

INTRUSIVE DIKES OF EATHIE.

THERE are appearances in connexion with the Lias of Eathie which seem well suited to puzzle the geologist, and which have, in fact, already puzzled geologists not a little. We find them traversed by intrusive dikes of what seems a greyish-coloured trap, extremely obstinate in yielding to the hammer, and which stand up among the softer shales like the walls of some ruined village. They are trap-dikes in every essential except one ;—they occur in every possible angle of disagreement with the line of the strata : in some places they enclose the shale in slim insulated strips, as a river encloses its islands : in others they traverse it with minute veins connected with the larger masses, in the way in which granite is so often seen traversing gneiss : in yet others the limestone in contact with them seems positively altered ;—the blue nodule has at the line of junction its strip of crystalline white, and the shale assumes an indurated and venous character : the dikes are, in short, trap-dikes in every essential except one ; but the wanting essential is of importance enough to constitute the problem in the case ;—they are not composed of trap. Some of our mineralogists have been a good deal puzzled by finding *crystals* of sandstone as regular in their planes and angles as if formed of any of the earths, or salts, or metals, whose law it is to build themselves up into little erections correctly mathematical in every point and line ; and they have read the mystery by supposing that these sandstone crystals are mere casts moulded in the cavities in which crystals had once existed. The puzzle of the Lias dikes is of an exactly similar kind : they are composed, not of an igneous rock, but of a hard calcareous sandstone, undistinguishable in hand-specimens from an indurated sandstone of the Lower