

of cells are formed, and in several the multiplication goes on in a regular arithmetical progression; but in others the cells are heaped together without apparent regularity, as in *Alcyonella* and *Alcyonidium*, where the softness of all the parts seems to allow of a non-regulated succession of buds. The general disposition of the cells, however, in this order is certainly after the quincunx, affording examples which the learned Sir Thomas Browne would have gladly adduced in proof that "Nature geometrized and observeth order in all things, and of the generality of this mystic figure." Nor indeed were they entirely overlooked by this observant physician. "The spongy leaves of some seawracks," he says, "Fucus, Oaks, in their several kinds, found about the shoar, with ejectments of the Sea, are over-wrought with net-work elegantly containing this order (the quincunx): which plainly declareth the naturality of this texture; and how the Needle of Nature delighteth to work, even in low and doubtful vegetations."*

Whilst the composite individual is thus increased by gemmules or buds, the species is propagated and diffused by means of ciliated ova, of which the source has been a matter of some difference of opinion among naturalists. There appear at certain seasons, on many of these zoophytes, round pearly testaceous bodies which are placed on or above the mouths of the cells. Ellis believed these to be their matrices or ovaries "which, in time," he says, "may unfold and extend themselves into those many beautiful tree-like forms that we find them in."† This opinion was also adopted by Pallas, because of the seasonal appearance of the bodies in question, and because they are found only over full-grown and matured cells.‡ No one after this seems to have held other belief, § until recent discoveries, demonstrating the complexity of the organization of this order, rendered the exist-

* *The Garden of Cyrus*, p. 33. Lond. 1686. folio.

† *Essay on Corallines*, p. xi.—Ellis's earlier conjectures, which, being erroneous, it is unnecessary to detail, may be seen in *Phil. Trans. abridg.* (an. 1753) x. p. 346.

‡ *Elench. Zoophytorum*, p. 36.

§ "I am inclined to consider them as ovaria enclosing the germs of future individuals; having observed that these vesicular bodies are sometimes whole, and in this case I have always found them filled with small globular bodies." *Lamouroux, Corall.* p. 58.