

Northwich. There are two beds of rock salt, lying beneath 40 yards of coloured marls, in which no traces of animal or vegetable fossils occur. The upper bed of salt is 25 yards thick : it is separated from the lower one by $10\frac{1}{2}$ yards of coloured marls, similar to the general cover ; and the lower bed of salt is above 35 yards thick, but has nowhere been perforated. Whether any other beds lie below these two is at present unknown. They lie horizontal, or nearly so, and both beds of salt are below the level of the sea. They extend into an irregularly oval area, in length one mile and a half, in breadth about 1300 yards, ranging from N. E. to S. W. Gypsum, so abundant in many other salt mines, and generally plentiful in the tracts of red marl, is found in most of the clays associated with the Cheshire salt.

The physical features of the country about Northwich are not very peculiar, yet sufficiently favourable to Dr. Holland's hypothesis. The valley of the Weaver is separated from that of the Dee by the sandstone ranges of Delamere forest, and the Peckforton hills, and from the course of the Mersey by an extension of the elevated ridge, called Alderley Edge. Below Northwich these bordering hills come very close together, and naturally suggest the idea that in ancient times there might at this place have been accidental bars formed, which while they lasted, would exclude the inroads of the sea. If by such an event the sea lake flowing up the valley of the Weaver was converted into an inland sea, and if the supply of fresh-water streams from the neighbouring country was very scanty, the natural progress of evaporation would certainly tend to dissipate the water, to concentrate the solution of salt, and finally to cause in it a partial precipitation. At first, gypsum or any other of the less soluble salts would be formed, and perhaps mixed with the earthy sediments mechanically deposited in the lake, and afterwards the salt be accumulated in the deepest parts of the water, in quantity proportioned to the evaporation of the liquid. If, at a subsequent time, the sea should again burst the barrier and inundate the valley, a new deposit of gypseous marls, and a bed of