

Huron, and throughout the country at the junction of the Laurentian and Silurian formations, between the river Severn and the County of Frontenac. Also in the vicinity of Belleville, Trenton,* &c.

The isolated boulders scattered over the country, frequently exhibit in themselves a polished and striated surface; and the small boulders and pebbles imbedded in the gravel deposits, often present the same effects. (*e.g.* The pebbles found in the terraces north of Toronto; also those in Drift gravel in the environs of Belleville, Marmora, Guelph, Niagara Falls,† &c.)

6. The gravel and sand beds of this series occur, in places, in oblique stratification, or exhibit what is technically termed "false bedding." This occurs at or near the upper part of the series, and is evidently due to a re-arrangement of the materials by the action of currents. (*e.g.* Drift-bank seen in Great Western Railway cutting at Toronto, and extending westward several miles; beds at Orillia, on Lake Couchiching; also near Collingwood, &c. A remarkable example, alluded to more fully in the second part of this paper, Deduction 3, occurs near the village of Lewiston, on the south shore of Lake Ontario.) I think it will be rendered clear, by what follows, that the currents in question were not marine, but were produced in the lake waters, when these stood at higher levels. In places, moreover, secondary ridges, or ancient spits, have been formed by the same action out of these drift materials. (*e.g.* Ridge at Weston, near Toronto, described by Sandford Fleming, C.E., in the present number of the *Journal*; and a ridge in Nottawasaga Township, described by the same engineer, *Can. Jour.*, 1st series, vol. i. Also the ridge at Craighleith, in Collingwood Township, mentioned by the writer, in this *Journal*, vol. v. p. 305.) These secondary ridges, it should be observed, are altogether distinct from the terraces of the lake shores and intervening districts. A careful search would, no doubt, reveal their presence in very many localities.

7. We now come to a fact of great interest: the occurrence of shells of fresh-water mollusca in the sands and gravels of these Drift deposits, at various levels above the present surface of our lakes. These shells belong to existing species, inhabitants of the surround-

* See a paper, by the writer, "On the Geology of Belleville and its Environs," in the *Canadian Journal*, Vol. V. (New Series), pp. 41-48.

† The localities cited in this paper, are those which have come more immediately under the author's observation. In most instances, the lists given might be greatly added to.