

PAGES

MISSING

THE O. A. C. REVIEW

"THE PROFESSION WHICH I HAVE EMBRACED REQUIRES A KNOWLEDGE OF EVERYTHING."

VOL. XXVIII.

JULY, 1916.

No. 11

Mushrooms and Toadstools

By R. E. Stone, B.Sc., M.Sc., Ph.D. Lecturer in Botany, O.A.C.

MUSHROOMS are the large, conspicuous fungi. They are simply organized plants, devoid of chlorophyll or leaf green, and hence depend upon other plants for their food. Most mushrooms are saprophytic, that is, they depend upon dead organic matter for food. The fleshy, umbrella-like structure, which we commonly call the mushroom, is only the fruiting portion of the plant and bears somewhat the same relation to the feeding or vegetative portion as an apple bears to an apple tree. If the soil around the base of a mushroom is carefully examined, it will be found to be full of fine threads, usually white, which spread out in all directions. These threads form the mycelium or feeding portion of the plant. This mycelium grows through the soil in which there is more or less organic matter and by giving off enzymes digest the wood, cellulose, etc., which is then absorbed and used in building up fungous material. The changes brought about in the organic matter we speak of as decay.

The fruit bodies begin as small knots of closely woven threads on the mycelium, and these knots then enlarge slowly under ground until the mushroom is nearly mature. This development lasts several weeks, in the case of the cultivated mushroom at least six weeks, under the best conditions. When the mushroom has been fully formed it expands rapidly and often pushes up out of the soil during the night. This has given rise to the idea that mushrooms grow in a night.

The terms "mushroom" and "toadstool" are used more or less interchangeably. Usually, however, the term toadstool is applied to umbrella-shaped fungi which are thought to be poisonous, while the term mushroom is applied to similar forms which are considered as edible. Unfortunately there is no simple test by which the poisonous and edible forms can be distinguished. There are certain tests which are sometimes used but these are unreliable. Such for example is the silver coin or silver spoon test. Some people think that the poisonous forms will turn silver black; this blackening of silver only indicates the presence of sulphur and has no connection with the presence of the poisons. Another test of which we hear is the peeling test. It has been supposed that if the "upper skin peels off" readily, the fungus is edible, but some of our most poisonous forms "peel" as readily as the cultivated mushroom. Even taste cannot be relied upon, as the most virulently poisonous forms possess no warning taste, in fact are said to be delicious. It is only by learning to know the poisonous species and avoiding all those with which one is not intimately acquainted that danger can be avoided.

Since it is the fruit body that is eaten, it is from the structure of this part of the plant that we must learn to distinguish the different kinds.

Let us examine the ordinary cultivated mushroom (*Agaricus campestris*, Linn.) in order to gain an idea of one of the edible forms.

This mushroom is umbrella-shaped with a cap or pileus corresponding to the cover of the umbrella. This cap is white with fine brownish threads over the surface. The cap is usually 2 to 4 inches wide. On the under side of the cap are the gills, a series of thin plates standing on edge and radiating from the center and free from the stem. When young these gills are pink but, as the mushroom becomes old, they turn brown to blackish brown. The cap is supported by a stem or stipe, which is usually white or with a slight

which forms the ring when the mushroom is mature; gills at first pink and later becoming brown or blackish brown.

Any mushroom having these characters may be eaten with safety.

Figure 1 shows the common cultivated mushroom.

SOME DEADLY POISONOUS MUSHROOMS OR TOADSTOOLS

The Fly Agaric (*Amanita muscaria*, Linn.)—Fig. 2.

Figure 2 shows one of the deadly



FIG. 1.—COMMON CULTIVATED MUSHROOM. (*Agaricus campestris*, Linn.)

tinge of brown. The stipe is nearly solid or somewhat spongy within, from $\frac{1}{3}$ to $\frac{2}{3}$ inches thick and 2 to 4 inches long. When the mushroom is young, the gills are hidden by a veil which stretches from the edge of the cap to the stipe. When the mushroom expands this veil is broken from the edge of the cap and forms a ring on the stem. The plant grows in fields and lawns.

The main points to remember about this mushroom are: Cap and stem white, with slight tinges of brown; when young the gills hidden by a veil

poisonous mushrooms, the Fly Agaric. At first sight it looks much like the common mushroom. It has a cap, stipe, gills, ring, but there are these differences: In the Fly Agaric the cap is usually yellow or orange with many loose scales on the top. The scales may be easily brushed away or may be washed off by light showers. The gills are *White* and *remain white* when the mushroom is mature. The stipe is white, as is also the large conspicuous ring. *At the base of the stipe or stem there is a large shaggy or scaly bulb*

which is not found in the common mushroom. The cap is from 3 to 5 inches broad, strongly convex at first, later becoming flat. The stem is 4 to 6 inches long and becomes hollow in age. This mushroom grows in the woods or along the borders.

This mushroom is very poisonous and a single plant contains enough poison to kill a whole family. The poison is muscarin and its effect may be counteracted by atropin.

The Fly Agaric has been known since

moist with sometimes a few loose scales on the top and varies in color from white to olive. The gills are white and remain so. The stem or stipe is white with a ring high up just under the gills. At the base of the stem is an abrupt bulb usually with a free rim standing up around the stem forming the so called poison cup.

The cap is from 3 to 5 inches broad and the stem 4 to 8 inches high. The plant usually grows in the woods but has been known to grow on lawns.

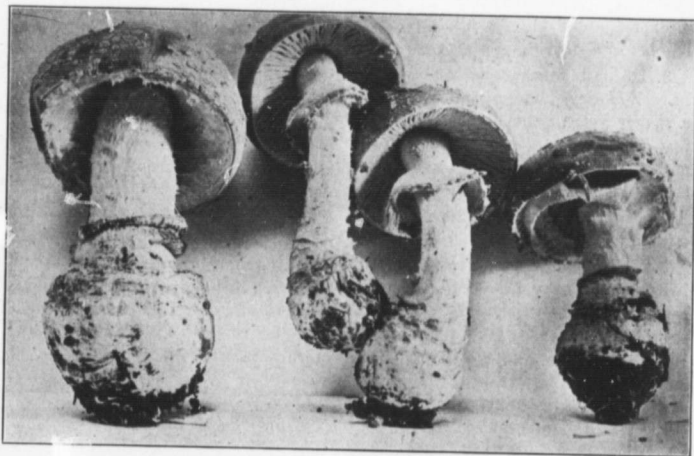


FIG. 2—THE FLY AGARIC. (*Amanita muscaria*. Linn.)

ancient times and used as a poison. It is undoubtedly with this species that Nero used to rid himself of unwelcome members of his court.

THE DEADLY AGARIC (*Amanita phalloides*, Fr.)

