

The Oyster In Chesapeake History

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"The abundance of oysters is incredible"

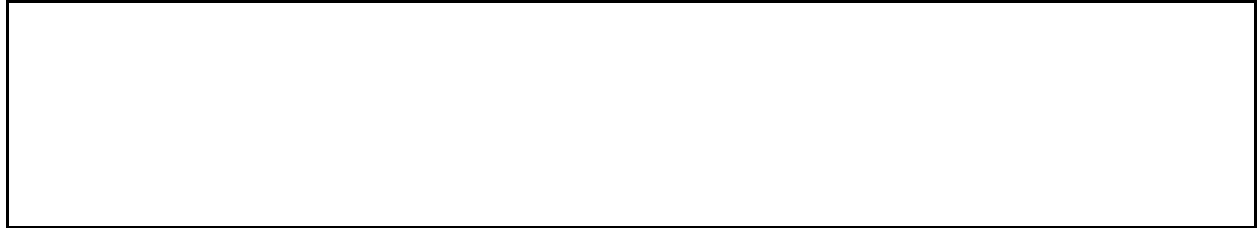
The Chesapeake is famous for its oysters. One translation of the word Chesapeake from the Algonquian language is "Great Shellfish Bay." Oysters have influenced the nature of the Chesapeake estuary and of those who have dwelled along its shores for centuries.

Oysters are found around the world, and the variety that lives along the Atlantic and Gulf coasts of North America is the American oyster, which has the scientific name *Crassostrea virginica*. The species name, *virginica*, was assigned because of the large population of oysters in the Virginia waters of the Chesapeake. It is hard to image how **abundant** this shellfish once was in the Bay. One of the early English settlers, William Strachey, wrote in 1612 that "Oysters there be in whole banks and beds, and those of the best. I have seen some thirteen inches long." (Strachey 1953) A Swiss visitor to the Chesapeake in 1701, Francis Louis Michel, was amazed at the number of oysters. He observed, "The abundance of oysters is incredible. There are whole banks of them so that the ships must avoid them. . . . They surpass those in England by far in size, indeed, they are four times as large. I often cut them in two, before I could put them into my mouth." (Michel 1916)

These numbers were the result of ideal conditions for oysters in the Bay. It offered relatively shallow waters that were rich in nutrients and with generally firm bottom conditions. Forest-covered lands that bordered the rivers and creeks deterred erosion, which meant that little dirt would cloud the waters and clog the gills of oysters. Ocean water from the Atlantic was diluted by fresh water flowing into the Chesapeake to produce the moderately salty water in which oysters thrive. Apparently, no serious diseases infected the shell beds. Finally, since the number of people living in the Chesapeake region for most of its existence was low, and since they had relatively simple technology for harvesting shellfish, oysters could grow and flourish.

Such huge numbers of shellfish had a major impact on the environment. Oysters are filter feeders, which means that they remove nutrients from the water as they siphon it through their gill system. This filtering process removes the phytoplankton and other small organisms that grow in the water. Each oyster is a small, water- treatment plant that cleans the water passing through it as it feeds. The effect of millions and millions of oysters feeding each day was to keep the waters of the Chesapeake clear and **pristine**. Biologists have estimated that when the English settlers reached Virginia and Maryland in the 1600s, oysters were filtering the entire Chesapeake Bay once a week. The result was waters of remarkable clarity, even down to depths of twenty feet or more.

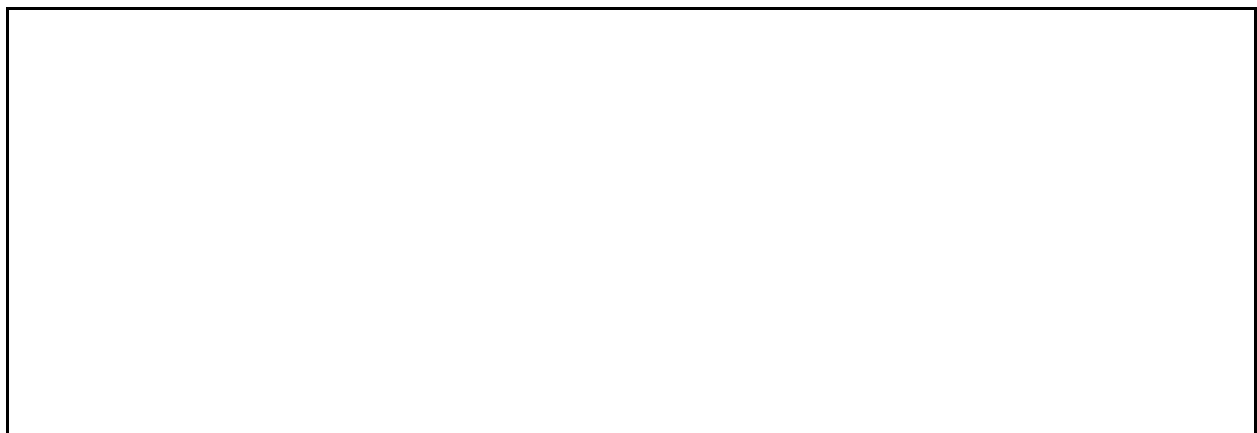




Oysters first colonized the Chesapeake Bay around 5,000 years ago. Very soon thereafter, people began eating oysters. The earliest evidence of oyster use found thus far in the region dates to around 4,500 years ago. Shell piles, called middens, were formed as people used the shellfish then dumped the empty shells in the same location repeatedly over the centuries. The earliest middens have oysters mixed with soft-shell clams, ribbed mollusks, periwinkles and other shellfish, showing that the Chesapeake Indians were initially eating a wide variety of species. Over time, use of the other types declined, and oysters became the preferred shellfish of the Chesapeake people (Waselkov 1982; Potter 1993). For them, oysters were especially important in the late winter and spring, when other food stocks began running low.

