

LECTURE FOURTH.

The Continuity of Existences twice broken in Geological History—The three great Geological Divisions representative of three independent Orders of Existences—Origin of the Wealden in England—Its great Depth and high Antiquity—The question whether the Weald Formation belongs to the Cretaceous or the Oolitic System determined in favour of the latter by its Position in Scotland—Its Organisms, consisting of both Salt and Fresh Water Animals, indicative of its Fluvial Origin, but in proximity to the Ocean—The Outliers of the Weald in Morayshire—Their Organisms—The *Sabbath-Stone* of the Northumberland Coal Pits—Origin of its Name—The Framework of Scotland—The Conditions under which it may have been formed—The Lias and the Oolite produced by the last great Upheaval of its Northern Mountains—The Line of Elevation of the Lowland Counties—Localities of the Oolitic Deposits of Scotland—Its Flora and Fauna—History of one of its Pine Trees—Its Animal Organisms—A Walk into the Wilds of the Oolite Hills of Sutherland.

THE mystic thread, with its three strands of black, white, and grey, spun by the sybil in *Guy Mannering*, formed, she said, a 'full hank, but not a haill ane : ' the lengthened tale of years which it symbolized ' was thrice broken and thrice to asp.' I have sometimes thought of that wonderfully mingled and variously coloured thread of existence which descends from the earliest periods known to the geologist down to our own times, as not unaptly represented by that produced on this occasion from the spindle of the gipsy. We find, in its general tissue, species interlaced with and laying hold of species, as, in the thread, fibre is interlaced with and lays hold of fibre ; and as by this arrangement the fibres, though not themselves continuous, but of very limited length, form a continuous cord, so species of limited duration, that at certain parts in the course of time began to be, and at certain other parts became extinct, form throughout