could defeat Napoleon and save Europe; Lincoln was the only man who could free the slaves of the Southern States. Our work may be more hurable, but it remains for us alone to do it. A man shows his strength by facing this issue, and determining to do his share to improve the conditions of humanity.

The College training is a strategic point in our lives. If we do not strengthen our characters here, the chance for doing so in the future is greatly lessened. The importance of developing mentally and physically is, very properly, often and strongly urged, but the question of moral and spiritual development, the most important of all, is too often discounted. If we look at the grandest success of men, we find it was attained through invincible determination to do right. We shall not be satisfied with less than the highest success, and so must we use the means, fixed purpose of right, to reach the goal.

The social phase of College life received recognition on the evening of Nov. 20th, when Mrs. McLaughlin, of the city, invited the Y. M. C. A. to spend an evening at her beautiful home. A very pleasant evening was passed, and everyone appreciated the efforts of Mrs. McLaughlin, her daughters, and others, to make the time thoroughly enjoyable.

There is one thing here at the College which seems to have been almost entirely

overlooked, and that is the Y. M. C. A. library. It exists for the benefit of the students, those who will take advantage of the opportunity to read Hillis, Speer, Sheldon and others. One of these books affords a very profitable means of spending a Sunday afternoon.

Literary Society

This organization, like most others, is just what the members choose to make it.

the active co-operation of all the members.

Too often we forget what we miss by neglecting our literary talents. The acquiring of facts is only one phase of education; the ability to impart knowledge, to influence men by the power of speech, is another more important aspect. The college-bred man should be a leader in social and political life, and for this leadership he requires not only knowledge,



THE FIRST MACDONALD CLASS.

The benefit we derive is exactly in proportion to the thought and effort which we give to the society. It is a co-operative organization, and for each member to obtain the greatest good it is necessary that the entire membership take an active interest. The Executive cannot make it a success unless the individual members are interested and anxious to work. It can do much to interest the men, but the society cannot be truly successful without

but the power to impress truth upon others. Our nation calls for men of wisdom and true nobility, and from whence shall they come if not from our colleges? Hon. G. W. Ross, speaking at Queen's, at the installation of Principal Gordon, deplored the fact that so few college men entered political life. He attributed this to the lack of debating as a feature of college education, to the large proportion of time spent by most students in the acquir-

ing of mere facts; this quiet, studious life giving them a distaste for the more active political world. This is too true. The active, aggressive spirit which is found in the athlete of the campus or of the debating hall, is wanting in the constantly grinding student. We must be able to think quickly, to meet arguments readily, to understand our fellow men, if we are to be of service to our country. Is it not selfish to refuse assistance in the issues which affect our nation? Does it not show weak manhood to remain idly unprepared for the future?

Start the New Year with the fixed determination to use the Literary Society, the best means to develop our manly powers. Each member should take an active personal interest, even to the sacrifice of a little study. This would merely be sacrificing the lesser to the more important. Attend all the meetings, respond when called upon to help, and urge the other fellow to do the same. Thus can we build up a strong, active literary society, develop latent powers, and when we come to inter-collegiate debating, the result will be a matter of pride.

Don't forget the conversat, last of January you know. Come back to college with lots of bright ideas, and prepare to make our social function a decided success.

The last Union Literary meeting of the term was held on the evening of December 5, when a very bright, interesting programme was given. The society is indebted to Misses Springer, Bell and Mills, and to Dr. Muldrew, Mr. Yeates and Mr. M. C. Cutting for their contributions to the programme. The debate was on Mr. Chamberlain's fiscal policy, the affirmative or Protection arguments being upheld by Messrs. Barrett and Clowes, while the negative or the Free Trade arguments were presented by Messrs. Bell and Reed. The

judges decided in favor of negative. Mr. McLean ably presented the criticisms of the evening.



W. A. SCOTT.

The student body was very much saddened and surprised by the sudden death of W. A. Scott, one of the brightest members of the Freshman class. He became ill on Sunday, November 29th, was removed to the city hospital on Monday, and on Tuesday passed away. The parents and friends in their sad bereavement have the sincere sympathy of every student.



