

the sea. Pieces of nacreous shell (belonging to a species of *unio*?) were also found in gravel, in the vicinity of Barrie, at an estimated height of about thirty feet above Lake Simcoe. I have found lacustrine and terrestrial shells in many other places, but these I omit from mention, as the shells occurred on the sites of ancient swamps, in gullies, or in flat lands adjacent to running streams; or in other doubtful situations in which they may have been deposited by freshets and other agencies of comparatively recent date.

Mr. Robert Bell, of the Geological Survey of Canada, has added greatly to the above localities, in a valuable paper published in the *Canadian Naturalist* for February of this year (1861). Amongst other spots in which he has discovered fresh-water shells, the environs of Collingwood and Owen Sound may be cited. At the former, examples of *Planorbis trivolvis*, associated with several species of *helix*, were found by him at an elevation of seventy-eight feet above Lake Huron. Specimens of *Melania conica* have been obtained, according to Mr. Bell, from another spot in this locality. Dr. Benjamin Workman, of Toronto, has also communicated the discovery of examples of a *Melania* and *Unio ellipsis*, on the high banks of the Don, about thirty feet above the lake. These may have been deposited by the river, however, when flowing at a higher level; but they were covered, according to Dr. Workman, by a considerable deposit of sand.

The upper deposits of the Drift period are separable with difficulty in many places from those of more recent age. As the one period merged gradually into the other, this must necessarily be the case. Among the more recent deposits of Western Canada, however, our river "flats" may be more especially cited, as those of the Grand River, filled with the remains of land mollusca. Also, the closely-similar deposits of the ancient bed of the Niagara, so high above the present level of that river; together with the shell-marls and calcareous tufas of our lakes and streams; and our deposits of bog iron ore and iron ochres.

§ 2. Deductions.

The following deductions appear to flow naturally from the observations recorded above:

1. A general depression of the land, at the commencement of the Drift period, must have taken place to such an extent as to admit of