



# Exploring Maryland's Roots



## Explore the Great Shellfish Bay Location Overview

### Intro

Even before colonists settled in Maryland, mariners from around the globe explored the shores of the Chesapeake Bay. Now you can sail around the "Great Shellfish Bay" from the point of view of one of the earliest visitors to the region.

Click on the map below to begin your adventure. Then roll your cursor over the interactive map to explore further. Click on the highlighted hotspots to read what some of the 17th century explorers thought of the area and for more information about the bay today.

### Key

A league = 3 miles

A fathom = 6 feet

A rod (roode) = 16 feet

Location	This information appears as the students "roll" their cursor over the location. It is written to make students feel as though they are on a journey.	This information appears when a student "clicks" a location.	
<b>Compass Rose</b>	You are heading west in open sea when you spot land! According to your map, you will turn north once you enter the Chesapeake Bay.	<i>"When you are come within the Capes, you enter into a faire Bay, which is navigable for at least 200 miles, and is called Chesapeake Bay, and runneth Northerly:"</i>  — Jerome Hawley and John Lewger, 1635	The compass rose tells mariners their position in relation to wind direction-north, south, east, and west.  <b>The Changing Bay:</b> Early maps of Maryland, like this one, have west at the top instead of north. This helped show sailors how to approach Maryland from the ocean. To us, it looks like the Bay is on its side.
<b>Atlantic Ocean</b>	After a two-month journey across the ocean, you can't wait to set foot on solid ground. Salt from the sea coats your skin, hair, and clothing.	N/A	Salt water from the Atlantic Ocean enters the mouth of the Bay. As you travel north up the bay, the amount of salt in the water gradually decreases.  <b>The Changing Bay:</b> The Atlantic Ocean, labeled Oceanus Orientalis on this map was also referred to as the North Sea or the Virginian Sea in colonial times. Learn more about the ocean voyage that brought the first colonists to Maryland in Journey to a New Life.
<b>Cape Charles and Cape Henry</b>	As you enter the mouth of the bay, there is land on both sides. You think you see Indians carrying long spears, but then they're gone. Was it just your imagination?	<i>"The ordinary entrance by Sea into this cuntry, is betweene two Capes, which are distant each from other, about 7 or 8 leagues, the South-Cape is Called Cape-Henry; the North, Cape-Charles. - "</i>  — Jerome Hawley and John Lewger, 1635	A <b>cape</b> is a point of land jutting out into water. Cape Charles is at the tip of a large <b>peninsula</b> , which is an area of land surrounded by water on three sides.  <b>The Changing Bay:</b> This peninsula is now called the Delmarva Peninsula. It includes parts of three states: <b>Delaware, Maryland, and Virginia.</b>



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<p><b>Lower Chesapeake Bay</b></p>	<p>This bay is awesome! It's a warm day and the water is so clear you can see the bottom. The water still tastes salty. Will it turn fresh as you travel up the bay?</p> <p>Someone just caught a huge fish for lunch. What a treat! You've been eating salt pork and stale bread for weeks.</p>	<p><i>"Chesapeake Bay flows gently between the shores; it is ten leagues wide, four, five, six, and seven fathoms deep, and teeming with fish, when it is the right time of year."</i>-Andrew White, 1634</p> <p><i>"...heaven and earth never agreed better to frame a place for man's habitation..."</i></p> <p>— Captain John Smith, 1612</p>	<p>The Chesapeake Bay is the largest <b>estuary</b> in the United States. An estuary is a body of water where salt water and fresh water mix.</p> <p>The Bay is about 200 miles long, contains more than 4,400 miles of shoreline, and holds about 18 trillion gallons of water. Its widest point measures 30 miles and its average depth is only 27 feet. Was Andrew White's estimate of the Bay's dimensions accurate? Hint: a league = 3 miles. A fathom = 6 feet.</p> <p><b>The Changing Bay:</b> Unlike the murky waters of today's Chesapeake, the water in colonial times was much clearer and cleaner. In fact the health of the bay today is determined by comparing it to the condition it was in when Captain John Smith explored the area in the early 1600s. Then, clear water revealed meadows of underwater grasses, huge oyster reefs, and many fish. John Smith believed the bay was a perfect place for people to live. But the area has suffered from the impact humans have had over the past 400 years.</p>
<p><b>Potomac River</b></p>	<p>You spend several days sailing up and down the Potomac River. You notice that the water becomes fresher the farther you sail from the bay.</p> <p>There are Indian villages along the shores and a group of friendly natives come up to your pinnacle. They are amazed by the size of your ship. Their boat looks like it's been made from a single tree.</p>	<p><i>"Into this Bay fall many goodly navigable Rivers, the chiefe whereof is Patomack...It's navigable for 140 miles, it begins to be fresh about 2 leagues above Patomack Towne."</i></p> <p>— Jerome Hawley and John Lewger, 1635</p> <p><i>"At the mouth of the river itself we perceived armed natives."</i></p> <p>— Andrew White, 1634</p>	<p>Five major rivers, as well as smaller rivers, creeks, and streams provide almost all of the fresh water to the bay. The Potomac is the largest river at nearly 400 miles long.</p> <p>Many kinds of fish spend their adult lives in the ocean but swim to fresh waters like the Potomac to have their young.</p> <p><b>The Changing Bay:</b> As long as people have lived along its shores, they have polluted the Potomac River. Native Americans moved their villages from time to time as they used up the nutrients in the soil and collected waste. Today, the polluting effects of population growth, farming, mining, clear-cutting, sewage, and garbage could be disastrous for the river if left unchecked.</p>
<p><b>St. Clement's Island</b></p>	<p>You decide to stop for a few days on St. Clement's Island to rest, wash up, and enjoy the wild nuts on the trees.</p>	<p><i>"This island abounds in cedar, sassafras, herbs and flowers to make all kinds of salads...However, since it is only four hundred acres wide, it did not seem spacious enough as a location for the new settlement."</i></p> <p>— Andrew White, 1634</p>	<p>St. Clement's Island in the Potomac River is where Maryland's colonists first landed. From there, they explored and chose a site for the new settlement.</p> <p><b>The Changing Bay:</b> Today, the island is a state park used for fishing, hiking, hunting, and picnicking. Just like in colonial times, the only way to reach St. Clement's Island is by boat.</p>



