

very largely. Enquiries are frequently made as to the existence of these deposits, and in order to present in a readily accessible form such information as is available from the published reports of the Geological Survey, some of which are long out of print and others not convenient for reference, the present paper has been prepared. While it is not maintained that the subject has been exhaustively treated, since the information relative to the occurrence of this substance increases from year to year as the scope of the Survey's operations is extended, the present paper will incorporate all available information on the subject in regard to its occurrence in the provinces of Ontario, Quebec, New Brunswick and Nova Scotia, taken from the published reports of the Geological Survey and from other sources of information, brought down to the present time.

Fresh-water marl occurs usually in marshes and shallow lakes, and generally contains the shells of several species of fresh-water mollusks. In the Geology of Canada, 1863, a good description of the mode of occurrence and physical characters of this material is given, which may be here quoted.

Mode of occurrence and origin. "Although belonging to the present geological period, this marl is not always of recent formation; inasmuch as the beds of it are sometimes overlaid by peat, or by a soil supporting a growth of large trees. At other times however, the marl covers the bottom of shallow lakes or ponds, and is evidently in the process of deposition. It appears to be formed by the waters of springs highly charged with lime, which is at first held in solution as bicarbonate but is deposited when these waters come to the air. It is thus similar in its origin to the deposits of calcareous tufa, which occur in many places where such calcareous springs flow over earth, rocks and vegetation, instead of falling into lakes or marshes. The presence of carbonate of lime is a necessary condition of the development of shells, and various species of mollusca abound in such waters. These by their remains, which often form a considerable portion of the deposits, give to them the name of shell-marl, which is frequently applied. This substance is white and earthy in its aspect, and, unless mingled with clay, is a nearly pure carbonate of lime, which from its finely divided state is well adapted to serve as a dressing for such soils as are deficient in