THE MACDONALD GIRL

Macdonald



Notes

The Macdonald Institute]



EARLY thirty years ago Ontario's first efforts to provide training in scientific farming and related subjects resulted in the founding of the Agricultural College at Guelph. The "Model Farm" thus established met with many difficulties and discouragements in its earliest years, encountering more of criticism and opposition than of sympathy and encouragement. Even those whom it was intended to benefit directly were slow to appreciate the value, much less the necessity, of the institution thus provided, and years of education were needed before the O. A. C. found its true relation to the farming interests of the Province, and, indeed, of the Dominion. Within comparatively recent years however, a very decided change of opinion has taken place and it has been made abundantly evident here, as elsewhere, that "wisdom is justified of her children."

In the year 1887, a very important step forward was taken when the college became affiliated with the University of Toronto, and was thus enabled to offer a number of thorough courses, extending over three or, more recently, four years, and leading to degrees in agriculture. The standing thus given in the ranks of our institutions of learning has been of great value to the college itself, and has

done much to maintain the dignity of the farming profession. But while gaining closer relations in the circles of higher education, it was felt that agricultural education was still limited in its influence along lines of even greater importance. The value of scientific training in any calling must always be in direct ratio to the general intelligence and progressiveness of those most interested. The men who know most are the men most anxious to learn, and vice versa, and it certainly says much for the farmers of Ontario when we find them heartily appreciating and supporting a college which is gaining distinction as one of the best of its kind on the continent. Yet, still higher possibilities of usefulness must always appear before a truly progressive institution, and it is the aim of the present article to indicate the direction in which such expansion is now taking place.

Up to the present year this "Farmers' University" had excited very little influence on our elementary schools, some sixty per cent. of whose pupils are directly connected with the farm life, while only slight efforts had been made to dignify the household duties of wife and daughter by raising these also to the rank of a science. If agriculture, well named the "art of kings," has profited so much from the systematic study and practice of its principles, must we not look for similar benefits from corresponding principles applied to the various "arts of queens"? And if these sciences thus meet the needs

of so large a proportion of our adult population, it must follow that to lay a broad and sure foundation for a sympathetic knowledge of agriculture and of home industry is one of the duties of our public schools. At the same time, educators have begun to appreciate the value of the simple phases of nature and of industry as school subjects for children apart from their practical value. We hear, on all sides, the demand for a more rational education appealing to the natural interests and activities of childhood, rather than attempting to develop the mind by filling it with forms which are often equally meaningless and useless to the learner.

In response to this widespread demand, and with a liberality worthy of so good a cause, Sir William Macdonald, of Montreal, in the year 1901, set apart \$175,000 for the purpose of encouraging the introduction of such studies into the schools of the Dominion. For reasons already suggested, it was decided that this object would be most effectively carried out in connection with the Agricultural College at Guelph, and here, in accordance with the wishes of the author of this splendid gift, there have been erected during the present year two magnificent buildings, the Macdonald Institute and the Macdonald Hall. The former of these is a solid structure of three storeys, built of pressed brick and terra cotta, and affording ample accommodation for large classes in nature-study, manual training, domestic science and domestic art. The hall is of even larger dimensions, and will provide a comfortable home for more than one hundred women students, with adequate space for kitchens, dining-room, gymnasium, music-rooms, etc. These buildings will form an integral part of the college, and the institution will thus come under direct control of the Provincial Government.

The numerous and varied courses offered to students by the Macdonald Institute may be broadly classified as preparatory for teaching or for home life. Of the former, two-year courses are given in nature-study and in domestic science and art, embracing a thorough training in

these subjects, as well as in the theory and practice of teaching. Students who successfully complete these courses will be awarded diplomas as specialists in their departments. Similar work in manual training, but extending over one year, will be provided, while this subject will also be taught in connection with other branches. Short courses of three months each will be given to actual teachers who wish to prepare for dealing with the above subjects along with the usual school studies, but no diplomas will be given in such cases.

For students not intending to teach, there is a very thorough two-year course in all that pertains to home economics, with greater emphasis on the practical and less on the theoretical and educational sides. Here, too, short courses are provided in the various branches of house-keeping and home industry, including optional subjects, extending all the way from millinery to dairying and poultry-raising. Such optional studies may be pursued for one or more of the three-months' terms.

