

of one plant entering into the stem of another, and becoming incorporated with its substance ; and we are told by Professor Balfour, that this kind of chance adhesion is often seen in the branches of the ivy ; and that not unfrequently, by a similar process, the roots of contiguous trees are united. Nor does it seem improbable, that what occasionally takes place among the higher plants of the present time may have been common among some of the comparatively low plants of so ancient a period as that of the Middle Old Red Sandstone. This formation of the gray tilestones has furnished one vegetable organism apparently higher in the scale than those just described, in a well-marked *Lepidodendron*, which exhibits, like the *Araucarian* of the Lower Old Red, though less distinctly, the internal structure. It was found about sixteen years ago in a pavement quarry near Clockbriggs,—the last station on the Aberdeen and Forfar Railway as the traveller approaches the town of Forfar from the north. I owe my specimen of this ancient *Lepidodendron* to Mr William Miller, banker, Dundee, an accomplished geologist, who has taken no little trouble in determining its true history. He has ascertained that it occurred deep in the rock, seventy-one feet from the surface ; that the beds which rested over it were composed, in the descending order, first, of a conglomerate thirty feet thick ; secondly, of a red rock four feet thick ; thirdly, of twenty-eight feet of the soft shaly substance known to the quarriers as caulm ; and fourthly, of more than nine feet of gray pavement, immediately under which, in a soft, argillaceous stratum, lay the organism. It was about four feet in length, bulged out at the lower end into a bulb-like protuberance, which may have been, however, merely an accidental result of its state of keeping ; and threw off, at an acute angle, two branches about a foot from the top. It was covered with a bark of brittle coal, which is, however, wanting in all the fragments