Another deadly poisonous mushroom occurring in this region is the Deadly Agaric. This mushroom varies very much in color, from pure white through yellow to olive color. The cap is smooth and

This plant, especially the white form, has been responsible for many cases of mushroom poisoning. The poison is phallin and there is no known antidote for it.

The two poisonous forms just described are the cause of nearly all the cases of mushroom poisoning. There are some other poisonous forms but they are less dangerous. By keeping in mind these two forms and by following the set of rules given below, there

should be little danger of poisoning from mushrooms.

RULES TO FOLLOW IN GATHERING WILD MUSHROOMS

Always examine the whole mushroom, especially the base of the stem, and reject the following forms:

1. Do not take mushrooms in the button or unexpanded stage as it is often difficult to distinguish the different kinds in this stage.

2. Do not take mushrooms that show the least sign of decay or of insect work as under these conditions even edible forms develop poisons.

3. Do not take mushrooms which have *White gills*, a *ring* on the stem and a *shaggy bulb* at the base of the stem and *loose scales* on the cap, or with an *abrupt bulb* or cup at the base of the stem.

4. Do not take mushrooms having a milky juice unless the milk is red.

5. Do not take mushrooms having brittle gills of nearly equal length, especially if the cap is bright colored.

6. Do not take mushrooms having tubes instead of gills, especially if the

mouths of the tubes are red or if the flesh changes color when broken.

7. Do not take mushrooms with clay colored gills, especially if they have a cobwebby veil.

8. In case of doubt as to the edibility of a mushroom always leave it alone.

Many people would like to know more about mushrooms and the following list of books is given to enable them to learn more about them.

IDENTIFICATION OF MUSHROOMS

Atkinson, Geo. F.—Mushrooms Edible, Poisonous, etc.; Andrus & Church, Ithaca, N.Y.

Clements, F. E.—Minnesota Mushrooms; University of Minnesota, Minneapolis, Minn.

Hard, M. E.—Mushrooms Edible and otherwise; Ohio Library Co., Columbus, Ohio.

Marshall, Nina L.—The Mushroom Book; William Briggs, Toronto, Ont.

CULTIVATION OF MUSHROOMS

Various mushroom spawn companies send out literature on the growing of mushrooms, and their advertisements may be found in the leading horticultural magazines.



Micro-Organisms and Disease

By J. E. Simmons, B.S. in Agr.

ALL diseases may be divided into two great classes or groups: the organic or physiological diseases due to weakness or improper working of some organ of the body, and the communicable diseases which are due to the invasion of the body by some micro-organism, whose growth causes the production of harmful products in the system. A communicable disease may be spread from one individual to another by the causal organism. Such is not the case with the organic diseases. Communicable diseases might also be called preventative ones because the prevention of their spread can be accomplished by stopping the transmission of the organism. The knowledge of the transmission of some of the common animal diseases is so well known and complete that if the farmers and stockmen could only be induced to put that knowledge into practice, some of our most common diseases would be exterminated in a few years. The knowledge of some other transmissible disease is not sufficiently worked out to prevent their spread; however, they can be controlled to a certain extent by precautionary steps. Such diseases as tuberculosis, anthrax and contagious abortion bring enormous losses to the farmers yearly and since the prevention of disease rests entirely with the farmer, rather than the professional man, it is he who should know the fundamental facts concerned with the transmission of disease among the domestic animals.

In order to produce a disease in an animal, the organism must enter the tissues, grow there and produce by-products which exert a toxic or poisonous effect upon the system. This

series of changes is known as infection. The severity of an attack of any communicable disease depends upon several factors or conditions. One of the most important factors is the condition of the host. If the host is run down in health due to fatigue, hunger, thirst, age or disease, the resistance offered is less and the virulence of the organisms is somewhat increased.

The organisms may enter the body from several different avenues, and many of the common organisms have definite specific methods by which they enter the body. The anthrax bacillus, for example, usually enters the body through wounds, either on the outer surface of the body or through abrasions in the mucous membranes of the throat and intestines. Tuberculosis, on the other hand, enters the body by wounds, by ingestion or by inhalation.

The micro-organisms may enter the body of the host and develop for a period but are soon overcome by the body. At a later period the organisms again invade the body and become very virulent, due to the fact that the first attack lowered the vitality and resistance of the body.

Micro-organisms produce poisonous substances in the body of the host, called toxins. These toxins are, in nearly all cases, deadly poisonous. The disease caused by a certain organism usually attacks the same tissues or parts of the body and it is this place of attack which can be used for correct diagnosis. Tetanus, for instance, attacks only the jaws, while anthrax invades the entire body. These evidences of the presence of the disease are not shown until some time after the

organisms have entered the body. This period may vary from a few hours to several weeks according to the virulence of the organism and the condition and kind of host.

When the organisms enter the body, they immediately commence to multiply and soon there are countless numbers of them. Soon the blood corpuscles attack the organisms and a fight to a finish follows. If the host has been weakened from any other cause, the attack of the disease is much more severe.

When it has been found that the animal is sick, it is very essential that a correct diagnosis of the disease be made. This is very important because of the fact that we have serums and vaccines to prevent further spreading of many of our common diseases. Since these are specific for certain diseases, their use against any other disease is useless. Unless the farmer can diagnose the case properly, he should call a veterinarian to treat the case.

If the disease has become established on the farm, precaution should be taken to prevent the spread to all the herd and when the disease is conquered, efforts should be made to prevent its introduction again.

Micro-organisms may be transmitted from place to place by a great many ways. The most common way, no doubt, is through the purchase of infected animals or infectious material, such as milk. The opportunity for the spread of the organisms depends on whether it produces spores or not. Most of the non-spore-forming organisms cannot withstand very long periods outside the body of the animal.

With spore-formers the opposite is true and the anthrax bacillus, which forms spores, lives for fifteen to twenty years in the soil.

The control of infectious diseases rests on the prevention of the passage of these organisms from the diseased to the healthy animal. The infected animal should be isolated from all other animals. This will prevent contact with healthy animals. All discharges from the infected animal must be destroyed immediately so that it cannot be a source of contamination to the healthy animals. This can be accomplished by disinfectants or by burning. This process must be thorough as a single living organism can bring about the disease in a healthy animal. Heat and sunlight are the two natural agencies for destruction of micro-organisms but as these are not always available, disinfecting must be done by means of chemicals. All the chemical disinfectants placed upon the market are not equally effective and many of them are valueless for disinfecting purposes.

The first step to be taken in disinfecting stables is to clean thoroughly the floor and walls. If this is not done, the action of the disinfectant is very materially decreased. Common disinfectants which are available to the farmers at all times are coal-tar products and lime. The coal-tar products are undoubtedly the best class of disinfectants for the farmer to use. Frequent and thorough application of disinfectants is a most economical preventive of diseases of farm animals, requiring only a small amount of labor and equipment.

