

The day was far spent when I reached Stromness; but as I had a fine bright evening still before me, longer by some three or four degrees of north latitude than the midsummer evenings of the south of Scotland, I set out, hammer in hand, to examine the junction of the granite and the Great Conglomerate, where it has been laid bare by the sea along the low promontory which forms the western boundary of the harbor. The granite here is a ternary of the usual components, somewhat intermediate in grain and color between the granites of Peterhead and Aberdeen; and the conglomerate consists of materials almost exclusively derived from it, — evidence enough of itself, that when this ancient mechanical deposit was in course of forming, the granite — exactly such a compound then as it is now — was one of the surface rocks of the locality, and much exposed to disintegrating influences. This conglomerate base of the Lower Old Red Sandstone of Scotland — which presents, over an area of many thousand square miles, such an identity of character, that specimens taken from the neighborhood of Lerwick, in Shetland, or of Gamrie, in Banff, can scarce be distinguished from specimens detached from the hills which rise over the Great Caledonian Valley, or from the cliffs immediately in front of the village of Contin — seems to have been formed in a vast oceanic basin of primary rock, — a Palæozoic Hudson's or Baffin's Bay, — partially surrounded, mayhap, by primary continents, swept by numerous streams, rapid and headlong, and charged with the broken debris of the inhospitable regions which they drained. The graptolite-bearing grauwacke of Banffshire seems to have been the only fossiliferous rock that occurred throughout the entire extent of this ancient northern basin; and its few organisms now serve to open the sole vista through which the geological ex-