

THE O. A. C. REVIEW.

The Dignity of a Calling is its Utility.

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Ex students will confer a great favor on the Editors of this journal by sending news, particularly experiences of practical value.



Entomology for the Farmer and Fruit Grower.

One of the questions of the day asked by every observant farmer and fruit grower is "how shall I meet the attack of these hosts of insect enemies that annually prey upon my crops?" As it would require volumes to answer fully this question, the object of this short article is not so much to attempt an answer, as to put the questioner on a line of study by which he may answer it for himself.

Insect life has been made of late years the subject of much investigation and numerous valuable books and reports have been published, by the study of which, along with personal investigation, the enlightened agriculturist or horticulturist is enabled to wage successful warfare against insect foes. The idea

of reading a few books on the subject, or of spending some time studying the insects themselves, should not frighten him. Both of these will become not only a means of profit, but a source of pleasure.

It is impossible to say just how much entomology the farmer or fruit grower should know. There is no limit to the information he might gain in the study of insects that would be of benefit to him in devising methods for preventing and repelling insect ravages. He should at least be familiar with the most common insects which attack the particular crops which he grows. He should be able to distinguish between injurious and beneficial species.

The majority of insects are vegetable feeders, but there are a great many that feed upon or within the bodies of other insects. These are called predaceous or parasitic, and in the main are beneficial, as they destroy many injurious forms. The lady beetles, or "lady birds," as they are often called, are amongst the most beneficial of our predaceous insects. Their food consists almost entirely of plant lice and insect eggs. But perhaps the most numerous and most active of our insect friends are the Ichneumons. There are many species of these wasp-like creatures, some very minute and others large and formidable looking. These pierce the skin and lay their eggs in the bodies of caterpillars where their young are hatched and nourished, thus destroying annually countless numbers of injurious larva. Such active allies should be known by him who fights insects, lest through sheer ignorance he slay friend and foe alike.

Nor is it sufficient to know an insect in any one of its stages of growth. The husbandman if possible should be able to recognize it in all stages of development. Insect life begins with an egg, from which hatches the first active form, the larva, generally known as a caterpillar, grub, or maggot. As all actual increase in size is during this stage, the larva has a voracious appetite and in this form is usually most injurious to vegetation. The length of larval life varies with different

species. Many complete their growth within a week, while others continue from one to several years. The average larval life among herbivorous insects is about four weeks. When the limit of growth is reached the larva ceases to feed and prepares for its first transformation. Some creep into crevices of stones or bark, or hide among crumpled leaves. A large proportion burrow into the earth, some spin for their protection silken or parchment-like cocoons, while others require nothing more than a retired nook in which to suspend themselves by slender but strong cables of silk. This is the pupa or resting state in which most insects pass the winter. After a certain time varying with the nature of the insect and the season of the year the second transformation takes place and the insect issues from the pupa-case in its mature or perfect form. And it certainly does appear wonderful that from the crawling maggot should come the active fly, from the soft grub the hard-shelled beetle, or from the repulsive caterpillar the beautiful moth or butterfly. But in addition to being a matter of interest a knowledge of the life history of insects is of no small importance. For at one or another of its stages of development, in the life history of nearly every insect, there is a time when its increase in numbers can be best checked. For example the *bot-fly of the horse* may be most easily destroyed by scraping the eggs from the horse's legs before they are licked off and taken into the animal's stomach. Most of the foliage-eating insects may be most easily killed by poisoning the voracious larva. Large numbers of the *Hessian fly* may be destroyed by burning the flax-seed like pupae in the fine screenings from the threshing machine and fanning mill. While in the perfect or imago state the *plum curculio* is most readily captured in sheets when shaken from the trees.

Successful warfare may however be waged against many insects in more than one stage of their development, and the man best acquainted with the different guises of his insect enemies, will be most able to direct his attack to the weakest point in different quarters.

Another item of great importance to the agriculturist, is a knowledge of the manner in which the different injurious insects feed, for upon this will depend the method of applying insecticides. All insects may in a general way, be divided into two classes: Those having well developed jaws and that chew their food, such as cut-worms, tomato worms, potato

beetles, etc., and those obtaining their nourishment like a mosquito, by inserting a sharp proboscis through which they suck the juice of the plant or animal upon which they feed. To this class belong the squash bugs, leafhoppers and all the many forms of plant lice, as well as bed bugs and animal lice.

As insects differ in their nature and manner of taking food, it is evident that the agriculturist must vary his methods of prevention and remedy according to the insects against which he may be fighting. As already intimated the attacks of some insects may be prevented, and as prevention is better than cure, such means should be devised whenever possible. These may be often found out through a knowledge of the life history of the insect under consideration. For instance, turnip flea-beetles make their appearance early in spring, live on whatever cruciferous plants they may find, lay eggs for a second brood and soon die. If turnips are sown so as to be well into the second leaf before the second brood of beetles appears, the crop may escape injury altogether. This period, usually sometime in June, varies with different localities and must be discovered by the farmer for his own neighborhood. The sheep tick being a wingless fly and passing its whole life on the sheep, when entirely exterminated may be got rid of for all time if the sheep are carefully prevented from re-infection from new animals added to the flock.

Climbing cut-worms, often so injurious to the leaves and buds of fruit trees, remain concealed during the day, just beneath the surface of the ground, and ascend the trees and commit their depredations in the night; such may be prevented by putting tar bands about the trunk of the trees.