Although the institute is only now nearing completion, while the hall is still in process of building, it was thought better to make a beginning in the longer courses at the opening of the college year in September. Some twenty-four students are now enrolled, of whom sixteen are taking the normal courses in domestic science or in nature-study. The short courses and the work in manual training will open in January in the new building, but meanwhile classes are being held in the various departments of the college, and already substantial work has been done. The number of students in attendance under these circumstances has been somewhat of a surprise, and is, no doubt, an indication of the growing need for such an education as is here offered. On the other hand, those who are not to be turned aside by the inconveniences of the early stages in all new undertakings, will gain the rewards which wait for the pioneers in every advance.

For more detailed information as to the courses, fees, etc., readers must

be referred to the provincial announcement issued in August last, which may be had upon request to the dean. It may be noted here that although the institute is, like the college, under provincial control, it is open on equal terms to students from all parts of the

Dominion. This is one of the few conditions imposed by its founder, and is in itself an indication of the broad spirit in which the gift was planned.

DR. W. H. MULDREW,
Dean of Institute.

Athletics.

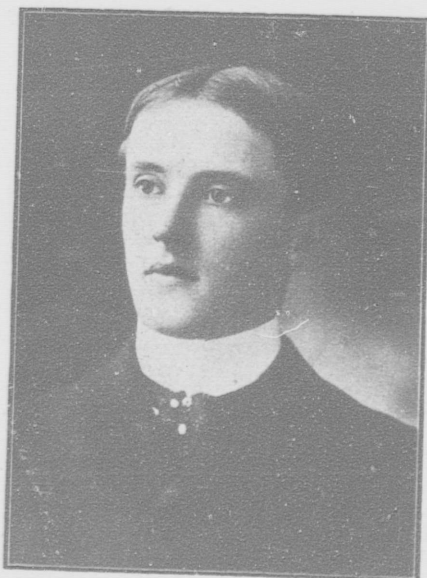
O. A. C. vs. St. Michael's College

On Saturday, November 19, the team journeyed to Toronto to play St. Michael's in their first game of the Mulock Cup series. In the resulting game, which was considered by the spectators to have been one of the best and cleanest contested, previously played this season on the Varsity Athletic grounds, the College, although defeated, had by no means the worst of the argument.

W. A. Hewitt and A. C. Snively were impartial as officials and gave entire satisfaction.

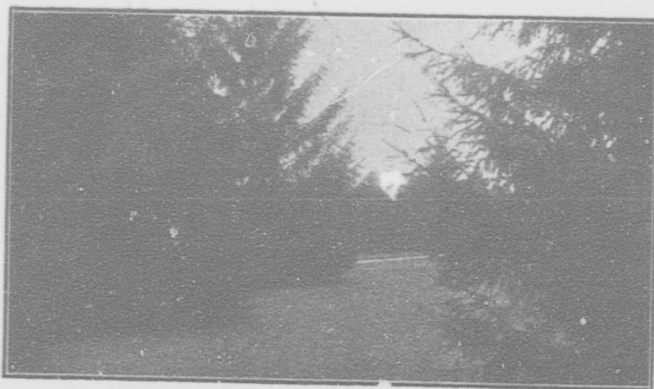
For St. Michael's, Carey and Dooley played by far the best games; while Bracken and Baker on the back division, and Dewar and Cooper on the wing line were conspicuous on the College team.

St. Michael's won the toss and elected to kick against the wind. Dooley kicked off, the kick going to Baker, who ran the ball back to half-way before being tackled. Bracken's kick was returned, caught by Baker, and the ball carried into St. Michael's territory. The Saints, in a series of brilliant runs, carried the leather back to the O. A. C. 25-yard line, where Warner secured it on a pass. Bracken kicked and the ball was held on St. Michael's 35-yard line. The Saints were again successful in running around the ends, and were finally in possession on the O. A. C. 25-yard line. From here they kicked, forcing the College to rouge. Bracken kicked well down the field, and



W. J. LENNOX.

W. J. Lennox, '05, is one of our foremost athletes. In the '03 sports he carried off the red ribbon in the quarter-mile, the half-mile and the one-mile races. He also won first place in the five-mile cross country run, in a bunch of ten, and has the honor of having his name inscribed on the Doherty-Dryden Cup. Besides being a good athlete he is a first-class student, and always ranks well in his class. His home is at Newtown Robinson, Simcoe County.



AMONGST THE EVERGREENS.



UNDER THE BIRCHES.



