

reach the Province of that name—forming a belt of several miles in breadth—whose strata are almost horizontal with a gentle almost imperceptible dip to the southwest.

Along the line of the Grand Trunk Railway, in some low cuttings, as well as in a number of localities between the lake and the track where openings were made for quarry and other purposes the Utica may be seen. About Oshawa and Bowmanville, the black bituminous and brittle shales of this terrane are evident and fossiliferous.

An interesting collection was made by the writer in 1883 at Whitby on a farm and lot, the property of Mr. Yerex, south of the G.T.R. track close to where a bore hole was put down by a company many years ago in order to find coal or petroleum. It was in spite of Sir Wm. Logan's assertions and statements regarding the strata in this neighbourhood not being coal-bearing or "carboniferous" that the company sank the hole and found that as soon as the bituminous shales capping the Trenton were traversed, the limestones formed a compact and solid thickness of rock beneath. It is almost needless to state here that neither coal nor petroleum were "struck" at this point, and furthermore that neither of these substances occur in this region. Except the very small percentage of oil which can be extracted from the more bituminous shales of the Utica here as elsewhere—no reservoir of petroleum or occurrence of that mineral oil can be obtained in the rocks of this age.

The fossil remains found at the pit or quarry, close to the bore-hole, Whitby, belong precisely to the same geological horizon as the shales in the vicinity of the Rideau Rife Range, Ottawa, or as the shales at Collingwood to be described later on.

The species recorded from this locality are:—

1. *Leptograptus fluccidus*, Hall.
2. *Orthograptus quadrimucronatus*, Hall.
3. *Leptobolus insignis*, Hall.
4. *Lingula* sp.
5. *Leptæna sericea*, Sowerby.
6. *Zygospira modesta*, Say.