

nites and Nautilites. It is probable that the animals that had straight chambered shells possessed greater facility of rising to the surface than the spiral ones, and accordingly we find them chiefly in the oldest and lowest formations. The animals of this class having heads and various senses seem to rank high in the scale of sentient organic beings; but they are not numerous, till we rise in the secondary strata, above the coal formation.

Very few spiral unchambered shells occur in the transition rocks*; for these animals crawl on their bellies like the snail, and do not seem fitted to live in deep water, unless, like the *Helix Janthina*, which nearly resembles the snail and lives in the Southern Ocean, they had little appendages like bladders, which enabled them to rise to the surface. Univalve unchambered spiral shells, become numerous in the upper strata, probably from the circumstance that these strata were deposited under shallower seas.

With respect to that class of the testaceous Mollusca which did not enjoy the privilege of having heads and eyes, their motives for travelling, whether for pleasure or necessity, must have been few indeed; and they may be supposed to enjoy life as well in the deepest recesses of the ocean, as nearer its surface. The tenants of bivalve shells, called by Cuvier, *Acephales*†, have, however, a power of locomotion which they effect, some by thrusting out a membrane called a foot, and with it they also attach themselves to rocks or other bodies, by a number of filaments called the Byssus, which they can remove at pleasure: others have two tubes, with which they force out water with considerable violence, and impel themselves in an opposite direction; and others again, by a strong muscular action in opening and shutting their shells, can jump twelve inches at one leap.

All these modes of motion, however, though sufficient for the wants of the animal, are very limited in their operation, and are equally adapted for animals in deep or shallow seas, in rivers or lakes: accordingly, we find numerous testaceous Mollusca of this class, not only in the transition, the secondary, and the tertiary strata but at various depths in our present seas and lakes.

* All unchambered spirals shells were occupied by animals which had an organ of motion placed under the body, as in snails: they had heads, and are called by Cuvier, *Gasteropodes*.

† *Acephales*—having no heads.