

The Farmer's Advocate AND HOME MAGAZINE.

THE LEADING AGRICULTURAL JOURNAL IN
THE DOMINION.

PUBLISHED WEEKLY BY
THE WILLIAM WELD COMPANY (LIMITED).

JOHN WELD, MANAGER.

Agents for "The Farmer's Advocate and Home Journal,"
Winnipeg, Man.

1. THE FARMER'S ADVOCATE AND HOME MAGAZINE is published every Thursday. It is impartial and independent of all cliques and parties, handsomely illustrated with original engravings, and furnishes the most practical, reliable and profitable information for farmers, dairymen, gardeners, stockmen and home-makers, of any publication in Canada.
2. TERMS OF SUBSCRIPTION.—In Canada, England, Ireland, Scotland, Newfoundland and New Zealand, \$1.50 per year, in advance; \$2.00 per year when not paid in advance. United States, \$2.50 per year; all other countries 12s. 6d. in advance.
3. ADVERTISING RATES.—Single insertion, 25 cents per line. Agents. Contract rates furnished on application.
4. THE FARMER'S ADVOCATE is sent to subscribers until an explicit order is received for its discontinuance. All payments of arrears must be made as required by law.
5. THE LAW IS, that all subscribers to newspapers are held responsible until all arrears are paid, and their paper ordered to be discontinued.
6. REMITTANCES should be made direct to us, either by Money Order or Registered Letter, which will be at our risk. When made otherwise we will not be responsible.
7. THE DATE ON YOUR LABEL shows to what time your subscription is paid.
8. ANONYMOUS communications will receive no attention. In every case the "Full Name and Post-office Address Must be Given."
9. WHEN A REPLY BY MAIL IS REQUIRED to Urgent Veterinary or Legal Enquiries, \$1.00 must be enclosed.
10. LETTERS intended for publication should be written on one side of the paper only.
11. CHANGE OF ADDRESS.—Subscribers when ordering a change of address should give the old as well as the new P. O. address.
12. WE INVITE FARMERS to write us on any agricultural topic. We are always pleased to receive practical articles. For such as we consider valuable we will pay ten cents per inch printed matter. Criticisms of Articles, Suggestions How to Improve "The Farmer's Advocate and Home Magazine," Descriptions of New Grains, Roots or Vegetables not generally known, Particulars of Experiments Tried, or Improved Methods of Cultivation, are each and all welcome. Contributions sent us must not be furnished other papers until after they have appeared in our columns. Rejected matter will be returned on receipt of postage.
13. ALL COMMUNICATIONS in reference to any matter connected with this paper should be addressed as below, and not to any individual connected with the paper.

Address—THE FARMER'S ADVOCATE, or
THE WILLIAM WELD COMPANY (LIMITED),
LONDON, CANADA.

portune for more clearcut regulations with severe penalties and a constructive campaign of education designed to build up this industry instead of making the way easier for factory-made, imitation products.

The present is really a critical period for the industry in which thousands of farmers all over Eastern Canada are engaged. Maple wood lots are now being better preserved and with the attention being paid to forestry the number of sap-producing trees may be almost indefinitely extended if proper encouragement is given. It is to be remembered that in order to success expensive fuel, labor and up-to-date appliances are requisite. Official reports show that again and again numerous samples have been collected and tested from all the Provinces, and the Chief Analyst, from the Department of Inland Revenue as a result is of opinion that little adulteration is done by the farmer. They have not the means or skill to do so without easy detection. On the other hand, a few big manufacturers mostly located in one of the large cities practice extensive adulteration. Dr. McGill says they work under the guidance of a skilled chemist and know just how far to go without being brought to justice. This is the sort of competition to which farmers are subjected. Bulletin No. 259 of the Inland Revenue Department, Ottawa, issued not long ago, shows that out of 128 samples of "maple syrup" collected for analysis, 37 were reported adulterated according to the departmental standard or "Lead Number," 1.60. In one district four samples are reported as low as .06 to .46, so that probably not five per cent. of genuine maple entered into the compound, and yet writes a correspondent, "No convictions." The labels are said to be made in a way calculated to deceive the very elect. Is a promising natural farm industry to be crippled in this way under sanction of those at the head of public affairs? It is recommended that farmers concerned everywhere should by letters to their local Member of

Parliament, to the Hon. W. B. Nantel, Minister of Inland Revenue, and Hon. Martin Burrill, Minister of Agriculture, Ottawa, make emphatic their wishes in this important matter so that further time will not be lost in the adoption and enforcement of effective regulations.

