

# Ocean Research Project

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ORP: Nicole Trenholm and Matt Rutherford

## What Is Ocean Research Project?

Ocean Research Project (ORP) is a non-profit organization dedicated to serving the scientific and scholastic communities. ORP has been involved in many projects to encourage the sustainability of the Oceans. ORP was founded by Matt Rutherford and co-founded by Nicole Trenholm. Along with scientist Jamin Greenbaum, they aim to educate people about marine issues and give back to the oceans.



## What does Ocean Research Project Have Planned?

In June of 2015, Ocean Research Project will sail to Eastern Greenland to study the melting boundaries of the Helheim Glacier at the Greenland Ice Sheet. On the sailing platform the team will monitor the progress of the drone's mission and they will record oceanographic, hydrographic and biochemistry observations in the Sermilik Fjord leading up to the base of the Helheim Glacier. ORP team will explore the effects of warming waters and quantities of fossil fuels entering the biosphere.



## What Has Ocean Research Project Done?

In the last 3 years, Ocean Research Project has been involved in 5 different projects. In 2012, Matt Rutherford broke a record by solo sailing the smallest boat in history Around the Americas and through the Northwest Passage. Once through this northern passage, Rutherford sailed around the entire state of Alaska then south through the Pacific Ocean from North to South America to make his left-hand turn at storm-tossed Cape Horn and completing his record breaking journey in 309 days after sailing 27,077 miles at sea.

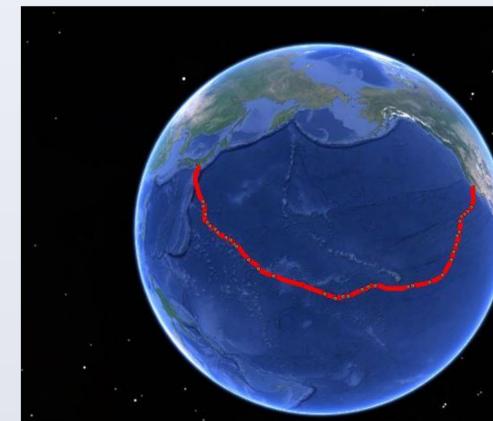


In 2013, a 6,800 nautical mile journey was made by ORP to the North Atlantic Gyre. A plastic debris survey was conducted beginning on the eastern edge of the North Atlantic Gyre using standardized methods to generate a dataset to add to the global understanding of how much marine plastic is on the ocean's surface and to explore further just how plastic threatens marine life and human health.

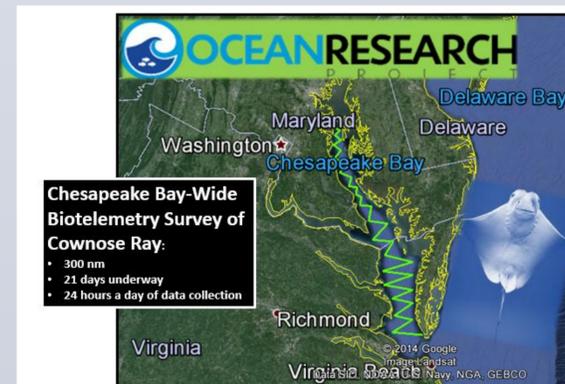


## What Has Ocean Research Project Done? Continued.

On April 26<sup>th</sup> 2014, ORP began its 7,000 nautical mile journey from the coast of California to Yokohama, Japan. On This journey, the team used a high speed trawl net to provide a dataset on how much marine debris lies on the surface of the oceans. The samples that ORP were able to collect were tested for persistent organic pollutants such as PCB's and Pesticides.



Starting in August of 2014, ORP teamed up with SERC (Smithsonian Environmental Research Center) and began their Bay-wide Biotelemetry project. The goal of the Biotelemetry project was to study the migration patterns of the Cownose Ray species throughout the Chesapeake Bay. In 21 days, ORP surveyed 300 nautical miles of the Bay 24/7 with Vemco receivers which receive pings from tagged fish in the nearby area. ORP also made an outreach to high school students with this project by offering an internship program in this study. The interns go to multiple sites, where they collect data from the Vemco receivers and analyze the data to learn about migration patterns of various fish species in waterways local to Maryland. The interns work closely with ORP and SERC to collect, analyze and organize the data that they receive.



## Ocean Research Project's Mission

"We believe that while no one can do everything, everyone can do something.

Our project is committed to serving the ocean research community. We provide data that explores man's relationship with the planet's oceans.

by *ENDURANCE WE...*

- Collect data on Earth's ocean's most dangerous problems: chemical pollution, climate change, ocean acidification and biodiversity loss
- Advocate man's opportunities to sustain the oceans through educational outreach and video documentary by sharing the insight of ocean researchers collective voice.
- Sail to reach the extents of the oceans with a core team of professional sailors, scientists, and artists."



## References

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