Handling and Grading Eggs for American Markets

By H. J. Sullivan, '18

A. CANDLING

WITH the advance of science, we learn more and more of things which our forefathers never dreamed of. New methods, new ideas and new thoughts have so turned things around that we hesitate in doing many things that our ancestors would never have thought of a second time.

To our forefathers, an egg was an egg. If it was bad, it smelled bad; if it was good, it did not smell. This practice worked fine until someone found that all bad eggs did not smell, and so a new method had to be thought of to detect whether the egg was unfit for food or not.

One of the first methods of testing eggs other than by smell was that of putting the egg in water. If it floated, it was thrown out; if it sank, it was all right. Many other methods were used, but none of them gave satisfaction until the use of light for testing came into use.

The first light used for testing was daylight, but it was not certain enough as it was good only on sunshiny days. Then came the tallow candle. This was in turn replaced by the coal oil light, and finally, by the electric light.

The term "candling" originated with the testing by the use of the candle.

The electric light is the best form of candle for testing. As mentioned before, sunlight is used in some places, but it is so uncertain as to cause it to be discarded by all big egg-candling establishments. The best form of electric egg candle is the one worked out by Mr. H. C. Pierce, of the Food Research Laboratory, Bureau of Chem-

istry, of the United States Department of Agriculture.

The candle is a ventilated can, having holes in the bottom to throw the light into the cases, and at the top are hooded ventilators which allow the heat to escape, and also, to help light the interior of the cases. The top is movable, and can be easily removed in order to clean the bulb or to clean out the candle. There is an attachment at the back by which the candle may or be raised or lowered to suit the candler. A spout at the front facilitates working, in that it keeps the reflection from shining in the operator's eyes. The inside of the candle, with the exception of the lower half of the spout, is left bright. The lower half of the spout is painted black to prevent the reflection of light into the candler's eyes. The outside is painted black.

To candle an egg, the candler places the large end of the egg obliquely over the hole in the spout. At the large end of the egg, in most cases, will be seen a space not filled by the egg material. This space is found in all eggs, except those just dropped by the hen. It is formed between the two shell membranes, by the contraction of the contents of the shell, caused by cooling, after leaving the hen's body. The shell does not contract as much as its contents, hence, the space. It might be well to mention here that the air space does not always occur at the large end of the egg. It is sometimes found on the side, and the writer has seen it in the small end of the egg. The smaller the air space the fresher the egg,

and vice versa. This rule does not apply in all cases; exceptions are constantly coming up, but this occurs with such frequency that it is called a rule.

After ascertaining the size of the air cell, the candler gives the egg a sudden twist which moves the yolk and causes it to pass in front of the light. As the yolk moves, it casts a shadow on the shell of the egg. The different degrees of darkness of this shadow, together with the size of the air cell, are two of the principal internal factors taken into consideration in candling. The third is the speed at which the yolk moves. In a fresh egg the white is thick, but as the albumin breaks down, we have the so called "watery white" formed. In turning a fresh egg, the white, being thick, opposes the movement of the yolk, which therefore moves more slowly than in a stale egg in which the "watery white" has formed. The fourth factor is the position of the yolk. The yolk in a fresh egg will in most cases be found a little above the center of the shell, while the stale egg will have the yolk sunken down towards the bottom.

Besides the internal conditions, we must also observe the outward appearance of the shell in order to candle the egg and grade it correctly. In examining the outside of the egg, we take into consideration: size, cleanliness, shape, freedom from cracks, and to some extent, color.

SIZE

When eggs are packed for shipment, they are put into cases, each case holding thirty dozen. Each egg has a separate compartment, made of straw board. The compartment is made for the average egg; so that one too small or too large will not fit.

If the egg is too small, it does not fill the cell, and consequently every shock causes it to roll back and forth. This is very liable to cause it to break,

and should it do so the contents, by wetting the wall of the cell, cause it to break down, and then the egg in the next cell is liable to be broken. Even if the egg next to it is not broken, it will roll in the broken yolk of the first, and become coated with dried yolk, which will cause it to be classed as a "Dirty."

CLEANLINESS

"A dirty egg is an abomination unto the merchant."

A clean egg will sell quicker than a dirty one, although the quality of the "dirty" may be better. On account of this, dealers, in grading eggs, usually make a grade called "Dirties," in which are placed all the dirty and stained eggs. These sell for from three to thirteen cents a dozen below those which are classed as first grade eggs.

SHAPE

Abnormal eggs never go as firsts.

FREEDOM FROM CRACKS.

A cracked egg cannot go as a first or second grade product. If an egg is cracked, it is put into a special grade called "Cracks" or "Chex." These sell very much cheaper than first grade products.

COLOR

This is discussed under, "Requirements of Markets."

B. CLICKING

In the spring, when the weather is fairly cool, and eggs are coming in fast, most candler do not candle, but test by "inspection" or as it is commonly called, "clicking." The operation is as follows:

The operator takes three eggs in each hand, allowing them to lie loosely; then with the middle finger manipulates them so as to cause them to strike against each other. If the egg is cracked a dead sound is given forth, but a sound egg has a ring to it.

The size, cleanliness, and shape are

judged by the eye, and the eggs are then graded accordingly.

REQUIREMENTS OF THE MARKETS

Certain localities have preferences for certain kinds of eggs. The reason for this is that they have become used to seeing a certain kind of egg more than any other, because of the breeds of poultry kept in that community, or certain conditions which have an influence on the eggs.

For example take New York City, which favors a white egg and will pay more for a white shelled egg than for a brown shell.

Boston, on the other hand, is directly opposite in her wants, paying more for, and demanding, brown shelled eggs.

South of the Mason and Dixon Line might well be called the "American Egg Dump." All colors, shapes, sizes, and conditions of eggs are sent to the South.

Chicago will take nearly any kind of an egg.

San Francisco favors a white shelled egg.

In Cuba, due to a lack of care of stock, the eggs are nearly all dirty and small. One dealer in that country went so far as to ship a quantity of Cuban mud to the States. It was to be smeared on the shell of the eggs which he bought, in order to make them look like the home grown product thus enabling him to sell them more easily.

This preference for a certain kind of egg led to some writers saying that one kind of egg had more value as a food than another. Brown and white shelled eggs were examined for bacteria, amount of food, thickness of shell, and germinating power, and the only difference found was, that the brown egg is a little thicker shelled than the white.

GRADES OF EGGS

EXTRAS

Eggs weighing over 24 oz. to the dozen, shell clean, not cracked, air space not larger than a dime; white, thick, translucent; yolk, a light, slow moving, dimly visible shadow.

