

creting follicles, and distinct oral, cardiac, pyloric, and anal orifices. The whole floats freely in a visceral cavity, the boundaries of which are formed by the delicate transparent parietes of the animal; the space between the alimentary canal and the parietes being occupied by a clear fluid, and by the muscles which act upon the animal."*

Let us now suppose that the polypes are in a state of extrusion and fully expanded, as represented in Fig. 39, *a*; all the cilia in play, and the water whirling in rapid streams up and down the opposite sides of the tentacula, carrying with them nutriment and the breath of life. All is quietness and security around, and the little creatures are evidently in a state of happiness and enjoyment: no one who has witnessed the microscope scene,—the myriads of the little flosculous heads that pullulate and blossom over the entire polypidom, as thickly peopled as the swarming hive, can have any doubt of this,† especially when he remarks the acuteness and vivacity of their sensibilities and actions, for, under his eye, one will ever and anon suddenly sink out of view, hide itself within the cell, again on a sudden emerge and expand, or, it may be, lay itself down in repose and concealment, until digestion has freed it from a state of repletion, or forgetfulness has removed the alarm of an enemy.‡ These positions are assumed with such a rapidity that the eye cannot trace the steps of the process; and large glasses and minute skill are required to reveal to us its mechanism.

* Farre in lib. cit. p. 393.

† "The heart is hard in nature,——
—— ——— that is not pleased
With sight of animals enjoying life,
Nor feels their happiness augment his own."
Cowper.

‡ "No trace of either nerves or ganglia could be detected; yet the attributes of a nervous system were so clearly exhibited as to leave no doubt but that this must exist, and probably in some degree of perfection. Not only was the delicacy of their sense of touch very strongly marked, but the operations also consequent upon the enjoyment of such a sense were sometimes singularly striking. This is seen in the instant retiring of the animal on the slightest alarm, and the caution which it sometimes shows before emerging again from its cell; in the obvious selection of its food; and in the pertinacity with which it refuses to expose itself to water that has become in the least degree deteriorated."—*Farre* in *Phil. Trans.* an. 1837, p. 414.