In many ways preventive remedies may be of great value, but along with these more deadly remedies must often be resorted to. The best remedies known for many injurious insects are far from satisfactory. But the farmer should as far as possible, keep up with the times in the use of insect remedies. All should read the best agricultural and horticultural journals, and all who can should obtain and read carefully the annual report of the Ontario Entomological Society. He should know at least the standard remedies, and be able to prepare and apply them in proportions that will destroy the insects without injuring the foliage.

Masticatory insects are most easily killed by poisons such as Paris green, London purple or hellibore applied to the plants upon which they feed. Suctorial insects cannot be killed in this way. They are most readily destroyed by such substances as Pyrethrum or kerosene emulsion, which kill by coming in contact with their soft bodies.

The study of insecticides must go hand in hand with the study of insects. The force pump or spraying apparatus is now as necessary to the complete equipment of every fruit farm as the pruning shears or cultivator.

The time has come when the success of the agriculturist or horticulturist depends in no slight degree upon his ability to detect and repel insect enemies. And if he would escape what our Dominion Entomologist has estimated as a "direct tax of 10 per cent. on all farm products," he must give more attention to the study of practical economic entomology.

Points on Feeding Poultry.

W. R. Graham, '92.

The best way to feed soft feed is bran one morning, corn meal the next, and a mixture of bran, corn meal and middlings, scalded, and fed warm the next. Never feed quite enough in the morning. Let the hens be hungry so as to compel them to scratch. At night give all they will eat up clean. Give nothing at noon if you feed as above described.

The best food for producing eggs is chopped clover and chopped meat, mixed and scalded, with a little ground grain sprinkled over it. Feed warm early in the morning. Give nothing more until an hour before roosting time, then scatter in litter of some kind—a good litter is leaves, cut straw, or dry earth—to make the hens scratch for it. A good scratcher is a good layer. Feed corn about once a week during cold weather.

Feed sulphur sparingly, as it will cause rheumatism or leg weakness. Never give it in damp weather.

Cheap egg foods are mostly ground oyster shell, and their benefits are only imaginary. Do not buy them.

It pays in winter to feed meat fresh from the butchers, even at ten cents per pound. Use daily a pound of lean meat for twenty hens.

Drinking water must be given so that the combs and wattles cannot get wet. Place

warm water before the hens three times a day in winter. Place cool water before the hens several times a day in summer.

Feed for Chicks. Give no food to chicks for twenty-four hours after they are hatched. Then feed every two hours until one week old. After that three times a day is sufficient.

The first feeding may be of rolled oats dried slightly on the stove if the weather is damp rubbed between the hands to crumble it. The rolled (or flake) oats are ready prepared, cooked, and can be had of any grocer, being the prepared oatmeal for instantaneous preparation of oatmeal gruel. Feed it to the chicks dry. Stale bread moistened with milk may also be given.

On the third day after beginning to feed, vary the food by giving rolled oats one meal, and prepared cake the next. The prepared cake is made by using equal parts bran, ground corn and oats—corn and oats are usually ground together—and middlings which should be salted to season, thoroughly mixed, and baked. Sift the corn and oats and feed the coarser parts to the old fowls. If fresh milk can be had the food may be mixed with it before cooking. If not use water. Then crumble the cake fine when feeding. It should be fed dry.

Ground meat is some times used for chicks, but results show that too much of it causes bowel disease. If a piece of lean meat be cooked to pieces or chopped fine after cooking and fed twice a week it will be sufficient.

After the first week mashed potatoes, cooked turnips, crumbled bread of any kind, or any wholesome food will do.

When chicks are ten days old the rolled oats may be omitted and wheat and corn can be used on alternate days. Teach the chicks to eat wheat and cracked corn early. After the chicks are three weeks old the cake may be omitted, the food scalded instead, but the quantity of bran reduced one-half. Bran is indigestible if fed raw and sometimes causes bowel disease, but if cooked or well scalded to soften it, the bran makes good food, as it largely abounds in phosphates, the best bone forming element that can be given. Never feed raw cornmeal to very young chicks. Feed early in the morning as soon as the chicks come out. Never keep them waiting for breakfast.

Milk may be given, but should be fresh, and the residuum carefully removed, but do not

substitute it for water. Give water to chicks from the start. Curds may be given two or three times a week, also fresh buttermilk.

A chick must not be allowed to tread in water as dampness is fatal. Water should be given in such a manner that only the beak of the chick can become wet.

When the chicks are busy scratching it is a sign of thrift. When chicks seem to be continually crying it means more warmth is needed. Warmth is as important as food.

THE FARMER BOY.

O farmer boy without alloy
 And pleasure at thy command,
 Why seek to roam, and leave thy home
 To wander through the land?
 Why roaming life with all its strife,
 And sin with all its glare,
 When now thy days in honest ways
 Are passed without a care.
 Why sigh for this, with all its bliss
 Grand nature gives to thee?
 Why coldly spurn her love and turn
 To shallow mockery?
 How can'st thou grieve her heart and leave
 Without regret and pain,
 Her sparkling rills and grassy hills,
 Her fields of waving grain,
 The summer long her round of song,
 Is hovering in the trees.
 Her beautiful flowers and sunny hours
 And musical birds and bees.
 Her scenery's free for you to see
 While on your way to school.
 Her springs are clear for you to share
 And there your thirst can cool,
 O farmer boy, with all the joy
 Kind nature gives thee now;
 Can'st thou not see a King is he
 Who hopefully guides the plow?

