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MISSING

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THE DIGNITY OF A CALLING IS ITS UTILITY.

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Technical Education.

BY W. PAKENHAM, DEAN OF FACULTY OF EDUCATION, TORONTO UNIVERSITY.

W. PAKENHAM, B. A.

THIS Province has provided gen erously for instruction in Agriculture—no Province more generously or more wisely. Gratitude should interest the farmer in the train ing of the mechanic and tradesman. And not gratitude alone. Increase of skill in mechanic or tradesman makes for increase of prosperity in the town, and urban prosperity is a necessary condition of prosperity in the country side. The farmer's prosperity,—and his comfort,—are measured by his mechanical utilities and conveniences, and these exhibit the highest genius of the urban worker. And not gratitude and self-interest alone. All must recognize, landsman and townsman alike, that the future of this Province is committed neither to the farmer nor manufacturer. It is committed to both farmer and manufacturer, each in his own sphere supplementing the other and both working to the limit of their powers in behalf of a fully rounded national life.

Interest in technical instruction is not a creature of this hour or this country. Education has always been more or less technical and utilitarian. Greek education—and the world has not known a better education than that of the ancient Greeks—trained the youth for his one occupation—the duties of citizenship. Mediaeval edu cation had little contact with real life and yet it trained the page or squire for his one occupation—the duties of chivalry. The education of two hun dred years ago, an education purely

classical, gave those for whom it was intended the best possible training for their daily occupations—the duties of the publicist and man of affairs. And so to-day the world demands that education, as its application widens to include the masses, should train all men, farmers, manufacturers, merchants, mechanics, for the duties and activities of life.

Nor is interest in technical education confined to this country. It is universal. Indeed the keenness of the interest and the readiness of the response to that interest are everywhere an unfailing index of national prosperity. In industry and moral worth no peasantry in Europe surpasses that of France, and nowhere in Europe is instruction in agriculture more carefully organized. Germany's system for the training of manufacturers and artisans is the most complete in the world, and her rapid advance toward industrial leadership is an eloquent testimony to the efficiency of that system. The British and the Belgians are the leading commercial peoples of Europe, and they surpass other European peoples in their equipment for training in commercial activities. No country has reaped such immediate results from technical education as Japan, and, to judge from the generosity of her philanthropists, and the magnitude of her public undertakings in that regard, no country promises more permanent results from technical education than the United States.

Let it not be thought that Ontario shows no interest in technical education. Last year she spent, directly or indirectly more than half a million on instruction in agriculture, and her instruction in agriculture is unequalled on this continent. In the higher forms of industrial education, in the training of consulting engineers and experts, she has long done more than her duty. In the lower forms of technical education, and in addition to the commercial instruction of the high schools, the Province organizes and aids instruction in Manual Training, Household Science and Industrial Art in three dozen urban centres at a cost to the crown alone of more than $50,000. And the present session of the Legislature gives earnest of more generous assistance.

But great as her efforts have been, Ontario's need of technical education is still peculiarly pressing. The existing financial stringency will expose her markets to the merciless competition of her neighbor to the South, and this competition will test to the limit the skill of her artisans. Unskilled foreigners now flocking to her urban centres will force her native workman up into the ranks of the skilled workmen if they are trained to go there—or down into the ranks of the idle. Her position as the machine-shop and clearing-house of the Great West will remain hers for the asking—and the deserving. Her raw materials widely distributed and difficult of access, her motive power remote and unlimited, her transportation problems greater than those ever yet faced by so small a people,cry now and cry insistently for the captain of industry and the skilled artisan.

And in Ontario, as in all other lands, progress in the industries outpaces, and will always outpace, progress in technical education. Here, as else where the school lags behind the shop and office.

Let us look at the problem of technical education from the point of view of

the shop. One hundred years ago the mechanic and the artisan were trained as apprentices. Shops were small, numerous and domestic. Owners worked with their men, knew them, and were known of them. Shop processes were hand processes; there were no machines or simple machines. Apprenticeship was long and exacting, but profitable both to owner and workman. The latter graduated from the shop a finished journeyman skilled in all the processes of a trade. The former, in an age which laid stress upon quality and not quantity, enjoyed at little cost the services of a carefully-trained young workman. But the apprentice ship system is going or gone. It was human and personal, and modern industrialism is not human or personal. It departs rejected of all men. The shop now lays stress upon quantity, not quality, and the owner no longer finds the apprentice profitable. Skilled in one small process in a trade, and jealous of the secrets of that process, the journeyman is now unwilling and incompetent to train the apprentice. And for the apprentice himself, the system is too slow and its rewards too remote. He can rise to the stature of a laborer, a helper, or a machine attendant in a few weeks. Why should he give years to a trade?

Even as the apprentice disappears, the shop teaches less and less. Numberless kitchen looms of former days become the great city factory that covers acres. Labor is divided and again divided. Five score trades of metal workers have grown out of the trade of the millwright. The butcher of early colonial days is represented in the four dozen trades of a modern Chicago packing-house. One man could once make a coat in a village tailor shop. A New York factory needs thirty-seven men. Thus the all round journeyman becomes a narrow specialist, and the man of many parts becomes the man of one part. In that part, too, he quickly attains the limit of his powers and as quickly recedes from it. "The trades of many machine attendants may be learned in a few days," said a member of the Moseley Commission. "We saw few gray haired mechanics at the machines; the pace was killing," he added. Work becomes standardized; cheap labor replaces expert labor; the machine replaces the man; the automatic in the machine replaces the rational in one thousand men. The workman does not know his employer, or his fellow-workmen, or the product which his hands help to shape. He is himself a number. "No Admittance" is written over the door of the factory. "No Admittance," not rarely, is written in spirit over its machines and processes.

While the shop teaches less, it demands more. At the workbench, knowledge now reigns supreme. Mathematics, Science and Art, as the products of patient research, now transform all industrial activities. Directly or indirectly they make old trades more exact, and more scientific, as witness the trades of the wood worker, metal worker, textile worker and engineer. Directly or indirectly they create new and highly skilled trades—the trades of the artworker chemist, electrician—and that great army of trades which minister to the comforts of our homes and our leisure hours. They replace the man-and-the-shovel by the steam-crane, physical strength by nervous energy, manual dexterity by intellectual dexterity. They lead ambitious men up and out

of the brutalizing trades. And they give rise to the insistent cry of the shop for the resourceful man who will lead—the foreman, inspector, superintendent or manager.

The problem of technical education as viewed from the shop lies then in the disappearance of the apprentice ship system, in the unwillingness or inability of the modern shop to train the workman, and in the increasing demand of the shop for trained work men.

The problem of technical education is no less pressing as viewed from the standpoint of the merchant. Trade to day is not the trade of one hundred years ago. It now recognizes no artificial or sentimental distinctions. Goods from China, Germany, England and California lie side by side on our shelves. Men must buy in the cheapest markets and sell in the dearest. Trade has annihilated space. The Toronto of to-day is not more remote from the Liverpool of to-day than it was from the Montreal of sixty years ago. No longer has the Anglo-Saxon a monopoly in things commercial. All people approach a dead level, though a high level, of industrial skill. Commerce becomes more and more a struggle, peaceful perhaps, but none the less merciless, for the mere right to exist.

Amid these conditions the merchant of to-day should know more than how to write legibly and calculate interest. He should know in a scientific way the goods in which he deals, and the needs of the trading world. He should understand the commercial and financial system of his own and other countries, and he should be familiar with the problems of supply and demand, of capital and labor, and of exchange and transportation. And all these things the office will not and cannot teach. Viewed thus from the standpoints of both the mechanic and the merchant the problem does not alter. The world needs technical instruction, and the shop and the office cannot give that instruction. Here arises the demand for the school.

Let us briefly examine the problem from the standpoint of the school. Education was given to the masses at first as a means of training good citizens. Now what makes a good citizen tends to make a good workman. A good citizen is intelligent and provident. So is a good workman. But public education did not at first aim at making the good workman. It did not train for special callings. That duty was left to the apprenticeship system.

But in time changes came. Apprenticeship began to pass away, leaving nothing to take its place. Public education also changed. It added new subjects, and not practical subjects at that! It enforced regular attendance; it increased the age limits; it seized the years abandoned by the apprenticeship system and filled them with literary subjects. At last it seemed as if public education were to stand alone, almost the only means of training boys for the trades—a means isolated and wholly ineffective. And more followed. Population began to shift from the country where the boy on the farm had much to do, to the town where he had nothing to do. Boy life began to mean "receiving much and giving nothing, learning much and doing nothing." Out of this life came "a one-sided attitude towards labor, a one-sided sense of values, a false standard for measuring time, possessions and pleasures, in

terms of cost; and a wholly false view of life." Out of it all came. in short, manual, moral and intellectual in efficiency.

Convinced of the inefficiency, the schools set about reform. They added bookkeeping, commercial arithmetic, commercial geography and shorthand to the courses of study but at once en veloped these subjects in the literary atmosphere of the other subjects. The schools remained as detached from the commercial world as ever. Then they added drawing and design. Taught by men whose competency was doubtful, drawing and design lost their industrial significance and became culture sub jects. Recently they have added manu al training and household science, and have justified these additions by the plea that they are culture and dis ciplinary subjects. And so the regular schools remain to-day in spirit scarcely more utilitarian than were those of fifty years ago. They cannot solve the problem of technical education. Here rises the demand of the special school for industrial instruction.

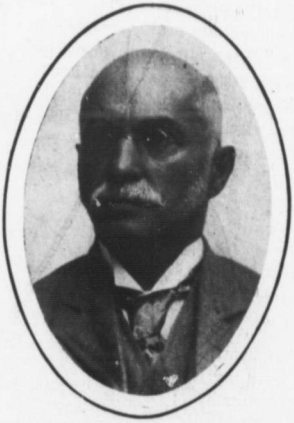
O SUMMER DAYS.

O Summer Days, how shall we part?
To you I gave my inmost heart.
Swift to your call have been my feet,
I loved your raptures and your heat;
Your sunsets and your evening star
Have beckoned from their deeps afar.
Your winds have taught me to forget—
O Summer Days, not yet, not yet!
Your veery's oft-repeated note
And oriole's song I've learned by rote,
Your nights have filled me with content,
Your dawns were as a sacrament.
The silence of your forest ways
Has given peace to troubled days,
And all your lovely, leafy things
Have brought the joy a comrade brings.
Beneath your dome of tender blue
I've learned to measure life anew;
The absent hope, the lost desire
Urge me again to something higher,
And beauty with her mystic gleam
Has waked again the old-time dream
And charmed away the vain regret—
O Summer Days, not yet, not yet!

—*Helena Coleman.*

Agriculture in the Days of Augustus.

BY J. E. WETHERELL, B.A., HIGH SCHOOL INSPECTOR, ONTARIO.



J. E. WETHERELL, B.A.

"NO doubt but ye are the people and wisdom shall die with you." Thus long before the age of Augustus a man in the land of Uz pricked the self-complacency of his friends. In every period of the world's history some Job or Cato or Carlyle has had the courage to tell his contemporaries that their views of current life were exaggerated or distorted or fallacious. In the present age with its marvellous progress in every field of human activity we are in need of constant reminders that our fathers had a modicum of wisdom, and that we are not *par excellence* the cleverest people of all time. The records of ancient days in biography and history and even poetry are excellent correctives and preventives of vanity or even of undue self-satisfaction, if we would stop occasionally in our precipitate modern rush to review the achievements of past ages.

Many of the young readers of the Ontario Agricultural College Review probably do not know that agriculture was a science in Italy in the days of Augustus, two thousand years ago. We have in our libraries works on agriculture, dating back before the birth of Christ. The most famous of these books is written in Latin verse, the *Georgica* of Virgil. The word "Georgica" is made up of two Greek words which have precisely the same signification as the two Latin words that make up "agriculture." Both words mean "the cultivation of the earth." So it is a mere accident that in these days of Greek scientific nomenclature the Agricultural College does not bear the title "The Georgical College."

In the following article I give a rapid sketch of the plan and purpose of the Georgics, adding a few interesting details. The author of the remarkable work was reared in the country. After getting his education at Milan, Naples and Rome, he returned to his paternal farm, where he lived for many years, engaged in writing, agriculture, arboriculture, and the management of an extensive apiary. His farm was in the north of Italy near Mantua, a little village close to the forty-fifth parallel

of latitude, which is the line that in Ontario passes Muskoka Lake. The "Georgica," a poem of four parts or "libri," is more remarkable for its agricultural precepts than for the qual ity of its poetry. The knowledge of farming and allied pursuits which Virgil possessed is, when one considers all the circumstances, marvellous in deed. I hope that some ambitious student of the Ontario Agricultural College will some day make an ex haustive study of the Georgics and publish a little volume thereon. We still go back to Roman days in our studies of jurisprudence and oratory, and I am satisfied that we could learn much from ancient Italy regarding the cultivation of the soil and the various occupations of the farm.

The general plan of Virgil's treatise is this:

Book I. deals with ploughing and the preparation of the ground for the seed.

Book II. treats of sowing and plant ing, of the culture of the vine and the olive, of grafting and budding.

Book III. discourses on the manage ment of cattle, horses, oxen, sheep.

Book IV. handles, with astonishing particularity, the management of bees.

In the first book he discusses the various kinds of soil, black, sandy, salt ish, fat, heavy, deep, etc., and he points out their fitness for different crops and vines and trees. He shows that soils like men have habits which the farmer must learn if he is to be successful. With many of the approved methods of modern farming Virgil was quite familiar. He recommends the practice of leaving lands fallow every other year in certain localities and with certain soils. He gives precise rules for a rotation of crops. Wheat should be followed by pulse—peas, beans, etc. Never, he warns, should flax be put in after a year of wheat. So unpoetical a subject as the use of manures he does not pass over. He advises a liberal sprinkling of wood ashes on certain soils. He says the burning of the long stubble gives a higher tone to the land. It would seem that "the wisdom of a thousand years" lies in most of his agricultural precepts.

The farming utensils as compared with ours were certainly primitive. Most frequently mentioned are ploughs, harrows and "slow-rolling wains." The plough was usually con structed of three different kinds of wood in its different parts. The sup port of the share was elm. For other portions linden and beech were com monly employed. Directions are given for using both ploughs and harrows. The mention of the "glittering share" shows that the farmer cared for his tools. Steers were the draught animals most in use. The Italian farmer is recommended to mellow hard fields by ploughing them four times in a fallow year. "Rule your land im periously and give it freqeunt exercise," advises the farmer-poet.

Interesting, indeed, are his cautions regarding the selection of seed. If the quality of the grain is not to degener ate you must each year cull out the largest. The seed should be artificially prepared for the soil. If you steep the grain in salt-petre and black lees of oil you will have a bigger crop. This is surely the forerunner (two thousand years ahead of time) of our steeping peas before sowing in a weevil-killing liquid, or our soaking of legumes in a mixture charged with millions of bacilli

whose function is to draw nitrogen from the air.

The Italian farmer had an infallible and picturesque almanac flaming across the sky. He knew well the constellations and the planets, and the first magnitude stars, and his times and seasons were measured by these heavenly beacons. The signs of the Zodiac, the twelve constellations through which moves the sun, determined mainly the period of farming operations, sowing and reaping. "Sow barley or flax when Libra makes the hours of day and night equal." "Sow millet when the Bull rises and the Dog-star sets." Virgil's astronomical directions are very numerous. "Sow wheat when the Pleiades set." "Sow vetches and kidney-beans and lentils when Bootes sets." That word "sets" tells a tale. By the "setting" of a star was meant its going down in the west just before the sun rose in the east. The farmer in summer was always up before the dawn. He knew the stars of the morning, but before the stars of evening had assumed their brilliancy he was sleeping the sleep of the tired. Fall ploughing began when Arcturus rose in Setpember. The fiery Scorpion, the Kids, the Dragon, all had their intimations for the up-gazing husbandman of old.

After the grain is up Virgil recommends that in certain conditions it be fed down to the level of the soil by the cattle to prevent too luxuriant growth.