FIRSTS. (No. 1's)

Eggs weighing 24 oz. to the dozen, (other classification same as Extras.)

SECONDS. (No. 2's)

Eggs weighing 22 oz. to the dozen, shell fairly clean, not cracked; air space not larger than a quarter; white; may be slightly thinner or more watery than a No. 1, translucent; yolk may show signs of heat, and be slightly heavier than a No. 1, and it may move faster.

NOTE: A second grade egg does not have to show all the above given characteristics. Any one of them will cause an otherwise first grade egg to drop into the seconds.

THIRDS. (No. 3's) (BREAKER'S)

Eggs are fit for food, but will not class as any of the above mentioned grades. They are usually of very poor quality, and are distinctly inferior eggs.

NOTE: None of the following grades are fit for food.

MIXED ROT (RED ROT OR ADDLED EGG)

Caused by the yolk breaking and allowing its contents to mix with the white, giving it a muddy appearance before the candle.

WHITE ROT

A mixed rot in an advanced stage, the yolk and white so thoroughly mixed together as to give it a clear appearance, which makes it difficult to distinguish from a fresh egg.

BLACK ROT

The egg shows black or a brownish color before the candle, due to either a dead embryo or mould. Hydrogen

sulphide can generally be smelled if the egg is handled.

SPOT ROT (MOULDY EGG)

Spots of mould on the inside of the shell. Can be seen very easily.

GREEN WHITE

A bacterial contamination of the white of the egg, giving it a greenish cast. (Not noticeable in the egg before the candle.)

BLOOD RING

A ring of blood on the yolk of the egg, caused by the embryo dying after having reached a blood stage. The yolk generally assumes a crescent shape, and the blood ring is seen just above its lowest point.

CRACKS (CHEX) LEAKERS, DENTS

Good for food, but cannot be shipped safely unless in a frozen condition.

Cracks.—Where shell is cracked, but shell membranes are intact.

Dents. Where shell is dented, but shell membranes are intact.

Leakers. Where shell and shell membranes are both broken, allowing escape of the contents.

We find that every egg handling

establishment has slight variations to the foregoing grades, but as a general rule, they are fairly well followed. Some graders allow light blood rings to go into the Thirds; others do not make a grade of Thirds. Armour makes two grades of Extras, etc.

The object of this article is, to give the reader, in a short sketch, the grading of eggs, the different grades, the methods used, and the requirements of the American markets in the egg trade.

It has been said that most of the large egg handling establishments grade their eggs. The writer would like to see every farmer who owns chickens grading his own eggs before bringing them to market. The reason that the farmer does not receive more for his eggs is just because *he does not grade them*, and therefore cannot tell the market price, and hence, always comes out the loser.

When we have buyer, seller, middleman and farmer, *all* grading their product before selling it, then, and not until then, will we have a better article on the market, and a better price for all concerned.

The Country Fair and the Agricultural Exhibit

By William H. Hill, '16

That "it pays to advertise" is a truism which is fully demonstrated in every phase of industrial life.

The fundamental industry of this country, namely, Agriculture, is not exempted from the favorable results which follow the different forms of advertisement.

There is no doubt of the great importance of agricultural institutions making use of every possible means for

improving and encouraging agriculture in Canada.

For over half a century the Agricultural College, Experimental Farms and Stations and Departments of Agriculture throughout Canada have been investigating questions of material and practical interest to the farmer of the country.

They have accumulated a vast store of information, which if it could be

engrafted to the practice of modern Canadian Agriculture would undoubtedly result in a great increase of our material prosperity, not only through a larger production per acre but by an increased net return to the individual farmer.

Now that the better utilization of organized agencies for the improvement of agriculture is being generally considered, attention is naturally directed to the country Fair, a force, which if properly directed, developed and assisted might be of great service, since it provides a local agency in its own district that is directly interested in the development of its agriculture.

As the Agricultural Fair can be justly considered to be the foster parent of the Agricultural Exhibit, it will be of interest to briefly trace the origin of the Country Fairs on this continent.

The idea of the agricultural fair, in America, as generally exemplified, by the country fair, had its origin in the occasional assembling of traders and producers in the ancient world; for the purposes of selling their wares to the customers who assembled to meet them.

In the course of time, the ancient fair was changed into a fair at which there were competitive exhibitions of domestic animals and various domestic products; with an underlying purpose of sale of the article exhibited.

However, the fair as an educational institution and as a place of amusement, rather than a market place, is distinctly American—it is now the social climax of the rural year and it should typify the progressive agricultural spirit of the community.

With the establishment of the agricultural colleges and experiment stations, there began a change in the character of the country fair.

The indirect influence of these in-

stitutions was first felt through their increased interest stimulated by them in improved live stock and better farm products; so that some of these colleges and stations soon saw an opportunity for educational and demonstrative exhibits at these fairs, which now represents so vital a part of many of them.

There are nineteen Dominion Experimental Farms and Stations in Canada besides the Agricultural Colleges and Departments of Agriculture in nearly every province. It can readily be seen that the workshops of experimental agriculture have a wide distribution throughout this Dominion, so that by their co-operation with the old established agricultural societies of the country, the valuable material they produce should be given to the farmer in the best possible form.

The country fair has already been found to be a most valuable assistant to the colleges and stations, wherever its services have been utilized. These institutions, in turn, have greatly strengthened the fair through their support in furnishing educational exhibits and skilled demonstrators and judges at annual exhibitions, thus setting a high standard along all lines of rural betterment.

Agricultural authorities are rapidly realizing the limitations of the bulletin and report. That they are not sufficient has been proven; that they lack the psychological effect of a well prepared exhibit is certain.

They also realize that the exhibit is one of the most efficient forms of agricultural advertising, and one with a strong stimulating power for better agriculture.

In conclusion, the advantages gained by the Agricultural institutions from their exhibits at country fairs, are that they give:

1. An opportunity to meet farmers

personally and explain the work of their institution.

2. An opportunity to conduct lectures and demonstrations while the fair is in progress.

3. An opportunity to initiate new movements for improvement of agriculture.

4. An opportunity for the collection into one place of the results of field experiments and demonstrations for the inspection of the public.

5. An opportunity to secure co-operation in demonstrational work.

6. An opportunity to enable the college or station to secure the names and addresses of representative farmers and young people, with whom to correspond in order to help disseminate information and secure co-operation in projects for rural improvements.

With all the above opportunities, the agricultural exhibit at the country fair will not fail in future to have a large and permanent field for educational and instructive purposes, and so substantiate the truth to the claim that "it pays to advertise."

