**PAESTA Podcast Series  -- You Asked, We Answered!**

 **Episode 28  -- Can oysters help restore Chesapeake Bay?**

Elene Mironidis, undergraduate student, Penn State Brandywine

Hello listeners! How is everyone today? My name is Elene Mironidis and in this podcast I will be speaking to you about the wonder of our nation’s very own Chesapeake Bay and how oysters can help restore it. A few main points that we will be discussing pertain as to why the Chesapeake Bay is so significant to us citizens and how these oysters can actually help restore this body of water. Foremost the Chesapeake Bay is thought of as the powerhouse that fuels not just the bay but the ocean life around it. Native Americans often referred to them as “the great shellfish” and in scientific terms the oyster is named the *Crassostrea virginica.* They are also famously known as Chesapeake gold. Two endangered species that also greatly benefit from the Bay are the shortnose sturgeon and the kemp ridley sea turtle. Now, let’s get back to how oysters can help this precious body of water… what do these oysters offer so incredibly much that it is believed they will restore the Chesapeake Bay? Oysters bring balance to ecosystems in the bay and they also offer habitats for invertebrates and fish. Another significant purpose that oysters serve is that they filter the water and this is so vital to the Chesapeake Bay due to all of the nitrogen and pollution that is in this body of water. It is stated by Fears who writes for the Washington Post that 130 square feet of oysters can actually remove up to 20 times more nitrogen pollution in only one year than if another site was not planted. It is said that a few oysters can filter 50 gallons of water in one day... the National Oceanic and Atmospheric Administration within the Chesapeake Bay Office is currently still developing oyster sanctuaries for the Chesapeake. Another initiative that was proposed and is in action now is the Chesapeake Bay Watershed Agreement- this plan of action called to protect and preserve all of the oyster reefs by the 2025. As of now six tributaries have already been selected to make larger scale forward movements to restore the oyster reefs to help restore the Chesapeake Bay. Another program that is a step forward in a very proactive manner is the creation of the Oyster Metric Team, and what this team does specifically is to guide all of the restoration efforts in the most efficient way. This team is compiled of members from the federal government and the state of Maryland. Another initiative that was taken is the Piankatank River Project- this project speaks about how the eastern oyster will be the saving grace for the Chesapeake Bay. The eastern oyster is vital and what the project proposes is to increase the suitable habitat for these oysters to thrive in so they can populate and help the Chesapeake Bay even more so. The project also wishes to specifically plant disease tolerant oysters so they can increase the oyster biomass as well.

(This audio file was recorded by *Elene Mironidis*, undergraduate student, Penn State Brandywine, in November 2016)

**References**

Chesapeake Bay Conservation Work | The Nature Conservancy. (n.d.). Retrieved September 24, 2016, Retrieved from <http://www.nature.org/ourinitiatives/regions/northamerica/areas/chesapeakebay/howwework/index.htm>

National Oceanic and Atmospheric Administration. (n.d.). Oyster Restoration - Oysters - chesapeakebay.noaa.gov. Retrieved September 22, 2016, from <http://chesapeakebay.noaa.gov/oysters/oyster-restoration>

Restoring Oyster Reefs - Chesapeake Bay Program. (n.d.). Retrieved September 30, 2016, from <http://www.chesapeakebay.net/indicators/indicator/restoring_oyster_reefs>

Kobell, R. (2015, May 14). Yale Environment 360: A Remarkable Recovery for The Oysters of Chesapeake Bay. Retrieved September 30, 2016, from <https://e360.yale.edu/digest/a_remarkable_recovery_for_the_oysters_of_chesapeake_bay/4437/>

Fears, D. (2013, May 5). Researchers think industrious oysters could clean up Chesapeake - The Washington Post. Retrieved September 30, 2016, from https://www.washingtonpost.com/national/health-science/researchers-think-industrious-oysters-could-clean-up-chesapeake/2013/05/05/1778a79c-b353-11e2-9a98-4be1688d7d84\_story.html