

of Moray, Cromarty, and Ross are covered by red boulder-clays ; a similar red boulder-clay overlies the red sandstone rocks of Forfarshire ; and I was first apprised, when travelling in Banffshire some years ago, that I had entered on the district of the Old Red, by finding the boulder-clay assuming the familiar brick-red hue. Over the pale Oolites of Sutherlandshire, as at Brora and Golspie, it is of a pale yellow tint, and of a yellowish red over the pale Old Red Sandstones of the long flat valley known as the *Howe* of Fife. Again, in the middle and north-western districts of Caithness, where the paving flagstones so well known in commerce give to the prevailing rocks of the district a sombre tint of grey, the boulder-clay assumes, as in the neighbourhood of Wick and Thurso, the leaden colour of the beds which it overlies ; while over the Coal Measures of the south of Scotland, as in East and West Lothian, and around Edinburgh, it is of a bluish-black tint,—exactly the colour which might be premised, on the polishing theory, from the large mixture of shale-beds, coal-seams, and trap-rocks, which occurs amid the prevailing light-hued sandstones of the deposits beneath. Of course, this condition of resemblance in average colour between the rocks and the boulder clays of a district is but of *general*, not *invariable*, occurrence,—the boulder-clay is not *invariably* the dressings of the rocks beneath. We may occasionally find the trail of the rubbings of one tract overlying, in an easterly direction, the deposits of a different one ; just as we would find the rubbings of variously-coloured pieces of pavement laid down to form a floor, and then polished square by square where they lay, encroaching, the débris of one square on the limits of another, in the direction of the outward stroke of the polisher.

But while we thus find all the conditions of a raft-formed deposit *in* or *associated with* the boulder-clay,—such as grooved and furrowed rocks beneath, scratched and polished stones, lined longitudinally, enclosed in it, accompanied, in