

## The Farmer's Advocate

HOME MAGAZINE.

LEADING AGRICULTURAL JOURNAL IN  
THE DOMINION.

PUBLISHED WEEKLY BY  
THE WILLIAM WELD COMPANY (LIMITED).

JOHN WELD, MANAGER.

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

1. THE FARMER'S ADVOCATE AND HOME MAGAZINE is published every Thursday.
2. 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.
3. 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, \$2.00 per year; all other countries 12s.; in advance.
4. ADVERTISING RATES.—Single insertion, 25 cents per line, agate. Contract rates furnished on application.
5. 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.
6. THE LAW IS, that all subscribers to newspapers are held responsible until all arrears are paid, and their paper ordered to be discontinued.
7. 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.
8. THE DATE ON YOUR LABEL shows to what time your subscription is paid.
9. ANONYMOUS communications will receive no attention. In every case the "Full Name and Post-office Address Must be Given."
10. WHEN A REPLY BY MAIL IS REQUIRED to Urgent Veterinary or Legal Enquiries, \$1.00 must be enclosed.
11. LETTERS intended for publication should be written on one side of the paper only.
12. CHANGE OF ADDRESS.—Subscribers when ordering a change of address should give the old as well as the new P. O. address.
13. 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 cash 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.
14. 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.

tive insect and plant disease pests out of our country, but these cannot be expected to do it all. Their findings and suggestions must be acted upon by the man on the land. It is his duty to familiarize himself as opportunity affords with all destructive pests, to as far as possible avoid introducing them onto his property by buying only clean, pure seeds and the best of fumigated fruit trees from clean nurseries, and in case they do obtain a foothold to find out the best methods of control and eradication and act upon them. He should not resist protective regulations under Government sanction, but should co-operate with the men vested with authority in the control and extermination of pests. These officers are not meddlesome minions of the law, irksome and vexatious, but friends. Investigators through studies of life histories and habits generally evolve a practical method of control. Spraying, rotation of crops, cultivation, disinfection and many other methods are outlined to keep the farm and orchard free of pests of all kinds. Study the different formulae from time to time recommended for specific plant diseases or insect pests; be familiar with insect life histories and habits and try to keep the farm clean. One man in a neighborhood, careless and indifferent, may perpetuate the scourge and spread it year after year. It is the duty of all to put up a game fight and if this is done the worst of the insect tribe or the most persistent plant disease must yield and by following up advantages gained the defeat may be turned into a complete rout.

### Plowing, the Basis of Cultivation.

We often hear the remark made that plowing is not as well done in these days as was the case some years ago. Many are the men well on in years who claim that they are much better plowmen than their sons or their sons' sons. Whether their contention is warranted or not the fact remains that much careless, indifferent work is done with the plow in these days when excessive expenditure should stimulate every effort to

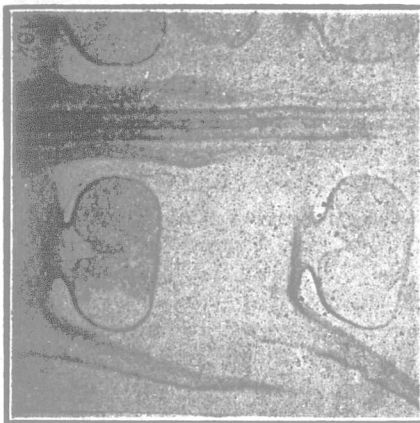


Fig. 1.—Longitudinal section of a spike of the tree club moss, showing sporangia containing spores.

do all things agricultural to best advantage. There seems to exist in many of the younger men of the time an apathy towards plowing which must have been acquired in most cases for it could never have been inherited seeing that their forefathers took great pride in the straight, even and well-turned furrow. The rush of modern times seems to have extended to this important farm work, for is it not the case that many look upon plowing as an operation where skill is not required and where the main consideration is to change green or brown fields to black? Have you ever heard the expression, "We got fifty acres blacked over?" How truly it applies in many cases. The field may be "blacked over" but it could not be called "plowed."

There is an old adage which applies well to plowing, "A thing well done is twice done." In many cases one good plowing would do more good than two of the uneven, crooked-furrowed, cut-and-covered variety so common. If there is any farm operation which should be well done it is plowing. Consider what it means. Plowing is the first and main operation in the preparation of the soil for a crop. It is most important in the destruction of noxious weeds. Without it under most conditions other farm implements could not satisfactorily prepare a field for future crops. It consists, or should consist, in the deepest and most thorough stirring the soil gets throughout an entire season. Upon it depends