The Women's Industrial Farm

By Pearl M. Gray '15

THE Women's Industrial Farm at Concord, Ontario, was established on December 1st, 1914.

Does this interest you Review readers—a women's farm? The City of Toronto has nearly one thousand acres of farm land twelve miles north of Toronto. It is in two sections—the men's farm on Yonge Street and the women's between Bathurst and Dufferin Streets. They are the result of new ideas and methods in the treating of prisoners, sentenced by the court for offence against the civic laws.

The old system was that of breaking the spirit by confinement, poor food and harsh treatment—control by fear. On these farms, we try to build, from these wrecks of lives, something worthy, something useful and good. Most of the prisoners have been cheated at birth, with inheritance and bad environment, which were conducive to the formation of evil habits. We hope, by the free country life, good food and useful work, to strengthen their bodies and minds and by kindness and personal interest to give them hope and

courage to take up the battle of life with a determination to win.

We feel that the work is big and worth while if only for the term of sentence they are kept from evil and are made useful citizens. Many are mentally deficient and irresponsible and should always be cared for by the state, as if left at large they are a moral menace to the community. Many are old and homeless. One old inmate, aged eighty years, was sentenced by the court before the jail on the Don River was built.

Their records show that we have some of the most vile women of Toronto, but there is no cause for alarm, as they are perfectly human and very responsive to kindness.

Their lives have been beyond description—not one but is filled with such tragedy that you or I might break under its weight.

The two farms are under the superintendance of Rev. W. B. Lindley. Mr. G. Scott is farm manager and Miss M. M. Carson is in charge of the women's work. The farms are inter-

dependent. The men do the work upon the land, putting in and harvesting the field crops. The women attend to the gardening and fruit, care for the stock—horses, cattle, sheep, pigs, chickens, ducks, geese—do the milking and make butter. They also care for the lawn and flowers. All of the housework is assigned so that each woman has her own special work, the schedule being changed from time to time to give each her turn at every task. All the cooking is done by the women, also the laundry. They make all their own clothes and the institutional supplies. Besides this they make all the clothing for the inmates of the men's farm, except boots—shirts, smocks, overalls, socks—and do their mending. The men, in turn, make the boots.

Each long term inmate, who is paroled for service, is given two complete sets of clothes at the minimum cost of material. For those sentenced for two years but whose conduct is good and who are willing and able to work, places are secured and their wages collected and banked so that when their sentence is completed they may have some capital with which to begin anew. Several have over one hundred dollars to their credit. Miss Soady, a member of our staff, visits them once a week to encourage or exhort to good work, or to adjust difficulties or to take them visiting or shopping. They are still under sentence and have not the liberty to go about alone. In this way they are costing the city nothing and are working steadily, which is more than many of them ever did in their lives before.

Very few of these women have ever lived in the country, so must be taught the A. B. C.'s of farm life. The majority like it and all think it much better than the old jail in which they have,

for the most part, served a term or two. We believe that plenty of fresh air and sunshine and outdoor work help to heal and sweeten both the physical and mental condition. We give an abundance of carefully prepared wholesome, appetizing food. For any special work they are allowed an extra bit of tea, which pleases them very much. When I tell you that our staff consists of four women—three for day and one for night duty,—that we have absolutely no way of punishing but must control by moral suasion and human kindness, you will realize something of the difficulty of the work, as most of the inmates are used to bars, bolts and dungeons. If you were to arrive in the midst of a wordy argument you would think that murder was imminent, but in ten minutes all is serene and forgotten. Their generosity to one another is a lesson for everyone as they would give their all to help another in greater need.

We have three religious services a week, on Sunday afternoon, the Salvation Army, on Thursday, the Anglicans, and on Saturday morning, the Roman Catholics. In the evenings, there is time for recreation and as we have a piano, there is music and dancing as well as games, fancy work or reading.

In passing, you would admire the prosperous, well kept farm and never dream that the old-fashioned red brick house was the home of from forty to fifty women. Or to see some of them about, you might even mistake them, in their blue denim dresses, for MacDonald girls. Drive down the beautiful avenue of maples and they appear mysteriously, with the curiosity of children, to inspect you. One old lady has knit ninety-seven pairs of socks. I wonder if any Mac. girls have knit as many for the Red Cross.

At present, a new cottage is under construction. When completed it will help materially with the work. We have wonderful dreams and visions of what our work will some day develop to be, and for the present are making

the best of the equipment at hand.

NOTE: Miss Gray is a graduate of the Macdonald Housekeeper Class of 1915, and is the dietitian at the Women's Industrial Farm. Ed.

THE THOUSANDTH MAN

One man in a thousand, Solomon says,
Will stick more close than a brother.
And it's worth while seeking him half
your days
If you find him before the other.
Nine hundred and ninety-nine depend
On what the world sees in you,
But the thousandth man will stand your
friend
With the whole round world agin you.

'Tis neither promise nor prayer nor
show,
Will settle the finding for 'ee.
Nine hundred and ninety-nine of 'em
go,
By your looks or your acts or your
glory.
But if he finds you and you find him,
The rest of the world don't matter;
For the Thousandth Man will sink or
swim,
With you in any water.

You can use his purse with no more
talk,
Than he uses yours for his spendings,
And laugh and meet in your daily walk
As though there had been no lendings.
Nine hundred and ninety-nine of 'em
call,
For silver and gold in their dealings;
But the Thousandth Man he's worth
'em all,
Because you can show him your feelings

His wrong's your wrong, and his right's
your right,
In season or out of season.
Stand up and back it in all men's sight,
With that for your only reason!
Nine hundred and ninety-nine can't
bide
The shame or mocking or laughter,
But the Thousandth Man will stand by
your side,
To the gallows-foot—and after!

THE O.A.C. REVIEW

REVIEW STAFF

J. C. NEALE, *Editor-in-Chief.*

D. M. McLENNAN, <i>Agricu'l</i>	H. H. SELWYN, <i>Alumni</i>
J. COKE, <i>Experimental</i>	C. M. NIXON, <i>College Life</i>
C. C. DUNCAN, <i>Horticulture</i>	A. H. WHITE, <i>Athletics</i>
W. STRONG, <i>Poultry.</i>	D. C. McARTHUR, <i>Artist.</i>
W. J. AUSTIN, <i>Query.</i>	H. J. SULLIVAN, <i>Locals.</i>
MARY BIRKETT, <i>Macdonald</i>	

EDITORIAL

THE PASSING OF A LEADER.

With the death of the late Dr. C. C. James, Canada sustained the loss of one of her greater sons. To Canadian Agriculture, is the shock most particularly keen for Dr. James was unquestionably one of its foremost leaders.