—Selected.



MUSKOKA AND ALGOMA.

While I am aware that winter is not the best time to come to proper conclusions as to the favorableness or unfavorableness of any

country for agricultural pursuits, yet a person may gain some slight knowledge to this effect even in winter, and besides there is the novelty of a trip through this region in winter, which has become so noted for summer tourists, but in cold weather there are few who care to undertake the journey, except on business in connection with railroads, lumbering, or mining, which are the chief pursuits in this North Western portion of Ontario.

The Hon. Charles Drury, ex-Minister of Agriculture, was to have joined me at Orillia, but on my arrival there he had not appeared, and the journey into the Northern country was commenced not in the best of spirits, as there had been some "big tales told" concerning rocks, bears, snow and frost; however, the writer plucked up his courage and commenced the trip, the object of which was to try to give some encouragement to the few farmers we expected to find there.

After leaving Orillia, there are some very nice farms, with good buildings, but soon one enters where the timber has recently been cleared. On the left of the track stands an old stable that was built, no doubt, by the lumbermen. The roof is gone, and growing up within its bare walls is a tree, that flourishes well within the protection of its fallen, hewn, and builded companions. Away in the distance the setting sun glistens on a church steeple, and the snow that hangs in pure white festoons from the trees, which skirt either side of the road, lend beauty to the scene.

In some places the railway company has begun planting wind-breaks along the exposed parts to protect from drifts, and repair the destruction that ought never to have taken place, for there are thousands of acres through Muskoka that should not have been cut. At the Institute meeting, held at Bracebridge, a paper was read on the advisability of replanting some parts of the country, which was warmly endorsed by practical men who discussed the question. All were agreed as to the need of it, the only thing was, how best to accomplish the desired result.

There is nothing remarkable to note between Orillia and Bracebridge, as it is a succession of timber land wholly or partially cleared, lumber villages with great piles of lumber stacked in every direction. (most of the houses in them are new, and as a rule are not very substantial) rocks, river, and stream, with plenty of deserted log cabins along the route, which have either been the abode of lumber-

men, or are the relics of some poor settler who vainly endeavored to hew a homestead out of the timber and rocks. One thing peculiar was noticed in the rocks, many of which appeared to run in narrow ridges, and for the most part in one direction.

Enthusiastic meetings of farmers and business men were held at Bracebridge, morning, afternoon and evening, on February 5th. Some who were present came long distances on foot, and in the evening the Hon. Mr. Drury having arrived, those who remained were amply repaid by a practical, and eloquent address from that gentleman. In addition to music, songs, etc., an address by Miss Hollinsworth, daughter of the President, on "Botany for Farmers' Daughters," would put to shame many of the fair sex in the older parts of the Province, while some of the sterner sex might take a lesson from this wood nymph of Muskoka. Bracebridge is a small town, and all its inhabitants seemed to take an interest in the farmers of the surrounding country. There is some talk of starting a cheese factory and hauling milk by boat, as one man estimated that the milk of 300 or 400 cows could be obtained in this way within a short distance.

Utterson was the next point, and the distance was traversed with the Sheriff of the district as coachman. We passed some fine brick houses on the way, but as our driver remarked, "the land was all better 'way back." This is a small place, but has two hotels, in fact there appear to be more hotels than any thing else, in nearly all the villages in this district. There were about forty farmers at the meeting and the only wonder was where they came from. Here as at Bracebridge the addresses were apparently greatly appreciated.

A run for the train in the evening, and we were on the road to North Bay, a stirring place of about two thousand inhabitants, whose chief source of income is the railroad, which pays out about \$20,000 per month, the repair shops being located at this place. These shops run night and day. As we boarded the bus the driver in response to the query, how far is it to the hotel? answered, "three or four acres," and we wondered. There is a large Separate School in the town, but the streets, as indeed do they all in these northern towns, do not appear to be laid out with any regularity, every one apparently having a street where it suited his or her fancy, no matter what the direction or the angle it formed with the others.

There is not much agricultural land here, but at Bracebridge and Utterson, there are very good tracts which are paying those who till them, owing to the fact of there being such a good home demand, as nearly all farm produce brings a higher price here, than in older parts of the province, owing to the lumber and mining camps.

After leaving North Bay the C. P. R. skirts the northern shore of Lake Nipissing, for many miles. Here and there is to be seen an agriculturist who is endeavoring to make for himself a home among the wilds; near one shanty I noticed a multiplication of services, the barbed wire fence of the railroad being utilised as a clothes line on which to dry the week's washing. (No clothes pins required). Soon after leaving Meadowsides, the lake cannot be seen for some time. At Sturgeon Falls which is quite a village, no rock is visible, but the land is a yellow sand.

We were entertained along the way by a lady, who appeared very anxious to make a good impression on the gentleman by her side, about whom my Hon. friend remarked he would guarantee he was not her husband. He certainly did not get a chance to say much, and the lady had it all her own way. We pitied him, and rather envied his powers of endurance.

On both sides great tall trees stretched forth their blackened, withered arms, and disclosed their charred trunks, seeming to say, "Oh, why has man treated me so, when I might have been a help and a blessing to him, had I been used humanely, but now there is nothing for it but to stand as a silent protest against the wholesale destruction of my still living friends." What timber there is along the track is principally second growth of black ash, cedar and birch. Here and there a sleigh track is seen, for the most part winding down or up the streams.