The important question of rain and moisture for the growing crops is considered. The gigantic scheme of C. P. R. irrigation in Alberta had its primitive example in Europe two thousand years ago. If the summer is not moist, declares the poet, you must divert the streams and rills over the sown fields. "Gurgling waters allay the thirsty lands, therefore decoy the torrents over the plains."

Weeds there were in abundance in old Italy. Although there was no James Fletcher to write a volume on the Farm Weeds of Italy, Virgil gives us a short catalogue of the most noxious. All of Virgil's list but one I find mentioned in Mr. Fletcher's recent volume, wild succory, the lazy thistle with its horrid spikes, burs, darnel, wild oats, caltrop. Reverent Virgil gives us the cause of the prevalence of weeds: "Jove himself willed that the ways of tillage should not be easy."

The growing crops had other enemies besides weeds. Mildew ate the stalks. Storms levelled the standing grain. Destructive birds ravaged the fields from the day the seed grain went into the soil until the new grain was safely housed.

The poet gives a vivid description of a harvest storm that "sweeps away the joyful corn and the toil of the steers." He gives the farmer various signs of the coming storm: the foreboding flight of cranes, ravens and crows—the snuffing of the heifer, the fluttering of the swallows—the croaking of frogs, the activities of the ant, "carrying her eggs,"—the moon's horns obscured—the sun rising or setting with face dimmed.

Precepts are given for occupations during bad weather. Sharpen your plough-share; stamp marks on your sheep; number your grain-sacks; sharpen stakes for the vines; weave baskets; parch your grain; make snares for birds; drive your flock of sheep into the river.

Instructions for making a threshing

floor are explicit. Level with a roller and consolidate with chalk. Get rid from the threshing-room of mice, moles, bats, weevil, ants, and other pests.

One solitary picture are we vouch safed of a farmer going to market. He walks by the side of his ass, which is laden with oil and apples.

Virgil was always a deeply religious poet, and in his work on farming there are many touches that indicate how thoroughly and continuously he believed in the power and influence of the Roman gods. One of the most impressive passages in the Georgics is a brief injunction at the end of a list of precepts: "Above all venerate the gods and renew to great Ceres (the goddess of grain) the sacred annual rites." Here we have the counterpart of our annual Thanksgiving Festival, the expression of gratitude for bounteous crops and plenteous fruits.

At a time in the history of our Province when the movement of population from country to town and city is assuming menacing proportions it is fitting that emphasis should be laid on the satisfactions and pleasures of rural life. Nowhere in the literature of the world can so fine a passage be found in praise of the country as in the second Georgic. I take the liberty of paraphrasing it somewhat freely and of omitting some unimportant particulars:

"O who will place me in the cool valleys and shelter me with the spacious shade of overhanging boughs? Happy is the man who has been able to come close to nature and to examine the causes of things, and to put beneath his feet all fears and inexorable destiny and the terrors of the lower world. Blest, too, is the man who worships the rural gods; him neither the rods of authority nor the purple of kings can disturb, nor perplexing discord, nor invading foes, nor the affairs of the great city, nor the downfall of states. Such a man grieves not too much at the miseries of the poor, nor does he envy the state of the rich. He gathers the fruits from the trees and the grain from the willing lands. He knows nothing of cruel laws and the maddening forum and the public courts. Various are the occupations and ambitions of men, but for me the country. The farmer cleaves the earth with the curved plough; then follow the labors of the year by which he supports his country and his home, his herds of kine and his fine steers. There is no cessation in his gains, for the year produces now apples, now the young of the flocks, now the corn sheaf. The furrows are pregnant with increase and the barns are full to bursting. The autumn in its turn lays down its varied offerings; high on the sunny rocks the mild vintage is ripened. When winter comes the olive is pounded in the oil-presses, the pigs come home grunting with pleasure at their fill of acorns. In the country the sweet children hang around their parents' necks "the envied kiss to share"; the chaste home preserves its purity; the cows suspend their udders full of milk; the fat kids disport on the cheerful green. This life the ancient Sabines lived of old. By such a life Etruria grew strong. Thus, too, became Rome the glory and the beauty of the universe.

Why a Student Should Support College Organizations.

BY D. R. KEYS, M.A., ASSOCIATE PROFESSOR OF ENGLISH, TORONTO UNIVERSITY.

"HOW can I make the best of my college course?" is a cry that must inevitably come from the lips of every student worthy of the name, who has been granted the opportunity for a college career. Hard indeed would be the heart that failed to sympathize with such a cry. So, when the appeal for aid in solving this perennial problem of the incoming freshmen came from the editorial sanctum of the *O. A. C. Review* to the present writer, he gave it a ready hearing. Nor have the labors of the University Summer Session, with its abundant lectures, its interesting cosmopolitan classes, its intensely high temperatures, been devoid of lessons on the subject under discussion. For, as this latest college development of our strenuous age—the summer session—taxes the men, who now above all others may fairly claim to lead the strenuous life, it justifies us in setting up a high ideal for the college student in general. Such an ideal should be in the mind of every young man who enters the Agricultural College, and we may express it in the form of a thesis, which is also a truism: *The full value of the College Course is obtained only by such students as take part in all the college organizations.*

To a graduate of many years' standing this theme is worn somewhat threadbare, but it may give it freshness to treat it first from a comparative, and then from a national standpoint before taking it up from a purely personal point of view.

It might almost be considered an axiom that in every country the national characteristics are reflected in the secondary activities of college life.

Thus the great English typical universities of Oxford and Cambridge show that devotion to outdoor exercise and sport which has done so much to make the English a colonising and a conquering race. And that the Oxford Union is almost as famous a debating club as the House of Commons, is recognized by all the lady novelists from Mrs. Humphrey Ward to Gertrude Atherton.

In Germany, on the contrary, we find a kindred people with very divergent ideals of student life. There the aristocratic students form a far smaller proportion of the whole body, and exhibit in their *corps* organizations that type of arrogance which is the natural characteristic of a dominant military caste. On the other hand the numerous literary, scientific and musical organizations which give a breadth and fullness to student life that it has nowhere else, testify to the highly developed intellectual and artistic life of that favored land. The finest type of German professor presents an almost unequalled combination of breadth of

scholarship and charm of personality, and this is largely due to the fullness and versatility of his student life. Martin Luther, the most typical of all Germans, is famed for the saying:

"Who loves not woman, wine and song,
Remains a fool his whole life long."

The reader of the "Schonberg-Cotta Family" will remember the picture of the elder brother Fritz Cotta telling the children stories of his student life with Martin Luther in their early days at Erfurt.

If we cross the Atlantic and look at that great amalgam of the English and German races which is slowly absorbing the surplus populations of Europe, we are not without further evidence that the national characteristics, both good and bad, are being reproduced in the avocations of student life. For the worship of the "almighty dollar" may be seen in the luxuriously furnished club houses of certain college fraternities,* the national desire to "get there" comes out strong in the record-breaking achievements of college athletes, and the saving grace of the Puritanic remnant is to be detected in the strength of the college Y. M. C. A. movement—one of the greatest religious forces in the modern world.

These examples all go to show that it is in the student organizations no less than in the lecture-room, the library or the laboratory that the distinctive features of each nationality are made prominent.

When we come to Canada and examine our system, we are more convinced than ever of this truth. Taking the University of Toronto as the most familiar example, we shall find that its student organizations during the last half century have reflected our growth from the provincial to the national stage of existence. Fifty years ago the Literary and Debating Society was the only student club in University College, as the teaching faculty was then called. Now, page after page of "*Torontonensis*" and the Y. M. C. A. Students' Handbook are taken up with many different literary, scientific, religious, athletic and social organizations which serve to represent the wonderful complexity of student life. To join even one half of these would be impossible from the inevitable conflict of their meetings, but most of the best students belong to at least half a dozen, and in the upper years one sometimes finds men taking part in twice that many. Occasionally, no doubt, a good student sacrifices his class standing to work of this kind; but I have had many men tell me that they did not consider the time ill-spent that had been devoted to what in one sense might be called "public business." As a rule the very best students, both men and women, are no less prominent in the class organizations than in the class lists, and as the latter grow more lengthy the former are likely to become more distinguished. The qualities which command success in the literary or debating society, in the class organization or the Y. M. C. A. are those that will also lead to a prominent position in later years, and many graduates eminent in political and professional life owe as much to their attendance on the literary society as to their lectures.

But after all the *argumentum ad*

* Let us hope that the Princeton men will illustrate nobly the generosity which is one of the highest national qualities by taking President Wilson's advice and dedicating their club houses as college dormitories.

hominem, the "appeal to the man himself" is always the strongest. Let us come back to our worthy student just entering the O. A. C. with a mind bent on making the best of his opportunities, and with a strength of purpose not inferior to his strength of muscle. Such a student will find in the first place the regular lectures and laboratory practice with the practical out door farm work of his course, all of which are obligatory upon him and in each of which he is to a greater or less extent working under the direction of another mind to which his own must be in some measure subordinated. In addition to this, however, another training presents itself to him where his own personality will come into immediate play, and where he will meet a different set of problems and be brought into still closer relationship with his fellow students, than in the routine work of the college.

The athletic society will help him to make the best use of that strength which he has already acquired, and will probably teach him that his full muscular development has not yet been attained. Boxing will afford him the best of all exercises, a training in self command, and the art of self-defense which will prove of service through life. Swimming will enable him, as occasion may arise, to save his own life or that of others, and to qualify for a position as forest ranger or canoe man. In football and hockey he will be cultivating courage, self control, presence of mind, promptness of action, quickness of hand and eye, and the power of working in harmony with his fellows which is so increasingly necessary in our modern life. In an age when athletics are so popular that a hero of a Marathon race attracts a thousand times more notice than the most brilliant of Rhodes scholars, the man who would be "up-to-date" must himself be something of an athlete. As machinery comes more and more into use on the farm in this age of electric development, the farmer will have less need of hard manual labor and more time for athletics.

Very different is the type of training provided by the Literary Society and the College Magazine. Here, too, the requirements of the time call loudly on the farmer to equip himself as a public speaker, and a writer for the press. If he is to hold his own in the political arena or in the Farmers' Institute, or in his religious or social circle he must make all possible use of the opportunity the literary society will give him. Every graduate, nay every student of the agricultural college, should aim at being a centre of influence in his own community, and for this purpose nothing is so well adapted as the training in speaking and writing that he has it in his power to acquire during his college course. Probably no class in the community except the clergy has more opportunity for the careful study of social, political and economic problems than the farmers, certainly no class in Ontario is more vitally interested in the right solution of these problems. And if Canada is to be saved from the dangerous anarchical tendencies that now threaten all parts of the world, but are especially rife in the United States, it must be by the combined wisdom of all classes. Hence the highest patriotism can be appealed to in order to stimulate the student's interest in the Literary Society and the College Magazine.

That the Y. M. C. A. is mentioned last agrees with the order of the ascending scale through the physical and intellectual to the moral and religious. The import of these bodies to the life, not of colleges merely, but of the whole community, has already been adverted to. No one who listened to Mr. Mott's account of the great International College Y. M. C. A. meeting in Tokio, as he described it in the Convocation Hall, of Toronto University last February, could fail to recognize the vast importance of this institution to the whole world. But it is of its value to the individual man I would here speak, and this may be exemplified by quoting a remark of President Falconer's after this great address: "I never heard Mr. Mott speak so well. He has grown immensely with his work."

It is this element of personal growth that comes through identification with such a movement which gives it its highest value and which proves the truth of the proverb, with which, as a moral, I would close:

"The liberal soul shall be made fat. and he that watereth shall be watered also himself."

BOOTH BOYS. Photo by Lucie Bailey.

Observations While Judging Field Crops in Western Ontario.

BY JOHN CAMPBELL.

HAVING for years travelled over many parts of our Province in fall and winter months studying conditions, the seeing of some counties while crops approached maturity, gave the writer additional satisfaction.

Ontario is a blessed country. Nature has done much for her. The sturdy, energetic, courageous pioneers did their part nobly and well, and the succeeding generations have done their part fairly well, but much, very much, remains for the present and future inhabitants to do in order to make her what she is destined to be. These years we are passing through a period of changes in stock husbandry, and adapting our methods to the demands of the times. Some sections are settling down to definite plans and purposes, using the better means to secure larger incomes from their farms. Other localities show little improvement, and no special study as to the proper methods to follow in order to keep up the name of progress passing over our land. Much might be stated of the lines of improvement practiced, and books might be written about what we don't do, things which would be to our financial benefit now, and would so improve our farms and live stock as to largely increase our incomes in future years.

Here is where the O. A. C. boys can do most good. When through at Guelph, go back to the old farm, not "with swelled heads," but with the determination to succeed, to succeed in helping in your own circle to raise the standard of live stock, to have better cultivated fields, to have cleaner grains growing on the farm, and so do your *little part* in making old Ontario still more and more the most highly cultivated, the best stocked, and the greatest all-round country to be found in all America. Little part above is italicized. Why? First for this reason: there are those who attempt greater things than they can carry out. Better, far better, do the little well, extra ordinarily well, than spread the effort over so much ground that it thins out and is not noticeable. There is great need for more thoroughness in our operations. Judging oat fields in Perth, Huron, and Bruce counties in July, revealed the want of close attention to details. Those counties are probably good averages — perhaps, above the average—of tillage and general management. Yet in the three counties only three fields were found free from mixtures of other grains, and only one absolutely clean. Barley was the usual vagrant, with peas and wheat to a lesser extent. No doubt the fact of grains grown being so largely fed on the farms, tends to make us rather indifferent.

For all that there are those who grow grains for the market, and others

who aim at supplying seedsmen, and customers requiring clean seed grains. To the former, considerable gain would result should unmixed grains be offered, and for the latter trade, perfectly clean seed would add twenty-five to fifty per cent. to its value.

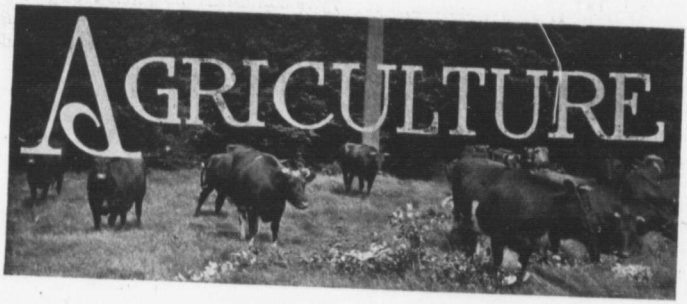
At present seedsmen declare it next to impossible to secure decent samples of grains for their trade. One field was seen in Huron, sown to oats, seed procured from some dealer two or three years ago, and named "Tartar King." This season, not one stalk in twenty was of the variety named.

A competitor in another district bought oats from a seed-house at the rate of $3.60 per bushel. It proved a mixed up variety. A neighbor, last spring, sent to a Toronto house for some new variety of oats. He was disappointed in finding it sprinkled at earing time with barley.

And so it goes. There is the demand for clean grains, and there is a premium price awaiting the producer. Therefore all considered, we cannot but be convinced that the movement in offering prizes for growing grain fields is a step in the right direction. In wandering here and there weeds were met everywhere. Old acquaintances, and new pests were plentiful. The one which is spreading fast, and seemingly beyond control, is the Perennial Sow Thistle. Wild Oats also, scored down more than one field, otherwise a winner of the money offered. Late sown fields were, as a rule, considerably visited. The fields all round were fairly good with but one promising to yield 75 to 80 bushels per acre. One of the smaller yields would score full points in the way of freedom from weeds, and other grains. But the promised return per acre scored it down outside of the money. Forty to 55 bushels per acre would take in fields with few exceptions.

The O. A. C. graduates should be able to make their mark, especially along this line. The study of the experimental plots, with the different varieties, the failures, the successes, the diseases affecting varieties, with the field grains grown, together with what can be gathered in general observation should be means whereby the student can equip himself so as to be a power for good in his neighborhood.

