

ing waters. They must not be confounded with similar shells left in elevated spots by the drying up of streams and ponds, or by the cutting back and lowering of river-beds. As occurring in our modified drift deposits, they are imbedded in sand or gravel containing northern pebbles and small boulders; and in situations, moreover, in which it is evident that no merely local causes could have been concerned in their deposition. The fragility of most fresh-water shells, necessarily operates against the preservation of these in the coarser sediments, and explains their absence, probably, as regards the upper Drift beds of many localities.

In some of these re-sorted beds, the bones and teeth of both extinct and existing mammals are occasionally found. The extinct forms comprise: a species of *Mastodon* (*M. Ohioticus?* see *Can. Jour. New Series*, vol. iii. p. 356); the *Elephas primigenius*; and apparently an extinct species of the horse. The remains of existing species found in these deposits (always confining our remarks to Western Canada); include the Wapiti, the Moose, Beaver, Muskrat, &c. These two classes of remains have been found together. In a railway cutting through Burlington Heights, near Hamilton, the tusk of a Mammoth (*Elephas primigenius*) and the horns of a Wapiti (*Elaphus Canadensis*) were met with at a depth of about forty feet below the present surface of the ground.* I have also seen the lower jaw of a Beaver (*Castor fiber*), obtained from the same locality. The flint arrow-heads, and other wrought implements of Amiens and Abbeville, which are now attracting so much attention in Europe, occur, apparently, in deposits of the same kind and age.

I have discovered fresh-water shells, under the conditions described above, in beds of stratified Drift consisting of coarse gravel filled with pebbles of gneiss and other northern rocks, on the Kingston road, about two miles east of Belleville, at an elevation, by rough measurement, of about 40 feet above the present level of Lake Ontario. These belong to *Planorbis trivolvus*, or to some closely related species. Other examples of the same shell were obtained from fine gravel in oblique stratification, near the village of Orillia, at a height of about 18 feet above the level of Lake Couchiching. This lake is about 120 feet higher than Lake Huron, and about 700 feet above

* See a paper on the Geology of this district, by Charles Robb. C.E., in this Journal, New Series, Vol. V. p. 510.