TWO VISTAS

THREE GLIMPSES OF COLLEGE GROUNDS

the ball was held in St. Michael's territory. By brilliant work on the part of Carey and Dooley, the play was again forced well into College territory, the latter being again forced to rouge.

Bracken tried a fake kick successfully and gained 25 yards. The full-back muffed the College kick, and McKillican got possession on St. Michael's 25-yard line. Bracken kicked across their goal line but the ball was carried out of danger by Dooley. From then till the end of half time the play centred in the middle of the field, neither side being able to score, the tally being O. A. C. 0; St. Michael's 2.

In the second half the College were penalized for a false kick-off, and their opponents were awarded a down in the centre of the field. Baker secured the ball on his 25-yard line, but the College were unable to gain on mass plays, and finally kicked, the ball being returned by the St. Michael's full-back. Baker again secured the leather on the 10-yard line, but the strong wind carried back the ball, which was kicked high and Bracken was forced to make a safety touch-in-goal. Score, St. Michael's 4; O. A. C. 0.

From the College kick-out, St. Michael's secured the ball and Bartman rouged the ball from their return.

Again the College kicked off, the wings followed down fast and got possession off Dooley's fumble. Bracken kicked again, the ball was again muffed, a dribble was started and Dewar succeeded in scoring a touch-down. Score, St. Michael's 6; O. A. C. 4.

The College held the ball on their 40-yard line from St. Michael's kick-off, but lost possession in trying to buck the line. St. Michael's promptly kicked and by fast following down forced the College to rouge. This ended the scoring in the game, time being called a few minutes later with the ball in the centre of the field, and the score standing, St. Michael's 7; O. A. C. 4.

The teams lined up as follows:

O. A. C.	ST. MICHAEL'S.
Bartman	Full Back..... Dunlop
Baker	Halves..... Carey
Bracken Dooley
Ransom Elliott
Fansher	Quarter..... Egan
Elderkin	Centre..... Eman
Dewar	Wings..... O'Leary
McKillican Walsh
McFadyen Mullen
Cooper Trihey
Warner Tansey
Carpenter Donnelly

Too much praise cannot be given to Mr. Milligan for the valuable services he has rendered the Athletic Association as Football Manager. The season just ended has been one of the most successful in the history of football at the College, and a great deal of the success may be attributed to Mr. Milligan's executive ability and knowledge of sports. It is not often that a man so successful in sport is found to be at home among such a collection of literature as the College owes to the late Mr. Massey, but Mr. Milligan's popularity among the students is due perhaps more to his technical knowledge and prompt service as shown in the library than to his good management and spirit in football matters.

Hockey

In past years the O. A. C. Hockey team has taken a prominent place among the teams of the Western part of the Province. Last year the College amalgamated its interests with the Victoria Club, of Guelph, under the name of the "Victoria-O. A. C. Hockey Club." The College also won the championship of the City League.

This year the Guelph Hockey Club are placing three teams on the ice, and the College, wise from experience, feel that they would not have the financial support from the city to warrant entering a team in the W.O.H.A. series. However, we have a number of fast men, and shall enter a good team in the City League. The College will also be represented by several men on the city teams.

Liquid Air Entertainment

On Monday evening, November 30, a Liquid Air and Wireless Telegraph entertainment was given in the Royal Opera House, Guelph, under the auspices of the O. A. C. Athletic Association, and proved a most enjoyable and instructive evening. It was attended by many people from town, as well as by nearly the whole student body. The Athletic Association are to be congratulated upon the success of their enterprising efforts to secure a College theatre night.

Prof. Patti demonstrated that Liquid Air was not a liquid in air, or air in a

liquid, but was absolutely dry. He introduced a number of previously unknown delicacies, such as (stewed) ice, frozen salad, and (sterilized) onions; and by means of his magic art converted some College beef into a comparatively tender morsel. He also set in motion some important Marconigrams which are probably still "agitating the ether" in a vain endeavor to find a "receiver," similarly tuned to the transmitter used.

The College theatre night was enjoyed by all, and if the experiment is again tried we have no hesitation in predicting a similar success.

VAGARIES.



