



Analysis Journal

Basking Shark and Sea Surface
Temperature

Observations:

The basking shark's data points begin in late March and continue through mid May.

The shark is in the northern Atlantic Ocean and continues on a relatively straight course northward over the course of the next two months.

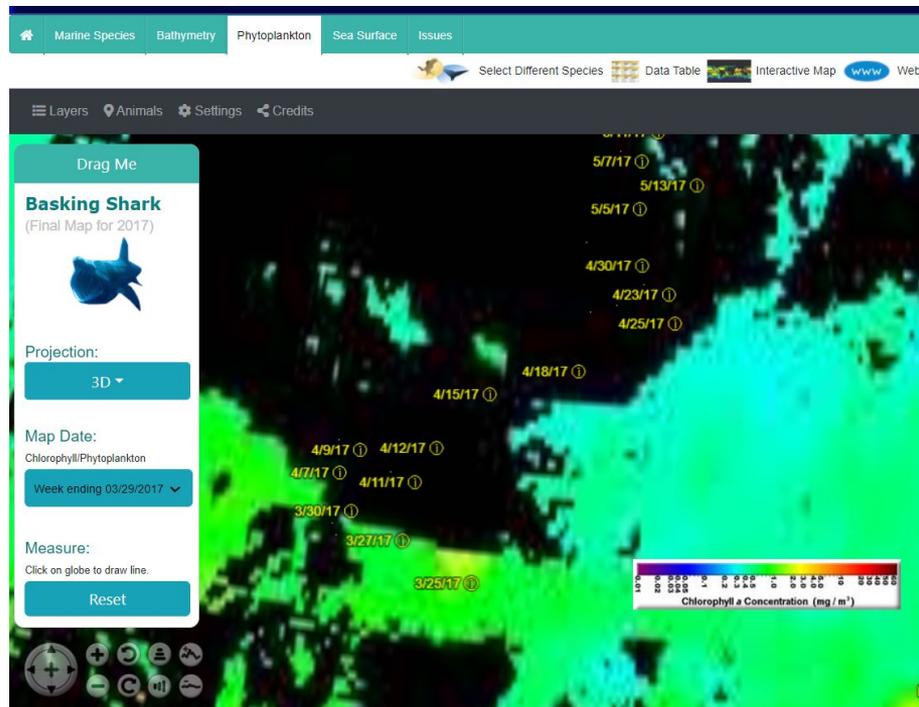
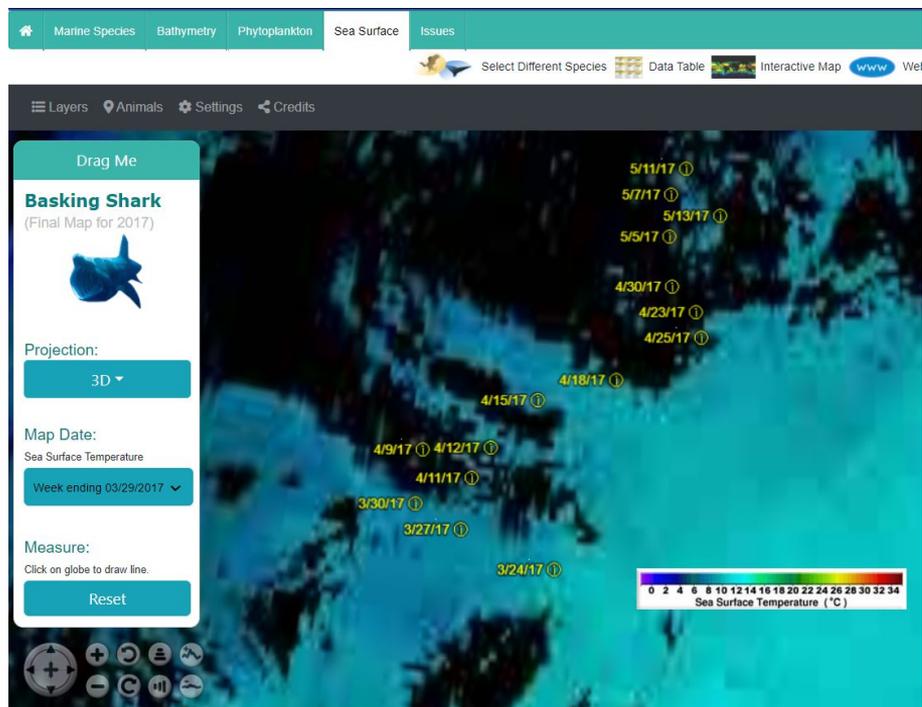
According to the map measurements, the shark traveled over 1300 km (about 825 miles) between 3/24/2017 and 5/13/2017.

