pretty sure conclusion regarding when and how the formation was deposited, as well as the nature of the deposit. Another important fact concerning the formations is that they always occupy the same position relative to each other. For example, if we represent the formations by 1, 2, 3, 4, etc., the lower numbers occupying the lower position, we shall never find 3 below 2 or 8 below 5. Some may not be represented in certain localities, there may be no 4, 6, 7, but if we find 3, 2, 5, 1 they will occupy the position 1, 2, 3, 5. From this it will be readily understood that as soon as we obtain a few characteristic fossils in the neighborhood of a place we can, with considerable certainty, make out the position of the rock in the geological series. At Stony Mountain, along the Red River in the Parish of St. Andrews, and at the C. P. R. round house near Selkirk are found outcrops which supply fossils peculiar to what is known as the Hudson River and Trenton formations, largely developed in the State of New York and in Ontario, especially in the vicinity of Toronto and east along the north shore of Lake Ontario. These outcrops, no doubt, belong to the same rock as that which is found some 50 feet below the surface at Winnipeg. The characters of the deposits at Stony Mountain are closely allied to those of the Hudson River formation in other localities, while the buff-colored magnesian limestones of the Red River Valley are likely representatives of the upper part of the Trenton limestone. Both formations belong to what is commonly known as the Lower Silurian Series.

FOSSILS OF THE SILURIAN AGE.

Before a stratum of rock can be formed, in most cases it is necessary that the place upon which it is laid be beneath a body of water, especially when the rock contains the remains of marine organisms. Now, since we have a good stratum of Silurian rock some 50 feet below the surface, cropping out west and north of us, we may assume that at one time this part of the country has been submerged and raised again from the waters which covered it. On an examination of the rocks at any of the outcrops referred to, you are almost certain to find some traces of primeval life some bear a close resemblance to shells of our own day, some not unlike the backbone of fish, while others are readily recognised as corals. All these peculiar remains are traces of animals, which occupied the waters when the site of Winnipeg was the floor of an ocean.

These creatures dying their bodies became entombed in the muddy bottom, afterwards petrified and as fossils have come into our possession, serving as keys to unlock the hidden secrets of the past. As these animals, now known only by fragments of rock resemble those found only in salt water at the present time we at once infer, that the waters which covered this place in those early days were of a briny nature. Pursuing the same line of thought we can readily assume that in those days the climate was much different from the present. For as already mentioned among the inhabitants of our early sea were corals, a group of animals that can exist only in waters which have a mean temperature of 66 degrees.

The wedge shaped fossils, which usually show a series of rings with a sort of rod running through their center are called Orthoceratites. they vary in size from a few inches to three feet in length. They are the remains of animals, which lived in shells consisting of many chambers, the last being occupied by the animal, a representative of the cuttle fish family.

Many of the shells found are readily identified as belonging to both groups of mollusks, those with univalve and bivalve shells. Among the fossils of our rocks are some of wormlike form. They vary from one to several inches in length. These are the stems of what are known as stone lilies. The stone lily is what remains of an organism, which flourished in the seas of the past. Attached to the sea bottom by the expanded base of a jointed stem and surmounted by a flowerlike expansion, it bore some resemblance to a closed lily, especially when the tentacles of the animal were folded in. They seem to have been very numerous, for large portions of rock are found made up almost entirely of these crinoid stems, not uncommonly called Encrinites. It is a rare thing to find a complete form, though at almost every outcrop innumerable fragments of stems are found. We have now to call your attention to a fossil not common here, but some fragments have been found.