* * * *

(Note.—Since the foregoing article was completed for publication we were pleased to receive from the Department of Agriculture, Ottawa, an admirable bulletin on "The Maple Sugar Industry in Canada," written by J. B. Spencer, B. S. A., editor of the Publication Branch, in which the entire process is described and beautifully illustrated. This is most commendable, being in line with the educational work suggested and the volume should be widely distributed.)

Nature's Diary.

By A. B. Klugh, M. A.

In any locality one of the most fundamental things which anyone fond of outdoor life can investigate is the character of the rocks to be found there. The rock formation determines the topography of the country, whether mountainous,

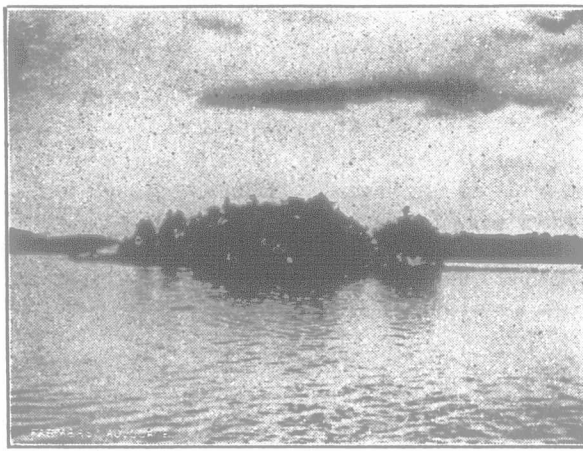


Fig. 1.—Island in Lake Opinicon.

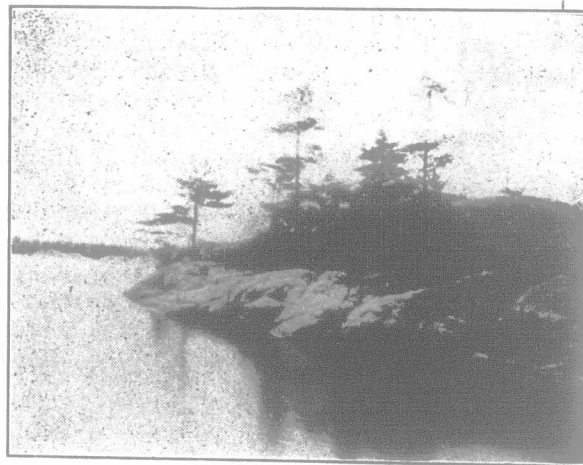


Fig. 2.—Shore of Muskoka Island.

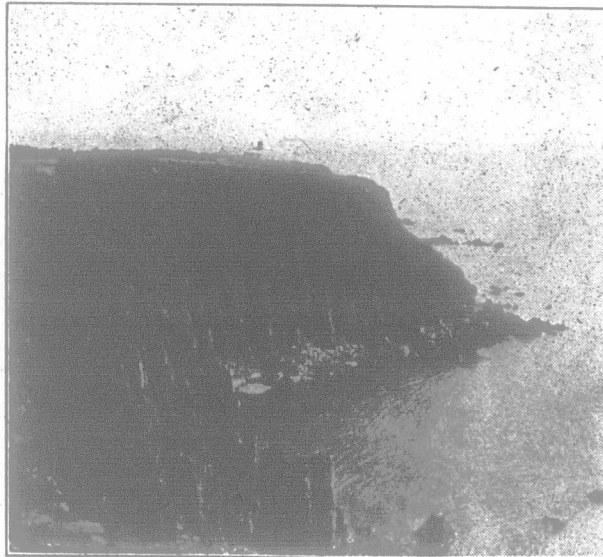


Fig. 3.—Southern Head Grand Manan, N. B.

rolling, or level, and it also determines to a large extent the kinds of plants and animals occurring in the region.