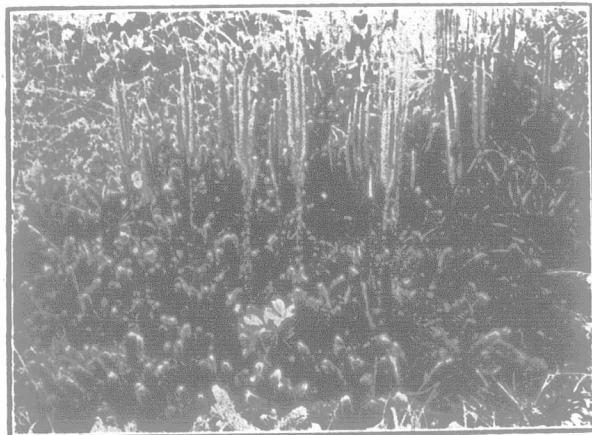


Fig. 2.—The common club moss.—Photo by Klugh.

the tilth of the soil when all cultivation is completed, and upon it depends largely the amount of extra cultivation necessary to produce good tilth. It is a difficult task to make a good finish with the cultivator and smoothing harrows where a bad beginning has been made with the plow. Good plowing is the basis of all good cultivation. This being true there is every reason to encourage young men and older men also to take more interest in this by many considered the most enjoyable and most important spring and fall (more particularly fall) operation.

Properly conducted plowing matches serve to keep up interest and are worthy of support. A man who plows well enough to win at one of these generally plows well on his own place, for good plowing requires care and the man who is indifferent ninety-nine days cannot turn a perfect furrow on the hundredth afternoon. It will pay to take more pride in our plowing. We have heard plows condemned when in reality it was the fault of the person between the handles that satisfactory work was not being done. Plows will not

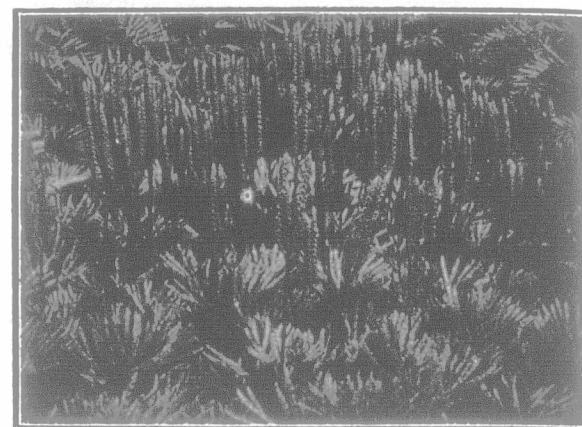


Fig. 3.—The ground cedar.—Photo by Klugh.

operate themselves. Land may be made black without much attention to the plow and the driver may slouch along carelessly steadying the handles or if it be a two-furrowed plow may not even take hold of these. Handles were made to hold. If they were not required they would not be there. Even with riding plows skill is necessary in their operation. The plow must be set to turn an even, true furrow and the driver to do good work must pay particular attention to his horses, have his lands started straight so that he can, by exercising care, keep them straight and each time across the field turn the same width of furrow. A careless plowman is usually careless with all cultivation and his crops generally show the effects of slighted work. The plow is not a plaything with which to pass the time, it is the first agricultural implement and upon the work done with it depends to a large extent, far more so than many seem to believe, the success or failure of farm operations. Try to plow the first furrow straight, an even width and an even depth and endeavor to make each succeeding furrow just like it, varying only where imperfections are noticeable in the first and as furrow lays on furrow straighten out all defects until each is straight and all the same width and depth.

### Nature's Diary.

By A. B. Klugh, M. A.

The Club-mosses are attractive plants at any time of the year, but they are particularly so in the late fall, when green things are not as common in the woods as they are during the spring and summer.

Though called "Club-mosses" these plants are

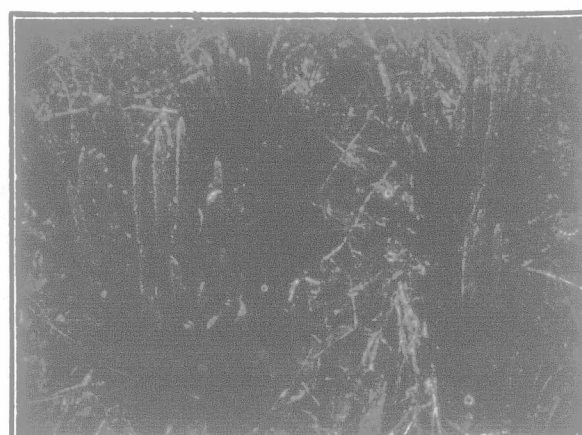


Fig. 4.—The tree club moss.—Photo by Klugh.

really allies of the ferns. The spores are borne in little pouches, known as sporangia, which are arranged in the axils of scales in a spike. These spikes show very clearly in the illustrations. The spores upon germination do not grow at once into a plant like that which produced them, but develop into a small structure known as a prothallium, on which are borne the male and female organs. The egg upon development produces once again the plant as we find it in the woods.

Fig. 1 is a longitudinal section of a spike, showing the sporangia containing the spores. This photograph was taken through a microscope and the section is magnified seventy-five times.