Past Verner and Warner we reach Woni-pilac which has been the seat of a large lumber trade, but now the timber is twenty miles back, and the logs are floated down the river. A crowd of lumbermen were at the station, and the shanties in the vicinity appeared to be well stocked, so that there is not likely to be a famine in *lumbermen* very shortly, judging from the visible supply for the present and future.

Sudbury! The centre of the mineral wealth of this district. Would that space allowed a

description of it. Had I been alone when landing at this place, the next train would have been taken for a return trip, as it is without exception the most lonesome place that a stranger ever dropped into, and the surroundings in the town, and outside of it, are anything but to cheer one, unless he be in search of the wealth which is supposed to be hidden in the rocks in the vicinity. We paid a flying visit to Copper Cliff mine. With a Jehu to drive us out we were not long on the way, both going and coming we passed a number of loads of beef on the road to the camp, some of which, judging from appearances, would make an ordinary mortal exclaim, is there anything tougher than this? The sulphur, which is first burnt from the rock containing the mineral, by piling it in alternate layers of rock and pine wood until a great heap is made, and this allowed to smoulder for weeks, can be smelt before you approach the mine at all. Only one smelter was at work when we visited it, but there are two in connection with this mine. The ore is not purified here, but the "slack" is separated and it is sent to England for purification. Huge piles of the partially purified metal were lying near the smelter. There are three or four other mines in the vicinity.

Milk was ten cents a quart, and beef proportionately dear, all of which, and nearly everything else that is eaten being imported, it makes a good market for farm produce within reach. The whole town appears to be built on the principle of "if there is any money to be made I want to make it, but at the same time I don't intend to lose much if I can help it," though it is said that nearly every merchant in the place has failed and there are not a few of them.

At Thessalon, which is about 60 miles from the "Soo," we had a two days' meeting, that for interest, attendance, and ability displayed, would equal many of our older institutes, and surpass others where the advantages have been much greater. At this point there appeared to be a great deal of good farming land, and considerable attention is paid to stock raising. One man near by has some famous trotting stock, of which he gave us an exhibition on the ice of the river that flows through the village. A great many of the farmers came from Huron and Wellington; judging from appearances they have done well in emigrating from even such good counties as those.

The "Soo" being the end of the trip, Mr. Drury returned after delivering an address, while I remained to do battle for two days. Here we found a flourishing Agricultural Society, under whose auspices the meeting was held; their stables, palace and grounds do the society and the surrounding agricultural district a great deal of credit. The Secretary, Mr. Dawson, informed us that the buildings were inadequate for the last fair, and they intended to add to them this summer. This being so, who can say that there is no farming land in Algoma? Judging from accounts and appearances at both Thessalon and the "Soo," there is a good deal of farming land, and the people are very anxious to have it developed. In fact, so eager are they, that I received a letter from a man in that neighborhood, who offers 40 acres of land which is all under cultivation, for the purpose of starting an Experimental Farm, if the Government feel like undertaking the matter.

In conclusion, is the country likely to amount to anything agriculturally, and would it be advisable for a person with limited means to settle in these parts? If the mining develops into anything like what it is expected to do, there will certainly be splendid markets for the produce grown. Quantities of gold have been discovered near Thessalon, and this together with the nickel and copper, will probably prove sources of great wealth, and attract a large population, which must be fed. Where there is land, it appears to be very good, and where any quantity of this can be obtained cheaply, as it can at present, those wishing to go into a new country would do well to take a look through Algoma. The great drawback is the long cold winter.

H. D.

PHRENOLOGY.

"How to Read Character."

MISS L. HENDERSON, GUELPH.

"Any philosophy which professes to unfold human nature as it is, to lay open the secret springs of human conduct is surely worthy of our earnest consideration."—Says Dr. Drayton. "Does phrenology do this?" you ask. I answer, "Yes it does—you may read the character and disposition of every person you meet if you are able to understand and apply the principles of this Science."

President Hunter, of the New York Normal College, said: "If phrenology could be proved to be a science, it would be a more beneficent discovery than the electric telegraph, because it would help to put the right man in the right place." This is exactly what phrenology does. The experiences of its teachers furnish hundreds of examples of the important aid this science has conferred on people by telling them what trade or profession they were best adapted by nature to fill. Also the benefit they received from an examiner's counsel or the reading of a phrenological work by which they were told strong points of character, and how to restrain weak points, and how to train and develop.

"Know Thyself" is the most important kind of knowledge for each and all. To be able to train and control our own faculties, mentally and physically, proclaims one a King or Queen of their species. Solomon says, "The man that ruleth his own spirit is greater than he that taketh a city," and that truth is as trite to-day as it was thousands of years ago, hence the first great benefit phrenology confers on our race is to read ourselves, take mental stock as it were, find out what are our capabilities, what are our deficiencies, and now to remedy them. Then for what life work are we best adapted, have we talents for business, for mechanics, for books, have we talents for success as a doctor, a farmer, a teacher? etc., etc.

Phrenology answers these questions in a practical way by giving substantial reasons for choosing any of these callings. Hundreds of people are to-day enjoying the comforts of being in the business their brain and temperament fit them for, in their right groove, the result of phrenological examination, or a study for themselves of phrenological principles.