To excel in whatever line the fancy and circumstances lead to, is an aim worthy of the most careful consideration. Make your mark, in doing ordinary things so extraordinarily well that the world will be compelled to acknowledge your real superiority in methods, so doing yourselves credit, and reflecting honor on the school of training you graduated from. We have an agricultural college, which we are proud of. Many graduates have made, and are making good in fields far away. When a similar record is made on the old Ontario farms, when graduates will stand out prominent as leaders in different lines of agriculture, and that the practice of successful methods will show clearly the advantages of higher training, the country will rejoice exceedingly. Boys, you can do it! The question is *will you*?



Cotton-seed Meal as a Food Product.

BY ANDREW M. SOULE, PRESIDENT GEORGIA STATE COLLEGE OF AGRICULTURE.

[In perusing the following article the reader must bear in mind that the writer is considering the subject from the standpoint of the stockfeeder of the Southern States of the Union. The Ontario feeder would have the cost of transportation and customs duties to add to the cost of the cottonseed meal sold to the feeders in Georgia. However, while the present high prices for all grades of feed continue to rule, cottonseed meal can undoubtedly be imported and sold in Ontario at a price at which it may be profitably introduced into the feeding ration.—Editorial note.]

COTTON-Seed meal is unquestionably the greatest concentrate on the market to-day, and we are not realizing one-half of its potential value in the south, for there is no reason, first of all, why it should not be fed, and the excreta obtained from the animals consuming it utilized as fertilizer to the infinite improvement of our soils. Cotton-seed meal, however, must be fed with care and skill in order that the largest profit may accrue to the owner of the live stock, and that no injury to their health result. Observation and direct association with experimental work where cotton-seed meal has been fed to horses, cattle, sheep and swine during a period of fourteen years is my sole reason for making this statement, since I have consistently advocated and urged the use of cotton-seed meal in every conceivable way for some years past. In my own personal experience more than 1,000 head of beef cattle which received more or less cotton-seed meal, have been finished under experimental conditions for market. At least 300 head of dairy cows nurtured largely on cotton-seed meal, have been under observation for a number of years, and it was my good fortune to be associated with some of the work done to test the merits of cotton-seed meal as a food for swine. We have fed cotton-seed meal at the rate of two pounds a day to horses and mules for long periods of time without injury. We have found some times that horses will not eat it. We think it a good food to combine with corn, but we are of the opinion that

when fed in large amounts it tends to produce certain eye troubles, especially periodic ophthalmia or temporary blindness. We believe it good practice to feed a reasonable amount of cotton seed meal with corn to all work animals in the South, but its extensive use is objectionable and undesirable. Numerous experiments have been made that show that after a period of sixty days, for some reason, hogs receiving cotton seed meal in considerable quantities often die, and this applies to the great majority of those fed. Occasionally an animal immune to its effects may be found. When cotton-seed meal, however, constitutes one-fifth of the daily ration, it can be fed for periods of sixty days, and probably longer, without apparent injury, if it is first mixed with corn and thoroughly fermented for from 20 to 36 hours in the summer, and about twice as long in the winter. This data is not only borne out by experimental investigation, which, after all, is the most reliable and definite guide, but coincides with the practical experience of many farmers who are feeding cotton-seed meal. It has been shown that this amount of cotton-seed meal will be highly beneficial to hogs confined to a straight diet of corn, and since cotton-seed meal is about four times as concentrated as corn, it is not surprising that a small amount of it, since it is so rich in protein, should have a beneficial effect on hogs, and improve the character of the carcass when the animal is slaughtered.

To advocate the use of straight cotton-seed meal in large amounts for hogs, we consider, would be unfortunate, and would result in great loss to our farmers and so restrain the use of it for many years to come. The one thing most important and necessary to emphasize about cotton-seed meal is in its very concentrated nature, and on account of this fact it should be fed with care and discretion.

Cotton-seed meal and hulls constitute an almost ideal ration for beef cattle. They should be fed in the proportion of one pound of cotton-seed meal to five of hulls. We think from five to eight pounds of cotton-seed meal is all that can be profitably fed to beef cattle, and that the daily feed should consist of two pounds of cotton seed meal to commence with and be gradually increased to seven or eight pounds towards the end of a feeding period of 100 to 150 days. When cotton-seed meal is fed in large amount to beef cattle, two results will surely follow. The animals will go blind in a large number of instances, and have what is often called "fat sickness," and there will be an excessive waste of nutrients because the animal cannot digest and assimilate all the food it is eating. By restricting the amount of cotton-seed meal fed no ill results will follow, and there will be a great saving in the amount of grain consumed by a beef animal. Much better results will follow the feeding of cotton-seed meal in the proportion of two parts to one of corn with silage made either from corn or sorghum, when it is desired to fatten beef animals. As the fattening period progresses, the corn should be increased and the cotton seed meal decreased, and if the animals are to be fed for 150 days, two thirds corn meal and one-third cotton seed meal should be fed during the last 40 days.

Cotton-seed meal is an ideal food stuff to combine with corn stover, pea hay, alfalfa hay or silage for animals to be carried through the winter as

stockers, and finished on grass in the summer. Not over two pounds per head per day should be fed.

For dairy cows cotton-seed meal and hulls make an excellent ration. It should be fed in about the same proportion suggested for beef cattle. Much better results will follow the use of cotton-seed meal, pea hay and silage, and this will enable the Southern farmer to avoid the purchase of such an expensive concentrate as wheat bran. A cow should not have over five to seven pounds of cotton-seed meal per day. We prefer to keep it at the lower amount, and this statement is based on years of careful observation with dairy cows. We have seen as much as 12 to 15 pounds of cotton-seed meal fed to cows for longer or shorter periods of time, but this is a waste of food and will often result in permanently injuring the health of the cow. People do not seem to realize that an animal may consume a large amount of nutrients which cannot be assimilated and will be of little use to it, but which add greatly to the cost of the daily ration. The dairyman must consider matters of this character with especial care. Under proper conditions, therefore, there is no concentrate the equal of cotton-seed meal for feeding to beef cattle and dairy cows. It has an important value in the nutrition of horses and mules, and it has now been shown to be an important adjunct in the fattening of swine. It is just as good for sheep in proportion as for cows, only small quantities must be fed, not over one-quarter to one-half pound per head per day. Cotton-seed meal is objectionable when fed to young calves or young animals of any class. It is too concentrated for them, gives them indigestion, and I have seen it cause the death of calves many times. As to the relative merits of cotton-seed and cotton-seed meal there can be no question, as the oil is objectionable in the seed.

What we need is to educate our people to understand the full nutritional value of cotton-seed meal and to utilize it with intelligence and skill in feeding all classes of live stock, and thus build up permanent animal industries through which we can supply the needed farmyard manure to increase the vegetable matter in our soils, and multiply their power to withstand drought and to produce larger crops with less expenditure for commercial fertilizers and labor. Cotton-seed meal is a gift to the South, which is not appreciated as it should be, but it should always be borne in mind that what has been learned about it has cost much labor, much time and much money, and those who are the truest and best friends to the Southern farmer will caution him to use this great concentrate with that degree of skill and discretion which is necessary to insure his obtaining the largest profit from its utilization. At the same time it should be stated that with Bermuda pastures and the proper use of cotton-seed meal, the construction of silos to the necessary succulent feed for winter feeding, a rotation of crops, and the reduction of the cotton area, and the extension of our animal industries, the permanent prosperity, happiness and independence of the Southern farmer will be assured. Therefore, no effort and pains should be spared to put these essential facts concerning the marvellous benefits which cotton-seed meal will confer on our farmers before them in a clear-cut and definite manner.

A Purer Milk Supply for Our Large Cities.

BY T. M. CARLYLE.

If we take into consideration the infant mortality, the frequent convictions of vendors of milk for infractions of laws governing its sale, and the reports of medical men and milk inspectors generally, regarding the sale of milk within our large cities, it is at once apparent to the most casual observer, that a purer supply is absolutely essential to the welfare of the public health.

It is a fact already sufficiently well demonstrated, that neither the producers nor the vendors of milk will of themselves give it the care and attention so necessary for the production of a quality suitable for the consumption of our large city populations. There are, of course, numerous exceptions to the above statement. There are men so zealous in the production of an article of good quality, and conscientious regarding the public health, that scarcely anything can be said concerning their methods, but taking the conditions generally, those cases that we may consider as ideal are so rare, and have such a slight influence upon the whole, that we can scarcely admit of them having any great uplifting effect upon the present conditions of the trade.

Let us consider the circumstances under which, at present, the citizens are supplied in such cities say as Montreal and Toronto, where the daily consumption of milk is many thousands of gallons. In view of the volume consumed it is readily understood that it is impossible to procure a milk supply within the immediate neighborhood of any large city. It must be brought in by rail, and from points anywhere within a radius of one hundred and twenty-five miles.

Under what conditions is the milk procured? It is furnished by farmers that have a very vague knowledge of the requirements of the city trade. It is taken from herds that may or may not be in a healthy condition. It is handled in utensils that only in rare cases are sterilized. It is milked in stables and cared for under circumstances that would prove disgusting to the consumer, and, in nearly half the cases, that do not conform to the laws of the Provincial Board of Health. Just in this connection, it is interesting to note the report of a Montreal paper that has of late been agitating for a purer supply of milk for that city. An inspector sent out by it, after visiting two hundred and fifty four farms that were supplying milk to the city, reported one hundred and twenty-six as not conforming to the health laws of that province, and it is hardly probable that the conditions surrounding other cities would be very much better. After the milk is ready for shipment at the farm, it is placed in an express wagon with no other protection from the sun's rays than a common blanket, and is hauled to the nearest railway station, sometimes a distance of four or five miles, where it is loaded into an ordinary baggage car, and conveyed to the city. After its arrival at its destination, there is usually a delay of fifteen or twenty minutes before the car is placed in a position to be unloaded.

The milk is then secured by the dealers and carted to their respective places of business, where it is placed in ice water until the time of delivery, which is the next morning; the milk thus being at least twenty-four hours old.

Two methods of delivery are followed: That of having the milk put up in glass bottles holding specified quantities and that of open measure, the latter system always to be condemned, as the milk is exposed to every contaminating influence of the atmosphere. Only a small percentage of the milk dealers have any means of sterilizing the utensils used in connection with the milk, while their place of business is often in a very unsanitary condition as well as location. Is it any wonder that under such circumstances our city milk inspectors sometimes report the bacteria contained in the milk as numerous as one million to the cubic centimetre with about three hundred thousand as the average during the hot weather?

Some of our most modern city milk companies have installed pasteurizing plants, and, considering the quality of milk with which they are supplied, are, perhaps, the most commendable and effective methods of protecting the public health, but pure natural milk without the aid of any process is always to be preferred, and is not impossible of attainment of which we have evident proof.

As an instance of what may be accomplished by producing milk under proper conditions, I may cite the case of the Elmhurst Dairy—a Montreal concern that is putting up a special quality of milk, suitable for infants and persons taking long distance journeys. The cows from which the milk is taken are first inspected by a competent veterinarian, and are kept continually under his supervision. Their food consists of balanced rations, made up from the best ingredients which the market affords, and drinking water is supplied from an artesian well. Particular attention is paid to air-space and light within the stable, while the arrangement of stalls, floors and ventilating systems are of latest design. Each herdsman is allowed only the number of cows which he can properly care for, his work consisting of feeding, grooming and milking the number apportioned to him. The cows as well as their surroundings are kept scrupulously clean, the udder and all parts in immediate contact being washed before each milking. The milker is always provided with a white duck suit, and uses a pail specially constructed to keep out any dust particles that may be floating in the air. As soon as the milking of each cow is finished, the milk is taken directly from the stable to the cooling-room, where it is at once carefully strained, aerated and bottled, the bottles being immersed to the neck in salt ice water, each bottle being hermetically sealed with paraffine wax when cooled to the proper degree. Over all is placed a special seal bearing the name of the company. Every utensil is thoroughly sterilized before being put into use, many of them being of white enamelled ware. An analysis of the milk is made regularly, and it is significant, that it reaches the customer with the count of bacteria about ten thousand to the cubic centimetre. The constantly increasing demand by the city physicians for sick patients and the satisfaction obtained by customers using it through out ocean voyages to European ports, are the best proofs of its quality; these

results being obtained without aid of preservatives or process of any kind.

There are three important steps to be observed in obtaining a pure supply of milk for any city: That of production, transportation and distribution. Very little is to be gained by attacking any one of these if the other two are not made effective as well.

What is needed is an improvement all along the line. Education as to the actual requirements of the city trade and better sanitary arrangements on the part of the farmers furnishing the milk, the providing of refrigerator cars by the railways, while the delivery of milk in the bottles should be made compulsory, as well as more effective inspection of the milk dealer's premises and methods of handling his milk. Then, too, the milk inspector's authority should not be limited to the city, but should extend right out to the farms on which the milk is produced, and that which is furnished and offered for sale under conditions that would prove injurious to the consumer should be prohibited.

Such improvements and extended inspection would naturally result in some increase in the cost of milk, but the economy that consists in a few cents per quart at the expense of the public health is too extravagant to be considered, and instead of becoming beneficial becomes an abuse.

MILKING TIME.

Miscible Oils for the Control of the San Jose Scale.

BY TENNYSON D. JARVIS, B.S.A.

EVER since the advent of the San Jose Scale on this continent experiment station workers—chemists, entomologists, and horticulturists—have been very active in proposing new remedies for its control. Hydrocyanic gas, whale oil soap, kerosene emulsion, undiluted crude petroleum, kero-water (a mechanical mixture of kerosene and water), kerosene limoid, and the lime-sulphur wash have all been exploited in their turn. All these remedies have their weak points and limitations, and, as a result, only a very few are now being used, and these with one exception in restricted locations.

Of all the remedies thus far proposed, the lime-sulphur wash is undoubtedly most generally used. This remedy, so far as efficiency is concerned, is quite satisfactory, for when properly made it will kill every scale insect with which it comes in contact. Its weakness lies chiefly in its undesirable handling qualities and in the many inconveniences and exacting requirements attendant upon its preparation. It is corrosive to man, to animals, to pumps, to hose and other apparatus. Its preparation requires an elaborate outfit, and it must be applied while warm. It is especially troublesome to the man with only a few trees, for it is just as much trouble to make up a small batch as a large one.

Realizing the demand for a more convenient remedy, may concerns are now placing on the market their various brands of "Scale Killer." The more common brands are "Scalecide," "Kill-O-Scale," "Target Brand Scale Destroyer," "Sure Kill," and "Ninety Five Per Cent. Soluble Oil." These proprietary remedies, or so-called "soluble oils," are unlike in composition, but are all based upon a petroleum distillate. Their strong point is convenience, for they simply need to be diluted with the required amount of cold

water, usually fifteen to twenty parts, and applied to the tree. They have all been found to be reliable scale destroyers, and, like the lime-sulphur wash, will kill every scale with which they come in contact. In comparing the efficiency, therefore, of these "soluble oils" with that of the lime-sulphur wash we have but to determine which will reach the greatest number of scales. The oil enthusiasts contend that owing to the spreading or "running" action of the oil there is a better chance of covering the whole tree or, in other words, it leaves a little wider margin for the careless worker. Whether oil in an emulsified form possesses any appreciable spreading power is an open question.

The most important point to be considered in this connection is the adaptibility of oil to the use of a fine nozzle. The young growth of many kinds of fruit trees, especially the apple, is covered with a fine pubescence in which many scales hibernate. It is believed that with the use of a fine nozzle and abundant power the small particles of spray liquid may be forced in among these fine hairs and thus reach any scales which would escape the coarser application of lime and sulphur. In discussing the subject of scale control in old apple orchards, Professor Parrott of the New York Agricultural Experiment Station, has this to say: "Of the various sprays that have been tested, the sulphur wash and the home-made oil emulsions have, on the basis of efficiency, economy, and safety to the trees, proven the most satisfactory remedies. Of the two, the oil emulsions have generally been somewhat more efficient than the sulphur wash in the treatment of old apple trees, and excellent results have been obtained with a light treatment of an emulsion on trees previously sprayed with the lime-sulphur wash, to reach the scales on the young wood."