As noted above, the European **settlers** were amazed at the quantities of oysters in the bay and almost immediately began eating them. Oysters soon became an important part of the diet. Saturday was the normal day for harvesting oysters. Study of the shells from sites indicate that colonists tended to collect oysters from shallow waters near shore, the same habitat favored by the Chesapeake Indians. People probably waded out and picked up the oysters, and used boats and short rakes to get them from slightly deeper areas. As is true today, oysters were only to be eaten in months with an “R”. This idea is an ancient one and was well known in sixteenth- and seventeenth-century England. While some think it is just a superstition, there are actually good reasons for it. Among these is the fact that oysters spoil much faster in warm weather.

There is little evidence that colonists sold seafood. In the 1700s, Williamsburg and other large cities not located on the coast were regularly supplied with oysters. It is unclear how, but local fisherman probably sold the oysters to them. The preservation method typically used during colonial times for oysters was pickling.



The size of the shells shows how humans impacted the oysters: when people over-harvest shellfish, such as oysters, the average sizes decline because the oysters are not allowed to grow very large before being taken. While the average size of shells in the 1640s were over 80 mm., by 1690 the average oyster shell was only 30 mm. Shells from around 1710 were back up to around 80 mm. in size.

We noticed that when the population of these cities grew, the oyster's sizes declined. When colonists followed the government to Annapolis and the cities got smaller, the oyster's sizes grew! This suggests that oysters were being over-harvested by the late 1600s.

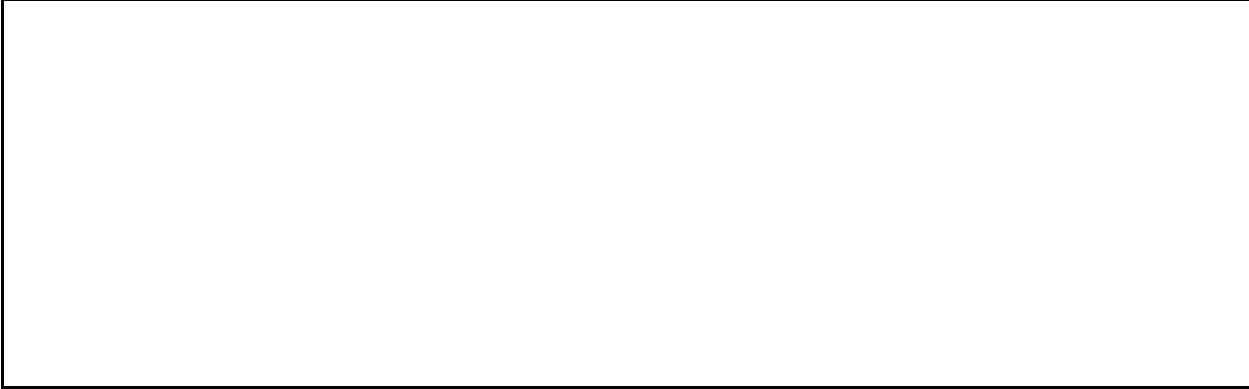


It was only in the 1800s that oysters began to be viewed as something more than a local food resource. The rise of cities with growing populations such as Baltimore, Norfolk, Washington, D.C., and Richmond spurred more demand for seafood, and harvesting of oysters and fish began to increase. The abundance of the shellfish also attracted outsiders. In the early decades of the 1800s, New England fishermen came into the Chesapeake with a **dredge device** that literally scooped up hundreds of oysters from their beds, a technology that had rapidly depleted the oyster resources in New England after its introduction in the late 1700s. The presence of dredgers taking Chesapeake oysters sparked concerns and anger. Virginia banned this equipment in 1811 and Maryland did so in 1820.

At its peak in the mid-1880s, over 20 million bushels of oysters were being taken from the Bay each year (Cronin 1986). This was the golden age for oystering on the Chesapeake. While the delicate flavor of bay oysters made them in great demand, the shells also became a significant market item. Oyster shells had been used throughout the colonial period to make mortar and plaster for buildings, but other uses were found in the Nineteenth Century. They became a valuable source of agricultural lime for farmers, served as grit in chicken feed, and were sought for road building and fill. Most of the shells for this were new but demand was such that attention even turned to old Indian shell middens. Ancient archaeological sites were literally carted away for fill and fertilizer.

In the 1890s harvests began to decline, mostly because the bay became unhealthy.. The Chesapeake became dirty because there weren't enough oysters to filter the water. In 1600 the water of the bay was completely filtered about once a week, but by the late 1900s the remaining oysters would require over one year to accomplish this same feat. (Newell 1988)





For thousands of years oysters thrived in the Chesapeake. They not only had a strong effect on the nature of the Bay itself but significantly influenced the ways of human life that developed along these shores. But in less than a century, the oyster was destroyed. Today, virtually nothing is left of the abundant oyster bars and reefs of the past. Although efforts are being made to restore the native oysters, introduce non-native oyster species, and expand oyster farming, it is uncertain whether they will meet with success. The story of the Chesapeake oysters is a classic example of a recurring tendency in human history: use it until it is gone. More thoughtful use of this abundant, delicious, and profitable resource would have allowed it to benefit far more people over a long period. We are still becoming aware of the environmental consequences from taking too many of the oysters from the Chesapeake.

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