

free, except at their origins; when unfolded they are twice as long as the shell, and in a state of contraction are disposed in six or seven spiral gyrations, which decrease toward their extremities. The mechanism by which the arms is extended is most beautiful and simple; the stems are hollow from one end to the other, and are filled with fluid, which being acted upon by the spirally disposed muscles composing the walls of the canal, is forcibly injected towards the extremity of the arms, which are thus unfolded and protruded. The respiration, as well as the nutrition, of animals living beneath a pressure of from sixty to ninety fathoms of seawater, are subjects of peculiar interest, and prepare the mind to contemplate, with less surprise, the wonderful complexity exhibited in the minutest parts of the frame of these diminutive creatures. In the stillness pervading these abysses, they can only maintain existence by exciting a perpetual current around them, in order to dissipate the water already loaded with their effete particles, and bring within the reach of their prehensile organs the animalculæ adapted for their support.

The spiral disposition of the arms is common to the whole of the brachiopodous genera, whose organization has hitherto been examined; and it is therefore probable, that in the fossil genus *Spirifer*, the entire *brachia* were similarly disposed, and that the internal, calcareous, spiral appendages were their supports. If indeed the *brachia* of *Ter.*