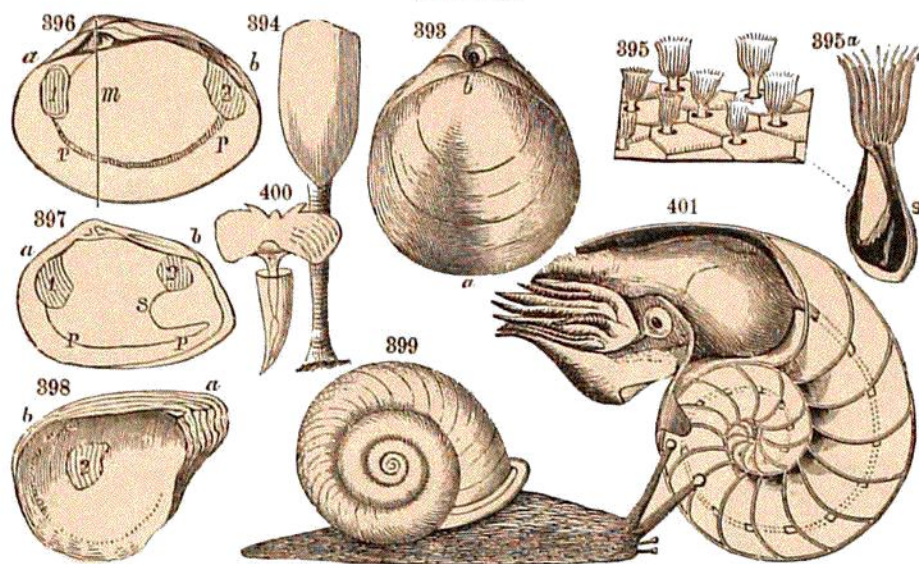


two (1, 2, Figs. 396, 397), rarely more, adductor muscles, and also an impression of the mantle or pallium, which is concentric with the lower and hinder margin of the shell in *integripallial* species, and has a sinus posteriorly in *sinupallial* species. The mantle is large, concealing the body, with the two sides either free at the lower edge, or not con-

393-401.



MOLLUSKS, Figs. 393-401. — (1) *Brachiopods*: 393, *Terebratula impressa*, of the Oölyte; 394, Lingula on its stem. (2) *Bryozoans*: 395 ($\times 8$), 395 a, genus *Eschara*. (3) *Lamellibranchs*: 396, 397, 398, the Oyster. (4) *Gastropods*: 399, *Helix*. (5) *Pteropods*: 400, genus *Cleodora*. (6) *Cephalopods*: 401, *Nautilus* ($\times \frac{1}{2}$).

nected (as in the Oyster, etc.), or else grown together into a sac (*Venus*, *Mya*); and in the latter case usually having the sac terminate behind in two tubes, as in *Mya*, *Solen*, one incurrent, for receiving water, to the gills, and food, and the other excurrent. Imperfect eyes or eye-spots exist in the mantle of some species. Gills are usually *lamellar* organs (whence the name, *Lamellibranchs*) situated between the mantle and the body. In a few boring species, the shell includes, or is followed by, a long, calcareous tube, which may be 1 to 2 feet long in *Teredo*, the timber-borer.

4. Molluscoids.

1. **Brachiopods.**—Brachiopods (Figs. 393, 394, and 402-430) have a bivalve shell, and in this respect are like the Lamellibranchs or ordinary bivalves. But the shell, instead of covering the right and left sides, covers the dorsal and ventral sides. Moreover, it is *symmetrical in form, and equal, either side of a vertical line ab*, Fig. 407. The valves, moreover, are almost always unequal; the larger is the ventral, and the other the dorsal. There is often an aperture at the beak (near *b*, Fig. 393), that in the young state and often through the adult gives exit to the pedicel, by means of which the animal is fixed to some support. Species having the two valves hinged together are called *Articulate* Brachiopods, and those that are hingeless are the *Inarticulate*. Some of the genera of the former group are *Orthis*, *Orthisina*, *Spirifer*, *Rhynchonella*, *Strophomena*, *Pentamerus*, *Terebratula*; and some of those of the latter are *Lingula*, *Lingulella*, *Obolus*, *Obolella*, *Discina*, *Crania*.

Brachiopods have a *pallium*, but no independent branchial leaflets; and a pair of coiled fringed arms, which in some cases may be extruded, — whence the name Brachiopod, meaning *arm-like foot*. For the support of these arms, there are often bony processes (Figs. 402, 406, and 409). These calcified arm-supports, when present, are 2 thin lamellæ, attached to the interior of the dorsal valve; they are short and curved in the