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<p><b>Islands</b></p> <p>(Students can name their own)</p>	<p>There are lots of islands all over the bay. You discover a small one near the Ile of Kent that isn't on your map. Earlier explorers have named most of the islands, but you get to name this one!</p> <p>Put your island on the map and give it a name: [ input field ]</p>	<p><i>"Kent is about twentie miles long...all along the necke where is not above 3 roode of water betwixt it and the maine land, and at either end having about 3 foote deep when the tyde is out;"</i></p> <p>— Ciprian Thorowgood, 1634</p>	<p>The largest island in the Chesapeake is Kent Island. Chesapeake Bay islands are surrounded by water and cut off from most large predators. That makes them a great home for terns, herons, ducks, ospreys, and bald eagles. Islands can also protect underwater plants and limit land erosion in shallow water areas.</p> <p>Like the ocean, the Chesapeake Bay has <b>tides</b>. The ocean's high tide pushes more water into the bay. When the ocean's tide goes out, the water from the bay rushes after it. This is called low tide.</p> <p><b>The Changing Bay:</b> At least 13 islands in Chesapeake Bay have disappeared since the area was first described and mapped by Europeans. Many more islands are in danger as the sea continues to rise because of global warming. In the next 100 years, the water level could rise as much as 3 feet.</p>
<p><b>St. Mary's City</b></p>	<p>The Indians here are very friendly. They share some bread with you made from corn and have even offered to let you stay in their village. It seems that they plan to move to another place soon.</p>	<p><i>"This place he found to be a very commodious situation for a Towne, in regard the land is good, the ayre wholesome and pleasant, the River affords a safe harbour for ships of any burthen, and a very bould shoure; fresh water and wood there is in great plenty, and the place so naturally fortified, as with little difficultie, it will be defended from any enemie..."</i></p> <p>— Jerome Hawley and John Lewger, 1635</p>	<p>In early March of 1634, Chesapeake Bay explorers chose this spot to settle. They acquired part of an Indian village from the friendly Yaocomaco Indians and named the colony St. Mary's.</p> <p>The colonists could have settled anywhere along the shores of the Chesapeake. Why do you think they decided to make this place their home?</p> <p>Find out more about the decisions early settlers made in Build Your Plantation.</p> <p><b>The Changing Bay:</b> Historic St. Mary's City is now a history and archaeology museum. While time and technology have changed the bay forever, scientists and historians are working to recreate and preserve the way this spot looked when the colonists made it their capital city.</p>
<p><b>Patuxent River and other tributaries</b></p>	<p>You notice that lots of small creeks and streams feed into the rivers.</p>	<p><i>"...Patuxent is very pleasant and commodious River; It's fit for habitation, and easie to be defended, by reasons of the Ilands..."</i></p> <p>— Jerome Hawley and John Lewger, 1635</p>	<p>Water flows into the bay from rivers and streams. These are <b>tributaries</b> of the bay. Maryland has more than 400 tributaries to the Chesapeake Bay.</p> <p><b>The Changing Bay:</b> The smallest creeks and streams can affect the health and clarity of the Bay. When pollution washes into these tributaries, it ends up polluting the bay too.</p>