"A knowledge of human nature would save many disappointments in business and social life." Reading our own characters, then, and training ourselves mentally and physically, is the first benefit this science confers. The second is to be able to read the character and dispositions of the people you meet, read them as you would a sentence from a book. The importance of this will commend itself to the minds of your readers, Mr. Editor, I think, as business men to know how to deal with customers in both buying and selling, to avoid rubbing against their angularities, quick temper, etc., which this science enables one to see, also how to choose friends whose dis-

position will chord with our own, that there may be harmony instead of jars, mutual pleasure instead of discord, and this science most certainly gives this important power of so choosing friends.

Some of the principles by which phrenology reads a character, briefly stated are:—1st. The law of correspondence, "Differences of external form are the result and measure of pre-existing differences of internal character; in other words configuration, outside shape, corresponds with internal organization of mind and function, mind shapes brain, brain shapes skull." This proves the law of homogeneousness, that every part of a thing shall correspond with every other part and with the whole. This law has been illustrated in a most remarkable manner by Professors Owen and Agassiz in natural history, and pervades the vegetable as well as the animal kingdom. But man affords its most striking example.

Next law is that of quantity or size. Size is the measure of power, other things being equal (the other things here referred to are quality, health and exercise), the larger the head, the face, the body, or any faculty, the greater the power indicated. But other things are often unequal. A comparatively small horse may sometimes draw a heavier load than a much larger one. Some men with moderate sized heads manifest more mental power than those whose heads are much larger, which facts indicate that there is some other law modifying size. This brings us to the law of quality. Size and other conditions being equal, the higher or finer the organic quality the greater power. Large size and high quality then, must be combined to give the highest order of power for thought or action.

Then comes the law of temperament. This means physical constitution, build of body: the human body is composed of three grand classes of systems of organs. 1st. The mechanic's system, viz.: bones, muscles, and ligaments; this is the motive temperament. 2nd. The nutritive system. Strong heart, large lungs and healthy digestion; this is vital temperament. 3rd. The nervous system, consisting of large brain and nerve tissue; this is mental temperament.

The effect of these different temperaments, or shapes of body, on the character is very marked; for instance, the motive temperament is known by length, long bones, tough, wiry muscle, generally a tall figure, lean and angular, with prominent features. Length indi-

ates and causes activity, intensity and persistence of character. These people are the workers of our earth. 2nd. Vital temperament is indicated by breadth, roundness, fat figure, is generally stout, round head and face, limbs plump and tapering. Breadth indicates comprehensiveness, latent force, endurance. These people are noted for lively disposition, enthusiastic and genial, sometimes fickle, these people are the sports and fun lovers of our earth. 3rd. Mental temperament is noted for large head, small body, high forehead, delicate, finely chiseled features. Character is marked by vivid conception, intensity of emotion, liveliness of imagination and refinement of taste, these people are students of our earth, our men and women of thought.

One person is tall and muscular (vital), another is short and plump (vital), a third small and slender (mental). This dainty brown haired girl is delicately fair; that boy is as ruddy as a Spitzenberg apple. Yonder man is swarthy and has black eyes, while those of the girl are grey and the boy's blue. We observe that the functions of life are not performed in these people with the same degree of force or rapidity, that their likes and dislikes have neither the same direction nor the same intensity, these differences and others not here specified are the results of temperament, the *corporis habitus* of the ancients.

To attempt to read human character without taking the great modifying influences of temperament, quality of size, into account, is to make numberless mistakes; this is the difficulty, the sand-bar on which too many professors of phrenology have been stranded, and have brought disgrace on this noble science, by their mistakes in diagnosing character. They read heads alone, are mere skull gropers, hence their inaccurate descriptions of people.

We may next consider heads. After we are sure of quality and temperament, the head or skull is packed closely full of brain tissue. This is the special medium through which mind manifests itself. Thought filters through brain matter. Heads may be large, medium, or small. But all differ in shape, hence the different dispositions of people. Shape of skull also indicates the race to which its owner belonged.

Phrenology divides the brain into about forty-two faculties and five lobes. The first is the frontal lobe, and contains intellect; located in forehead; these are the faculties of memory, observation, reason, criticism, etc.; are sharp

and cutting, contain no affection, hence a person with the intellectual lobe the largest is too critical to be loving, too cool and calculating to be very affectionate.

The second lobe is located above intellect in the superior frontal and parietal region, in other words, at the top of the head, and are the group of the religious and moral organs. These faculties give us an alliance with the higher life; lift us up from the mere human into the Divine, constitute man a moral and accountable being, give him the disposition to be of service to his fellow man (*benevolence*). To worship his Creator (*veneration*). To expect a future state of existence (*faith and hope*).

The third lobe. The selfish propensities are located above and around the ears, they lead people to make provision for animal wants, and to assert and defend rights of person and property. Broad headed people take mighty good care of themselves, are energetic, forceful and courageous. Those with narrow heads are patient and easy going, and make amiable companions but poor business people.

The fourth lobe. Domestic propensities are grouped together in the occipital region, or back head, these faculties constitute man a social and domestic being, are the foundation of his attachment to family and home and country. This lobe of organs large makes people loving and affectionate to husband, wife, children friends and pets.

5th lobe. Ambitious sentiments are in the in the upper back parietal region, crown of head. Their function is to manifest independence, ambition, prudence and stability. People who have this group large are proud, self-reliant, love to take a lead, make good commanders, but poor followers.

These are the leading groups of organs in the head, whichever lobe is the largest is the leader, dominates the others; size being a measure of power.

To the Editor of the O. A. C. Review:

SIR,—In response to requests from several quarters, I will ask permission to address through your paper a few notes to inquirers and others interested, bearing on the agricultural situation of the Province of Prince Edward Island.

