

tions, as in the nautilus. Some orthoceratites are two or more feet in length: the animal contained in them must have been of vast size. Orthoceratites are the most ancient of fossil chambered shells, and are chiefly found in transition limestone.

Fig. 9. The Belemnite is a taper straight shell with an internal chambered cone. In some species there is no chambered cone. This unchambered internal shell may have performed the same office as the internal bone of the *sepia officinalis*, or cuttle-fish. It is deserving notice, that the coat of the belemnite, when slightly burnt, yields the odour of burnt horn, which tends to confirm the supposition that internal shells were corneous substances.

Fig. 13. The Nummulite, (so called from its resemblance to a small Roman coin) has nearly a flat or lenticular form. It has within it a cavity, divided by partitions into numerous small cells, without a siphon or siphunculus; part of the outside of the shell is removed in the figure, to show the internal chambered structure. Whether the animal belonged to the genus *Sepia* is not known.

This little fossil forms entire calcareous hills and immense beds of building stone in some countries. "It is of stone composed of these shells that the Pyramids of Egypt are constructed." Cuvier, *Règne Animal*.

All the above genera of chambered shells, with the exception of the *Nautilus* and *Spirula*, are fossil.

We are come now to other orders of molluscous animals, whose organization is less complex, and their powers of motion more limited, than in the cephalopodes. These are the inhabitants of bivalve and univalve shells. The first are called by Cuvier *Acephalous*, being without heads. Of these the oyster offers the most familiar example. Most of the species are permanently attached to rocks, and have no member to protrude beyond the shell. Those species of the oyster family that are not attached permanently, can only move by driving out the water, as they suddenly shut the valves of the shell. Species of other genera of bivalves, though without heads, possess the power of locomotion.

Fig. 16. represents the animal and shell of a *Bucardium*.

This animal puts out a triangular body, formed of two pipes or tubes, separated and flat, but which becomes round as the water enters by the lower tube, and goes out at the upper one. The tubes are surrounded with hairs. When the animal is disturbed, or hears a noise, it throws out water to the distance of a foot. When it wishes to change its quarters, it protrudes a long foot, and seeks, with the further end of it, some object or point of support, to which it fixes it; the animal then draws back its shell about two inches at a time, till it has attained or reached the spot where it desires to abide. Cuvier regards one of the tubes as suited for respiration by the absorption of water, and the other for its excretions. He further states, that bivalves which have these tubes live buried in mud or sand.

The animals inhabiting univalve shells are chiefly classed by Cuvier as *Gasteropodes*, from their moving in their stomachs like snails. In most species of univalves, the animal has a head with two eyes, and a trunk resembling the trunk of an elephant; with this trunk it seizes its food; and in some species the trunk is used for piercing other shells. The animal crawls upon a fleshy foot, near the end of which there is