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<b>Marshes</b>	Tall grasses line the shores in some places. You are bothered by the mosquitoes. But lots of small fish, birds, and other animals seem to love the marshes. When you try to walk around, your boots get stuck in the soft muddy bottom.	<p><i>"...there is great store of Marish ground also, that with good husbandry, will make as rich Medow, as any in the world."</i></p> <p>— Jerome Hawley and John Lewger, 1635</p>	<p>Marshes and wetlands are the areas between land and water. They are filled with grasses and other plants that like extremely wet soil. The soil in marshes is usually soggy (not solid) because it is underwater or frequently flooded. All kinds of insects, amphibians, reptiles, birds, and mammals live here. Shrimp, shedding blue crabs, and the young of many fish species love to hide in these areas, where the Bay waters are very shallow. Predators, including blue crabs, spot, striped bass, ducks, herons, and osprey visit the marshes to look for food.</p> <p><b>The Changing Bay:</b> There were more than 3 million acres of wetlands in the Chesapeake Bay during colonial times—more than twice what remains today. The loss of marshes because of rising sea levels affects birds, fish, turtles, and other wildlife.</p> <p>New marsh develops naturally as rising seas flood the land. But many coastal residents protect their property by building sea walls and other structures that prevent marshes and beaches from moving inland as the sea rises. If this trend continues many more of the bay's beaches and marshes will be lost.</p>
<b>Wildlife on Land</b>	<p>You decide to go ashore for a closer look at the land. While hiking through the woods, you notice that the trees are much taller than the ones you're used to seeing in England.</p> <p>On your way back to the ship, you stop to snack on some wild strawberries. You can hardly believe how much wooded land there is and how many different kinds of plants grow in the forests.</p> <p>You load up with more strawberries and some samples of the soil to take back to the ship.</p>	<p><i>"...on both sides wonderful forests of fine trees rise up on solid ground, not made inaccessible by thorn hedges and underbrush, but just as if planted spaciouly by hand so that one could easily drive a chariot drawn by four horses between the trees... the soil seems especially fertile. Far and wide in the very dense forests we tread on strawberries, vines, sassafras, acorns, and nuts. Soft black earth of about one foot is spread over rich, dense red clay. Very high trees are everywhere, except where a field is cultivated by a few people. An abundance of springs supplies drink."</i></p> <p>— Andrew White, 1634</p>	<p>Many plants grow wild in woods and fields of Maryland. They provide food and shelter for animals. Several kinds of berries, pine trees, oak trees, and hollies are among the plants that are native to Maryland, which means they have always lived here.</p> <p>The soil changes from wetlands to a mixture of clay and sand, to a dry rocky mix as you move inland away from the bay</p> <p>Changing Bay: In colonial times, a continuous line of trees grew around the bay and its tributaries. These trees held the soil in place and protected the land from storms. Today, people, houses, shopping malls, and parking lots have replaced many of the trees and other protective plants. Though strawberries and other plants are grown on farms, they're often treated with fertilizers, pesticides, and other chemicals. As a result, more soil and pollution washes into the bay when it rains. This threatens the sea life that depends on clean water for survival.</p>
<b>Fish/Shellfish</b>	Your pinnacle gets stuck on a bed of oysters and you have to wait for the tide to come in to continue your sail. You open a few oysters with your knife and eat them raw. More oysters are dropped into a stew for later.	<p><i>"In sommer no place affordeth more plentie of sturgeon...lying so thicke with their heads above water, [that] for want of nets, we attempted to catch them with a frying pan...[oysters] lay as thick as stones."</i></p> <p>— Captain John Smith, 1607-1608</p>	<p>The Algonquian Indians named this body of water Chesepiooc meaning "great shellfish bay" for good reason. The bay is rich with shellfish such as oysters, clams, and crabs. Many types of fish also live in the bay, including perch, bass, herring and shad. During the warmer months, bluefish, weakfish, croaker, menhaden, flounder and spot, enter the bay for food.</p> <p>Some of the fish and shellfish live in both fresh and salt water. For example, the blue crab travels</p>

