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flowing in an opposite direction mingle with the waters of the north.

But my work is with the stones of the quarry and to these I must direct your attention rather than the enhancing story of that icy age.

Having gathered up a number of the fragments lying on every side at the quarry, and examined carefully the rock in situ, we observe that innumerprimeval able remains of life are readily obtained and that these traces of early life are chiefly the remains of corals, cuttlefish, a few shells and some crablike creatures as are reprethe diagrams before you. sented on When we compare these with the characteristic forms of life found in the different layers of the earth's crust we at once discover that they belong to what is known as the silurian system.

SELKIRK ROCK SILURIAN.

Consequently here at Selkirk the greyish limestone, comparatively soft, capable of yielding very white lime and readily cut into ornamental stone for building purposes is of aqueous origin (once the floor of an ocean) and rich in traces of life peculiar to rocks of the silurian system. Now turning to our diagram we observe that this layer of rocks occupies the 4th place in the geological series while the loose deposits above the rock belong to the 11th and 12th systems.

The question which naturally presents itself is what has become of the intervening strata represented by the 5th to the 10th systems ' These are found in other parts of the world. Their absence is accounted for as follows :---

ABSENCE OF BOCK FORMATIONS ACCOUNTED FOR.

1. The locality may have been raised above the sea at the close of the Silurian period, and continued so while other places were submerged and in a position to receive further additions to their state. We must remember that before a stratum of rock can be formed, that in most cases it is necessary that the place upon which it is deposited be beneath a body of water, especially when the rock contains the remains of marine organisms.

2. The deposits may have been formed and afterwards were worn away by long periods of time. But we can scarcely imagine whole series of rocks, so completely swept out of existence as not to leave a vestige of them.

3. Some have thought that the place may have been located in deep water and

situated beyond the reach of deposits being added, while they were forming nearer the shore, where rocks are more rapidly formed by the action of the sea upon the coast. One thing is certain, that after the formation of the Silurian deposits found at Selkirk, there was a great break in the formation of rock in this part of the Dominion. In other parts we find that formations thousands of feet in thickness were deposited, while the banks of the Red River remained the same. Rocks of later date are represented elsewhere, while here not a trace of them is found. Throughout the formation of the Red sandstone system, our strata appears to have received uo additions. During the great coal-forming period, nothing seems to have been added to the Selkirk layers. The period of chalk-building passed away, still those at Selkirk appear to have not been increased. Whole series of rocks thousands of feet in thickness were built up and great periods of time passed away during which the deposits of this quarry lay above and beyond the influence of the sea. But when the glacial and past glacial times appear the limestones of Selkirk received a covering.

GEOLOGICAL HORIZON OF SELKIRK QUARRY.

As already observed fossils are quite numerous in the quarry, confined to comparatively few orders and characteristic of several formations found in the Silurian system. We have no hesitation in considering these rocks as Silurian but there is some difficulty in assigning them to the respective formations of that system hitherto they have been placed among the lower Silurian, (Trenton formation) but the fossils found in the quarry last summer would seem to indicate a higher geological horizon and it is likely further examination will show that this outerop contains strata of upper Silurian as well as lower.

Before entering upon a description of some of the most common and important fossils found at Selkirk, I shall endeavor to explain fully what is meant by a fossil, how they are formed and the inferences we can conclude from their presence in rock.

FOSSIL DEFINED.

A fossil may be defined as "any body or the traces of the existence of any body whether animal or vegetable which has been buried in the earth by natural causes," or the relics of plants or animals imbedded in rocks. They may be formed as follows :---