His work in Agriculture definitely began in 1886 when he came to the O.A.C. as Professor in Chemistry. This position he occupied for five years, leaving in 1891 to accept the joint position of Deputy Minister of Agriculture for Ontario and Secretary of the Ontario Bureau of Industries.

His term of office in this capacity was marked by the many improvements which were made in the interests of Ontario farmers, one of the chief being the establishment, in 1906, of the present system of district representatives. He was also influential in bringing the Ontario Veterinary College into

affiliation with the University of Toronto.

In 1912, his appointment as Agricultural Commissioner for Canada opened up a still larger sphere of activities. Here he was enabled to carry on much important investigational work, and since 1913 has had the administration of the Agricultural Instruction Act under his direct supervision,—this act providing for the expenditure of \$10,000,000 in ten years for purposes of instruction and demonstration in agriculture, in the various provinces of the Dominion.

In 1914 he was appointed as a member of the Board of Inquiry into the High Cost of Living and since the outbreak of the war, has been actively connected with the campaigns for Patriotism and Production and Production and Thrift.

At all times, Dr. James was a student

and besides his various activities in agriculture, was able to give a certain amount of his time to other things, particularly to literature and history. He wrote many books, historical and scientific, and very recently compiled two agricultural war books which are proving of great value. Early in life, in 1886, he received his M.A. degree and in 1912 was granted the honorary degree of Doctor of Law by the University of Toronto. In 1911 the title of C.M.G. was conferred upon him by the King.

So passes one of Canada's undisputed leaders, and just at the prime of his life. Few men have crowded into study which he has done and few have been more greatly honored. But his a brief life the amount of work and influence has not passed with him. His work has been such that its effects will continue to be felt by the succeeding generations, and upon the foundation laid by him will much of the super-structure of Canadian agriculture be built.

OMEGA

This is not really the end but it is the final issue of the current volume of the Review. Our next issue, in September, will be Alpha,—the beginning of a new year's work.

The Review has had a prosperous year, despite the unfavorable conditions which have prevailed. Next year, we hope to do even better.

Just here, the Editor wishes to thank most heartily the members of the 1915-16 staff, who have so ably and so faithfully fulfilled their various duties. Without the co-operation of its entire staff, no magazine may hope to prove a success—especially a College publication where those in charge have but a limited amount of time to spend in the work of preparation. Hence, the

success of the past year evidences a unity of purpose as well as diligent application on the part of those who have been responsible for the material for the various departments.

Four members of the staff are now in khaki, being members of the 56th (O.A.C.) Battery, C. F. A.—Messrs. D. M. McLennan, C. C. Duncan, C. M. Nixon and D. C. McArthur. To these men, we extend especial thanks, and sincere wishes for a safe return to their Alma Mater, from the battle-fronts of Europe.

YEAR '19—'SHUN!

From present indications, it would appear that the Freshman Class of '20 will be considerably smaller, numerically, than any of the Freshman Classes of the past several years. Here is a chance for the Sophomores of '19 to introduce something new in the way of initiation. Since the prohibition of night initiations, each successive class has received much the same type of "informal reception." Perhaps this has been due partly to the large number of men to be put through their "performances" in the short space of one afternoon. But with a decrease in the number cannot some new "stunts" be devised that will have a more definite object than merely to cause the newcomers to resemble a dilapidated minstrel chorus? Ye genii of '19, who propose to return next Fall, allow your thoughts to turn initiationward occasionally between now and September 15th, that the Faculty may be amply rewarded for the precious lecture time given up for this purpose, that the Juniors and Seniors will be forced to admit—grudgingly of course—that it was "almost as good as we gave the Freshies when we were Sophomores," and that the Freshmen may look upon you with awe and envy as they re-

member the originality and executive ability which characterized the rites of their admittance to membership in the O.A.C. student body.

OUR SUPPLEMENTARY HONOR ROLL

We are pleased to have evidence of the interest which our readers are taking in the O. A. C. Honor Roll. We have received from various sources, a considerable number of

names which had been omitted, and which are appearing in this number as a "Supplementary Honor Roll." It is our purpose to publish in the September issue a complete, revised list of the men who have enlisted. In order that no person may be missed we ask you again to co-operate with us and send in the names of any of O.A.C. men of whom you may know, who have gone or are going overseas, and whose names we have not as yet published.

Alumni

SUPPLEMENTARY HONOR ROLL

Atkinson, H. '17
 Blayney, Lieut. Clarence, '14
 Brown, Sergt. J. '14
 Carpenter, Fred. '10
 Clemens, Leon, '16
 Cumming, R. E. '15
 Dickie, C. M. '15
 Dunlop, J. '14
 Fitzpatrick, A. C. '17
 Good, C. A. (Lieut.) '14
 Gravely, C. H. '14
 Hales, J. P. '15
 Harding, P. S. D. '13
 Hinman, R. B. '15
 Hurndall, J. '14
 Keirstead, R. M. '17
 Light, J. '16
 McKenzie, N. D. (Capt.) '10
 Pawley, Lieut. N. H. '15
 Robertson, Sergt. A. '06
 Stewart, Lieut. Pat. '14
 Sutton, R. G. '17
 Taylor, E. J. '19
 Vining, Lieut, R. L. '14
 Walker, Clinton '12
 Waterhouse, P. '14
 Winslow, J. H. '15
 Wright, Lieut. W. H. '11

NOTE: If any of our readers know of an O.A.C. man who has enlisted, and whose name does not appear above,

will they kindly notify us, giving name and college year, that we may publish a complete "Honor Roll" in a future issue.—Ed.

O. A. C. CASUALTIES

NOT SERIOUSLY WOUNDED

The many friends of Private Ralph W. Donaldson, Port Williams, P.P.-C.L.I., officially reported as wounded May 14th, will be pleased to learn with thankfulness that his wound is not dangerous and he is doing well at a hospital in Oxford, England, after two weeks' treatment in a British Red Cross hospital in Staples, France.

A letter received from him and dated May 16th gives the following particulars: "My wound received, May 12th, which is of the most pleasant type possible, was caused by shrapnel ball passing through lower part of right shoulder muscle, leaving the bone uninjured. Under X-Ray examination yesterday, a small piece of shell was found, and in a few days will be removed. My arm is stiff and sore, but not painful. In reaching this finely equipped hospital, we wounded, after receiving first aid, passed successfully through three different dressing

stations and a clearing hospital. Every possible attention is shown, and it is surprising the skill and despatch with which cases are handled. Many men in our platoon were seriously wounded, others suffered shell shock, others burned and bruised with high explosive "sausages," other fine men have made the "supreme sacrifice." Things were hot all the time we had been holding this line and one had constantly to expect something unpleasant to happen.

Since enlisting a year ago last April, and ten months of it spent in trench life in France, this is the first sickness or accident even for a day.

