



ANATOMY OF THE OYSTER SHELL

- All species of oysters share the same common anatomical parts. That is, there is a **right shell** and a **left shell**. The **right shell** is the top shell. The **left shell** is the one attached to the substrate and is called the bottom shell or cup. The left shell is usually more curved or cup-shaped than the right shell.
- Oysters belong to the group Bivalvia and have two shells hinged together. The end with the hinge is referred to as the **anterior end**. The opposite end is referred to as the **posterior end**.
- The **mantle** produces layers of tissue to form the shell. Calcium carbonate composes the chalky middle layer. The innermost layer is the **nacre**.
- The **umbo** is the portion of the shell that formed when the oyster was a veliger larva. It is on the anterior end of the shell near the hinge. One can see concentric growth lines around the umbo. These are not uniformly secreted since they can be influenced by environmental changes, such as temperature, food, stress, and disease. These factors affect the oyster's ability to produce more shell tissue.
- The **hinge** is the area where the two valve join together. It consists of three parts. On the hinge there are small projections, **hinge teeth**, that align the valve and enable it to close correctly. Oysters have very small hinge teeth. Most bivalves have more prominent teeth that can be used to help identify the species. The hinge has two ligaments. The **external ligament** is flexible and provides the axis of movement for the two halves of the shell. The internal ligament is called the **resilium**. When the adductor muscle of the oyster is relaxed, the external ligament and resilium work together to open the shell. To close its shell, the oyster contracts its adductor muscle.