It is quite safe to assume, then, that with large apple trees the scale may be more effectively subdued by the use of an oil spray. The question of cost naturally follows such a conclusion, for it matters not how convenient or how effective an insecticide may be, if the cost is not within reasonable limits. The lowest quotation received from any of the manufacturers of "soluble oil" was fifty cents per gallon by the barrel. After diluting with fifteen parts of water the emulsion ready to spray would cost slightly over three cents per gallon. For the commercial orchardist such a price is almost prohibitive, but for the man with a few trees and who has not the necessary equipment for making the sulphur wash it is a great boon. The manufacturers are sending out hundreds of carloads every year, which fact goes to show that there is a great demand for a more convenient remedy. Even at such exorbitant prices many prominent fruit growers, especially in Western New York, are using it in their apple orchards. In consideration of the fact that, with the use of a fine nozzle, one gallon of oil emulsion will go as far as one and one half gallons of the sulphur wash and in view also of the great saving in time and fuel, there is not so much difference in cost between these two kinds of insecticides.

About a year ago two experiment stations, Storrs and Delaware, published formulae for the home manufacture of "soluble oil." As a result many of the manufacturers have either reduced their price or are putting out other brands at reduced prices. The

manufacturers of the well-known scale cide are now selling a preparation known as "Carbolene" at thirty cents per gallon by the barrel. Experiments by the Storrs Experiment Station show that the latter preparation is equally as efficient as the former. It is believed by many that these two preparations are identical, and that the brand sold as Carbolene is carried simply to meet the competition of many new concerns who are now manufacturing "soluble oil" after the formulae suggested by the above mentioned Experiment Sta tions.

"Soluble oil" of good quality may now be purchased for 25 to 30 cents per gallon, depending upon the quantity required, and at this price it seems al most as cheap as the lime-sulphur wash, and at the same time decidedly more convenient. For use in old apple orchards, at least, it is certainly worthy of a trial.

In view of the difficulty in securing materials of the proper grade it is not advisable at the present time for the average fruit grower to prepare his "soluble oil" at home. Nevertheless many of the prominent fruit-growers of Connecticut are using an oil of their own preparation. Mr. J. H. Hale, the well-known peach-grower, orders his crude petroleum in car load lots, and the other materials in proportionate quantities directly from the producers. In this way he secures a more uniform and a more reliable product and at the lowest price. By securing the various materials in this way the emulsion ready to spray, costs him not more than one cent per gallon. There are many oil wells in Ontario running to waste and crude petroleum may be ob tained for slightly more than the cost of the barrels. In view of this fact it would seem that a "soluble oil" might be prepared in Ontario at a much lower cost than in the United States. When the local dealers come to under stand the requirements and to realize the demand for such materials little trouble should be experienced in mak ing up a "soluble oil" at home.

MORE LOVELY GROWS THE EARTH.

More lovely grows the earth as we grow old,
More tenderness is in the dawning spring,
More bronze upon the blackbird's burnished wing,
And richer is the autumn cloth-of-gold;
A deeper meaning, too, the years unfold,
Until to waiting hearts each living thing
For very love its bounty seems to bring,
Entreating us with beauty to behold.

Or is it that with years we grow more wise
And reverent to the mystery profound—
Withheld from careless or indifferent eyes—
That broods in simple things the world around—
More conscious of the Love that glorifies
The common ways and makes them holy ground?

—*Helena Coleman.*

The Horticultural Experimental Station Jordan Harbor.

BY A. J. LOGSDAIL, '09.

OF late years the Fruit Growers of the Province have agitated for the establishment of an Experimental Fruit Station in the Niagara Peninsula. This agitation has been successfully met, through the generosity of Mr. M. F. Rittenhouse, a wealthy Chicago gentleman, formerly of Jordan Harbor. Mr. Rittenhouse has signified his deep appreciation of and loyalty towards his native home and country in a very concrete manner. He has established here the Rittenhouse School, which, equipped as it is, with an efficient Manual Training Department, an interesting museum and library, and surrounded by exceedingly beautiful grounds, is the pride of two townships and the envy of the rest. Directly opposite the school is the Victoria Concert Hall, which with a seating capacity for over four hundred people, is no small factor in the promotion of the social life of the neighborhood, and another splendid tribute to Mr. Rittenhouse's affection for his boyhood home. Last, and perhaps to us most important, comes the purchase of some ninety acres of land, and the donation of the same to the Ontario Government for experimental work in Horticulture. The property is situated on the shore of Lake Ontario, one mile west of Jordan Harbor Post Office, and just below the Rittenhouse School and Victoria Hall. The road from the lake shore to Vineland, for a distance of nearly a mile, has been macadamized and a granolithic side walk has been laid down, and shade trees have been planted along each side thus transforming a country lane into a handsome boulevard. It is intended to complete this work as far as the main road between St. Catharines and Hamilton; and it is not exaggerating to say that through the philanthropic efforts of Mr. Rittenhouse, the Jordan

Harbor district will speedily leap into prominence as one of the choicest localities in the Niagara peninsula.

Immediately upon coming into possession of the farm, the Ontario Department of Agriculture appropriated a sum of money to be spent in fitting the station for the work to be carried on. Early in the summer of 1907, H. S. Peart, B.S.A., was appointed to the position of director, and the work of getting the land into first-class shape was commenced. A complete system of under-drainage was planned by the Physics Department of the Ontario Agricultural College, and the fall of 1907 saw the installation of eleven miles of under-drains completed. By this means a cold, wet soil has been transformed into highly productive land, and this object lesson of the great value of under-draining has proven productive of results in the surrounding country.

At a meeting of the Advisory Board of Experiment Stations, held in the spring, a preliminary outline of the work to be undertaken was drafted, and President Creelman and H. S. Peart, B.S.A., are pushing the necessary construction work along as fast as possible, in order that the work outlined may proceed with the least possible interruption or inconvenience.

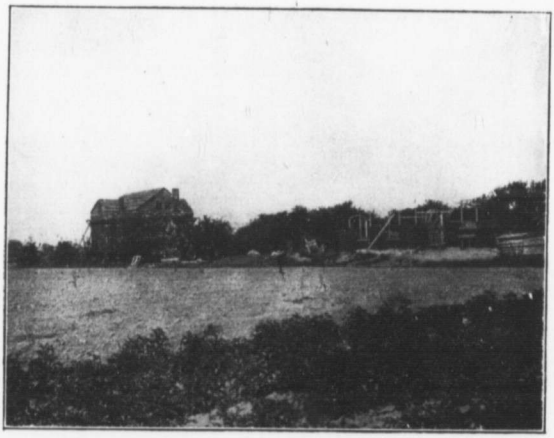


Photo by A. G. Turney, '09.

The Director's Residence and Administration Building in Course of Construction. Rear view.

The equipment for the work in the past has been very meagre, but the new barn, with stables for the work horses and implement storage, is now completed, and a small building has been renovated for the experimental canning of different varieties of fruit and vegetables. A small cold storage, the adminstration building and director's residence are in the course of erection and it is hoped this year to commence on the construction of a small range of greenhouses and a workman's cottage.

On the farm are eight acres of commercial apple orchard in full bearing, also an acre of peaches. This spring's planting consists of seven acres of peaches, two of plums, five of apples, four of pears, one acre of grapes and a considerable quantity of small fruits. Several blocks of different classes of trees were planted for the purpose of ascertaining the best method of tilling to produce maximum crops at the least cost. On the whole the young stock has made favorable growth.

This summer about eleven acres were devoted to fertilizer and variety tests. The most important variety tests being with peas, beans, tomatoes, sweet corn, watermelons, muskmelons, squashes, pumpkins, potatoes, onions, cauliflower and cabbage. The fertilizer tests are being carried on with a variety of crops on both heavy and light soils. Variety orchards of peaches pears, plums, cherries and apples have been set out, but, of course, the results of this experimental work will be somewhat deferred, owing to the length of time which must necessarily elapse between the planting and the profitable fruiting age of a tree. The effectiveness of several important spraying mixtures is also being tested on both the station and neighboring farms. The remainder of the farm is chiefly in grass and oats, but a considerable portion of this land will be planted next year in fruit and vegetables.

There is yet another line of work at the station, and that is the production of new varieties which will be as good or better than the standard now grown, or cover a portion of the season for which no variety now exists. The work of Plant Breeding is receiving more attention every day, and the Experimental Stations at Ottawa and Guelph are turning their attention seriously to this new phase of agriculture, and it is therefore necessary that Jordan keep abreast of the times. Some of

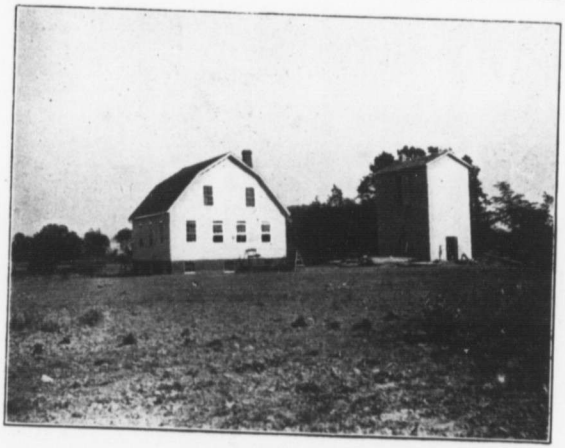


Photo by A. G. Turney, '09.

Rear View of the Canning Factory and Eureka Cold Storage Plant.

the ideals that are being worked for, are: A peach with the color and quality of the Crawford, the firmness, size and yield of the Elberta, and the season of the Triumph; a grape, with a thin but tough skin, a good color, heavy yielder, and with desirable edible and shipping qualities. The Worden and Lindlay is one of the crosses made with a hope of attaining this ideal. Throughout the summer there has been a considerable amount of hybridizing done on some of the fruit farms situated about Winona, Grimsby, Beamsville and Jordan, and it was pleasing and encouraging to find the readiness with which the experienced fruit growers gave of their practical experience and stock, many of them personally assisting in the work.

This experimental work is the beginning of a movement that will eventually be extended throughout the entire Dominion, for it is essential that a Province having climate and other conditions peculiar to itself must necessarily work out its own destiny. By this statement, I mean, that for the best interests of the fruit growing community of a country, there should be some central station where experimental work could be carried on, dealing particularly with the localized problems of Horticulture everywhere confronting us to-day.

It might not be out of place at this juncture to mention a few of the problems which it is hoped may be solved, or partially so, in the near future. It is a fact known to all Horticulturists that a variety of fruit may excel in a certain locality but be practically value less elsewhere, the difference often being due to a warmer climate, a shorter season, a drier atmosphere, a heavier soil, the reverse of these conditions, or a combination of them. All these fac

Photo by A. G. Turney, '09.

THE NEW BARN.
Ontario Experimental Station, Jordan Harbor.

tors have tended in many ways to lessen the benefits that might have been derived from distant Experimental Stations. Again, we often hear it said, that such and such a variety of fruit is "running out." What is the cause of this? The explanation is a long one, but may be partially explained in brief, as follows. We know that no ten trees, shrubs or plants of any one variety, are alike; one is the best, one the poorest, (it often requires a well-trained eye to detect which really is the best, or which the poorest) nevertheless, it is the desire of all fruit growers to have the best. This excellence can only be obtained by a continual and careful selection of plants year after year, bearing in mind while selecting the plants the necessity of not only choosing for, good cropping qualities, high flavor, firm texture, or bright color, but also strong plant vitality, a quality too often forgotten.

In conclusion, may I say that the most valuable work from such a station will only be obtained by the hearty support and co-operation of the fruit growers as a whole, and by support, I mean, suggestion, interest and patience, not interference and voluble vituperation.

ROAD AND BRIDGE IN FRONT OF STATION.

THE O. A. C. REVIEW

EDITORIAL STAFF.

A. D. CAMPBELL, '09, Editor.

F. C. NUNNICK, '10, Associate Editor.

H. SIRETT, '09, Agricultural.
G. H. CUTLER, '09, Experimental.
A. G. TURNEY, '09, Horticultural.
H. CHRISTIE, '10, Athletics.
G.LeLACHEUR, '10, College Life.
P. E. LIGHT, '11, Locals.
J. W. JONES, '09, Staff Photographer.
G. H. UNWIN, '09, Artist.
MISS B. WILLIAMS, Macdonald.
C. F. BAILEY, '09, Business Manager.

Editorial.

College Spirit

A careful perusal of this issue will show that much attention has been given to college organizations, first by no less an authority than Professor Keys, of Toronto University, and also by the editors of College Life and Athletic departments. It would appear that the executives of the various organizations are ready and willing to do everything in their power for the advancement of the student body, and we believe they are. It is well that this is the case, for with such a cosmopolitan student body as we have and with so many young men direct from the farms and not from secondary schools of any kind, there is sure to be much to be done. We can not do better than repeat what has been said in more places than one in this issue, that it is necessary for the student to take an active part himself in order to derive benefit. This is true of the Review, although the opportunities are possibly more limited. But, we extend to all students an invitation to get in touch with Review work and no doubt something for each one to do, will be found which will make him a better and strong er man.

Since so much has been said about this matter our readers will be inclined to inquire if college spirit is on the wane at O. A. C. Many will answer that of late it has been. A writer in the athletic columns attributes the decline in athletic circles partly to the abandonment of inter-year games. Whatever the cause may be, let us hope for a speedy revival. Let every boy and every girl, by the interest he or she takes in all college work, prove himself or herself worthy of this college.

A New Trophy

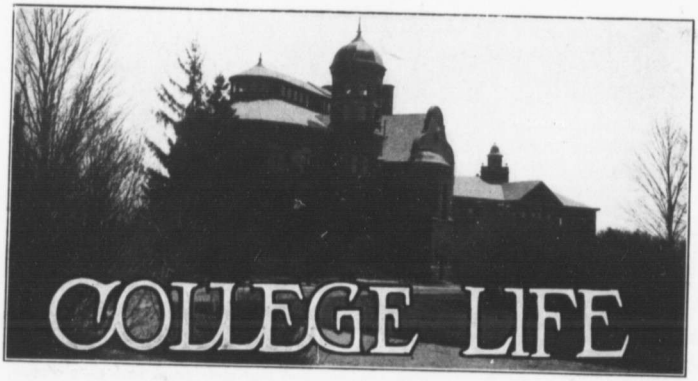
The conditions under which Stock Judging teams from the various colleges in the United States and Canada will compete at the International Fat Stock Show at Chicago this fall differ from those of former years. Only one trophy will be given, and that for the judging of horses, beef cattle, sheep and swine. In former years one trophy was given for horse judging and a separate one for other kinds of live stock. It was the second that O. A. C. teams succeeded in winning for the last three years. It is now for the next team that journeys to Chicago to bring back the new trophy.

The Call for Men

Repeatedly is the remark heard, "This is a young man's age." In Canada, especially do we rejoice that there is an important mission for every one to perform if he but sets about it. True, it is that at the present time there are men who cannot find work to do. But this, fortunately, does not apply to men interested in agricultural pursuits. Canada has immense areas waiting for the plough share, and its whole agricultural area stands in need of more intensive and better methods of farming. Men of brains have a work to do. Then, again, the agricultural education idea has such a grasp upon all civilized peoples that too many men of the highest caliber cannot be forthcoming. In our own province the demand is especially great. This is proven by the fact that nearly all of the men who graduated from this college last June have accepted positions of trust in various lines of work where they will have ample scope to give expression to their inherent and strongest capabilities. Moreover, up to a short time ago there came, and possibly yet is coming, the call for men to go to our sister provinces to assume positions of very extreme responsibility. Newfoundland is seeking an organizer and president for an experimental farm and agricultural college. From Manitoba Agricultural College comes the call for a professor of dairying for a professor of agronomy and for a professor of bacteriology. Saskatchewan seeks a deputy-commissioner of agriculture to succeed the late Mr. A. P. Ketchen, and Alberta is about to undertake the founding of a college which will require many men.

On every hand we see the need of persons capable of doing investigation and research work. In agricultural colleges, as in other colleges, the professors have so much to do that they find it impossible to undertake the experimental and research work which the science demands.