(R. W. Donaldson was a '15 graduate)

Capt. J. E. Lattimer, whose name was given out at Ottawa as among the officers missing with Generals Mercer and Williams after the battle of June 3, is a native of Burford, near Brantford. He was representative of the Department of Agriculture at Port Arthur until his enlistment, and joined a Brant county corps. He was afterward transferred to the Toronto unit with which he was serving on the firing line. His parents are living in London with his sister, Mrs. Alfred Raymond of Cove road.

(J. E. Lattimer is a graduate of year '14).

PTE GEO. RAYNOR KILLED IN ACTION

Word has been received of the death of Pte. George T. Raynor, only son of Mr. T. G. Raynor, representative for eastern and northern Ontario of the seed branch of the department of agriculture, and Mrs. Raynor, of 9 Regent Street, Ottawa. Pte. Raynor was killed in action between the 2nd and 4th of June in the recent heavy fighting around Ypres. He was 22 years of age and enlisted in January, 1915, going overseas with a draft from

the 8th C.M.R. He had been in the trenches since the end of last October. He was a student and attended at different times Elgin and Cartier public schools, the Ottawa collegiate institute and the Ontario Agricultural College at Guelph. He had recently been on survey work. He was an active member of the Excelsior Club of McLeod Street Methodist church. Born at Rose Hall, Prince Edward County, Ontario, he came from United Empire Loyalist stock and fully upheld the traditions of those who long ago came to Canada to live under the flag for which Pte. Raynor has now paid the last sacrifice.

(Geo. Raynor belonged to year '15).

ANNOUNCEMENTS

WOLTZ—KOHLER

A quiet wedding took place at the Methodist parsonage, Cayuga, on June 13th, when Emma, youngest daughter of Mr. and Mrs. Kohler, was married to Geo. L. Woltz B.S.A., District Representative of the Department of Agriculture for the County of Haldimand.

The ceremony was conducted by the Rev. Thos. Voaden and only immediate relatives of the family were present. The happy couple left for a ten-day trip down the St. Lawrence and on their return they will take up residence in Cayuga.

Mr. and Mrs. Beverly McDonald, Picton, Ont., announce the engagement of their daughter, Sidna Beverly, to Major Clifford Bennett Nourse, 168th Battalion, London, Ont., son of the late Gordon H. P. Nourse, Edenburg, O.R.C., South Africa, the marriage to take place very quietly in June.

Mr. and Mrs. Thomas Stanley of "Maplehurst," Metcalfe, Ont., an-

nounce the engagement of their only daughter Lillian Constance May, to J. Edmund McRostie, B.S.A., of Kemptville, Ont., youngest son of Mr. and Mrs. John McRostie of Blenheim, Ont. The marriage will take place quietly in June.

The engagement is announced of Janet Olave, eldest daughter of Rear-Admiral W. Oswald Story, Admiral-Superintendent Esquimalt Dockyard, and Mrs. Story, Crossdoney, Guelph, to Sergeant Alfred Christian Cleeves, 4th Brigade C. F. A., youngest son of Mr. F. Cleeves, Penmanmwr, North Wales, the marriage to take place in England early in August.

Dr. and Mrs. H. A. Wilson of Wardsvile, Ont., announce the engagement of their daughter, Elizabeth Winifred, to Mr. John E. McLarty, B. S. A., of Rodney, the marriage to take place on June 28th.

Mr. and Mrs. H. Hanham, Port Colborne, announce the engagement of their youngest daughter, Zella Elizabeth, to Mr. John Lorne Dougherty, B. S. A., of Chatham, Ont., son of Mr. and Mrs. A. J. Dougherty, Pembroke, Ont. The marriage will take place late in June.

WINTER—BATELL

A quiet but very pretty house wedding was solemnized Wednesday evening at 7.30 o'clock, at the home of Mr. and Mrs. J. E. Battell, 1030 First Avenue N. E., when their daughter Edna Grace was married to Mathew Horace Winter, B.S.A., Renfrew. Rev. H. C. Speller, assisted by Rev. W. Hancock Wawota, Sask., brother-in-law of the groom, officiated at the ceremony.

The bride was attended by her sister Cora, and Miss Leila Woodley, Vic-

toria, B. C., Carl Battell, brother of the bride attended the groom.

CROSKERY—HILLIARD

A very pretty June wedding took place yesterday afternoon at the residence of Mr. and Mrs. Frank B. Hilliard, 11 Tiffany Street, when their second daughter, Maud Bradley, was united in marriage to Mr. William MacLaren Croskery, B. S. A., of Kinburn, Ont., son of Mr. and Mrs. David Croskery. The ceremony was performed in the presence of a large number of invited guests, by Rev. Dr. A. J. MacGillivray, pastor of Knox Church. The bride, who was given away by her father, looked exceedingly winsome and girlish as she entered the room to the strains of the wedding march played by Mrs. W. A. Knowles. She was handsomely attired in a gown of white delecter satin, trimmed with baby Irish lace, and wearing her mother's wedding veil, trimmed with sea pearls, lillies of the valley and rose buds, and carrying a shower bouquet of white roses and lillies of the valley. The bridesmaid was Miss Edna H. Hilliard, sister of the bride, who looked very charming in her dress of pink moire silk, trimmed with baby Irish lace, and carrying a bouquet of American Beauty roses. Mr. Harold V. Binkley, B.S.A., of Hamilton, acted as groomsman. The groom's present to the bride was a very handsome gold wrist watch, to the bridesmaid, a pendant, and to the groomsman, gold cuff links. The bride was also the recipient of many other costly and beautiful presents. After the ceremony a dainty buffet luncheon was served, after which the happy couple left on the 6.20 train for points east, the bride wearing a navy blue suit and Panama hat. They will reside at Kinburn, where the groom conducts a large dairy farm.

Among the guests from out of town were Mrs. Clinton Hewlett, of New York; grandmother of the bride; Miss Phoebe Brooks, of New York; Mrs. Eidt and Miss B. Eidt, of Stratford; Misses Tye, Miss Marjory Walker, Miss Janie Brown and Fred Walker, of Hayseville, Ont.; Miss Florence Puddicombe, of New Hamburg; Miss Margaret Ballingal, of Galt. The house decorations were pink and white. Before the newly wedded couple departed Dr. MacGillivray proposed three toasts, to the bride and groom, the bridesmaid and groomsman, and to the bride's parents, all of which were responded to by the parties concerned. The bride is one of Guelph's popular young ladies, while the groom is a well known graduate of the O.A.C., and their many friends will wish them much happiness in their wedded life.

CANADIANS AT PURDUE UNIVERSITY

Graduates of the O.A.C. and other Canadian institutions hold many prominent positions at Purdue University as the following will show.

