

# Oceans of Research



## Lesson 1

[https://web.uri.edu/gso/files/N-Dawn\\_Back\\_View\\_sm.jpeg](https://web.uri.edu/gso/files/N-Dawn_Back_View_sm.jpeg)

# BIG DATA: WHAT IS IT & WHY DO YOU CARE?

## Big Data:

1. Large amounts of available data.
2. Can be challenging to find and use.

**?** You have more access to data than ever before

1. It's used in your daily activities.
2. It's used in many modern careers.



# THE RCRVs



Rendering of the R/V Taani. Oregon State University. Retrieved from <https://today.oregonstate.edu/news/osu-name-new-research-ship-taani-which-means-%E2%80%99Coffshore%E2%80%99D-1>



Rendering of the R/V Narragansett Dawn. University of Rhode Island Graduate School of Oceanography. Retrieved from [https://web.uri.edu/gso/files/N-Dawn\\_Back\\_View\\_sm.jpeg](https://web.uri.edu/gso/files/N-Dawn_Back_View_sm.jpeg)



# WHO ARE OCEANOGRAPHERS & WHAT IS OCEANOGRAPHY?



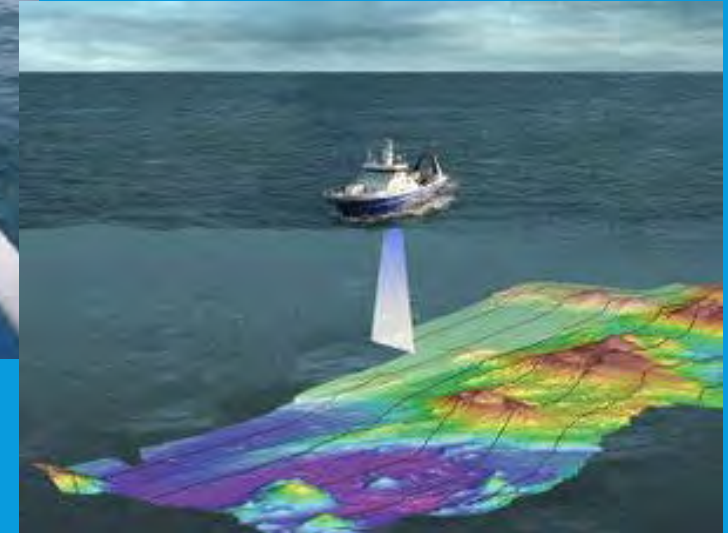
Retrieved from: [https://web.uri.edu/gso/files/Angela-Stahl-diving-2021-BRM\\_0254.jpg](https://web.uri.edu/gso/files/Angela-Stahl-diving-2021-BRM_0254.jpg)



Retrieved from: <https://spark.adobe.com/page/bjRLv/>



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Retrieved from: [https://schools.look4.net.nz/careers/new-zealand-careers/careers-descriptions/jobs/geological\\_oceanographer](https://schools.look4.net.nz/careers/new-zealand-careers/careers-descriptions/jobs/geological_oceanographer)



**SHE SAVES  
THE OCEAN**

[https://youtu.be/B-\\_dv0B0g1c](https://youtu.be/B-_dv0B0g1c)



[https://youtu.be/51y\\_Ahx3Mxw](https://youtu.be/51y_Ahx3Mxw)

# WHEN DID OCEANOGRAPHY BECOME A SCIENTIFIC DISCIPLINE?



*The Challenger. Britannica Online. Retrieved from <https://www.britannica.com/event/Challenger-Expedition/media/1/104756/16297>*



*Research "van" system. Retrieved from <https://web.uri.edu/gso/files/Research-van-interior.jpg>.*



# WHERE DOES OCEANOGRAPHIC RESEARCH HAPPEN?

- Oceanographic research happens all over the world
- New England is a unique place for oceanography. Researchers from around the world come to study here!



