

the carbonaceous form so common in the other two formations, but as mere coloured films of a deeper red than the surrounding matrix. Further, I have detected in the same beds, and existing in the same state, fragments of a striated organism, which may have formed part of either a true calamite, like those of the Coal Measures, or of some such striated but jointless vegetable as that of the Lower Old Red of Thurso and Lerwick.\* With these markings ferns are occasionally found;

\* Since these sentences were written I have seen a description of both the plants of the Upper Old Red to which they refer, in an interesting sketch of the Geology of Roxburghshire by the Rev. James Duncan, which forms part of a recent publication devoted to the history and antiquities of the shire. "In the red quarry of Denholm Hill there occurs," says Mr Duncan, "a red stratum of soft yellowish sandstone, which contains impressions of an apparent fucoid in considerable quantity. One or several linear stems diverge from a point, and throw off at acute angles, as they grow upwards, branches or leaves very similar to the stem, which are in turn subdivided into others. The width of the stalks is generally about a quarter of an inch, the length often a foot. The colour is brown, blackish-brown, or grayish. The same plant also occurs in the white-stone quarry [an overlying bed] in the form of Carbonaceous impressions. There can be little doubt that it is a fucoid. The general mode of growth greatly resembles that of certain sea-weeds; and in some specimens we have seen the branches dilated a little at the extremities, like those of such of the living fuci as expand in order to afford space for the fructification. It is deserving of remark, that the plant is seldom observed lying horizontally on the rock in a direction parallel to its stratification, but rising up through the layers, so as only to be seen when the stone is broken across; as if it had been standing erect, or kept buoyant in water, while the stony matter to which it owes its preservation was deposited around it." Mr Duncan, after next referring to the remains of what he deems a land plant, derived from the same deposit, and which, though sadly mutilated, presents not a little of the appearance of the naked framework of a frond of *Cyclopteris Hibernicus* divested of the leaflets, goes on to describe the apparent calamite of the formation. "The best preserved vegetable remain yet found in Denholm Hill quarry," he says, "is the radical portion of what we cannot hesitate to call a species of calamite. The lower part is regularly and beautifully rounded, bulging and prominent nearly four inches in diameter. About an inch from the bottom it contracts somewhat suddenly in two separate stages, and from the uppermost sends up a stem about an inch in diameter, and nearly of the same length, where it is broken across. At the origin of this stem the small longitudinal ridges are distinctly marked; and the whole outline of the figure, though converted into stone, is as well defined as it