

it would have been if it had been obtained from a less depth, the sudden change of pressure having no doubt very much disarranged its economy. It, however, swam round and round a shallow tub in which it was placed, moving after the manner of all Cephalopods, backwards, that is with the shell foremost. It floated at the surface with a small portion of the top of the shell just out of the water, as observed by Rumphius. The shell was maintained with its major plane in a vertical position, and its mouth directed upwards.

The floating of the shell, as described, no doubt was due to some expansion of gas in the interior, occasioned by diminished pressure, for the animal seemed unable to sink. It moved backwards slowly by a succession of small jerks, the propelling spouts from the siphon being directed somewhat downwards, so that the shell was rotated a little at each stroke, upon its axis, and the slightly greater area of it raised above the surface of the water.

Occasionally, when the animal was frightened or touched, it made a sort of dash, by squirting out the water from its siphon with more than usual violence, so as to cause a strong eddy on the surface of the water.

On either side of the base of the membranous operculum-like headfold, which, when the animal is retracted, entirely closes the mouth of the shell, the fold of mantle closing the gill cavity was to be seen rising and falling, with a regular pulsating motion, as the animal in breathing took in the water, to be expelled by the siphon.

The tentacular-like arms contrast strongly with those of most other Cephalopods, because of their extreme proportional slowness, and also their shortness, though they are not shorter proportionately than those of the living *Sepia*. Whilst swimming they are extended radially from the head, somewhat like the tentacles in a sea anemone; but each pair has its definite and different direction, which is constantly maintained. This direction of the many pairs of tentacles at constant but different angles from the head, is the most striking feature to be observed in the living *Nautilus*.

Thus, one pair of tentacles was held pointing directly downwards. Two other pairs, situate just before and behind the eyes, were held projecting obliquely outwards and forwards, and backwards respectively, as if to protect the organs of sight. In a somewhat corresponding manner, the tentacular arms of the common cuttle-fish, whilst living, are maintained in a marked and definite attitude, as may be observed in any Aquarium.

The very great abundance of the shells of the Pearly *Nautilus* is most strangely contrasted with the rarity of the animal