Professor A. T. Wiancko, Chief of the Agronomy Department, hails from Muskoka. After graduation at the O.A.C. in 1895 several months were spent in the Chemical Department at dairy investigational work. The year 1896 was spent on a Minnesota Stock Farm and 1897 at home. In 1898 he was appointed Assistant Librarian at the O.A.C. and later Instructor in German also. 1901 was spent at experimental work with commercial firms at Ames, Neb. In the fall of the same year Prof. Wiancko accepted the position of Instructor in Agricultural Chemistry and Assistant Agriculturalist in the Nebraska College of Agriculture. For two years Prof. Wiancko stayed at Nebraska but in 1903 received the appointment of Associate Professor of Agri-

culture at Purdue University and Associate Agriculturalist at the Experiment Station. In two years Prof. Wiancko was promoted to Agriculturalist of the Station and in 1907 to Professor of Agronomy. When Prof. Wiancko went to Purdue he did all the College and Station work alone. Now he has charge of a staff of 22 including several of professional rank.

Professor G. I. Christie, Superintendent of the Department of Agricultural Extension was born at Winchester, Dundas County, Ontario. After attending public school at Winchester he entered the O.A.C. and was graduated with honors in 1902. In 1901 he was a member of the Live Stock Judging Team at Chicago and carried off many honors. In the fall of 1902 he went to the Iowa State College at Ames receiving a degree from there in 1903. After spending two years in the Dept. of Agronomy Prof. Christie went to Purdue where he has built up the Department of Agricultural Extension. Some idea of the scope of this department may be obtained from the fact that in 1915 more than one million people were reached through its various activities. In 1913 Prof. Christie was made State Leader of County Agents or District Representatives as they are called in Ontario. Each agent is thus under his direct control.

Prof. Christie has for his right hand man, Mr. G. M. Frier. After a preliminary education in his native town of Shediac, N.B., and at the Provincial Normal School at Frederickton, Mr. Frier taught school for some time before entering the O.A.C. in 1904. During his college career he was much interested in Literary and Y.M.C.A. work and was President of the Junior year. In 1908 Mr. Frier was graduated, a specialist in Agricultural Biology. After a year as Dean of Residence and In-

structor in English he came to Purdue as Prof. Christie's assistant. Here his rise has been rapid. At present Mr. Frier is in charge of the Division of Short Courses and Exhibits, a branch of the Extension Department. He has done much in co-operation with the rural church to improve the social conditions in the country communities.

Miss Roberta McNeill is another member of the Extension Department. She is from Ottawa and is a daughter of the late Alex. McNeill, Chief of the Fruit Division. After graduating from MacDonald Institute with honors in 1912, Miss McNeill went to Purdue and entered the Extension work. At present she has charge of Women's Clubs, where her work is chiefly giving demonstrations and talks throughout the State.

Mr. C. W. Stanley is an Instructor in Agricultural Chemistry. After attending Stratford Collegiate Institute Mr. Stanley entered the O.A.C. in the fall of 1908 but after 3 years with Class '13 was compelled, owing to illness, to finish with '14. A short period was then spent in the Chemical Department. In September of 1914 Mr. Stanley accepted his present position at Purdue but at the close of the present school year he expects to come back to Guelph as a soil analyst.

Other Canadians at Purdue are:

Professor W. K. Hatt, Head of the

School of Civil Engineering, Professor of Civil Engineering, Director of the Materials Testing Laboratory. Prof. Hatt received his A.B. degree from the University of New Brunswick in 1887, C.E. from Cornell in 1891, A.M. from University of N.B. in 1898 and Ph.D. from Cornell in 1903.

Professor P. N. Evans, Head of the Department of Chemistry, Professor of Chemistry, Director of the Chemical Laboratory, Prof. Evans received his B.S. degree from McGill in 1890, and a Ph.D. from Leipsic University in 1893.

Professor J. A. Estey, Assistant Professor of History and Economics. Received his B.A. degree at Acadia College and a B.A. from Oxford in 1909.

W. M. Hepburn, University Librarian. Received M.A. degree from Dalhousie College in 1898 and a B.L.S. from the State Library School at Albany, N.Y. in 1903.

OBITUARY

We regret to report the death by drowning, on June 3rd, of R. B. Newman '17.

The accident occurred at Black River and burial was made at Spencerville, Ont., on June 7th.

The Review extends sincere sympathy to his relatives and friends, in their bereavement.





The sun was sinking in the west, its bright orb shining in a subdued manner, as if its dinner had not agreed with it. The wood was still. There was no sound to be heard except the drone of the bees, the whine of a saw mill, and the puff of a locomotive as it slowly laboured up the long incline to the town of Big Hollow.

Bill Bissett, our hero was sitting silently on a soft log beside Nellie Burns, daughter of the town detective, his arm carelessly thrown around her 22 inch waist. Still, all was still. Suddenly a sound broke the still stillness. Bill's arm tightened around Nellie's 32 inch waist. She sighed. The sound came nearer, and Bill's arm tightened. Nellie sighed. Again, and nearer the sound came. Bill's arm tightened. Nellie sighed.

Suddenly, quite suddenly, before Bill had time to withdraw his arm, a tall manly figure parted the bushes and stepped into view.

Nellie's face grew blue, she blushed furiously. It grew blue because she was blue blooded.

Bill slowly withdrew his lunch hook from around her 42 inch waist and looking the intruder in the eye, said sternly: "Got any tobacco, Skinner?"

Skinner, for it was he, or him, looked quietly at the ground, and absent mindedly chewed his beard.

"Yes, I have some tobacco," he said, "but——!"

"What kind?" eagerly asked Bill.

"Senator," replied Skinner.

The air grew blue; Nellie had burst a blood vessel.

No that's wrong, Bill had started to speak.

Unnoticed, Nellie slipped away—she wore slippers,—and climbed the long incline to Big Hollow. The sun had sunk. The air was bluer. Both Bill and Skinner were talking.

Hezra Judas Swife.

IT IS NOT ALWAYS EASY

To apologize,
To begin over,
To take advice,
To be unselfish,
To admit error,
To face a sneer,
To be charitable,
To be considerate,
To avoid mistakes,
To keep on trying,
To forgive and forget,
To profit by mistakes,
To think and then act,
To keep out of the rut,
To make the best of little,
To shoulder deserved blame,
To subdue an unruly temper,
To maintain a high standard,
To recognize the silver lining,
To be a true Christian,

—But it always pays.

Tobacco is a dirty weed,

I like it.

It satisfies no normal need,

I like it.

It makes you thin, it makes you lean,

It takes the hair right off your bean,

It's the worst darn stuff I've ever seen,

I like it.

(To be continued).