What is now most needed are men who have the opportunity and the desire to give the best that is in their lives for the cause of agriculture. Scientific agriculture is but in its infancy. We need, firstly, investigators, secondly, teachers.



September is the month which wit nesses each student's return to O. A. C. for another year.

During the summer months the great majority of the student body are absent, but there is always a number of men who deem it more profitable to spend their time working on some of the departments than to turn to other fields of labor. The past season was no exception to the rule, and every year was represented.

Then, too, during the summer months the faculty of the O. A. C. are generally to be found in office or labor atory, or making tours of investigation throughout the Province. The pre sence of a large number of June excur sionists makes it necessary that the ma jority of the faculty should be con stantly at their posts during that month. However, during the past sum mer a number of them were privileged to take post graduate work or Short Courses at other seats of learning.

President Creelman visited Italy, Germany, and the British Isles. Pro fessor Harcourt spent the summer in Germany and Great Britain. Messrs. Eastham, Howitt and D. Jones took a course of lectures extending over a month at Cornell University.

Improvements.

No very large additions were made to the college during the past summer but, nevertheless, many improvements have been made. A new boiler room is nearing completion and two large boilers are being put in. A large coal shed with three lines of car tracks ex tending the whole length has been erected just across the street car track from the boiler room. Just to the north of this building a fruit and veg etable cellar is now in course of erec tion. Extensive repairs have been made to the stables in the farm barn; the whole interior was remodelled and modern fittings installed. In connec tion with the Poultry Department an incubator house is now in course of erection. Two new residences are be ing built just beside the residence of Mr. Wm. Squirrel and will be occupied by members of the staff of the Horti

cultural Department. In the early spring two new fire-proof vaults were built, one in connection with the President's office and the other in connection with the Bursar's office.

Changes in Staff.

The summer of 1908 witnessed fewer staff changes than usual. Macdonald Institute retains its former faculty. Mr. Gamble will hereafter be known as Professor Gamble, he having been made head of the Department of Soil Chemistry. Mr. Dan. Jones, B.S.A., has been appointed lecturer in the Bacteriological Department to succeed Mr. Barlow, who was obliged to resign on account of ill-health. Mr. Jones is a '08 graduate. He took post graduate work in Cornell during the past summer and was Dean of Residence and

DAN H. JONES, B.S.A.,
Lecturer in Bacteriology.

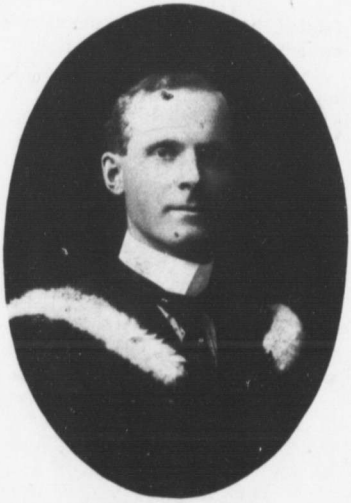
Lecturer in English during 1906 and 1907. His success as a lecturer at that time, and his love for probing into the mysteries of bacteriology is ample indication that he will be a useful and efficient member of O. A. C. faculty.

An addition to the staff of the Biological Department has been made in

LAWSON CAESAR, B.A., B.S.A.
Lecturer in Biology.

the person of Mr. L. Caesar, B.A., B.S.A. Mr. Caesar is another '08 graduate; he obtained his arts degree from Toronto University several years ago, and then attended Normal College, Hamilton; he afterward took post graduate work at Oxford University; he was also for some years Classical Master in Port Hope High School. It will thus be seen that Mr. Caesar is a man of high scholarly attainments and his appointment is one that will be looked upon with favor by all friends of the college.

On the resignation of Mr. R. R. Graham, who has been Dean of Residence and lecturer in English during the past year, Mr. G. M. Frier, '08, was appointed to take his place. Mr. Friar is thoroughly conversant with Ontario Agricultural College life, and having



G. M. FRIER, B.S.A.,
Dean of Residence.

had experience in teaching, he is a man well qualified for the position he fills.

One familiar face that was missed by the students on their return this fall was that of Mr. Alfred Davidson, who for so long has been assistant in the Bursar's office, and has had charge of the Post Office Department. Mr. Davidson was early in July lured away by the tales of the golden West, and is now sojourning in British Columbia.

College Extension Work.

Each year sees the sphere of influence of this college extending over a wider area. Early in the spring Mr. H. H. LeDrew, lecturer in Economics, began a careful study of agricultural conditions and methods, principally from an Economic standpoint, in the counties of the Niagara peninsula. Mr. LeDrew has succeeded in compiling a large amount of very important statistics and his report, which will be published shortly, should form a basis for a more intelligent study of economic conditions in the territory covered.

The Physics Department has had three men doing drainage work throughout the Province; in the earlier part of the summer Mr. C. C. Thom, B.S.A., Mr. J. H. Hare and Mr. W. R. Reek; more latterly Mr. D. A. McKenzie took Mr. Hare's place. In nearly every case demonstrations were held, and the farming communities look upon this work of the Department of Agriculture with great favor and appreciation, and it is a line of College Extension work which is sure to grow.

The work in Agriculture in the six High Schools in which specialists were placed last year has resulted so satisfactorily, although little more than an experiment at first, that the Government has started two more men at similar work. They are Mr. R. M. Winslow, at Picton, Prince Edward County, and Mr. J. H. Hare at Whitby, Ontario County. The work done by these men is growing rapidly and is being received kindly and appreciatively by the farming classes. Each man found it necessary to have an assistant during the summer months, and each one will require an assistant during some part of the winter season.

Executives of the College Organizations.

The various College Organizations began this year's work with the determination that each shall be of greater benefit to the student body than ever before.

The Literary Society is an organization having for its aim the social, musical and literary development of the

students. The term, literary, includes public speaking and debating, and receives the greatest attention of the association.

It is absolutely essential that every student of Scientific Agriculture be able to express his views on any subject when called upon. Any member of the Literary Society who will take advantage of every opportunity offered him will soon see a marked improvement in his platform manners. It is desirable that every man entering the college should join as soon as possible, and take an active part in all proceedings of the organization as in this way alone will he receive the greatest benefit.

The Union Literary Society is composed of three sub-divisions: The Freshmen form the Maple Leaf Society, and the members of the Sophomore, Junior and Senior years form two societies, the Alpha and the Delphic, the divisions being made by a specially appointed committee. Organization meetings of these three sub-societies for the election of officers are called separately at the beginning of each term. The President of the Union Literary Society and entirely new officers will be elected in December. Elections in the Union Society take place in December and April.

The most important events in the Literary Society year are the intercollegiate debates, and the Oratorical and Public Speaking contests. Valuable prizes are offered and these contests have been the means of arousing much interest in platform speaking.

Regular meetings of each of the three societies will be held every Saturday evening in Massey Hall. Joint meetings of the three societies, together with the Macdonald Institute Literary Society, will be held once a month.

For some time the Literary Society Executive have been considering the advisability of entering a Debating League with seven Toronto Colleges. It is certain that this college has the material to produce good speakers. All that is necessary is systematic and thorough practice and training. It will be well for every student to keep in mind the question of entering the league that he may be able to discuss it intelligently when the time comes.

The Young Men's Christian Association is an undenominational organization of young men which deals not with the doctrines of theology, but which is intimately associated with life and its deepest interests.

It believes that the only successful life is the all-round life, and that the world is looking (not for a one-sided man) but for a man who is educated mentally, physically and spiritually; whose brain is keen, cultured and liberal; whose hands are deft; whose eyes are alert and sensitive; whose heart is tender and true. It lauds the development of mind received in the regular college course, and in literary training, and the development of body received in physical exercise on the athletic field, but who shall say that these alone will produce the all-round man? Given the greatest development of mind and body possible for a human being, and man still finds himself hampered on every hand by his own limitations, beyond which he is not permitted to penetrate, and which virtually say to him, "Thus far, and no farther shalt thou go." He finds that in himself he is not sufficient to reach the end toward which his ambition leads him, and as a result we find all

mankind reaching out after a power higher than man, the power holding the keys to the secrets of the universe. This reaching out after an unseen yet infinite power is the expression of the innate religious nature of man kind.

Looking back over the history of the world it is evident that this expression of man's religious nature has been the most potent factor in uplifting human ity. Ruskin declares that each great style of architecture had its origin in the expression of the people's religion and that the beautiful art of the sculp tor and the painter found birth in re ligious people's expressions of their conceptions of Deities.

It is the firm conviction of the Y. M. C. A. that the development of this re ligious nature in man is necessary for the acquirement of all-round manhood. It believes that the true religious na ture finds expression in service and (since such a nature is exemplified in the faultless life of Christ) seeks to cultivate it among the members by studying His perfect character in Bible Study, and through Him coming into contact with the infinite power of the universe in prayer and in organized midweek services.

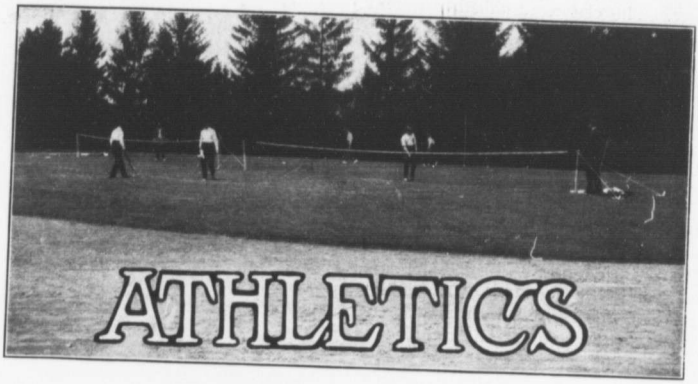
In this way the Young Men's Chris tian Association endeavors to add its quota to the many influences which tend to broaden the education of the students of O. A. C. and which aims to send forth from these halls men who are indeed greater than kings in that they reign within themselves, trium phantly ruling over their desires, fears and passions.

The Executive of the Philharmonic Society have mapped out a fairly exten sive and varied programme for the coming year and hope that everyone will help the society to carry it out.

It is desired that every man who can sing will join the choir at once and so help in our chorus singing. The chorus will take up "The Lost Chord," "The Bridal Chorus," "The Rose Maiden," and one or two other chor uses for the annual concert. This year it is proposed to have an innovation in the way of chorus accompaniment, by having a student orchestra and all musicians are earnestly requested to make themselves known to any of the Executive as early as possible, so as to have the orchestra properly organized. Besides the chorus accompaniment the orchestra will practice other pieces for the concert and Literary Society meet ings.

The general practice will be resumed once or twice a week in the sitting room when every student is invited to take part in the singing of our col lege songs.

The choir and glee club will, of course, be continued and practices will be arranged later. The Executive wish to add only a few more words: Don't forget the College Song Competition; Don't forget to turn out and help the Executive in their plans and they can guarantee a record year for good music and sociable evenings in our sitting room.



IT is a well-established fact that the measure of success of any organi zation depends largely on how carefully and how wisely plans have been laid. Although we have not space here to set out in detail our plans for each branch of Athletics this season, we desire to give a general idea of the possibilities of this big department of college life.

We have no hesitation whatever in predicting that this will be the best season in all lines of sport that O. A. C. has ever known. This year an unprecedented opportunity is before us to make the season, from start to finish, a record-breaker. Last year showed a big advance on the work of the previ ous year, but was especially character ized by an increased interest in Ath letics on the part of the students gener ally. This is one reason why we are so hopeful for this season's work.

It is becoming very clear that in order to obtain the best results men tally, a student's physical needs must be intelligently met. There was a time, not so very long ago, in the his tory of college athletics, that a winning team in football, base ball, or hockey, meant a successful season. In later years, however, it is being felt that athletics mean too much to the educa tion and development of the student to confine its helpful influences to some forty or fifty men. In past years the fellow in most need of exercise has been left severely alone, and the al ready well-developed youth has re ceived the lion's share of attention. It may be stated that our students are drawn largely from the rural districts, where conditions have been so favor able as to render them healthy beyond the need of exercise. Perhaps some of them may think that they have had too much hard work, and this may be true. But surely it would be a big mistake for those who have been engaged in active physical exercise during the summer to discontinue sud denly, thus allowing the circulation of the blood to lag and the system to be come clogged up with impurities. It is corrective exercise that our boys have perhaps most need of, for much of the work that they have been doing has tended to give them improper pos

ture. The classes in calisthenics will prove very efficient in straightening such men.

Rugby.—Of all college games, with out a doubt, the one most popular is rugby. It is not only one of the most interesting sports to watch, but among the most fascinating to play. And is it any wonder that this is so, when one recalls dashing across the field, ball under arm, with a dozen men from dif ferent corners of the field in hot pur suit, and then to dodge two or three of them, gently push three or four others to the right or left, and finally cross the line for a touch-down amid the deafening applause of the assem bled crowds? Well you'll agree with me there's some incentive in doing things like this, for that shows the kind of stuff men are made of. We are particularly fortunate in having as manager of our first team, Mr. R. M. Coglan, and as captain, Mr. R. C. Tre herne. Both these men are noted for their cool, deliberate manner, and we will be much disappointed if their pro duct is not the best ever produced here. The student who wins a place on either first or second team this year will be well repaid in the physical training he will receive, for never be fore were there such elaborate plans made to make winning teams. There is no doubt we have the best material in the country to work with, and it is our purpose to see it in a high state of development before the season is far advanced.

Out-Door Athletics.—Although rug by is to go ahead at such a fast pace, yet when field day arrives, likely early in October, you may look forward to seeing the records go again. The train ing will be scientific, and, even if the marks set in previous years are pretty high, we see no reason why we cannot do it some better when the time comes.

Hockey.—With Mr. Fred Edgar as manager, and Mr. Hoffman as captain of our hockey forces, we expect to see O. A. C. colors carried to victory when the ice season opens up. Many of last year's best stick handlers will be ready for the game, and with the good, new material that is sure to come in, should give us, with proper training, a hard aggregation to beat. In fact, our boys are entering the competitive games this year with that indispensable spirit of pluck, which spells victory for our teams.

Indoor Base Ball.—Perhaps no in door game last year was so popular as the one played with the slim bat and the big soft ball. Mr. Knauss will no doubt draw up an inter-year sched ule, and interesting times will be spent.

Basket Ball.—Last year our first team in basket ball played two very exciting games with the Galt Y. M. C. A., and carried away the honors both times. A member of that team who de serves a word of credit is the manager for this season, Mr. Wm. Irving. Early in last year's operations Bill was not looked upon as being likely to make a place on the first team, but by steady, faithful work, he not only won a place but finished the season one of the strongest men. We look forward with confidence to seeing splendid basket ball this season. Of course, there will be inter-year work, and, doubtless, some games with outside teams will be arranged.

Wrestling and Boxing.—Those who witnessed our wrestling and boxing tournament last spring will remember the good men who were developed dur ing the season in these sports. We

may expect something pretty scientific from those fellows this year, and as we will again have our special room in the basement, with added facilities, a good opportunity will be given to all men wishing to take part in these body building exercises. Mr. Coglan, who so kindly gave us very considerable of his time last year, in instructing, we are glad to say, will be with us again.

Water Sports.—Those of the students who were so active last year in promoting water sports will be delighted to know that our swimming pool has undergone a change. It will be remembered how handicapped we were in playing water polo, owing to the shallowness of one end of the bath. Since then the entire bottom has been taken out, and the dimensions are now 52 feet long, 15 feet wide, 7 feet deep at one end with a regular slope to 5 feet deep at the other end. In some of the colleges across the border students are not allowed to graduate until they are able to swim, and we are in hearty sympathy with such a rule. We do not intend to have any non-swimmers at O. A. C. by April '09.

Gymnastics and Calisthenics.—Until recent years our work in gymnastics and calisthenics have been somewhat limited. However, for some little time, with improved equipment, steady progress has been made. Special advancement along those lines was noticeable last year, and with the same leadership, added progress will be made again this year. Something new will be introduced in the Rhythmic Drill, which has become so popular in some of the large colleges and Young Men's Christian Associations in the United States. Physical Director Reeds has spent the month of August at a summer institute of physical training in New York State, and will no doubt bring back with him many new ideas.

