

recent river; we must not forget the Post-Pliocene beds of Goat Island and of the river banks, through which this deep and dark stream has cut its way; we must not forget the former, now drift-filled, outlet from the present whirlpool to St. David's village.

But chiefly this magnificent mass of thundering water should recall to us the formation of, so far as known, the ancient valley of the escarpment, the valley at Hamilton. A valley diminishing in width from eight miles to one, and traceable, as has been most ably shown by Dr. J. W. Spencer, Director of the Geological Survey, Georgia, as far as Caledonia, thence southeastwardly to Lake Erie, thence across the present lake to Pennsylvania and to Western Virginia—such a valley as this makes Niagara dwindle into insignificance. What a landscape, too, of boiling rapids, tumultuous surges, mountain-like waves and noble falls this must have presented—a glorious spectacle, upon which no human eye ever gazed! Nor did the work of the waters end there, as the slopes and terraces at the bottom of Lake Ontario to-day bear witness. Yet this channel from Hamilton to Lake Erie is choked with drift, so that its very existence lay unknown till about ten years ago; upon the sand and the clay filling the channel, farming has been carried on for well nigh a century, and still goes on to-day.

With this scanty description of the valleys of the Niagara ridge, let us ascend to the summit, tracing these streams to their source; and in order to be more exact, let us consider the last described series of creeks first in order. Now when we ascend to the highland, we notice one or two features of importance; and of these the first is that the highest part of the escarpment is, in general, at or near the edge, that there is a general southwesterly slope, not exactly the same as the dip of the strata. Thus, while Queenston Heights is three hundred and sixty-seven feet above Lake Ontario, Buffalo, or Lake Erie, is but three hundred and twenty-seven feet; on the Welland railway, in like manner, there is a southerly slope of fifteen feet in the distance between Thorold and Port Colborne, and the brow of the escarpment at Hamilton is seventy-eight feet above Port Dover. True, in the last case, the "Summit," a short distance south of the escarpment, about five miles say, is about a hundred feet higher, and true it is that, between Jarvis and Hagersville, we have a slightly lower ridge; yet this does not lessen the value of the general statement, especially if we remember that the former-men-