IN reading over some early "Reviews," we find some very interesting items, which gives us an idea of what college was like in those days which have come down to us as "very wild and woolly." We also can read between the lines what some of our present staid and sober professors did in their youthful days. For instance, who

would have thought of our professor of bacteriology and our professor of agriculture writing poetry. But here it is in black and white, along with comments written by the paper's critic (not as severe as these personages are to-day):

"The next poem that comes to our notice is one, entitled, 'Ode to My Dog,' and signed F. C. H. It is markedly characterized by high-souled (not high-heeled) devotion to dumb animals, especially the playful and innocent bull-dog. Here is a selection."

"O noble beast of varied hue,
And massive jaw and sinewy limb,
Accept the humble praise of him
Who strives to yield thee honor due.

"The dainty meals I bring to thee,
Are smuggled from the kitchen's store;
And oft I fain would bring thee more,
But that the matron watcheth me."

And yet our matron tells us that they were all good boys in the past. What a jolly!

The critic goes on to say: "We have several other excellent poems, among which is one called, 'The Lost Coin,' by G. E. D. Perhaps the most spirited passage in this runs as follows:

"Tokens! are they? Tokens! say you?
By those tokens hear me swear.
Next time there are tokens going,
Yours most truly won't be there."

But space forbids any further notice, so we reluctantly relinquish our pleasurable and profitable task."

Oh! ye muse! was that critic sincere? If so, the writer was certainly born to late.

Now, listen, will you, to a story of how another venerable and respected professor schemed for the Government. Thank goodness, that we live in an enlightened age, free from graft:

Prof. Hutt's soliloquy: "Now, I just made up my berry accounts for the year, and I'm just fifteen dollars behind, what am I to do? Oh, I've struck it, just give the second year a chance."

"Say, Prof. Day, can't you miss a lecture period?" "Why, yes, Mr. Hutt, anything to oblige you, and it's a splendid idea."

The period was vacant, the fruit very tempting, and the boys walked over to the strawberry patch.

Bulletin Board same afternoon:
"All members of the second year, except _____, fined fifty cents for eating berries."

Prof. Hutt: "I tell you I'm sharp."

By a system of easy reasoning we might see how the barb-wire fence of the nineteenth century was originated.

The following tells how Doctor Reid, in those ancient days, made the moon move at his order:

First Student—"Do you like the college?"

Second Student—"Naw; got to put in twenty-five hours a day."

First Student—"Go on! There's only twenty-four hours in a day."

Second Student—"Yas, I know, but we had to put in a full day at first, and now we've got to get up an hour earlier for Doc. Reid's lecture, and if that doesn't make an extra hour, I'm a jay."

Doc. still makes time as much as in the days of the ancient chronicle.

Here's two on Prof. Harrison, when his little feet went pitter-patter along the old corridors, and when he used to delight in the dream of a mustache:

Harrison—"I got a cold from getting my feet wet taking a bath."

There! that proves our theory that the baths are at least 100 years old.

"Those whiskers shorn from Harrison's chin,

Will make him show his natural epidermis,

Who else would hide it from the view of men,

And keep us all in doubt and ignorance."

Even our worthy matron did not escape in those days of chivalry (?)

The cariole turned down the road leading to Mr. McIntosh's (Chumpy's road):

The Matron—"Why do we always have to come away down here?"

The Driver—"Oh! You should not grumble; you are nearer to the *Angells* than you are ever likely to be again."

For confirmation of this ask some of the exiles.

Prof. W. R. Graham, as a student, once advanced this statement:

"Much study is a weariness to the flesh."

Richard has grown in flesh since then, but won't think of those who have taken his place.

The following extract will no doubt clear away a vexed question from many minds:

Mr. Rennie: "Weeds, weeds! the more you cultivate them the faster they grow. I say, professor, how can we get rid of weeds?"

Prof. Lochhead: "Well, the only way, Mr. Rennie, is to have them all pulled out, root and all."

Mr. Rennie: "Who is going to do it?"

Prof. Lochhead: "An idea; have not those second year fellows half an hour of liberty after tea? This should not be. We shall start them collecting weeds."

Mr. Rennie: "O, dear, dear, that's splendid."

October 6. Notice: All second year students will have to collect fifty different species of weeds and must hand them in before November.

"How to collect two hundred weeds, press and mount them all in the space of an hour." Bulletin by T. Jarvis. Free."

And still there's weeds. Another method, Professor. Time for another idea.