One cannot but feel, in viewing the state of agriculture here, that it has gradually fallen into a rather undesirable condition. It is a matter that concerns every citizen here

whether his hand guides the pen or plough, for this province is purely agricultural. The farmer, however, is directly affected, and feels already uneasy in his situation. The influences under which he is being cornered and borne down are widening daily, and must extend ultimately to the professions and trades. In the opinion of many, the cloud that has been gathering is darkening. A few evidences may be cited: a universal desire in proprietors to dispose of farm property, and in farmers' sons to forsake farming are among the strongest evidences of increasing agricultural depression: It would require but little observation to convince one, that the former pervades the minds of our property holders; and, touching but delicately the latter, it is enough to say that there is great cause for regret. But remaining upon our farms are the few who are "anchored," and these are the poor fellows who must breast the storm.

Intricate questions coming every day from our farmers reveal the degree to which changing circumstances are presenting new difficulties. Decreasing fertility of soil, and increasing competition, accompanied by lowering prices in farm produce, and difficulties in reaching market, are not insignificant foes. Nature favors the island with large crops of roots even 1200 bushels of turnips per acre—and potatoes and oats are grown extensively.

These the farmers have grown abundantly for many years, and, while navigation is open, have no difficulty in marketing. But a prime steer, or a summer's make cheese is a rarer article, and has to wait the slow demand of a sluggish local market. The first of these conditions only encourages the further exhaustion of the soil at the farmer's expense, and the second discourages the inception of higher and more profitable systems of agriculture. That the farmers have a keen perception of the disadvantages under which they labor, and that they still continue along this disheartening course, expresses their inability to get out of the beaten rut or track.

Now, with these evidences there are other grave features, notably this:—the island having no other natural industries giving much employment, and there being but few openings along professional and commercial lines, the young men leaving the farms cannot find other employment. The alternative is to leave the island.

That the farmers of the island are kind hearted, intelligent and plodding is admitted

by all who know them. But it is to be regretted that they are not more progressive.

The chief products grown are potatoes, over 6,000,000 bushels annually, and oats amounting to over 3,000,000 bushels. The greater part of these products are exported; but, after paying freights, commissions and duties, they do not return much money to the farmer. Last season potatoes did not net more than 15 to 20 cents a bushels. Oats, lately, have commanded fair prices; but the yield per acre of this crop is decreasing. In certain departments of live stock there has been marked progress, particularly in standard-bred, and, to some extent, in Percheron and Clydesdale horses. It is an exception, however, to find either a saddle or a coach horse on the island. But let no man boast that his spirited driver can lead along her majesty's highway, for the most sleepy looking, unshapely and ungaitly weed may rouse up and move his stumps with surprising activity. Yes, a pride is taken in speeding horses; and nowhere probably, unless in Cape Breton is there faster and wilder driving.

In the improvement of cattle, sheep, and pigs, there has not been as much interest taken as with horses. There has been a lack of systematic selection and improvement, and as a consequence, the great bulk of the cattle and sheep of the island are unimproved. But of late the interest in the improvement of all classes of live stock is awakening. The establishment of a Provincial Exhibition, that is held annually in Charlottetown will advance this interest, and the local government, in all probability, will give substantial aid to farmers, through regular importations, careful breeding, and distribution of the best breeds of cattle sheep and pigs. A dairy experiment station is to be located here in a few weeks, the result of which must certainly be to encourage the production of a better class of cheese and butter. But as yet there has been very little factory cheese and butter made on the island. Two or three cheese factories have been working, more or less irregularly, for several years. The tendency is, however, to discontinue them.

No creameries have yet been established here. The system of agriculture practised at the present time, is much as it was twenty-five, thirty, fifty or more years ago. But, notwithstanding this apparent standstill, there must be a brighter future for P. E. Island farmers. We have a warm soil, easily tilled, and capable

of producing abundant and nutritious fodders. Exceedingly heavy crops of hay can be grown here on land in proper cultivation; corn promises to mature sufficiently for the silo; and the fodders and grasses give a delicious flavor to meats and dairy products. If the farmers can only be persuaded to forsake the old, cheap, and exhaustive system of raising potatoes and oats, it will almost immediately result in development along other lines of farming.

The dairying industry should be a prominent feature in the agriculture of the island. To bring about these changes, however, substantial aid and direction must be afforded. Creameries and cheese factories must be introduced and for a while partially sustained by government grants; the farmers must learn to discriminate between profitable and unprofitable stock; they must learn how to provide abundant fodder for wintering stock; and the government of our island must do more in the way of importing stock of the right stamp and the distribution of new seeds.

Steps have already been taken to establish two important associations, one a Provincial Dairymen's Association, and the other a Fruit Growers' Association. The first annual meeting of the former association is to be held this May, and opened by Prof. Jas. W. Robertson, Dairy Commissioner and agriculturist for the Dominion. This society when thoroughly in working order, will have much useful work to do for the farmers of the island. In the cultivation of fruit there has been very little done. The climate apparently is not warm enough to mature grapes and other delicate fruits, but apples, plums, gooseberries, etc., do well. In the establishment of apple orchards much time has been lost; and money squandered by setting out (through ignorance and misrepresentation) inferior varieties. In this, as in other departments, there must be organization to collect and distribute reliable information. The late Mr. Wm. Brown, of Charlottetown, took a lively interest in fruit culture and became an authority on the island. His sudden and lamented death has seriously delayed the establishment of this association. But these several industries, the dairy in particular, are looking up, and in time they will work important changes in the agriculture of this pretty island, the garden of the gulf.