To the Freshmen.

Now that you are enrolled as a student of the O. A. C. it is necessary for you to take your due share in the various games and athletic sports that society provides.

Football is preeminently the main sport indulged in by the students during the first early part of the fall session, and if you are capable, physically, to assist in this game, turn out to play as soon as possible. Every facility will be given you to play.

Organization is of primary importance. After your President of the year has been elected, turn your attention immediately to the election of your football captain and manager. Elect them both and give them power to organize and arrange the team according as they deem best, and give them control over the discipline that should be ever present in any successful team.

It will be necessary before the first three weeks of the term are over, to enter a team against the teams of the other years in the college, and in order to do your year justice you must put a team out onto the football field. If your capain and manager deem it necessary and advisable a coach can be procured for them either from the members of the first team or from the Faculty.

Every aid will be given you so that you may enter into competition with nearly the same amount of practice, and nearly the same amount of knowledge of the rules as the other years.

Furthermore the schedule, as will be later posted on the bulletin board, will

see the Freshmen placed towards the end of the list, thus leaving you more time for practice.

All that remains for you now is to elect your captain and manager—help him to form a team and give him every assistance you are capable of. By so doing you will not only be bestowing a benefit to your own year but also to the college as a whole which will profit by your enthusiasm.

Let enthusiasm be the watchword from now on and let progress be resultant of enthusiasm.

The Football Situation.

BY R. C. TREHERNE, '09, CAPTAIN.

As "In spring time a young man's fancy
Lightly turns to thoughts of love,"

So with the ending of the harvest season and the advent of college days the thoughts of our embryonic athletes turn instinctively to the joys of strife and the sweets of victory to be gained on the football field with the fast approaching season. Probably no sport is endowed with such enticing qualities as football. Embodying, as it does, splendid physical upbuilding for the youth, and offering magnificent opportunities for both individual distinction and united prowess, football not only adds to the strength and agility of the student, but makes him a broader minded and consequently better man.

The great "desideratum" in any organization, be it stock company, cooperative association or educational institution, is efficient and legitimate advertising. All the great American colleges have increased their fame and attendance by means of their conjunctive athletic associations. Their teams for football, base ball, rowing or any other customary college sport have achieved results which to a non-athletic school would have been impossible. Consequently we have before us the worthy task of upbuilding our Alma Mater, and raising her to an efficient standard among the other colleges and universities with whom we are in competition.

Through the medium of football this process of retaining our Alma Mater in the proud position she now occupies with her sister institutions is not only made possible but never before has such an opportunity been laid before us, and we would indeed be foolish if we let the opportunity pass.

The present Athletic Executive decided before the term closed in the spring to continue the system of inter year games, and its action is highly to be commended, because not only do inter-year games induce new men to take an active interest in football, which they would not otherwise do, but they also serve the purpose of bringing new material into the football field; a purpose which is of undoubted utility.

For the past two years the system of inter-year games has lain dormant because it was decided by those then in authority that its practice was detrimental to the true college spirit. "If sincere year spirit was animated, the college spirit suffered," and their argu

ments were based on fact and experience.

When the point is considered that other colleges and universities successfully combine year spirit and college spirit, indeed, that the one largely increases the other, the question naturally arises, "Why do they not also at the O. A. C.?" I think we fail to realize that college spirit is more for the benefit of the future than of the present and that in our ignorance of the correct significance of inter-year games we kill them by our attitude towards them.

We should realize, and it seems we have failed to realize this fact of late, that inter-year games, if played in the spirit of manly fair play, which should characterize all college sport, can be made to do more for college spirit and develop better 'Varsity material than almost any other course we can pursue. Discontinuance of these games on such pleas that have been forwarded does not help the college spirit, but is in reality a suicidal procedure.

It is, to use one of John Henry's characteristic expressions, "up to us," as college spirited men to see that inter-year games are carried on in such a manner as to promote a healthy and generous rivalry instead of petty individual jealousies. Dirty work in these games should be frowned upon by the entire student body, and those persisting in such underhand methods ostracised.

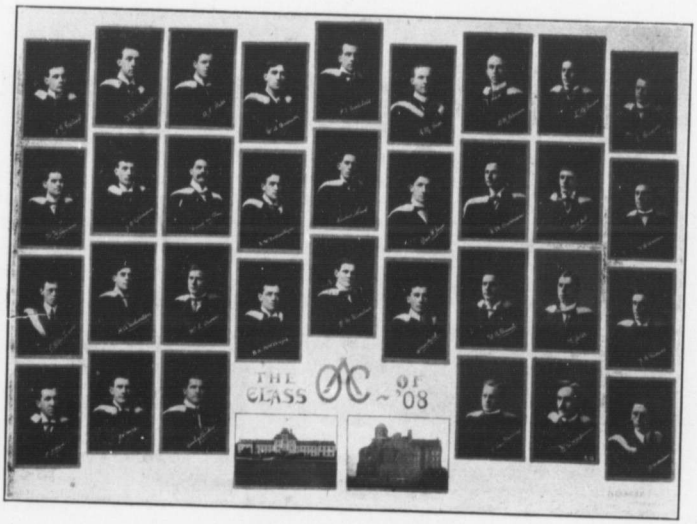
The practice of vituperative "rooting," from the side lines, is even more to be condemned, and should meet with the heartiest dissapproval and contempt by every fair-minded and patriotic student as well as athlete. If such an attitude is maintained by the student body at large, the numerous civil strifes will be prevented and a spirit of generous rivalry and wholesome college spirit will spring up in its place.

It is with such thoughts as these that I wish the football season to open up this fall, and, if as a resultant from our will power, to commence a new era, combining inter-year spirit with college spirit, being thus for the betterment of the whole.

While it is exceedingly to be regretted that many of our good football players are not to be back to help us this fall, we have nevertheless grand material to build up from, and if we can only "get down to business" in the true sense of the word, we can form a team that will remain unsurpassed in the future as it will excel the records of the past.

Sufficient words have now been used—action alone remains—so let us all, right now, work together for the goal of common good.

Our Old Boys.



The Class of '08.

THE Class of '08 was the largest graduating class in the history of the Ontario Agricultural College. It was not only great in number but it was also great in achievement. It was the team from this class that last year put the crowning touch on the work that has been done in three successive years by three different teams at Chicago. This team it was that made the Bronze Bull Trophy of the Union Stock Yards Company of Chicago the permanent property of our Alma Mater. Hodson, Archibald, Arkell, MacKenzie and Bowes comprised the team. "When can their glory fade? Let their names be held in ever lasting remembrance in the annals of the Institution. Their work brought honor to the institution, honor to their year, and honor on themselves; let honor be given to whom honor is due. It would take up too much space to chronicle the deeds of the class in sport, in public speaking and debate, and in class work. Individually and collectively the class has made its mark in college life and work, and this is a

good omen for the future of whatever part the community its members are called to work.

Edgar E. S. Archibald, Wolfville, N. S.—Edgar S. Archibald joined the class of '08 at the beginning of the junior year, having previously received his B. A. degree from Acadia University. During his third year he made a name for himself by his keen observations in nature study. He was a member of the victorious '08 judging team, thus winning a share in the honor of bringing the Bronze Bull to the O. A. C. We understand Archy has the position of assistant in Animal Husbandry at the Nova Scotia Agricultural College.

T. R. Arkell, Arkell, Ont.—"Reg." Arkell, a brilliant member of this year's graduating class was on his "vacation" when we spoke with him a short time ago. It may be that he is on his "vacation" yet. We have no doubt but that when "Reg." gets good and ready he will turn his abilities to good account. Arkell has always been an enthusiastic patron of, and a vigorous participant in, college sports. He has always stood at or near the top of the class in examinations. In his second year he had the distinction of being the gold-medalist. So great was his love for the study of live stock that he was selected to be one of the judging team for 1907, when the famous trophy was won in the International Stock Judging Contest, held in connection with the big Exhibition in Chicago. Arkell's home is in the village of Arkell, six miles from Guelph. Here his father owns a very fine farm, and is one of the best known sheep breeders in the country. Arkell junior, following in his father's footsteps, is an expert on sheep raising, and we have every reason to believe that he will be a success in the live stock line.

W. A. Barnet, Living Spring, Ont.—W. A. Barnet, conscientious, discreet, obliging, a much respected member of the '08 class, came among us with a thorough public school education as a basis for his college course, and well did he build on that basis. His whole college career has been one of development and progress. Wilfred is now in the employ of the Dominion Government at a good salary. Though never a user of the weed he is identified at present with the tobacco industry of his native province, Ontario. We wish him well. We know he will do his Alma Mater credit. Perhaps he will be a Sir William McDonald some day.

L. A. Bowes, Strathnairn, Ont., familiarly known as "Dr." Bowes, will not soon be forgotten by the class of '08. Ever since the class first came together in 1904 the "Dr." has been prominent and popular with all classes. The "Dr." in his fourth year took the Agricultural option and became so proficient in stock judging that he was selected to be one of the team to represent the O. A. C. in the International Stock Judging Contest at Chicago. He was Agricultural Editor of the Review in his final year. Since graduating he has entered journalistic work in the West with the Winnipeg Telegram, with which paper he was previously connected. He is a man of fine appearance and considerable ability, and will doubtless make good.

W. A. Brown, Meaford, Ont.—W. A. Brown, of Meaford, was the "henolo

gist" of the class. "Henny," as he was affectionately called, knew all about feathered fowl and is now putting his knowledge into practice in the Agricul tural College of Maine, U. S. A. Brown was very active in student organiza tions, several of which are indebted to him for good, honest service. The "Lit." of the fall term of last year elect ed him as its President, and to him is largely due the credit for the inaugura tion of the Public Speaking Contest as held last year, in which the contestants must confine themselves to Farmers' Institute subjects, and in which the au dience is allowed to question the speak ers. He acted as chairman of the Mis sion Study Committee, and was also a member of the Basket Ball team.

L. Caesar, Mono Road, Ont.—L. Caesar was in some respects the "father" of the class of '08. He was more mature than most of his class mates, and one whose advice was eag erly sought. He is a graduate in Arts from Toronto University, and is ment ally an all-round man. After his Arts course in Toronto he took post gradu ate work at Oxford, England, and then returned to Ontario and taught classics and history in a High School for some years. He has always kept himself well abreast of current events, and his knowledge of affairs in general was always in great demand, particularly by men seeking information when working up debates. He specialized in Biology, for which his patience and well-trained powers of observation par ticularly fitted him. He remains at the O. A. C. as an assistant in the Biologi cal Department, specially devoting his time to Insect Pests and Plant Pathol ogy. Caesar has created a record for himself in that he is the first of the class to join the ranks of the benedicts. We wish his bride and himself joy and true happiness.

F. A. Clowes, Toronto, Ont.—F. A. Clowes entered the O. A. C. with the class of '07, and dropped out at the end of his third year, returning to college to complete his course with last year's class. He played on the college Rugby and Basket Ball teams for several sea sons, and spent a great deal of time in work for the Y. M. C. A. as a Mission Study leader. He was a member of the O. A. C. delegation to the Nashville Student Volunteer Convention two years ago, and it is into Foreign Mis sionary work that he intends to throw his energies. Just at present he is in Manitoba, we believe, at Brandon.

G. B. Curran, Orillia, Ont.—G. B. Curran, '08, has not been seen much since convocation. He evidently had his mind and his eye on the West, for there he is and has been for some time engaged in journalistic work in con nection with the Nor' West Farmer. During his college course Curran was always an ardent supporter of all branches of college athletics, and was Athletic Editor of the Review in his final year.

F. H. Dennis, London, Ont.—"Pat" Dennis, christened F. H., is one of the most industrious men that ever was around the institution. He was never tired of work, and he was always light hearted and optimistic, never a drudge. Though perhaps he did not shine like a star of the first magnitude, he was a steady light. It is said that for his fourth year thesis he handed in one of the best that has ever been handed in

on a dairy subject. With all his love of work, however, Pat could take a genuine interest in sport. He was one of the mose efficient in the gym exhi bition team. His neat, cleanly built, muscular figure stood him in good stead with the ropes, rings and bars, and it is only to be expected that it will not fail him in the years to come.

G. M. Frier, Shediac, N. B.—G. M. Frier, hails from the east, the region of the wise. He was always looked up to as a senior by the rest of the boys, and his fatherly advice was often in demand. He has been chosen by the President to be Resident Master. That statement reveals volumes. We know Mr. Frier will fill the post with good judgment, discretion and dignity. We know that in him the students will have one who understands them and their needs, and who will see that they get their rights. Peace and prosperity attend him.

J. D. Gilmour, Parry Sound, Ont.—One of the keenest men of the class was Gilmour. Though he specialized in Biology with a view to taking up Forestry work, he would make a bril liant success in a mathematical course. Clearness and readiness of mind are qualities which he possesses to an eminent degree. This summer he is in Riding Mountain with a forest survey party.

H. Groh, Preston, Ont.—H. Groh is a good example of the man who says little but is always ready for action when the time comes. Although deeply interested in all sides of agri culture, his chief delight was in Bi ology, and more particularly in Botany. There was no plant, and nothing con nected with plants, that did not inter est him. A close observer, a systema tic worker with good natural ability, and plenty of perseverance, he was one of the best students of the year and had the enviable record of secur ing a first in all his majors. Harry was a square and fair going chap, always ready to help any fellow who needed it, and to take his part in anything that tended to the welfare of the col lege. For some time after graduation he was assistant Horticulturist on the Jordan Experimental Farm, but about the first of August left there to become Dr. James Fletcher's assistant at the Experimental Farm, Ottawa. This, we believe, is just the right job, and Dr. Fletcher is to be congratulated on getting the right man for it.

J. H. Hare, Cobourg, Ont.—J. H. Hare has gone to Whitby as Specialist in Agriculture in the High School there and District Representative of the On tario Department of Agriculture. While in college "Jimmy" was a rather quiet member of the class, yet one who accomplished a deal of useful public work. In his final year he was Presi dent of the Athletic Association, which perhaps is the most arduous office among the student organizations. A very hard worker, a plodder in fact, of a particularly conscientious nature, quiet and unassuming, Hare has been, and he will be, a general favorite with his fellows.

G. Hibberd, New Windsor, Mary land—Granville Hibberd entered col lege as a freshman with the class of '08, remaining with the class till gradu ated. During the first three years of his course, he was Athletic Instructor,

and introduced many improvements. Despite his various duties he made creditable showing as a student. Hib berd is at present farming with his father.

R. W. Hodson, Toronto, Ont.—Ron ald Hodson was a charter member of the class of '08. Hod's strong point was Animal Husbandry, being good enough to carry off the Barton Hamer medal at Chicago, for making the highest aggregate of any O. A. C. student in the judging competition. He was a good athlete, making most of the college teams right through his course. At present he holds the posi tion of Live Stock Commissioner for the Province of British Columbia.

D. M. Johnson, London, Ont.—Dan Johnson was a charter member of '08. He took a zealous interest in the Athletic Society, was always ready to undertake a responsibility, and carry to a successful completion the business of any committee. He was always found on the college Hockey team, where he played a steady game. Dan was a hard student, making a good record. We understand he intends pursuing farming in the West.

D. H. Jones, Guelph, Ont.—Dan. H. Jones entered the O. A. C. with the class of '06, but dropped out at the Christmas of his final year to take up the duties of Resident Master in suc cession to F. H. Reed. In that ardu ous capacity he proved a success by his kindliness, good humor and tact. Last fall he resumed his studies with the class of '08, with whom he is not less popular than he was with his own classmates. Dan is an Englishman, and is noted for his pedestrianism. He is a keen lover of nature, of good books and of art. Few men around the O. A. C. are better read in English literature than he is. The four pictures of Shake speare, Carlyle, Tennyson and Scott, which adorn the walls of the students' parlor, bear sufficient testimony to his high artistic ability. He specialized in Bacteriology, and is now attached to that Department of our college.

