

AN adjourned meeting of undergraduates was held in Moss Hall last Friday evening, after the Literary Society meeting, to decide the form of the petition to the Senate *in re* Medals, Scholarships, and Prizes. Mr. Creelman occupied the chair, and both those in favor of and those against the petition were well represented. After several motions against the petition were put and lost, the following form was agreed on:—

To the Senate of the University of Toronto:

WHEREAS it is at the present time recognized and admitted that the University of Toronto and University College urgently require funds for carrying on the work of both more efficiently; and

WHEREAS it is proposed to obtain these necessary funds either by an increase of College fees, or by the abolition of Medals, Scholarships and Prizes, in which no less a sum than \$5,605 is annually expended; and

WHEREAS it is the undergraduates who are most interested in this matter, as reaping all the advantages, as well as all the evils, of Medals, Scholarships, and Prizes;

WE, undergraduates of the University of Toronto, do therefore humbly petition, that such Medals, Scholarships, and Prizes be abolished, and that the proceeds be devoted to University College purposes; and furthermore, that for the present system of ranking be substituted that followed at the University of Oxford.

A committee of thirteen was then appointed to circulate the petition for signatures; and it is now being rapidly signed. It is hoped that a large majority of the undergraduates will sign before the petition is presented.

THE University College Natural Science Association met on Wednesday Evening; the President, Dr. Ellis, in the chair. Dr. Ellis, on behalf of the Committee appointed to discuss an article for the constitution, relative to the McMurrich Medal, brought in the following revised report:

"Through the generosity of W. B. McMurrich, Esq., M.A., the Association has in its power to award a medal, known as the 'McMurrich Medal,' subject to the following provisions:

1. The competition for said medal shall be open to undergraduates of Toronto University, being members of the Natural Science Association, or of the Literary and Scientific Society.

2. The said medal shall be given for the best essay on some scientific subject, preference being given to those indicating original research.

3. The said papers for competition to be sent in on or before the first day of March in each year, to a Committee of the University College Natural Science Association, to be nominated and appointed by the members thereof, and the said committee, so appointed, shall award the said medal, and bring in their report in regard to the same at the annual meeting of said association.

4. The donor to be, *ex-officio*, a member of said committee.

5. No medal shall be awarded unless the committee deem the paper worthy of such an acknowledgment.

6. The Medal Committee to be appointed at the first meeting of the association, to be held in the month of March.

7. The winner of the medal will not be allowed to compete a second time."

This report was received and adopted, and the Secretary instructed to send a copy of the regulations to the Literary and Scientific Society.

The night of meeting was changed from Wednesday to Tuesday evening.

Mr. Geo. Acheson, B.A., then read an instructive and exhaustive paper on Bacteria. A number of forms were shown under the microscope.

Mr. Lawson read a paper on the Rocks of the Niagara Period, with more special reference to the Niagara Escarpment. He showed the distribution of the rocks of this formation throughout Canada and the United States, and attacked the existing theories concerning the Escarpment. Both papers drew forth considerable discussion.

A committee consisting of Professors Chapman and Wright and Dr. Ellis was appointed to examine the essays for the McMurrich Medal.

TORONTO SCHOOL OF MEDICINE. The regular meeting of the T. S. M. Medical Society was held on Friday evening, 17th inst., the President, Dr. A. H. Wright, in the chair. After routine business, during which the members of the society expressed themselves as strongly opposed to co-education in medicine. A paper was read by Mr. S. Stewart, B.A., on "Bacteria, and their relation to diseases." The subject of the paper was discussed by Mr. J. T. Duncan and Dr. A. H. Wright. It was announced that at the next meeting Dr. Richardson would read a paper on "Science—falsely so-called."

An interesting relic has lately been presented to the museum of the school by Mr. Henry Montgomery, M.A., B.S.C. It is a human femur, obtained in 1878 from an ossuary of the Huron Indians in the township of Medonte, county of Simcoe. It differs from an ordinary femur in having its lower half twisted upon its axis, and in having the patella ankylosed with its inferior epiphysis. Immediately above the inferior epiphysis is a groove about an inch in depth and the same in breadth, running in an oblique direction. The groove is very regular and smooth in outline, and was probably caused by a bullet from one of the old French rifles.