Yours truly,

A. E. S.

Charlottetown, P. E. I.



Local News.

SOMEONE'S affections are at Whithy.

CARLYLE is an authority on the "nutritive ratio" of eggs.

HAVE you heard M. ...'s new recitation, "Easter Eggs?"

DOES Carpenter shave up or down? Down most decidedly.

THE third year exams. begin on May 5th., lasting till the 27th.

MILLER is the absent-minded youth who strolled down to church in a football cap last Sunday evening.

A VALUABLE addition to the farm stock, in the shape of a Holstein bull, has been made from the herd of Mr. Smith.

WE are sorry to have to record the departures of Messrs. Grey and the Willans Bros., who have left for the Northwest.

Miller has a little chum,
Whose fleece is just like tow,
And wheresoever Miller roams,
Wh- Tottie's sure to go.

A CERTAIN young man, Murphy I think, makes the sapient observation "That there is nothing like an examination to teach one how unbounded one's ignorance is."

FOOTBALL is all the rage just now, two teams having been picked, matches between them are played at every opportunity. Baseball, in the meantime, is hiding its dishonored head.

D. A. SMITH, Esq., has returned to the College, where he has obtained a situation. Everyone is sincerely glad to see him back, especially the footballers, who greatly appreciate his valuable services.

A STRIP that is receiving the serious consideration of the authorities, is to have negro waiters in the dining hall, because "the naughty boys won't leave off speaking to the girls." In the meantime, pending the arrival of the darkies, the 2nd. year tables have each secured the services of two 1st. year men, who really make very fair substitutes.

A TENNIS CLUB has been formed; Professor Hunt is president, F. C. Harrison, secretary-treasurer, and there is a committee of three in addition. Under such able management the club will doubtless prosper.

ANYONE desirous of seeing the marked improvements effected in the personal appearance of a student, during a course at the O. A. C., may have his desires satisfied, by calling at Room 39, and making known his errand.

MANY a sick youth has fervently blessed Mrs. Craig, who, like a ministering angel, is always hovering about the hospital, never sparing herself while anything can possibly be done for the relief of the patients. In fact some of them, we believe, do not recover as soon as they would if they were not treated so kindly.

A BUSINESS meeting of the Literary Society was held on April 24th, for the purpose of winding up matters for the year. The treasurer's report was read, found satisfactory, and adopted; after which votes of thanks were proposed to the various officers of the Society, eliciting from them short farewell speeches in return. A motion to the effect that a special vote of thanks be tendered to President Mills, for his many kindnesses to the Society, during the past year was carried unanimously. The meeting then adjourned.

THE 3rd. year have decided that the dignity of their year requires a growth of down on the nether lip, and are accordingly offering prizes amongst themselves for the best specimens produced within a given time. The foremost competitors are probably Field and Buchanan. At present Mr. Field has one hair the most, but between them they can only muster five. Cowan, Sleightholm and Linfield are making heroic efforts, and free use of hair invigorators, and we think are slightly ahead of the remaining six members, who are decidedly "in the soup."

ALTHOUGH it was not the first of April, a very neat trick was played on D— during the middle of the last exams. He received a dainted, scented note, requesting the pleasure of his company at a (fictitious) social gathering that evening. At first, he decided not to go, but study, for as he said, "He knew he would fail in Chemistry the next day, anyway, and he might as well fail honourably." His scruples soon disappeared, however, and he might have

been seen departing from the College an hour later, dressed for a mash; and he might also have been seen returning half an hour later, looking as if he had been mashed. Poor D—, every day in the year is the first of April for you.

A FRIENDLY game of Association Football was played between the O. A. C. and Guelph Business College, on April 23rd, the score being 7 to 0 in favor of the O. A. C. The Guelph team kicked wildly, and played a much slower game throughout than our men, whose forwards kept the ball on the Guelph goal the greater part of the time. Only one shot was made on the O. A. C. goal, and that was deftly stopped. The following compose the Senior Association team for this season: Goal, F. McCallum; Backs, Soule and Freeman; Half-Backs, Shaw, Field and Hurley; Forwards, Smith, Willans, N., Brown, Buchanan and Putnam. Shantz will play in the cup matches.

THAT Prof. Robertson, Dairy Commissioner for Canada, is interested heart and soul in the progress of the dairy industry in the Dominion is apparent to all, and his untiring efforts in that line are greatly appreciated. In every possible manner he encourages, and seeks to spread knowledge of the most improved methods of butter-making, etc., and the best classes of stock to keep for this purpose. One of his latest expedients in this line, is his offer of a gold medal to the O. A. C. student of the 2nd. year, and a silver medal to the one in the 1st. year, who takes the highest percentage of marks in an examination, or examinations, on dairying and stock-breeding in connection with dairying. This must prove a great incentive to particular study along these lines, and we trust a healthy, manly competition will ensure so auspicious an event as the introduction of these awards of medals.

