



Oyster restoration made easy.
Natural shoreline erosion control.

Oyster Reef Pedigree Certificate

Congratulations on your new ownership of a genuine ReadyReef Oyster Community Reef. This reef represents not only a future of improved water quality and multi-species habitat, it is also a direct descendant of the highly evolved shoreline ecology that greeted the first Native American humans and European settlers on the North American continent. The word Chesapeake derives from an Algonquian word meaning 'Great Shellfish Bay'.¹

Native to the eastern seaboard and Gulf of Mexico coast of North America, *Crassostrea Virginica* (or Eastern Oyster) is the succession king of sessile (fixed in one place) shellfish. Once numbering in the trillions, the oyster dominated the shallow and intertidal waters. Not only did the oyster filter the water by eating algae, its cemented, ancestral shellcore reefs with living exoskeleton lined the shoreline and protected the marsh roots from scouring waves. The marsh grasses rooted the soil, protecting it from overtopping waves, and captured any erosion from run off. So even with rising sea levels from glacial melting, the Chesapeake Bay waters were Caribbean clear.

From a habitat standpoint, many other marine species find shelter and food within the complex reef matrix. Crabs, shrimp, small fish, and bloodworms venture out from and retreat back to the oysters. Molting crabs check in and out for their hazardous growth spurt. Foraging game fish and herons regularly hunt the reefs.

Growing above the killing bottom (where disease lives in the mud, low oxygen occurs, multiple predators thrive, sediments smother life, and toxins settle), oysters procreate in the tidal flow and live healthy lives. They are the keystone species for a productive body of water.

Today, with less than 1% of the original 17th-century population, your populated reefs will become brood stock for future generations. Eastern oysters can reach sexual maturity at four months old. The eastern oyster has a complex reproductive cycle. They are protandric. Most spat are male, but they can later change to female, and even back again. The cycle begins during late summer and autumn months with the storage of glycogen energy reserves. This glycogen is then used to support gametogenesis during the next winter and early spring when food intake is at a minimum. (Glycogen also keeps the oysters from freezing in the cold.) The gametes begin to mature in late spring and then, from June to August they are spawned into the water column, where fertilization occurs (why you don't eat oysters in months without "R"s.)

Oyster beds have an estimated 50 times the surface area of an equally sized flat bottom. However, if they begin life on a flat bottom, their chances of survival are very slim. So, you have given them a habitat upwards into the water column, their natural thriving zone. Enjoy the awesome show that is a living reef community.

Thank you for your participation in the restoration of this fantastic and, scientifically speaking, complex species. From its first arrival into the Bay 5,000 years ago, you are now a force in a new Renaissance of the Virginia Oyster.