

work of spaces, vacant, or loosely filled with peroxide or carbonate of iron. It therefore seems certain that by some means or other the organic silica, distributed in the shape of sponge spicules and other silicious organisms in the chalk, has been dissolved or reduced to a colloid state, and accumulated in moulds formed by the shells or outer walls of imbedded animals of various classes. How the solution of the silica is effected we do not precisely know. Once reduced to a colloid condition, it is easy enough to imagine that it may be sifted from the water by a process of endosmose, the chalk matrix acting as a porous medium, and accumulated in any convenient cavities.

In various localities in the chalk and green-sand of the North of England the peculiar bodies which are called *Ventriculites* are excessively abundant,—elegant vases and cups with branching root-like bases, or groups of regularly or irregularly spreading tubes, delicately fretted on the surface with an impressed network like the finest lace. In the year 1840 the late Mr. Toulmin Smith published the result of many years' careful study of these bodies, and gave a minute and most accurate description of their structure. He found them to consist of tubes of extreme tenuity, delicately meshed, and having between them interspaces usually with very regular cubial or octohedral forms. These tubes in the *Ventriculites* found in chalk were empty, or contained a little red ochreous matter; but when a *ventriculite* or a portion of one happened to be entangled in a flint, it was either incorporated with the flint or replaced by silica. Mr. Toulmin Smith supposed that the skeleton of the *ventriculite* had been originally calcareous,