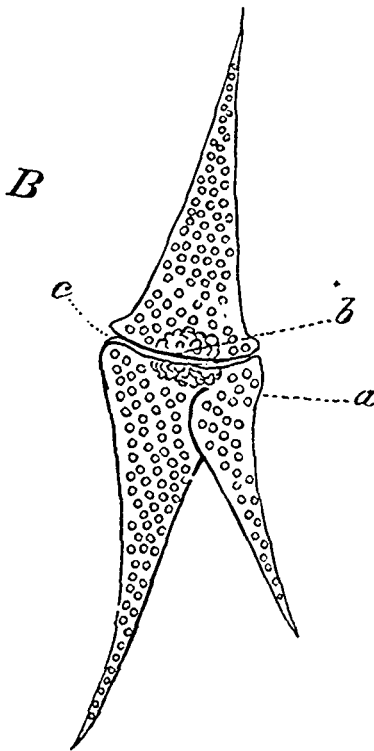


Strangely enough, the Island ponds, opposite Toronto, favored us with specimens, also silicious, and bearing nearer affinity to the fossils of Barbadoes than any yet discovered, so far as we know.



B, represents one of these animals (?)—it was alive when we examined it, and moved about the field with a gliding motion. At *a*, is represented a limb which possesses a joint, by means of which it can open and shut at pleasure; *b*, shews a flocculent mass, which gave an idea of *fool*, while *c* represents

a curious trumpet-shaped termination which, from the frequency of finding them, appears to be easily detached: finally, the entire surface is covered with very minute tubercles.

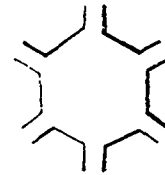
All the specimens here described, have been converted into permanent preparations, and it is hoped that the above description of them will prove interesting to the members of the Canadian Institute.

ADDITIONAL OBSERVATIONS BY J. ROVELL, M.D.

The Bear

Within the last few weeks I have had the opportunity of examining the alimentary canal of the brown Bear of this Province, which presents some interesting points for observation.

First, the œsophagus.—This tube on being submitted to microscopic examination, furnishes an exception to the general rule with reference to the form of muscular fibre found in it. In works on Physiology and Anatomy, it is stated that striped muscular fibre exists in the upper third only; the lower portion possessing non-striped fibre.* Messrs. Todd and Bowman, however, observe, "In some specimens from the human subject, we have failed in detecting any (striped fibre) in the lower half of that tube, either in the circular or longitudinal layer; but in another example we have found them to within an inch of the stomach." Beale, in his Clinical Medicine, notices the presence of striped muscle in the œsophagus of tenci. In the Bear I find that striped fibre exists throughout the whole tube, terminating in an abrupt line with its convexity towards the stomach. In the rest of the stomach and intestines there is ordinary plain fibre. The villi of the intestines are very varied in form. In the duodenum they are exceedingly elongated and densely packed; injected with chromate of lead their vascularity is beautifully shown, and the arrangement of the vessels at the base of each villus is distinctly brought out, and it appears that the vessels of all the villi are in communication; thus, supposing six villi placed together, the vessels at the base present the following arrangement:—



In this portion of the intestinal canal, they also present broad bases and very obtuse apices. In the ilium they are considerably smaller, and cluster in greater numbers on and around the raised margins of the Payercan Patches. In the large intestine the villi have disappeared, and, as in other animals, have more the appearance of a stomach; the net work of beautiful capillaries, rendering the organ intensely vascular. Here, however, is another peculiarity noticed,—along the whole length of this large tube an unbroken chain of glands, about one quarter of an inch in width, runs, having short villi covering the surface. This arrangement gives one the idea that the plain surface of the intestine may perform the office of a second stomach, while the long chain of glands is a real excretory apparatus.

The Lobster.

There is one other subject which I desire to bring before the Institute, with the view to obtain information. While engaged in dissecting a lobster, my attention was particularly directed

* I cannot procure a reference to Mr. Gulliver's papers.