The following clipping establishes the time when our Professor in Chemistry bought his first razor, and, boyishlike, wanted to use it:

"And Harcourt looks dejected

Since he took that hurried clip—

Not one of us who knew him

Ever thought he'd so much lip."

His assistant was in earlier years known as *Falstaff*. Ha ! a libel ! Our genial Assistant Professor has outgrown his youthful regard for the fair sex and through many years of sleepless nights has become inured to hardships. Wilson is to blame for it, for does not the chronicle say :

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

Again we read about one known as G. B. McCalla "as not much to look at but a good one to go" and also that he was secretary of the Y. M. C. A. "once upon

a time," no doubt very near its inception.

We shall conclude these vagaries with a quotation from a poetical description of the wild charge of the College Fire Brigade on the Dairy Piggery, in which

"Hopkins to the right of them,
Grisdale to the left of them,
Andy behind them,
Volleyed and thundered.
No longer a rush pell-mell,
All their work was done so well,
Not e'en one hero fell,
But they had scared to death,
So I heard Morgan tell.
Two pigs that had heard Hume's yell :
Mighty half-hundred."

THE STRANGER IN GUELPH HEARS A SOUND.

Hush ! did ye hear that sound ?
Like the dull deep rumble of the trembling
ground ;
When hidden fires demonstrate their
wrath,
And lava streams make dangerous every
path.

Whence comes that sound ?
Hark ! Listen to the roar !
It rises higher, louder
Echoes longer than before.

Has a meteor struck our planet,
And gone boring to the pods ;
Can it be the fearful wailings,
Of great Rome's forgotten gods.

Now it soundeth like the pounding,
Of a thousand angry Thor's
Or the fierce and furious tumult,
Of a hundred bloody wars.

Hark ! it cometh from yon hill-top ;
Where the College buildings stand !
Are those stalwart students fighting,
Back to back and hand to hand ?

THE SOUND EXPLAINED.

Easy stranger, you're excited ;
That er sound ain't new to Guelph ;
'Tis but the students yelling ;
O'er the abundance served on delf.

Smooth yer fur now, calm your bristles,
And I'll tell ye what's the jig.
It is noon-tide at the College ;
And they're dining awful big.

I have been up there at meal time,
And it's awful how they eat ;
Why ! they'd do a hefty bullock,
From the horns clear to the feet.

Them er students, ain't mouse stomached ;
You should see them sup bone juice,
Why ! I've seen a dozen of 'em,
Swallow down a six-pound goose.

Do not doubt my statement, stranger ;
But that crowd of hungry men ;
Eat most as much good butter
As a family of ten.

Like to know the regular menu ?
Well, I think, I have it pat ;
If I haven't lost the memory,
From the thing beneath my hat.

First, there's pure and sparkling water,
That's been introduced to tea ;
Sir, a barrel full of that nectar,
Would intoxicate a b'ar.

Then potatoes, mealy beauties—
With the skins off, mind you, too—
Served up most very generous,
In the ratio, one to two.

Then comes beefsteak, how the students,
Hail the rashers with a roar;
While they draw their emery whetstones;
That old cow was three or four?

She was born—I mind it clearly—
In eighteen thirty-seven,
But through kind regard for gender,
We will call her just eleven.

Ah! the soup she'll make, what nectar!
Why the odor from the pot,
Would send remembrance bounding,
Back to days I've most forgot.

When folks made soup from limestones,
And flavored it with sage,
Just to keep expenses running,
On a very narrow gauge.

Then there's bacon, with a rind
That would make a Zulu shield
A young and tender swine,
And he very seldom squeeled,

If his victuals were the same
At morning, noon and night;
For said he I get it cheap though,
And price, makes the matter right.

Sir, up there there's nothing wasted;
Everything's turned into cash;
What is left of tender sirloin,
'S tendered up next day in "hash."

There is baker's buns and doughnuts,
There is bread cut fine and thin,
Tip the waiters! bless ye stranger;
To speak to them's a sin.

And there's girls up there worth courtin',
I've been up there, and know;
But I've no more time to linger;
'Scuse me stranger, I must go.

SOLILOQUY.

So that's what caused the tumult,
'Twas no subterranean row;
Well I'm glad, I'm really thankful,
I was afraid, I vow.

I'm astonished, why their grub stake
Must be uncommon rare;
I have fed on College vituals,
But I never rent the air,
With roars of praise like thunder,
Or a wild exaltant howl;
'Twas generally low cussin',
Or a prolonged growl.

