

lar fragment appearing in some parts of the mass for yards together. The debris of our harder rocks rolled for centuries in the beds of our more impetuous rivers, or tossed for ages along our more exposed and precipitous sea-shores could not present less equivocally the marks of violent and prolonged attrition than the pebbles of this bed. And yet it is surely difficult to conceive how the bottom of any sea should have been so violently and so equally agitated for so greatly extended a space as that which intervenes between Mealforvony in Inverness-shire and Pomona in Orkney in one direction, and between Applecross and Trouphead in another — and for a period so prolonged, that the entire area should have come to be covered with a stratum of rolled pebbles of almost every variety of ancient rock, fifteen stories' height in thickness. The very variety of its contents shows that the period must have been prolonged. A sudden flood sweeps away with it the accumulated debris of a range of mountains; but to blend together, in equal mixture, the debris of many such ranges, as well as to grind down their roughnesses and angularities, and fill up the interstices with the sand and gravel produced in the process, must be a work of time. I have examined with much interest, in various localities, the fragments of ancient rock inclosed in this formation. Many of them are no longer to be found *in situ*, and the group is essentially different from that presented by the more modern gravels. On the shores of the Frith of Cromarty, for instance, by far the most abundant pebbles are of a blue schistose gneiss: fragments of gray granite and white quartz are also common; and the sea-shore at half ebb presents at a short distance the appearance of a long belt of bluish gray, from the color of the prevailing stones which compose it. The prevailing color of the conglomerate of the district, on the contrary, is a deep