'**VARSITY MEN.** Mr. W. Houston, M.A., is a candidate for election to fill one of the vacancies about to occur in the Senate of the University.

We notice that the talented author of "Clinker" has again achieved distinction; but this time by his social qualities, as the following clipping from a morning paper will show:

Yesterday afternoon the students and clerks of Messrs. Blake, Kerr & Cassels presented an address and a piece of plate to Mr. Cayley, on the occasion of his leaving that office to accept a partnership in another prominent city firm. The recipient replied in a few happy and well-chosen words.

GLACIAL ACTION IN WESTERN ONTARIO.

(Concluded.)

The close of the Champlain period seems to have been marked by a luxuriant vegetation wherever land was reclaimed by the subsidence of the waters. And as the rivers during their annual freshets, carried on their surfaces trunks and branches of trees, these were buried in the silt which the opposing currents of the lake piled up at the river-mouths. Fragments deposited in this manner, associated with the mollusca which inhabited these estuaries, are occasionally met with in the later blue clays of Ontario. The evidence upon which the existence of an interglacial period is based, is not very satisfactory, yet there seems no other way of accounting for the driftwood and shells of *Unio* and *Lymnea* found in the upper portion of the Erie clay. As there can be no doubt of a subsequent recurrence of glacial ice, it seems probable, that this interglacial vegetation flourished during the period of time which elapsed between the emergence of the land, and its elevation a second time to the region of perpetual frost.

The second appearance of glacial ice, although accompanied by all the phenomena which characterized the first, had nothing like its erosive effect. It served by its weight to consolidate the underlying deposits, and gave the clays a much greater coherence and consistency than they previously had.

Had the ice at all reached the thickness of the former period, the underlying clays and gravels would have been completely removed. Instead of this, the glacier slipped along over the ancient deposits without much disturbance. It was accompanied by a ground moraine just as the earlier was, as is shown by the unstratified deposits of clay and gravel which are found here and there to overlie the stratified Erie. The close of this period was marked by a melting of the glacier, and the introduction of a second Champlain period, during which stratified deposits were formed similar to the preceding. The clays of this period, commonly called Saugeen clays in Western Ontario, are quite distinct in physical characters from the Erie. They have a red or yellow color from the presence of iron in a highly oxidised condition. They are moreover much less compact than the Erie, and are less pure, containing generally a large percentage of sand and angular fragments of rock. Although in discussing the two great glacial ages, I have referred to the phenomena which were the outcome of the gradual melting of such enormous accumulations of ice, it must be borne in mind that during both periods, there seem to have been spasmodic attempts made by the glaciers to regain their former influence. Perhaps a number of causes combined to produce long periods during which the mean annual temperature fell very low, and as a result the ice sheet was able to regain some of its lost ground. A careful analysis of the drift deposits in almost any part of the country will be found to bear out this conclusion. For example, in boring for salt at Southampton, at the mouth of the Saugeen River, the following strata were met with between the rock bed and the surface:

1. Thirty feet of hard boulder clay, evidently a remnant of the ancient ground moraine which formed beneath the first great ice sheet.

2. Seventy feet of blue clay and boulders. By this time it is apparent the ice sheet had departed, and the turbid waters were depositing their sediments, while occasional boulders dropped off from the melting bergs and floes.

3. Fifty feet of soft marly beds. The climate must now have so far moderated that the lower types of animal life flourished in the greatest profusion in the shallows of the lakes and rivers, and many years must have passed before this immense deposit could have been formed.

4. Five feet of boulder clay. We have here again the remains of a ground moraine formed beneath the ice sheet, which seems to have regained for a short time its pristine vigor.

5. Sixteen feet of sand and gravel. This deposit may have been formed in the following way. The valley of the ancient Mohawk probably marked the line of the retreating glacier, and a crevasse extending eastward up the valley of the Saugeen River seems to have been swept by a powerful current, which only permitted the coarser portion of the debris being deposited.

6. Five feet of blue clay. Calm waters replaced the ice sheet, and the fine materials which were previously held in solution quietly sank to the bottom.