

strength than is possessed by the porcellaneous shells, which, in consequence of the tenuity and uniform intermixture of the animal cement with the calcareous particles, present a harder and more transparent, but, at the same time, more brittle compound. It is these qualities, together with their smooth enamelled surface, often beautifully variegated with brilliant colours, and presenting altogether a close resemblance to porcelain, that have procured them the name they bear.

When the transparency and brittleness of these shells are very great, they have been considered as forming another class, and they have been termed *Vitreous shells*, from their making a nearer approach to glass. Some shells present intermediate textures between the membranous and the porcellaneous.

All those surfaces of the shell on its outer side which are not in contact with any part of the animal, are originally covered with an epidermis:\* which, however, is frequently rubbed off by friction.

The process employed by nature for the formation and enlargement of the shells of the mollusca was very imperfectly understood prior to the investigations of Reaumur, who may be considered as having laid the first solid foundations of the theory of this branch of comparative physiology.† His experimental inquiries have fully established the two following general facts: first, that the growth of a shell is simply the result of successive additions made to its surface, and secondly, that the materials constituting each layer, so added, are furnished by the organized fleshy substance, which he termed the skin of the animal, but which is now known by the name of *the mantle*, and not by any vessels or other kind of organization belonging to the shell itself.

If a portion of the shell of a living snail, for instance, be removed, which can be done without injury to the animal, since it adheres to the flesh only in one point, there is

\* This membrane has been termed the *Periastracum*.

† Mémoires de l'Académie des Sciences, 1709, p. 367, and 1716, p. 303.