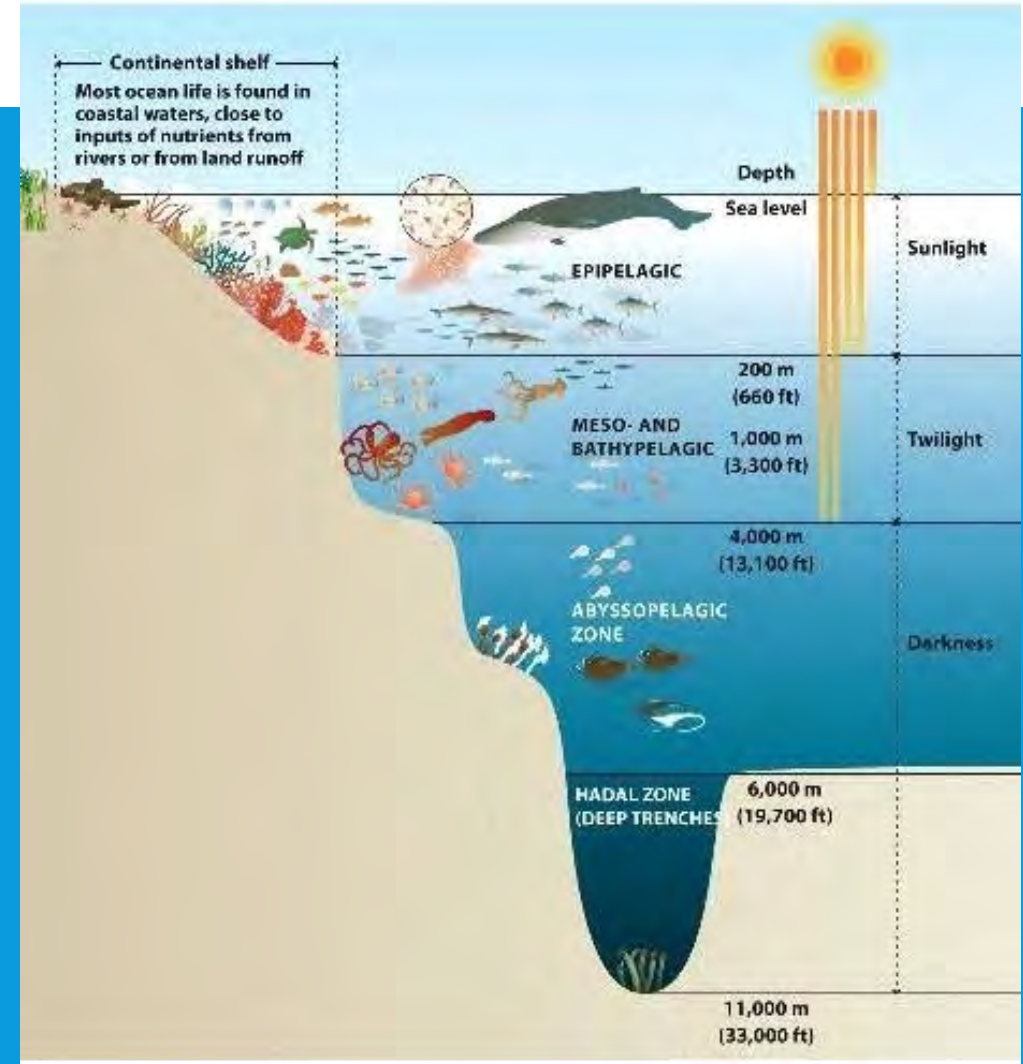
*On an unusually flat sampling day on Narragansett Bay, GSO graduate student Mary Kane and undergraduate intern Rachel Marshal, prepare to release the day's catch. Photo Katie Pratt.*



*Map of the Atlantic Coast's Submarine Canyons and Seamounts. Source: [https://www.fws.gov/northeast/northeast-canyons-and-seamounts/images/about/canyons\\_map.jpg](https://www.fws.gov/northeast/northeast-canyons-and-seamounts/images/about/canyons_map.jpg)*

# WHERE DOES OCEANOGRAPHIC RESEARCH HAPPEN?

- Most research has historically taken place in the Epipelagic and Mesopelagic zones, which are considered “shallower” water.
- In more recent times, more efforts have been dedicated to exploring the deeper, darker parts of the ocean.



[https://sites.google.com/site/osd2ndgradehabitats/ocean-habitat/ocean-zones/15\\_04%20%281%29.jpg?attredirects=0](https://sites.google.com/site/osd2ndgradehabitats/ocean-habitat/ocean-zones/15_04%20%281%29.jpg?attredirects=0)



# WHY DO WE CONDUCT MARINE RESEARCH AND COLLECT DATA?

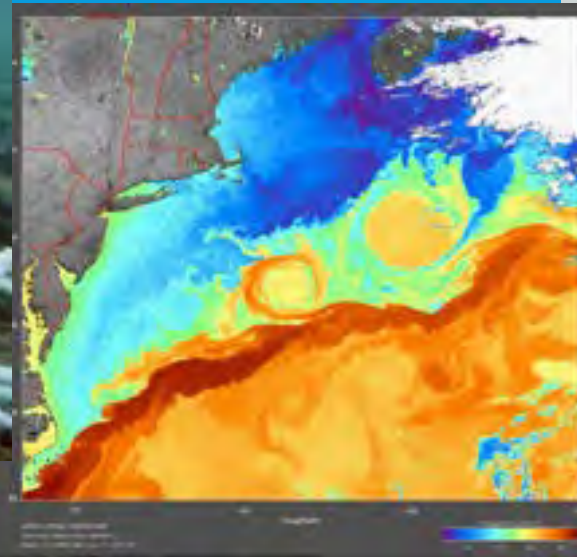
- The ocean provides us with food, oxygen, affects our weather and climate, etc. It is important for our survival!
- The more we know about marine issues, the better we can solve them.



*Plastic pollution, retrieved from: <https://www.oregister.com/2018/04/21/earth-day-2018-how-plastic-pollution-occurs-and-what-we-can-do-to-lessen-it/>*



*Coral bleaching in the Great Barrier Reef. Source: <https://sharkresearch.rsmas.miami.edu/coral-bleaching-of-the-great-barrier-reef/>*



*Modeling of Sea Surface Temperatures shows an eddy on the northern fringe of the Gulf Stream, retrieved from: <https://web.uri.edu/gso/research/ocean-currents/>*



*Humpback Whale, retrieved from <http://www.hsumarinelab.org/new-page-1>*