Markers begin just over 700 km away from the nearest land mass and end around 470 km away. Ireland is nearest to its start but it is closer to Iceland by the end of the tracking.

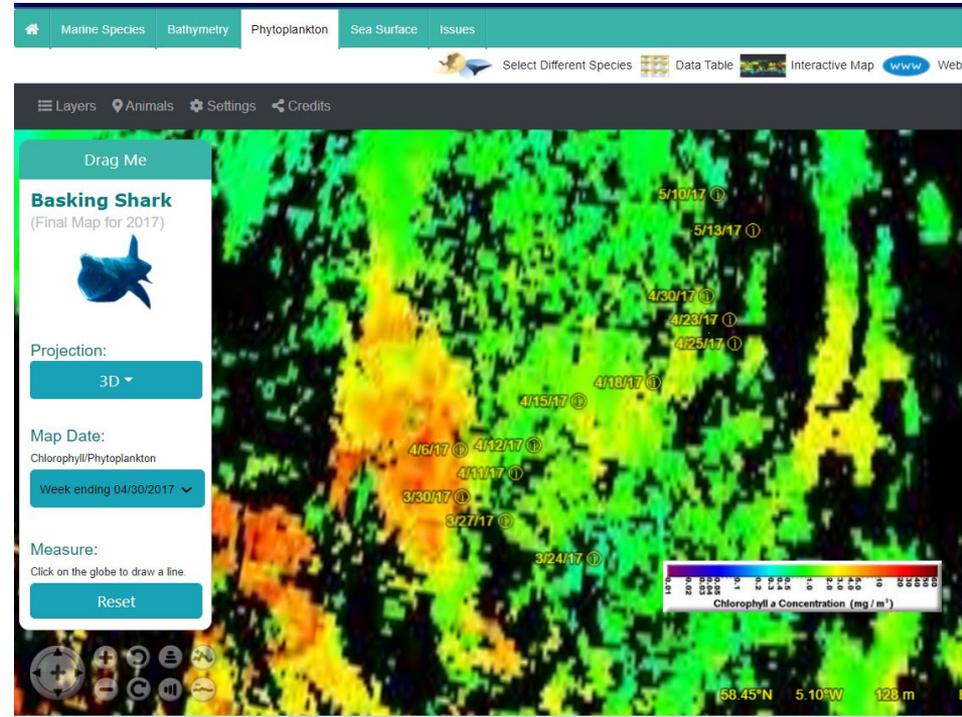
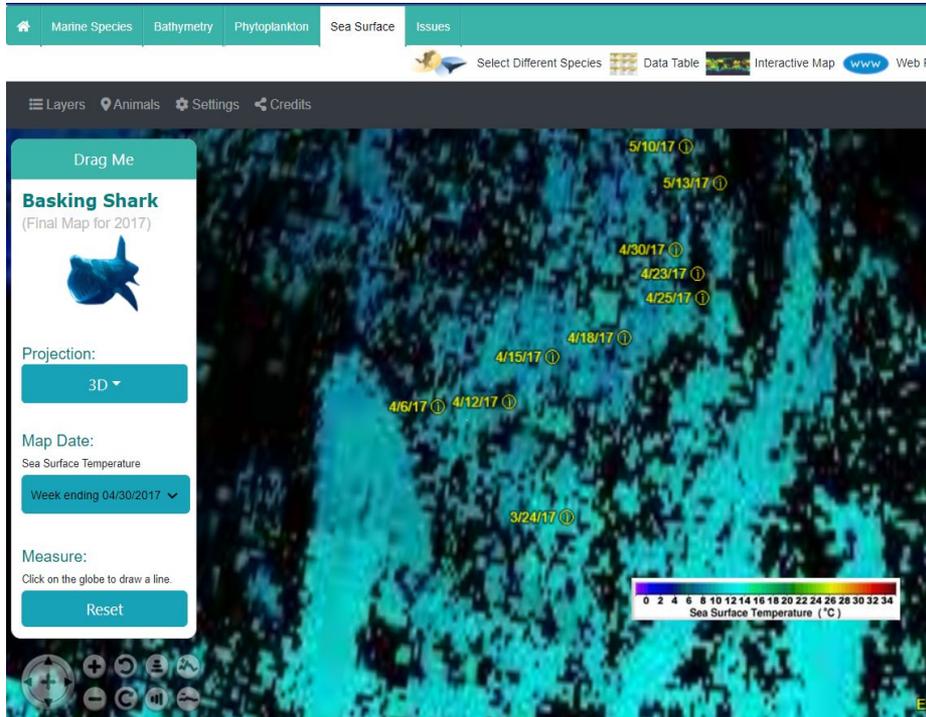
Sea temperatures throughout the area of the shark's travel ranged between 8-12 °C.