Would that I could raise my halloo
When those praises rend the air,
And feed once more varacious,
On that sumptuous College fare.

I could test my patent molars,
That were guaranteed to grind
The hard-tack of the navy,
Or the ham-bone of a hind.

How they water! those store grinders,
As though possessed of nerves,
And thinking of the plum-stones
In that jar of thin preserves.

Ah! those grinders! Bless the dentist
Who designed such crushing tools,
With them mouths should be fitted,
E'er they tackle boarding-schools.

They would bore their way triumphant,
To a doughnut's flinty heart,
On emaciated pastry
They'd defy the tanner's art.

—Kerry O'Brien.



Victor C. Wright

"A Merry Christmas," quoth the Turkey,
"You bet your neck," answered the Farmer.

Locals.

The motto of all Horticulturalists should be : "(S) pray without ceasing."

A fair one of Guelph—"Who is that funny little man with reddish-brown hair and a flourishing military moustache ; he looks like a foreigner ?"

"Oh, he is Mr. Rusty."

Lecturer at the Liquid Air Entertainment—"I want some competent person to tell me whether this is alcohol. I will ask Mr. De Coriolis to come forward and taste it."

(Ed.) "Why was Corry chosen ?"

The January number of the O. A. C. Review of 1896 says the Guelph police force consists of one and a half representatives. This has lately been increased to two, but we have no hesitation, in fact much pleasure, in nominating Mr. Growler as a third member.

His qualifications are too numerous to state at length, but we all know he can make a terrible noise for no reason ; he also fondly imagines people tremble when he growls, and he thinks he "cuts a lot of ice."

Heard in Dining Hall—New girl waiting on table.

Smart Freshy—"What are we to call you ?"

New Girl—"Pearl, sir."

Smart Freshy—"Oh, you are the 'pearl of great price.'"

New Girl—"No, sir ; I am the pearl cast before swine."

Outline of a story :

Chapter I.—Maid one.

Chapter II.—Maid won.

Chapter III.—Made one.—Ex.

Professors Hutt and Harrison, and Mr. Pickett seem to have spent a very pleasant time at Leamington. Dr. Mills and Mr. A. B. Cutting were there also.

Birds of a Feather Flock Together.

7

One preacher of Guelph refuses to take The Review out of the post office.

Guess who it is, and we shall give one year's subscription to The Review free. Two guesses for 50c. or three for a quarter. Guess the right man three times and we shall give you three free subscriptions to our valuable paper.

All answers to be in by Xmas.

Hawtin on entering the Opera House—"What a pretty church. Who did you say the minister was ?"

Will the lady student who left a pair of "rubbers" in the Chemical Laboratory kindly call for them as soon as possible, as they occupy a lot of space, and are so conspicuous.

Hamilton—"Ah ! Back at last, I'll never go to Chicago again."

We have every reason to doubt Mr. Hamilton's remark, as his appearance on arrival at the College clearly showed he had had a good time.

Hammy arrived without a hat, only one boot, and was distressed because he had left a shirt in Chicago. Rothwell will vouch for this, as he had to pawn his pipe to contribute towards ticket expenses.

Prof. Reynolds—"Mr. Monkman, can you tell me where Winnipeg is ?"

Monk—"It's between here and Vancouver."

Prof. Reynolds—"Is that east or west from here ?"

Monk—"East."

Prof. Reynolds—"I have yet got a lot to learn with regard to Canadian geography. Mr. Gamble could you tell me where Toronto is ?"

Gamble—"I guess it's between Guelph and Montreal on the G. T. R."

Prof. Reynolds—"In which direction ?"

Gamble—"West."

Look up our 'tin Board amongst "Ads" at back of "Mag."

Lecturer in French—"Will you please correct that word moines to moins?"

Junior—"Certainly, but may I look at your book again, for I am almost sure I saw it spell—Moines.

⌘

Wanted at table No. 2, a small sieve to be used for the following purposes: To sift from the raw material presented to

that table the following material, to wit, namely, tacks, flies, worms, granite and gneiss rocks, bricks, feathers, hairs, and pine knots. No reward is offered, as the same invention may be of use at other tables.

Wouldn't that t-a-c-k-s your uncle's digestive powers!

An Announcement

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