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Reflecting a Day at the Chesapeake Bay: A Personal Experience with Oysters

In our class GNED-261, Honors Exploring the Science in Our World, we learn about the power of water in the world, and more specifically, the Chesapeake Bay. As students in this class, my peers and I were given the privilege of accompanying Dr. Fink on a trip to the Longwood University owned property of Hull Springs Farm with the objectives of gaining a better understanding of the Bay, its ecosystems, and to take a deeper look into the presence of the Chesapeake Bay oysters. Being at Hull Springs Farm gave us a way to be closer to the Bay, and served as a place to stay while building closer relationships between the students, as well as a place to discuss the relations of the Bay to our lessons and readings that we have been asked to read. However, it was our excursion into the town of Irvington, Virginia that allowed me to better understand the ecological state of the Bay, and gave me the ability to closely analyze the effects of the commercial oyster fishing industries on the Bay itself, as well as the affects that being located along the Chesapeake can have on the living community, itself.

When first arriving, the feeling that the small town of Irvington incited in me was that of a very quaint and “homey” feeling. One can see the very carefully decorated shops, stores, bed-and-breakfasts, and town museum. The townspeople greet you, smiling as you pass, and then you can see much of the citizens congregating to put together the town decorations for the holiday season. Once we got into town, however, we visited the beautiful Tides Inn, which is situated right on the edge of the Bay. It was there at the Inn that we were finally introduced to the topic of

the oysters of the Bay, and the effects that it has on the community of Irvington. It is also the information we learned at the Inn that I believe best exemplifies what we learned in the duration of this fieldtrip. Once we were settled, a worker of the Tides Inn introduced us to the Captain William Saunders, who would later take us all out on tours of the Bay, and then gave a lesson on the oysters of the Bay. Through her, we learned about the culture of the Oyster Trail, that Irvington had long been a part of, and how the oysters have become integrated into much of the culture of the towns and cities along the watershed coast.

First, we were introduced to the history of the eastern oyster. As told by the lecturer, oysters were eaten by the Chesapeake Paleo Indians, who used rakes to harvest them, in substitute of the oyster tongs that watermen use today. After their arrival, the settlers began to eat the oysters as the Indians had shown them what to eat. In connection with what we have read in class, the Indians taught the settlers to use menhaden, as well, as fertilizer. The colonials found that the oyster was everywhere, and ate about 10 bushels of oysters a year. Spreading from the coastal colonies along the Bay, oysters were shipped west through the use of horses. The lecturer continued by mentioning the original colonists under Captain John Smith. She explained that shortly after they arrived on the new homeland, John Smith went back to Britain for supplies, leaving 1,500 people to settle on their new lands. However, Smith returned to less than 500. This had been caused by a resource shortage, and a draught. Even further, weary of the statement from the Indians that said any white man that stepped out of the fort would be killed, the settlers would not leave their settlement to go to the river to catch the fish or harvest oysters. The speaker then furthered the story of oysters in our history by telling us of the crucial use of oysters as a easy source of protein to war-worn soldiers during the Civil War. During this time period, the speaker also emphasized that while a significant amount of oysters were eaten during this

period, the shells were not returned the water which could have helped accelerate the restoring of the oyster population.

The next significant topic that the speaker talked about, was the Oyster Wars, a competition for resources in the Chesapeake Bay between the states of Virginia and Maryland. Oysters had become depleted, and as a result, towers were built along the state borders on the coast in efforts to keep out poachers from out-of-state. Then, there was the matter of overconsumption. People were eating the oysters at a much faster rate than they could reproduce. Also, trains shipped the oysters much too rapidly compared to horses, so oysters were harvested in much faster rates to compensate. As an effect of these, now, we only have 2% of our original oyster reefs. Despite this, the speaker then went on to state that oysters are on a 'comeback'—although Captain William Saunders later contradicted this statement. According to the speaker, over 40 million oysters are being sold due to the agricultural industry growth.

