## CANADIAN NATURALIST

SECOND SERIES.

## ON THE GEOLOGICAL FORMATIONS OF LAKE SUPERIOR.\*

By THOMAS MACFARLANE.

III. UPPER COPPER-BEARING SERIES.

The name of the Upper Copper-bearing Rocks of Lake Superior was given to this series by Sir W. E. Logan, to distinguish it from the Huronian or Lower Copper-bearing Rocks. The geographical and geological position, lower altitude, regular bedding, and peculiar lithological character of these Upper Rocks cause them to be easily recognised and readily distinguished from the Huronian. They have been separated into an upper and lower group, the latter of which seems, however, to be confined to the north-west parts of the lake. Along its eastern shore, between Sault St. Marie and Michipicoten, there are frequently found, betwixt the water and the high Huronian or Laurentian hills, narrow strips or patches of the rocks of the upper group, which often jut out as small islands into the lake, and doubtless extend out great distances beneath its waters. Such limited strips of these rocks are found, for instance, skirting the base of Gros Cap, along the south shore of Bachewahnung Bay and at Cape Gargantua. But besides these and much more important for the study of the upper group of the Upper Copper-bearing series, there are occasional extensive developments of its rocks, many thousand feet in thickness, such as at Cape Mamainse, Michipicoten Island, and Point Keweenaw

<sup>\*</sup> Continued from page 201.