

it will here be necessary to present the student with more ample details. The excellent introductory botanical works of Dr. Lindley, and Professor Henslow, convey full information on this, and every other department of the science, and should be consulted by those, who intend to make this branch of Geology their particular study. For the general reader, and amateur collector, the following notice of a few obvious essential characters of vegetable organization, will probably afford sufficient information.

Every plant is essentially an aggregation of cells ; and the most simple forms of vegetation consist of a congeries of cells (*cellular tissue*) of the same kind, and have no visible fructification ; such are the sea-weeds (*algæ, confervæ, &c.*), mosses, and lichens. In the more complex tribes the cells become variously modified, are elongated into tubes or vessels (*vascular tissue*), some of which possess a spiral structure, and others have their sides studded with little glands. The vascular tissue consists of two kinds of vessels. 1. The *spiral* or *tracheæ* : these are membranous tubes, with conical extremities, having within, a coil of elastic fibre spirally twisted, and capable of being unrolled (*Lign. 1, b.*). 2. The *ducts* ; which are a modification of the structure of the spiral vessel ; their extremities are rounded or conical, and their sides marked with transverse lines, rings, or bars. Their functions appear to be different from those of the spiral vessels, and