Before making any study of the rocks we have to adjust our viewpoint. The usual way of regarding the geological features of a country is as something unchangeable, because except in the event of earthquakes and landslides they have not apparently changed in our time or in our

father's time. This popular belief finds expression in such terms as "The everlasting hills" and is expressed in Bryant's line:

"The hills rock-ribbed and ancient as the sun."

To the geologist it is, however, very apparent that great changes have taken place. When attention was directed to these changes, it was found that they were unceasing, and were especially noticeable in lands which, like the countries round the Mediterranean, had been occupied for many centuries by civilized man. When once the fact was established that the solid globe was subject to change, men looked first to the more obvious and violent forces as the agents of this change. To the occasional destructive fury of the earthquake and volcano was attributed far greater importance than to the ceaseless but inconspicuous work of the rain and the river. Another reason why catastrophes were regarded as the only important factors of change, was the very general belief that the earth was only a few thousand years old. If all the modifications which the earth's surface had undergone were accomplished in this comparatively short time they must have been accomplished suddenly and violently, and in a great part, by agencies of which we have had no experience. Then all sorts of fantastic causes, such as collisions with comet's tails, were conjured up to account for the facts.

Suddenly, however, the conviction grew that the agencies which are still at work are the same which brought about the manifold changes of the past. These agencies are rain, both by the mechanical action such as can be seen in any sloping, plowed field, and its chemical action by reason of the compounds dissolved in it, ice and its expansion during its formation, flowing water, both surface and underground, with the stones which it carries along, changes in temperature which cause expansion and contraction and consequent strains in the rock, waves in their action on the coast, winds and its abrasion by means of material carried along, and glaciers. All these factors are still at work all over the Dominion, except the last, and in comparatively recent times, geologically speaking, glaciers have done an immense amount of work in this country. The rock domes so conspicuous in our Laurentian country (see Fig. 1) have been rounded off by the huge ice-sheet which at one time covered all Eastern Canada, and the same glacier carried down the boulders, often termed "hard-heads," which are now found in limestone areas and in localities where no rock at all is visible at the surface to-day.

Rocks are divided into three main classes, according to their origin. Those which were formed from the molten mass when the world solidified are termed Igneous, meaning formed by fire; those laid down under water are termed Sedimentary, meaning formed from sediment, and those which have been formed by heat and pressure from other rocks are called metamorphic, meaning changed.

Granite is an example of the first class, limestone of the second, and the Gneiss, which is seen so conspicuously in many parts of Eastern Canada, is a metamorphic rock, being granite which has been, as it were, pressed and smeared, so that the minerals composing it are arranged in bands. Fig. 1 shows an island of Gneiss in Lake Opinicon on the Rideau, and Fig. 2 is a photograph of the shore of an island composed of Gneiss at Go-rime Bay, Muskoka. In both cases the Gneiss has been rounded and polished by glacial action.

Fig. 3 shows one of the grandest cliffs in Canada. It is at the southern end of Grand Manan in the Bay of Fundy, and is about three hundred feet in height. It is composed of an Igneous rock known as Basalt and the characteristic columnar appearance can be plainly seen.

Insects Reduce Production.

Editor "The Farmer's Advocate":

Just a line to say how I appreciate your article on "Fight the Insect Foes" in your issue of November 6th. I find in going through the country and in talking to farmers that there is still a great lack of appreciation of the importance of combating those factors such as insect pests, etc., which reduce production. This is quite as important as taking all the necessary measures to increase production.

C. GORDON HEWITT,
Dominion Entomologist.

The people of Ontario now have an opportunity of presenting to a Provincial highways commission their ideas regarding road construction. This will, no doubt, influence the policy of the Government regarding roads and their maintenance. This is of more vital importance to farmers than is often credited to the movement, and they should present claims that will ensure a comprehensive move in the direction of permanently good roads.