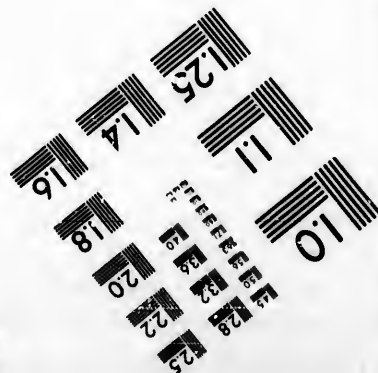
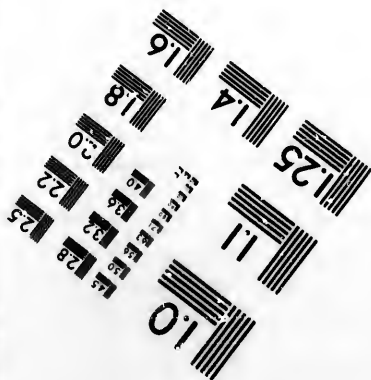
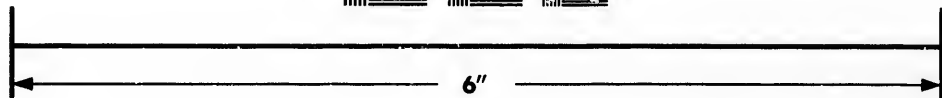
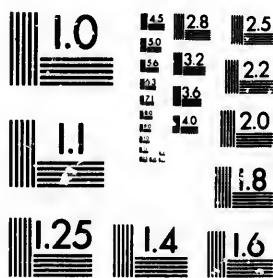


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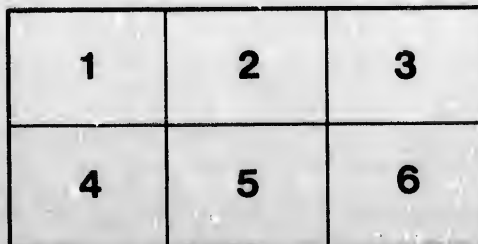
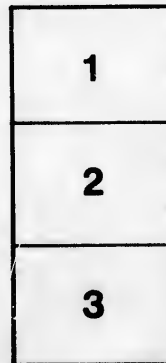
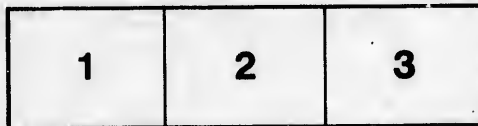
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[Reprinted from the CANADIAN RECORD OF SCIENCE, January, 1889.]

*Note*  
ON MODERN CONCRETIONS FROM THE ST. LAWRENCE.

*read before Nat. Hist. Soc. of Montreal*  
BY REV. PROF. KAVANAGH, S. J.

WITH REMARKS ON CYLINDERS FOUND IN THE POTSDAM  
SANDSTONE.

The modern concretions referred to were collected on the  
the rush-covered shores of the St. Lawrence near Boucher-  
ville, and may be thus described :—

They resemble small radishes, like these, varying much  
in shape, are symmetrical, perforated axially, the more or  
less perfect bore or perforation often containing vegetable  
fibres.

Their production seems to be due to the action of the  
rush roots upon the soft, plastic clay, so indurating it that  
it can resist the wash of the waves; the receding of the  
water during the summer leaves these concretions standing  
out in relief, like fossils on a weathered surface.

V. A. G. L.

.....

The phenomenon seems to be analogous to that formation of nodules around organic nuclei within masses of soft material, which occurs in many geological formations.

These little bodies are evidently clay concretions formed around vegetable fibres, and hardened by a small percentage of calcium carbonate. since when treated with hydrochloric acid they effervesce feebly and become disintegrated. They probably originate in the molecular aggregation of the calcareous matter in the clay around any foreign body included in it. They are about half an inch in diameter, and the largest may have been two inches in length, with rounded ends. When broken, they show a small central canal containing a little sand and strips of epidermal tissue, the remains of a root or stem. One shows three branches apparently proceeding in a verticillate manner from a central stem. In the centre, the light, reddish-brown colour of the clay has assumed a greenish hue, owing to deoxidation of the Peroxide of Iron by decay of the vegetable nucleus.

**REMARKS BY THE PRESIDENT ON CERTAIN ANCIENT CONCRETIONS, IN CONNECTION WITH THE ABOVE.**

On a small scale these modern concretions are similar to those so often found to enclose vegetable remains in the carboniferous system; and in the Pleistocene at Green's Creek, on the Ottawa, vegetable stems are sometimes found enclosed in similar, but larger and harder concretions.

Concretions of this kind appear to throw light on those remarkable trunk-like cylinders which have been found in the Potsdam sandstone. These attracted the attention of Sir Wm. Logan many years ago; but as they showed no structure, external markings, or carbonaceous matter, they were not regarded by him as true fossils. More recently they have been studied by Dr. Selwyn in exposures on the bank of the Rideau canal, near Kingston. Dr. Selwyn has kindly sent photographs of these specimens, to be exhibited to the Society. Mr. A. Young, a student in applied science in McGill University, has also presented fine specimens to the

Peter Redpath Museum, one of which is on the table. In their entirely arenaceous character, their concentric lines of growth, as well as in traces of a central axis or canal of small dimensions, and, in one instance, in a regularly rounded end, they resemble concretions, but I have been unable to find any central organic matter. This may, however, have perished, leaving a mere cavity, as in the modern concretions above described, which would become filled with sand, like that of the enclosing cylinder. This at least appears to me at present the most probable explanation of these puzzling forms. It would be confirmed if any distinct vegetable or zophytic axis could be found in any of the specimens, or any carbonaceous matter representing such an axis. In the meantime, it may be regarded as a more or less probable conjecture as to their origin.