Chlorophyll measurements ranged from approximately 1 mg/m³ in March to upwards of 3 mg/m³ by the locations in May.

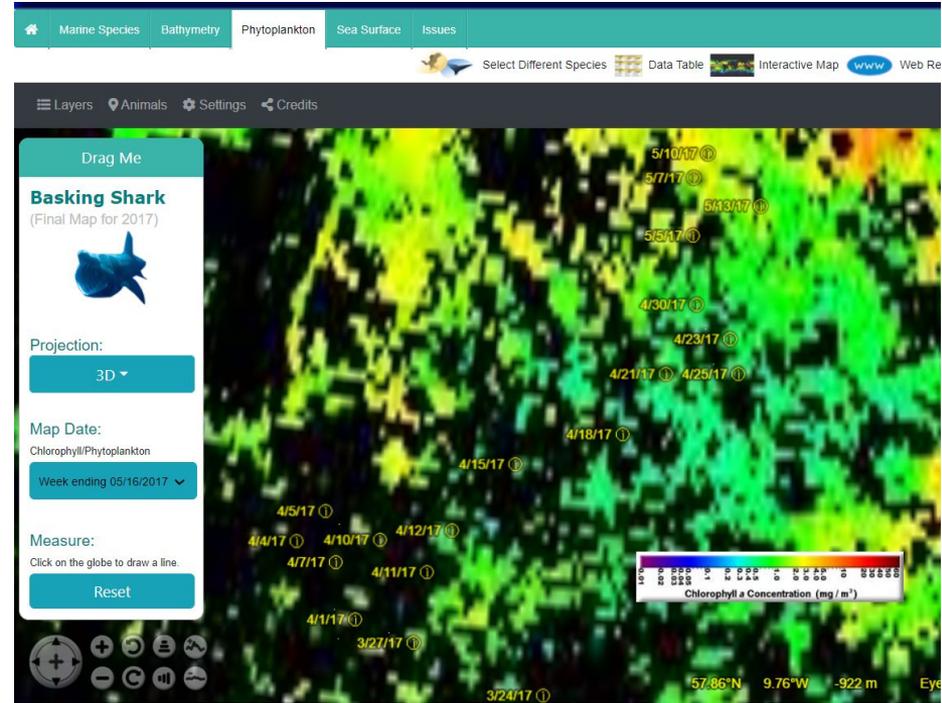
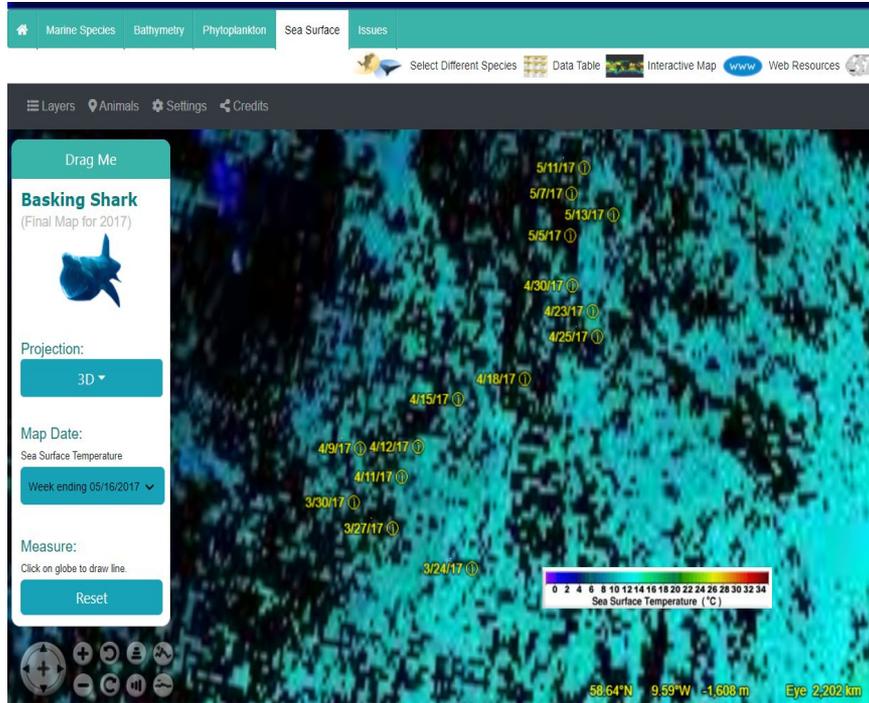
March Surface Temp (left) and Chlorophyll (right) Maps



April Surface Temp and Chlorophyll Maps



May Surface Temp and Chlorophyll Maps



Justification

The basking shark has most likely trekked all this way following his food source of plankton. Basking sharks thrive in warm and cool waters and can be found in many oceans and seas including the northern Atlantic where he is during this tracking time frame. Plankton tend to thrive in colder waters because they are more nutrient rich. The maps show a correlation between the consistent cooler sea surface temperatures and the presence of plankton. As you progress through the map imagery you can see the chlorophyll concentrations increasing along the same direction the shark is traveling. Chlorophyll concentrations are the indicators of the presence of plankton, the basking shark's main food source, and the reason he is traveling in this direction. The end of this tracking time period also coincides with the beginning of the basking shark's mating season where they tend to continue toward more coastal waters between May and July. So it would make sense that he was found even closer to land at the end of the tracking time than he was at the beginning.

Sources

http://www.signalsofspring.net/maps/map_2021.cfm?site=aces&page=maps&imager_y=Sea_Surface_Temperature&who=Basking%20Shark&user=teacher&DATA_YEAR=2017&newanimalpicked=yes&pickanimal=no&datafilter=anytime#

http://www.signalsofspring.net/maps/map_2021.cfm?site=aces&page=maps&imager_y=Phytoplankton&who=Basking%20Shark&user=teacher&DATA_YEAR=2017&newanimalpicked=yes&pickanimal=no&datafilter=anytime

[Powell, L. 2020. "Cetorhinus maximus" \(On-line\), Animal Diversity Web. Accessed March 29, 2022 at https://animaldiversity.org/accounts/Cetorhinus_maximus/.](https://animaldiversity.org/accounts/Cetorhinus_maximus/)