PROF. ROBERTSON paid the College a flying visit on April 22nd. With his usual kindness he addressed the "boys" during the evening, in the class-room. His entrance into the class-room was the signal for an enthusiastic burst of cheering, which was repeated again and again during his talk. His description of the progress of the dairying interest in various parts of Canada, was intensely interesting, and was given in that humorous style, which all O. A. C. boys know and appreciate so well. A comparison he drew between life and the course of the St. Lawrence, rapid and boister-

ous in its earlier days, but becoming toned down, and bearing on its bosom a nation's commerce, as it reached its development, was especially apt. Prof. Robertson gave a glowing account of the success which our graduates are meeting with all over the continent, two of whom he has in his own department at Ottawa, Messrs. Lehmann and Elliot, he praised especially.

A DIARY which was picked up in one of the corridors was put into our hands; thinking its contents might interest our readers we furnish the following extracts:

April 2nd. Lectures this morning as usual. Working in the gravel pit, next to Morgan, this afternoon. Since Morgan eat those two dozen eggs for breakfast on Easter Sunday, the feathers (or down) can be seen appearing on his chin and upper lip. We call him "Eggs," he does not like it.

April 7th.—Went down town this evening and had some oysters with Stewart, who swears positively he discovered some pearls in his. He intends taking them to Pringle's and having them mounted; and will then distribute them, I suppose, amongst his numerous lady friends.

April 11th.—Second year exam. on "Practical Horse" this afternoon. We had no exam. so I went in to watch the second year. Did not know before how many idiots were in that year. One fellow, H——, actually could not point out the hock; he seemed to think too, that the twitch was a new kind of halter, for he tried vainly to get it over the horse's head. Wonder what takes Jackson to the telephone so often. Saw him there four times to-day between 12 and 4 p.m. (*To be continued next month.*)

In Waite's veins flows that same fiery blood which coursed through the vikings of old, and inspired them to make dangerous voyages in the hope of plunder, or simply for the sake of adventure itself. Thus by ancestry as well as education, is Waite a skilful seaman, and accordingly no one was surprised to see him stroll down to the Speed, and embark on its tumultuous waters in a frail boat. Apparently the mechanism of these oars differs in some important respects, from those used by the old Norsemen, for here Waite was at fault, and try as he would, he could not succeed in making his craft travel in any other direction than a circle. Meanwhile he was drifting down stream, and rapidly approaching a dam,

of whose existence he was rendered only too painfully aware, by the warning shout of a mocking undergraduate, as well as by the thunder of the waters as they swept over that huge precipice. That something must be done, and soon, was only too apparent; and Waite, with his characteristic presence of mind, decided to jump ashore, as the boat floated by a promontory. He jumped, but oh! ye fates, the unstable boat spun rapidly backwards as the fatal leap was made, and Waite landed in two feet of water. He turned and saw his craft floating out into mid-stream; one plunge, and he was up to his neck, another, and his hand clutched the bow. For so expert a swimmer it was but a trifle to gain once more the shore, from whence he ignominiously towed back the boat to the boat-house; and returned to the college, a wetter, but we sincerely hope, a wiser man.

The following are the results of the Easter Examinations:

PASSED IN ALL SUBJECTS.

First year (ranked according to standing in general proficiency):—1, R. S. Shaw, O. A. C., Guelph; 2, J. E. Crealy, Strathroy, Ont.; 3, L. G. Bell, Qu'Appelle, Assa., N. W. T.; 4, Robert Harcourt, St. Ann's, Ont.; 5, W. D. Dyer, Columbus, Ont.; 6, H. L. Beckett, Hamilton, Ont.; 7, A. T. Wiancko, Sparrow Lake, Ont.; 8, E. M. Husband, Cairngorm, Ont.; 9, S. R. Curzon, Kingston, England, and C. Silverthorn, Summerville, Ont.; 11, W. H. Harvey, Exeter, Ont.; 12, T. B. Harvey, Charing Cross, Ont.; 13, H. A. Hunter, Orangeville, Ont.; 14, T. J. Hurley, Belleville, Ont.; 15, F. C. S. Carpenter, Rat Portage, Ont.; 16, N. Gies, St. Jacobs, Ont.; 17, W. W. Cooper, Kippen, Ont.; 18, W. A. Ruthven, West Essa, Ont.; 19, L. W. Eaton, Dartmouth, N. S.; 20, C. W. Miller, Langford Mills, Ont.; 21, D. Aylsworth, Bath, Ont.; 22, W. R. Graham, Belleville, Ont.; 23, A. L. Kent, Toronto, Ont.; 24, J. D. Housberger, Jordan Station, Ont.; 25, J. Conn, Heathcote, Ont.; 26, J. E. Tolton, Walkerton, Ont.; 27, W. Carlaw, Warkworth, Ont.; 28, B. M. Copeland, Hamilton, Ont.; 29, A. R. Curzon, Kingston, England.

Second year (ranked according to standing in general proficiency): 1, D. Z. Gibson, Willow Grove, Ont.; 2, W. L. Carlyle, Chesterville, Ont.; 3, F. A. Wilkin, Calgary, N.W.T.; 4, R. N. Morgan, Kerwood, Ont.; 5, A. G. McKenzie, Fairview, Ont.; 6, G. F. Marsh, Thornbury, Ont.; 7, W. Haight, Wellington, Ont.; 8, W. F. Newcomen, Epping, England; 9, E. F. White, Clarksburg, Ont.; 10, F. C. Harrison, Ronda, Spain; 11, R. A. Thompson, Thornton, Ont.; 12, E. C. Perry, Smithville, Ont.; 13, J. C. H. Sparrow, Antrim, Ont.

An *argyral* was granted to Mr. Soule and Mr. Storey of the first year.