

When I was younger, my mother took me down to Cape May (I was born in and grew up in central Jersey) to survey horseshoe crabs while they were spawning in the spring. I've long had an interest in horseshoe crabs— they are known as a “living fossil” because they have lived for over 450 million years and have remained relatively unchanged for the past 150 million years, meaning that they have survived periods of mass extinction, including that of the dinosaurs (65 million years ago). Their blood is blue and has antibacterial properties, causing them to be overfished, because they use hemocyanin (which is copper based) rather than hemoglobin (which is iron based) to transport oxygen. They are also an important member of the Delaware Bay ecosystem as many shorebirds, such as red knots, depend on the eggs laid in May to sustain appropriate fat levels during periods of migration. They are one of the oldest species on earth, but their habitats are now being threatened due to anthropogenic (human caused) climate change, which is why we need policy to mitigate its effects.

The climate in Cape May is changing; this can be ascertained by analyzing data provided by NOAA. This data shows that Cape May is warming significantly and has been since 1894, especially during the day time. This correlates with periods of high greenhouse gas emissions (Industrial Revolution and later) as well as deforestation and other climate affecting behaviors. Climate change in Cape May means that both the unique ecology and the residents will be devastated. As a coastal area, Cape May county will mostly be affected by sea level rise. Sea level rise is caused by rising atmospheric and oceanic temperatures melting polar regions, and it has been mapped (if climate change causing actions continue as usual) to destroy all lower lying coastal towns (Cape May is only 6 meters above sea level) as well as major cities on rivers such as New York, Philadelphia, and Boston.

What this means for Cape May is that it will physically no longer exist, and the first part to be submerged will be the beaches necessary for the horseshoe crabs to spawn. These beaches are also important to the Cape May economy as they are a major vacation spot for those all around the Delaware Bay area. A large portion of Cape May residents, according to US Census data, is retired, meaning that if their homes flood, they do not have a stable form of income to mitigate the expenses of repairs. We saw the effects of mass flood destruction from Superstorm Sandy, and we will see them again as the coastline gradually moves further inland. Events like Superstorm Sandy have been predicted to become more frequent, although claims that extreme weather events will occur more frequently due to climate change, because of the difference in heating rates of oceanic and atmospheric temperatures, have not yet been proven with significance.

This lack of significance in data has caused a distrust in the science behind it. Anthropogenic climate change has been proven to be significant, but as science does, the conclusions are relatively recent and constantly changing. This distrust behind science has become a partisan issue, where a large portion of the GOP outright denies climate change. We (The United States or Cape May) cannot afford to do this. Preventative measures are far less costly than restorative ones, and could save the lives of the people and creatures of Cape May. Recent scientific papers have stated that we are on the verge of another mass extinction— this

time the horseshoe crabs may not be able to survive. The best thing to do is ensure that our representatives, local, state, and federal, know that we believe in climate change and want measures to stop it.