

Silurian seas, and which, from their perishable nature, have lost all trace of their original forms. In the ashes of an anthracite of our Scottish Silurians which occurs near Traquair, Professor Nicol of Cork observed, under the microscope, tubular fibres unquestionably vegetable, but which he thought indicative of vegetation of a higher class than our existing algæ. There is, however, a family of marine plants, now represented on our coasts by a single species, which had, I am inclined to think, its representatives at a very early period in our seas ; and which, had it existed during the Silurian ages, could have furnished the tubular cells. I refer to the *Zostera*, or grass-wrack, a plant of the pond-weed family, which, unlike any of the algæ, has true roots, true flowers, true seeds, tough fibrous stems, and grass-like leaves, traversed by parallel veins, and that yet lives in the sea among *laminariæ* and *floridiæ*, far below the fall of our lowest stream-tides. It is worthy of notice, too, that the *Zostera marina*, our recent British species, when driven ashore on parts of our coasts at certain seasons, as it always is in great abundance, decomposes into a substance much resembling peat, that, unlike the brown pulpy mass into which the algæ in similar circumstances resolve, retains distinct trace of the vegetable fibre. It is further noticeable, that some of the vegetable remains of the Old Red Sandstone,—the oldest specimens furnished by our Scottish flora that present aught approaching distinctness of outline,—exhibit several traits that remind us of the leaves of gigantic *Zostera*. The vegetable impressions of some of the Caithness flagstones have rectilinear edges, and are traversed by parallel lines, scarce less strongly marked than the ridges of the Calamite ; but, from the extreme thinness of the impression left in the rock, they seem rather the veins of leaves than the fluted markings of stems. It is quite possible, therefore, that though the anthracite beds of our Scottish Silurian system give evidence of the existence of a higher vegetation than that of the algæ,