Moving on from this, the lecturer moves onto the ecological standpoint in relations to oysters. First, she shows us how shells of oysters have become a commodity, despite being needed because of the oysters' tendencies to attach to other shells, which ultimately increases oyster numbers. Next, we learned the life cycle of the oyster. During the first 6 months of life oysters are male, after which they are female. This ability to switch genders heightens the likelihood of reproduction. We then learn that once fertilized, the larvae stage, which lasts 2 weeks, is the only time in the life of an oyster in which they are mobile. After this stage, the larvae sink down the water column, attaching to other oysters or hard surfaces. The speaker also stated that through the use of aquaculture, there has been an increase in larvae. With this, she also stated that the aqua-culture oysters are the ones used in restaurants, as these oysters are tumbled to be rid of their edges and produce the perfect and cuffed half-shells that are sold in

stores. These aquaculture oysters are grow much faster than native oysters, as they do not breed. Native oysters on the other hand, have 2 chromosomes, and have much slower growth rates due to breeding. Finally, the speaker transitions to the environmental roles of the oyster. First, she said that just one oyster filters 50 gallons of water per day. They also provide habitat for other marine life through the continuous attachment of shells to each other. Lastly, The speaker concluded her talk by tying in the watermen by discussing the boats used, and the harmful effects that dredging has on the bay and the oysters themselves.

While having learned so much from just this person, we went on to further our investigations on the oysters in the Bay by going out into the town of Irvington itself. This experience helped me to better understand the effects that living on the Bay has on the people in the community, while waiting to take a tour with watermen William Saunders. Immediately walking into town, we ran into multiple people setting up the trees with lights in preparations for the holidays. Two of those people turned out to be members of the town council, both of which were eager to help with our questions. Through them, we were able to learn that Irvington is a “very ripe area”, with many retirees coming to settle down. We also learned that there are two types of people in Irvington: the “come-heres”, and the “born-heres”, which means that those that live in Irvington want to be there. The community is very close-knit as well. Every one knows each other, and all are very invested in the on-goings of the town. Even more, the townspeople are very proud of their town’s history and place on the Oyster and Artisan Trails. Each of the town members that I talked to were quite animated when talking about the town, all of which pointed us in the direction of the town museum, which was dedicated to the history of Irvington in relations to the oyster industry, and shipping innovations in the last three centuries.

What made the Place-as Text investigation so interesting to me, would be the first-hand experience of being on the Bay while on the boat of Captain William Saunders. On this boat we were taken to multiple spots of oyster reefs. This gave us the chance to personally see the different organisms that use the oyster reefs as habitats, such as crabs and small fish. Furthermore, we got to get the perspective on the state of the Bay and its oysters directly from a waterman. While on the boat, Captain Saunders explained the hardships that he has to face as the oyster numbers deplete. One of the causes of this, he said, is the fact that certain companies are privatizing the Bay, and taking oyster reefs for themselves, making the job of a waterman hard. Even more, certain companies are not returning the shells to the Bay, which keeps the oyster numbers from growing. The shells that the companies do return, however, are being placed in the wrong reefs. Also, many of the shells that are put back into the water are useless, as these shells are 'dead' according to the captain. Saunders also mentioned that 90% of the oysters that were produced in the past year died as an effect of the significant rise in algal blooms, which Captain Saunders stated were an effect of climate change. What made the most impact on me during the trip, was that in his closing remarks, Captain Saunders said that it was up to *us*, and our generation to save the Bay, and its oysters, without which the Bay will suffer—and no longer be as clean.

Overall, I am very thankful for this hands-on experience at the Bay. Prior to the trip, I was filled with facts on the Bay, menhaden, oysters, blue crabs and more, and well-read on the accounts left by watermen. Our class had discussed the ordeals that the Bay has gone through: overfishing, pollution through runoff, and also the effects brought on by climate change. Being on the Bay myself, I feel I am much more knowledgeable on the Bay. Seeing first-hand the deterioration of the species in the Chesapeake as well as the species within it that has been

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caused by human actions, makes it even more real, and personal. It makes me realize how this coming generation really does have a responsibility to save the Bay.