Morley Jull, Burford, Ont.—No member of the class was more con scientious, no member of the class was more reliable, no member of the class was more unobtrusive, yet more often on the line of duty, than was Morley Jull. Morley was "white," from top to toe, both in side and out. He never lost his temper and was always willing to look on the other side. As secretary of his class he performed the drudgery necessary in such a position with light hearted ness and even gladness. Though not very often a first-class winner in sport ing events, he was a good runner up in the long runs, and he finished just as happy and contented as if he had come in first. His equableness of tem per should stand him in good stead in the battles of life even as it did in college harum scarums. He has se cured a good position down south in the poultry line.

E. Lewis, Westerbrooks Mills, N. S.—E. Lewis, Arcadian, came to the college two years ago. Having secured his B. A. in Nova Scotia, and taken some agricultural work there also, he began the O. A. C. course for the B. S. A. degree as a Junior. There were, though, quite a number of exams. in first and second year work—technical

subjects and the like—that he was held responsible for, and such are always a nuisance to a third or fourth year man. Lewis, however, could always "ginger up." As a sprinter in the hundred yard dash, and the quarter mile, and as a pole vaulter he took the palm. Like a bird he would cleave his way through the air, and finish up amid the vociferous applause of the spectators. He is now helping Mr. Angus McKenny, District Representative for the Department of Agriculture at Essex.

D. A. McKenzie, Queenhill, Ont.—Dave McKenzie entered the class of '08 in the freshman year. He was a hard student and got a great deal out of his course. The class elected him President for the Sophomore year. During his senior year he made the judging team, and did his share to bring the trophy to the O. A. C. As an athlete, Mack will be remembered on the Football field, where he did good work. He is now engaged in drainage work.

A. H. McLennan, Trafalgar, Ont.—A. H. McLennan, Mac or Archie, according to taste, was a great old boy. Though a married man with a family before starting his course, he yet could and did enter into college life with the enjoyment of a young 'un. Being a man of discretion he attended to his studies, but believing that all work and no play makes Jack a dull boy, he entered into our sports with a will and was one of our loudest footballers. He had a deep resonant bass voice which was the pride of the choir, and which caused the congregation to thrill when at some special Sunday afternoon service he would sing a solo or take part in a duet.

I. F. Metcalf, Burford, Ont.—I. F. Metcalf took but a portion of his course with the class of '08, having entered for the second instalment in '07. He contracted a peculiar liking for Agronomy, but graduated in Agriculture and purposes taking a post graduate course in Agronomy very soon.

C. Murray, Avening, Ont.—Charles Murray was for the greater part of his college days a valued member of the Rugby team. He is husky, and also speedy, and often made good 'bucks,' and gains. He was strong, too, in other lines, having been President of the Literary Society in his final year. He is now at Collingwood as assistant to the Representative of the Department of Agriculture there.

W. C. Owen, Thornton, Ont.—If hard work, pluck, and sand spell future success, then W. C. Owen is going to attain to something. He entered the class with, perhaps, fewer natural advantages than many of his fellows. None of them, however, made better use of their time, nor derived such real benefit from their course. Sincerity and earnestness combined with industry are qualities which Owen possesses to a high degree. He is now managing a large farm near Tillsonburg. We shall hear more of him in the future.

A. M. W. Patch, Guelph, Ont.—A. M. W. Patch is more familiarly known as "Dan." He is an Englishman from Devon. Few of his fellow students knew him at all well personally, but all know that he is a hard and faithful worker. He specialized in Biology, and intends to enter the new Forestry Department of Toronto University this month to prepare himself for work in that branch.

D. M. Rose, South Hackney, London, England.—D. M. Rose, or "Dave," came to the college four years ago, smart, husky, browned by the western sun on the Manitoba prairies where he had gone two years before straight from a quiet home on the outskirts of Old London, England. Dave is one of the right kind of Britishers, no allowance man he. He makes things move in whatever sphere he labors; always reliable; never officious; always willing to give a helping hand in any good work. Though often near or at the head of his class, efficient as a public speaker and debater, and a capable organizer, he perhaps may not be called brilliant, but he is something better than that. Dave is good with all the best that word implies. He has a big heart and this it was that lead him to take such an active part in the Y. M. C. A., the Sunday Schools down town, and the pulpit around the country side. He spent half his time in such self sacrificing work, and then besides he worked like a Trojan on the Review, one year being assistant editor and the next year editor. What that signifies in the way of work very few realize. Yes, Dave is such a one that England might be proud to own as son, that Canada might be proud to possess as resident, that the O. A. C. might be proud to have as representative of its student body, that any community might be proud to have as an integral member, for wherever he is, Dave will be a force for truth and righteousness. In a week's time he goes to Trinity, Toronto, to study theology. Like one of old, he has chosen the better part which shall not be taken away from him.

A. E. Slater, Guelph, Ont.— Archie Slater is a man who will not soon be forgotten, either at the O. A. C. or at Macdonald Hall. He is always most terribly in earnest whether at work or at play, but like most earnest men he "gets there." He did the Review good service for two seasons as Editor of the Experimental Department, and he also acted as a Mission Study leader for the Y. M. C. A. He has made his mark as a public speaker, having won the Oratorical Contest in 1907. Chemistry is his strong subject and this option he took in his final year. He has gone to Trinity College School, Port Hope, as Science Master. We predict a brilliant future for him.

F. B. Warren, Gamebridge, Ont.—"Freddy" Warren has returned to his farm near Gamebridge, where no doubt he will make good use of the large store of knowledge which he accumulated while in Guelph. He has a farm of some 300 acres, and he intends to make a specialty of dairying. Perhaps the youngest member of the class, he did not take much part in the work of student organizations. He studied hard and well, and his high grades in the final examinations showed the good use he had made of his time.

R. M. Winslow, Chelsea Green, Ont. —R. M. Winslow has had an enviable college record. In his second year he won the general proficiency medal; in his third he headed the class list; in his fourth he won first place in the public speaking contest, was on the staff of the Review, was president of his year, and at its close was chosen by his classmates as the man most worthy to receive the medal given to the fourth year student who had done most for his year and for the college. With a physique that would delight the eye of a Greek; a mind strong,

keen, logical and original in the trend; a retentive memory, an untiring zeal in the pursuit of knowledge, independence of disposition and abundance of mischievous good nature Windy has all the gifts that seem necessary for a splendid success in life. His present position as Agriculturist on the staff of the Picton High School gives him a good field for the development of the best that is in him.

H. A. Wolverton, Nelson, B. C.—Harold A. Wolverton was one of the younger members of the class. Of a somewhat retiring disposition, he yet found plenty of work to do. He served both as a Bible Study and Mission Study leader on the Y. M. C. A. Cabinet, was a member of the College Choir and Philharmonic Society, and for one one year was Treasurer of the Athletic Association. He specialized in Horticulture, but intends to enter Foreign Missionary work. He enters McMaster University this month in preparation for this work.

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The Review, and its large circle of readers all unite in mourning the untimely demise of Mr. A. P. Ketchen, the late Deputy Commissioner of Agriculture for Saskatchewan. The following appreciation of his work since he became identified with the North west, is clipped from the Nor'-West Farmer:

It has been very rarely indeed that the agricultural interests of the West have been called upon to sustain such a loss as has been occasioned by the untimely removal of A. P. Ketchen, Deputy Commissioner of Agriculture for Saskatchewan; and it is not often that death snatches so unexpectedly one who seems to have so large a claim upon life.

Mr. Ketchen was so widely known throughout the West that it seems almost needless to touch upon his biography. His old home was in Ontario, in Stanley township, Huron County. On his father's farm he first acquired that love for agriculture that so strongly characterized his later life. In his youth and young manhood, on the old farm, he attained some distinction because of his success as a feeder of beef cattle and a breeder of heavy horses. So widely did he become known, in fact, that during the last five years that he remained upon the old farm he was engaged quite largely in Institute work and live stock judging, thus traveling over almost the entire Province of Ontario and familiarizing himself with the methods of the most successful farmers.

In 1900 he entered the classes of the Ontario Agricultural College, where in three years he completed the regular four-year course, graduating in 1903 with the degree of Bachelor of Science of Agriculture. Immediately after graduation he was secured by the Dominion Department of Agriculture to fill the position of Assistant Live Stock Commissioner, which position he resigned in the fall of 1904 to join the editorial staff of The Nor'-West Farmer. From this place Mr. Ketchen went two years later to assume the duties of office at Regina as Deputy Commissioner of Agriculture, which position he most ably filled until his death.

Looking at him as an all-round man, Mr. Ketchen was an outstanding figure. He was eminently practical—successful on the farm and in the office. He was a hard worker himself, yet so considerate of those with whom he associated as to make it a real pleasure to be a co-laborer together with him. He had so thoroughly mastered the

details of the farm, both from the practical and the scientific standpoint, particularly in live stock lines, as to make him a popular live stock judge, a thoroughly informed institute speaker and an individual whose personal opinion on agricultural questions was always in demand. Yet, notwithstanding his familiarity with the practical side, and even with the drudgery of farm and office life, his thought had never been entirely absorbed by the purely common-place. There were few men who had a keener appreciation of the beautiful, either in nature or art, than had Mr. Ketchen. He loved the open fields, the trees, the greenery of the grass and the lovliness of the flowers. His enthusiasm for rural life was as unbounded as it was unaffected. He was a true patriot; he loved his country and its people. He was an able writer, and those familiar with his style read his articles not only for what he had to say but also for the masterly way in which he was able to say it, as he was an English scholar of rare attainments. Best of all, he was kindly and charitable in his disposition and manner, and while the general public are mourning the loss of a valued public official, all those who knew Mr. Ketchen are grieving over the death of a personal friend.

Mr. Ketchen had been married for two years and a half and to his bereaved wife and other relatives we offer our deepest sympathy.

Matters Matrimonial.

Cupid will not be said "nay;" Venus will not be denied. Never in the history of the O. A. C. have so many of its graduates been gathered into the swelling company of benedicts in one season as have been bound hand and foot and smitten under the fifth rib beyond all cure during the past three months or so. If this pace keeps up we shall soon have to attach a postscriptum to all advertisements of the college, and at the tail end of the calendar—"school for instruction in matrimonial matters, etc., etc." Who will dare say that the close proximity of the Macdonald Institute is not bringing forth fruit in due season? The frou frou of women's dresses, and the smiles and tender graces of their wearers, such as are continually in evidence around the campus when the college is in session, must undoubtedly, judging by appearances, create an atmosphere that the sturdy sons of the soil find it difficult to get along without, and so forsooth they must just go and get married.

John Buchanan, the erstwhile considered inveterate batch, whom we were all beginning to think had safely passed the danger point, a few months ago startled all, even those with whom he was most intimate, by the announcement of his forthcoming marriage with Mabel, daughter of Mr. and Mrs. Samuel J. Laughlin, recently of Guelph and now of Rochester, N. Y.—

"A miracle of symmetry,
A miniature of loveliness, all grace
Summ'd up and closed in little;—
Mabel,
She so light of foot, so light of spirit—
Oh she!"

Gee Whiz! We shall have to shut up or Jack will be getting jealous. Well, such was the girl with whom Jack left the altar on Wednesday, the twenty-sixth of August, to wend upon his honey-moon into the wilds of Muskoka, where, undoubtedly, he will get plenty of honey and no lack of moon, and with whom he will be at home on

Eramosa Road after October the first. Perfect bliss and long life be the happy lot of Jack and his wife.

Great Caesar crossed the Rubicon many years ago. His namesake, the classical scholar and equal in the performance of duty and scholarly attainments, "Julius Caius," alias Lawson, of the class '08, with the characteristic intrepidity of the ancient one, was the first of his class to breast the waters and safely get over the matrimonial Rubicon of modern times. Within a month of graduating, "Julius" was a married man. The affair, however, was not so sudden as to strangers it might seem, for long had he been in love, and those of us who knew him, will rejoice to realize that, in the winter evenings, after his arduous duties of the day have been conscientiously performed, he will sit in his home on Elora street and listen to the soul-soothing strains given a fleeting existence by the deft fingers of Mary E., daughter of Mr. and Mrs. Mason, Ramsayville, with whom he was joined in wedlock.

"Feasts satiate; stars distress with height;
Friendship means well, but misses reach,
And wearies in its best delight
Vex'd with the vanities of speech;
Too long regarded, roses even
Afflict the mind with fond unrest;
And to converse direct with heaven
Is oft a labor of the breast;
Whate'er the uplooking soul admires
Whate'er the senses banquet be
Fatigues at last with vain desires,
Or sickens by satiety;
But truly my delight was more
In her to whom I'm bound for aye
Yesterday than the day before,
And more to-day than yesterday."

So sang Coventry Patmore and so, or in other words to the same effect, some time ago declared J. B. Fairbairn, better known to his familiars as "Ford," and every day now, he says or thinks the same. On the 27th of June, Ford entered into double harness with Luella, daughter of Mr. and Mrs. Elliott, of Brantford. He has bought a lot on College Heights, next to Professor Reynold's house, where he intends to build in the near future. Long life and happiness be the fortune of Mr. and Mrs. J. B. Fairbairn.

"What is it to be in love?
It is to be all made of sighs and tears;
It is to be all made of faith and service;
It is to be all made of fantasy,
All made of passion and all made of wishes;
All adoration, duty, and observance;
All humbleness, all patience, and impatience,
All purity, all trial, all observance."

C. C. Thom, of '04 class, in the spring and early summer denied again and again that he was meditating taking the plunge. But, notwithstanding this denial, all who met him on the street, or took meals with him or worked with him, or by any other means had conversation with him, or casually observed him, could see that he carried with him the sign manual of Cupid's successful attack, according to Shakespeare, the best authority, and knew that "something would soon be doing." These suspicions were verified on August 20th, when Thom took to wife Lena, the daughter of Mr. and Mrs. Steel, of Guelph. A pretty little wedding took place, and by a successful ruse the happy couple eluded the more or less embarrassing attentions of assistants at the ceremony, and

away they went to the Rideau for a pleasant time. They are now back in Guelph and still the pleasant time con tinues, and we know it will continue so until the end, which we all trust is far, far distant.

"I have led her home, my love, my only friend,
There is none like her, none;
And never yet so warmly ran my blood,
And sweetly on and on."

This was the experience of James Murray, class '02, on Thursday even ing, the 28th of June, 1908, and the girl he led home was the daughter of Mr. and Mrs. W. C. Allan, 247 Gloucester Street, Ottawa. The Review, repre senting the student body, the Faculty and the Alumni, extends to Mr. and Mrs James Murray the very best wishes for a long continuation of such blissful experience.

"What is love? 'tis not hereafter;
Present mirth hath present laughter;
What's to come is still unsure;
In delay there lies no plenty;
Then come kiss me sweet and twenty;
Youth's a stuff will not endure."

So thought Harvey S. Peart, of the class of '04, and his apprehensions led him to press his suit on Robina, daugh ter of Mr. Robert A. Butchart, of "Brockey" College Heights, with such ardor that on Wednesday, July the 1st, of this year, he had the delight of lead ing her from the ceremony at which they twain had been made one, and now, even at Jordan, they maintain that they are within the Promised Land, the land flowing with milk and honey. They may be sure of our best wishes, and we hope that the abundance of good things around them will supply them with a full sense of satisfaction.

Angus McKenny, who took the first two years of his college course with the class of '06, and the latter two with the class of '07, and who is now Repre sentative of the Department of Agri culture at Essex, felt it somewhat dif ficult to continue his life with satisfac tion to himself without a partner "dear, dear and true," and so on the 26th of July, Etta, daughter of Mr. and Mrs. Backus, was joined to him in the holy bonds of matrimony and though,
"No truer time itself can prove her,
May she ever more prove dearer and nearer," is the wish of the Review.

We also have it on good authority that Jack McCallum, of the class of '02, was married last month, and that C. M. McRae was best man, but we have no further particulars to give. There may be others of whom we have not heard, and there probably are. But what a batch this is, surely

Our "Old Boys" at the Dominion Exhibition, Calgary, Alta.