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<b>Fish/Shellfish</b> <i>continued</i>			<p>throughout the bay — from the mouth of the bay to fresher rivers and creeks — in order to complete its life cycle.</p> <p><b>The Changing Bay:</b> The bay still produces a delicious supply of fish, crabs, and other seafood, but not nearly as much as it did in the 1600s. By some estimates, the oyster population is less than two percent of what it was in colonial times. Too much fishing and too much pollution have decreased the number of fish, shellfish, and underwater plants.</p>
<b>Wildlife on Land</b>	You plan a day trip inland to look for birds and land animals. In just a few hours your list includes more than 20 different kinds of animals and more birds than you can count.	<p><i>"No other mammals appear besides deer, beaver, and squirrels, which compare in size to European hares. Infinite is the number of birds of various colors, such as eagles, herons, swans, geese, partridges, and ducks."</i></p> <p>— Andrew White, 1634</p> <p><i>"...a few of us went ashore...[where] we see many deere, yelkes and turkies..."</i></p> <p>— Cyprian Thorowgood, 1634</p>	<p>The Chesapeake Bay area is home to many mammals, such as squirrels, rabbits, mice, beavers, and deer. Most mammals live on land. They nurse their young and usually have fur. The region is also the home to hundreds of different kinds of birds.</p> <p><b>The Changing Bay:</b> During the 1600s, wolves, cougars, elk and even buffalo still lived in the Chesapeake Bay area. You can still find deer and wild turkeys, but people are taking over the land they live on. Many scientists also believe that global warming could threaten the bird population.</p>
<b>Climate</b>	It feels warmer here than in England this time of year. You need your hat to keep the sun out of your eyes.	<p><i>"The weather was very fine and hot, without rain, near six weeks."</i></p> <p>— Thomas Dudley, 1634</p>	<p>Large bodies of water like the Chesapeake change temperature more slowly than air does. The water helps keep nearby places cooler in the summer and warmer in the winter.</p> <p><b>The Changing Bay:</b> Pollution has caused the temperature to increase around the world. In the past 100 years, the temperature in the Chesapeake Bay region has increased about three degrees due to this global warming. The government, businesses, and individuals are learning more about this warming trend and how to react to its potential risks.</p>
<b>Indians</b>	After sailing about 200 miles up the bay, you come to a place where the water is too shallow and rocky to continue. Rather than go ashore, you decide to head back down the bay. You're afraid of running into the huge natives that you've heard live in this area.	<p><i>"...There dwell the Sasquehanocks, upon a River that is not navigable for our Boates, by reason of Sholes and Rockes; but they passe it in Canoos...The Sasquehanocks...did usually make warres, and incursions upon the neighbouring Indians..."</i></p> <p>— Jerome Hawley and John Lewger, 1635</p>	<p>Early explorers found different groups of Native Americans all along the shores of the Chesapeake Bay. The Susquehannocks lived at the north end near what is now called the Susquehanna River. They were a fierce and powerful group that often attacked the gentler tribes, such as the Yaocomoco, in other parts of the bay.</p> <p><b>The Changing Bay:</b> The population of Native Americans along the Bay nearly disappeared after the colonists arrived. This was partly due to European diseases and war with colonists and other Native Americans.</p>



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### About the primary source quotes:

**Jerome Hawley** and **John Lewger** were both on the early voyages to Maryland. Their reports of the area helped inform people in Europe about the Chesapeake Bay.

**Andrew White** was a Jesuit priest who was among the first English settlers to Maryland. He celebrated the first Catholic mass in English America on March 25, 1634, and for the next ten years tried to convert Indians and colonists to Catholicism. His written account of early Maryland gives us a vivid picture of the land and its people.

**Cyprian Thorowgood** was with the first colonists to St. Mary's in March 1634. He was an attorney in Maryland and was also involved in the fur trade. His letters describe a voyage to the mouth of the Susquehanna intended to set up a trading post

**Captain John Smith** was among the first colonists of Jamestown, Virginia in 1607. He explored the Chesapeake Bay area and created one of the first maps of the region. Take a look at his early map as well as some of the other maps and charts used by the early settlers.

**Thomas Dudley** served as governor or deputy governor of the Massachusetts Bay colony. As governor he signed the charter of Harvard College. Letters from his travels to the Chesapeake Bay area can be found in the History of New England from 1630-1649 by John Winthrop, Esq.

*Interesting fact:* While researching this activity, the writer, Karen Kane, discovered that Thomas Dudley is her 14th-generation grandfather. In fact many Americans can trace their roots back to the early colonists in the New World. Learn more about researching your heritage at the National Genealogical Society Web site.