If the Ontario Agricultural Col lege failed to teach us anything in agriculture, or in fact, if it failed to teach us anything on any of the sub jects found upon its curriculum, it would still repay one many times over for the time, and the expense incurred in taking a course within its walls, in creating, as it does, such a healthy free masonry amongst its ex-students.

The Dominion Exhibition, held at Calgary last July, was the means of bringing many of these men together.

The Alberta O. A. C. Old Boys' Association had thoughtfully erected a tent on the grounds, where all O. A. C. boys could register and make appointments. This association, which was formed a year ago, also took this opportunity to hold its second annual dinner. About thirty-five Old Boys sat down to a sumptuous repast at the Indian House, Calgary, on the evening of July 2nd. After all had done ample justice to this part of the programme a good full toast list followed. The speeches were mostly reminiscent of old college days, and showed the loyalty for his Alma Mater which exists in the heart of every ex student. The following is a full list of those present:

Hon. Geo. Harcourt, Deputy Minister Agriculture, Edmonton; G. H. Hutton, Superintendent Experimental Farm, Lacombe; J. H. Grisdale, Ottawa; Professor G. E. Day, Guelph; T. B. R. Henderson, Edmonton; M. C. Cutting, Medicine Hat; J. P. Cleal, Airdrie, Alta.; James A. Hayes, Calgary; B. R. Nagtany, Cheadle, Alta.; C. Moodie, Winnipeg; E. C. Holman, Airdrie, Alta.; R. E. Everest, Camrose, Alta.; W. H. Gunn, Vancouver, B. C.; F. S. Jacobs, Winnipeg; J. E. Runions, Calgary; B. E. Paterson, Winnipeg; M. D. Geddes, Calgary; F. G. Bunting, St. Catherines, Ont.; Geo. D. McVicar, Cayley, Alta.; R. H. Clancey, Souris, Man.; M. C. Brownlee, Calgary; Ada A. Gray (Macdonald College graduate), Vancouver, B. C.; Mrs. E. C. Holman, Airdrie, Alta.; Geo. A. Stouffer, Lacombe; H. H. Craig, Edmonton; J. Weir, Carbon; E. L. Hodgins, Portage-du-Fort, Que.; Theo. Ross, Charlottetown, P. E. I.; C. M. MacRae, Ottawa; N. Williams, Calgary; and J. Bracken, Regina.—E. L. H.

A Subscription Prize.

We again desire to draw the attention of the ex-students to the prize, which is being offered for competition to the readers of the Review. The prize which is a Melotte Cream Separator from the factories of the R. A. Lister Co., is to be awarded the candidate securing the largest number of new subscribers, other than students, under the following regulations:

1. Competition terminates October 31, 1908.

2. Candidates must be students or ex-students of the college.

3. Candidates must be subscribers to the Review.

4. The Review is to be offered at the ex-student rate, viz.: 50 cents per year, and no shorter term subscriptions are accepted.

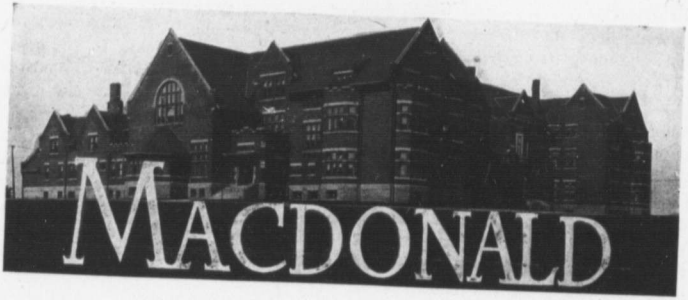
5. All subscriptions must be forwarded to us by the end of the month in which collected, so that the mailing list may be adjusted in time for the new subscribers to receive their copies the following month.

6. Information regarding the progress of the competition and some idea of the candidate's standing will be forwarded him on the 1st and 15th of each month during the contest.

All those who intend entering the competition should send in their names at once and get receipt blanks and any further instructions that may be required.

Subscriptions will run from date of receipt until September 1, 1909.

The final awards will be made by a committee of four, elected by the student body, to whom a full report of each candidate's work will be submitted and same announced in the first number of the Review appearing after the prize has been awarded.



Early Days at Macdonald.

BY EDNA M. FERGUSON.

WHAT a host of memories, peculiar to those early days, do we Macdonald girls first cherish! There were only twenty-five or thirty of us in the combined classes of 1903-1904, and, perhaps, we missed much that the girls of to-day enjoy as a result of a more settled state of affairs on the Macdonald side of the car-line; but, nevertheless, any inconveniences or disparaging circumstances were more than compensated for, by the thought that we would ever maintain the honor of having been the pioneer students of Home Economics in connection with the Ontario Agricultural College. And after all, is that not in deed an honorable memory to carry out with us into the years to come?

When we arrived at the college, we found that the Macdonald Institute was far from being completed, and, as for the Hall, instead of its being ready for our occupancy, we saw only the foundation stones in place. With very "freshy" feelings, and, we dare say, manners too, we found our way over to the President's office, and, having received a hearty handshake from genial Dr. Mills, were directed to our beloved Dean, Dr. Muldrew, whose splendid manhood and broad-minded, sympathetic nature for a few short months shed their helpful, inspiring influence around us all. To this day, and we are sure it will be so as long as we live, the memory of that good man of high ideals and noble purpose spurs us on to a life of greater unselfishness and sympathy and kindness, even such as his own.

From the opening until on in the winter, the classes were held in the class-rooms of Massey Hall. Here we assembled, surrounding those very tables of this present day, and discussed the somewhat new, but highly interesting problems of Political Economy, Food Values and Home Sanitation; or, by way of variety, first learned the difference between a stitch and a space, and then proceeded to wear our eyes out in our efforts to vie with one another, in securing the worthy approbation of our instructress. Our locker room was open to the general public,

had they ever wished to use it, and was to be found down in the basement of the above-mentioned building. Here our hats and wraps were laid wherever we could find a spot for them, and with the aid of a small-sized mirror, bought with the proceeds of a five-cents-a-piece collection, we used to smooth our dishevelled locks before proceeding into the precincts of learning above. In convenient, do you say? Horribly so, and stuffy, and crowded! But all this could not dampen the ardor or lessen the optimism of the Macdonald pioneers.

When the Institute became habitable at all, we somewhat reluctantly bade a fond farewell to the now familiar class rooms at Massey, whose very chairs we had grown to love, and took up our abode during school hours in our own institution. To-day the Macdonald girls have well-kept swards to the right and to the left of them, and splendid pavements on which to wend their weary way to and from classes, and once they enter the Institute every thing is harmony and quietude, and smooth sailing. They know nothing of dodging lumber piles and freight cars, of walking on a single car rail in preference to wading in mud ankle deep, of picking their steps through corridors strewn with the refuse of building materials, of having their lectures delivered to the accompaniment of hammers and saws, and whistling and yelling. Distracting, you say? Yes, but the Macdonald pioneers meant business, and would not allow these things to stand in the way. And then, as spring advanced, and the surrounding mud dried sufficiently to get across the intervening space, what a delight it was to climb the ladders in the fast-growing home beside us, and pick out the rooms we were so soon to call our very own. The first choice was to be ours, and richly we deserved this privilege.

Our memory of that first year stands out very clearly. It may be that other incidents in connection with our experiences in pioneer work may be forgotten, but surely none of us will ever fail to remember those dreadfully cold, stormy mornings, when the street cars would not get much beyond the rail way tracks, and we had to plunge our way up to the college through snow two to four feet deep. More than once we have got stuck in some embankment, and been pulled out by our more fortunate comrades. And had it not been for the huge farm sleighs sent to our relief at four o'clock by our kindly President we never would have found our way back to Guelph in the face of those terrible blizzards that used often to sweep up College Heights during that winter of 1904. Certainly we first Macdonald girls led a strenuous life in ways that none others have ever had to do since.

On our return in the fall we were able to get housed in dear, old Macdonald Hall, and assuredly it was a welcome change to boarding in the town. Our members by this time were considerably reinforced by new students, and with feelings of due dignity and pride did we realize that we had to assume the responsibilities of seniors.

A number of questions came up for our serious consideration that year, and among them was the one of self-government. We have to confess that some of the girls, the new ones, of course, would talk, and in study hour too, and we felt it was a matter that would have to be dealt with severely. So, behind closed doors we met, elected

our chairman, and proceeded to discuss ways and means of helping to preserve order in the Hall, in some corridors especially, since it was simply impossible for our capable and highly esteemed superintendent to be omnipresent. The result was that we were delegated to monitor certain portions of the halls, and with great and imposing dignity and authority did we effectually, for a time at least, quell all disturbances.

Another point at issue was the inauguration of a Literary Society. It seemed only fair to the students of future years to have established on a good running basis a Literary Society of no mean merit. A meeting was held in the Assembly Hall of the Institute, one day after four o'clock, and there and then we formulated our plans and held nominations for office. Speeches were heard from different parts of the house, some—it seems unfair to reveal it—in tones tremulous with emotion; others, in voice firm enough, from members whose strong conviction in the matter somehow necessitated them hanging on firmly to the seat in front of them. Applause was generously awarded every girl who did her duty by this noble cause, and in the meetings that eventually followed fortnightly, we felt that it was well worth the effort involved, to gain the invaluable experience of expressing ourselves easily and naturally before a public audience. Why, one of the Presidents actually conducted an open Literary over in the boys' gymnasium one night, and the boys said she did not do badly either. However, we who have passed from the halls of learning hope sincerely that the Macdonald girls of today will not lightly put aside these Literary Society meetings, for we have found that the hard lessons we had to learn in conducting them, have been of inestimable worth in later years.

It was during this second year too, that we instituted our Young Women's Christian Association, and held our first meetings, and we have been glad indeed to see that this side of student life is still being fostered. As the years succeed one another, we hope the Macdonald girls will find this hour spent together on Sunday evening increasingly helpful and inspiring.

There are so many things of interest connected with those first two years which we would like to relate in this reminiscent sketch, for that time is frought with happy memories. Still, our readers may be already wearied, reading an account in which they are not seriously interested. So we'll close instead, holding out to those who are yet to follow us, our sincere wishes for their very greatest happiness, and truest and best development during the months of their sojourn at our beloved Alma Mater.

The Conference at Silver Bay.

BY LUCIE BAILEY, MACDONALD INSTITUTE DELEGATE.

After the tedium of train travel, the two hours' boat trip across Lake George proved very restful. This beautiful lake lies in a basin of the Adriondacks. We took the boat at Lake George station and made fre

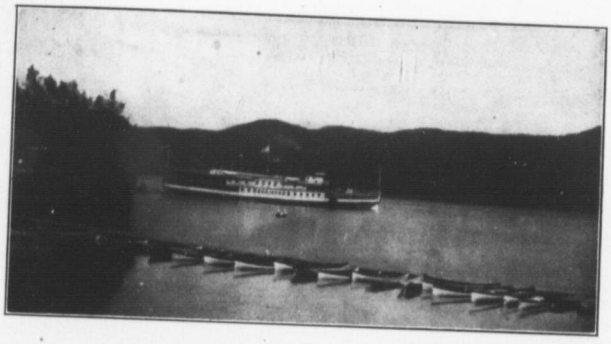


Photo by Lucie Bailey.

ARRIVING AT SILVER BAY.

quent calls at the various summer resorts, situated along the shores of the lake, and reached Silver Bay in time to register at the main building before dinner.

Our first service was a platform meeting, held in the Auditorium Monday evening, addressed by Mr. Janier. This platform meeting was followed each evening by the meeting of the separate delegations. The Canadian girls were surprised by Miss Anderson, general secretary of the Young Women's Christian Association of Toronto Colleges. At 9:30 p.m. a retiring bell rang and at 10 o'clock lights out.

The Canadian delegation which numbered thirty-six, was housed in Forest Inn. At 7:30 next morning a call came for breakfast. Each morning at 8 o'clock found the presidents in Hay stack Memorial Hall, where, under the leadership of Miss Wilber, chairman of the Conference, topics were discussed which pertained to the conducting of a Young Women's Christian Association. At 9 o'clock came the Bible classes. These were under four leaders, who discussed the Psalms, Old Testament institutions, Christian fundamentals and the life of Christ. Following the Bible Classes at 10, the Mission Study Classes met, which were also under four divisions. Each of these lasted an hour.

After fifteen minutes' intermission, we all assembled again in the Auditorium. These Auditorium meetings, which were held each day, in the morning and evening, were addressed by Messrs. Mott, Stone, Ellis, Spier and Janier, who spoke on various religious subjects. The services of song were under the direction of Miss DeBow, of the New York Studio Club, assisted by members of the various delegations. At 12:15 came dinner, so-called, after which, until 5, we were free to visit museum and library, or to enjoy ourselves on the lake and campus, or go for a climb on the mountain side. At 7 o'clock health talks were given by Dr. Annie Galbraith. Then followed the usual evening meeting, and the day's routine was ended.

Wednesday, college day, had special features for the afternoon. The delegates came together in a little grove and marched, eight abreast, to the front lawn, singing the national anthem. The

Photo by Lucie Bailey.

HILLS SURROUNDING SILVER BAY.

representatives of each of the larger colleges formed a corps by themselves. The Canadan girls, being fewer in number, all marched as one body. Each corps then performed a "college stunt" and sang their song. Mount Holyoke, by means of a scarf drill, spelled the name of their college; Wellesley girls represented athletics; Syracuse were Merry Widows; Smith College, the Japanese girls, while Vassar represented the women of "Ye olde tymes." Space will not permit giving particulars about all the "stunts," but the New York Student Club deserve special mention. They came in a decorated wagon, outlandishly dressed, and were announced by suitable names as they

Photo by Lucie Bailey.

LAKE CHAMPLAIN.

descended. They gave a concert, the programme consisting of well known melodies (?), some with cracked voices and minor chords. Canadian achievements must not be overlooked. Two by two, carrying the Union Jack in one hand and the Canadian flag in the other, marched singing the Maple Leaf, after which we formed the Maple Leaf, and while doing so, spelled Can ada. While executing this figure we sang our thanks to Silver Bay.

On Tuesday and Friday afternoons the New York Studio Club entertained us in the Auditorium with programmes which had been carefully prepared. These numbers were very different from those which they had favored us with on College Day. For the beauti ful rendering of these well selected compositions displayed their trained voices to perfection, and gave us a treat never to be forgotten.

Saturday afternoon was spent in seeing aquatic sports, in which there were many competitors.

Mr. Spier addressed both services on Sunday, which were largely attended.

At the closing Auditorium meeting on Monday evening each representa tive was presented with a beautiful prayer on "thoughtfulness," the gift of Mrs. Spier.

The bustle of departure on Tuesday morning is better illustrated by the accompanying picture than by any de scription given in words.

Yet one could not use the term "con fusion" in describing the well arranged leave-taking, for the baggage preceded us and only at the sound of the gong were the four hundred delegates al lowed to move toward the boat. Then a happy farewell salute came from the thirty-five bell boys (college students) who sang in chorus their "Adieu."

THE DEPARTURE. Photo by Lucie Bailey.

You say that you slapped him on the back and called him a brick? What hap pened then?

He threw himself at me.

Jack P.—Say! I had an awfully close shave this morning.

Ed.—How's that.

Jack P.—I got it for fifteen cents at Benalicks.

Presant (showing visitors the per ennial border in garden)—This, gentle men, is the celestial border.

President Creelman (after a short conversation with Freshman on the initiation)—Can you swim?

Freshman—No-o-o.

President Creelman—You have my sympathy.

Baker—Excuse me, Miss D., but have you any company home?

Miss D.—Lots, thanks; there's fa ther and mother, two brothers and a sister.

Will some kind friend kindly show the difference between the following advertisements, both of which appeared in a well-known paper?

Wanted—A chauffeur, ability com bined with experience, necessary.

Wanted—Butcher, must know how to drive as well as kill.

After exams. First Examiner—(Out in the woods.) O, cuckoo! Shall I call thee bird or but a wandering voice?

Second Examiner—Name the alterna tive preferred, with reasons for your choice.