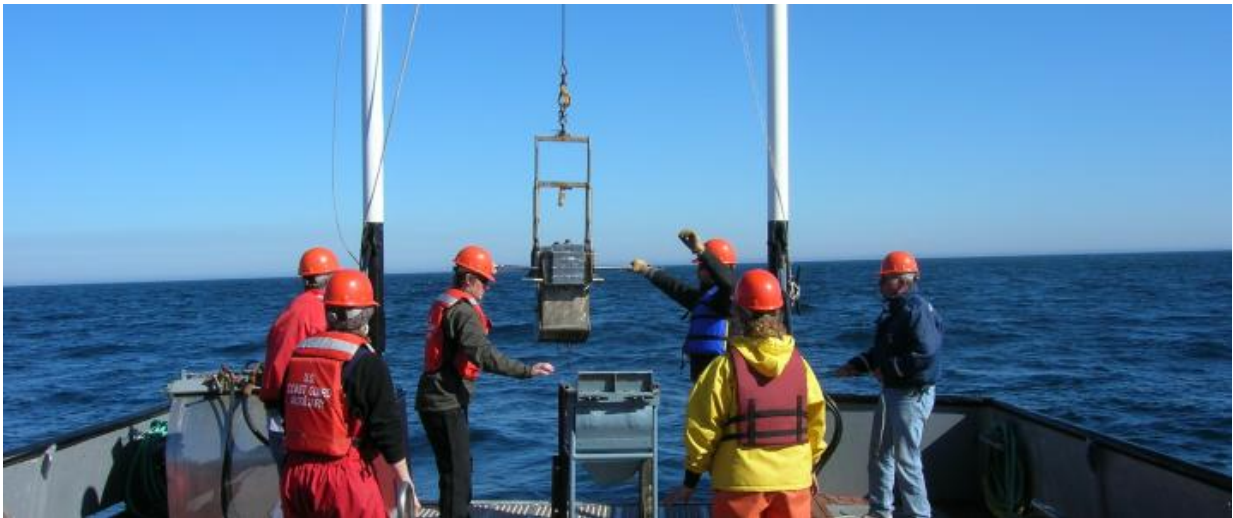


# Surveying sea floor animals for offshore renewable energy

July 7 2017

---



Credit: Oregon State University

There is growing interest in developing offshore wind and wave energy facilities in the Pacific Northwest. But not much is known about the sediment and animal life along the sea floor in the region.

That presents a problem for renewable energy companies because they need to consider environmental implications before constructing facilities in the ocean.

A team of Oregon State University researchers has helped address that

problem by using a 500-pound device with jaws to grab squares of sediment from the ocean floor at eight sites off the coasts of northern California, Oregon and southern Washington.

In a just-published paper, they outline research that found relationships between sediment characteristics and animal life (mostly pencil-eraser-sized clams and worms) were consistent across the sites they sampled.

That's significant because it could allow renewable energy companies to reduce collections of marine [animal life](#) to characterize a potential [development](#) site. That type of analysis is costly and time intensive because it involves identification work by humans.

Instead, companies could primarily conduct sediment analysis, most of which can be automated. Once the sediment analysis is done it could be cross-referenced with the findings of the Oregon State team to predict the marine animals likely to be found at a site and potentially determine impacts.

The research, led by Sarah Henkel, a marine biologist at Oregon State's Hatfield Marine Science Center, involved collecting [sediment](#) from 137 spots ranging in depth from about 160 to 360 feet, depths currently targeted for wave energy development.

The spots clustered around eight locations, from two to 10 miles off the coast of Eureka, California, six Oregon locations (Bandon, Siltcoos, Reedsport, Cape Perpetua, Newport, Nehalem) and Grays Bank, Washington.

In the Pacific Northwest, there has been recent interest in energy development off the coast of the several coastal Oregon areas, including Reedsport/Coos Bay, Newport and Tillamook, Henkel said.

Although recent plans to build a wind farm off the coast of Coos Bay fell through, Henkel currently is conducting similar collections and analyses at the depths targeted for offshore wind development in anticipation of future wind projects off Oregon.

Offshore renewable energy development is still in its infancy in the United States, with the first offshore wind project recently completed in Rhode Island. European countries have a longer history of offshore renewable [energy](#) development.

The just-published paper, "Small proportions of silt linked to distinct and predictable differences in marine macrofaunal assemblages on the continental shelf of the Pacific Northwest," was published in the journal *Continental Shelf Research*. Kristin Politano, who formerly worked in Henkel's lab, is a co-author.

**More information:** S.K. Henkel et al. Small proportions of silt linked to distinct and predictable differences in marine macrofaunal assemblages on the continental shelf of the Pacific Northwest, *Continental Shelf Research* (2017). [DOI: 10.1016/j.csr.2017.06.016](https://doi.org/10.1016/j.csr.2017.06.016)

Provided by Oregon State University

Citation: Surveying sea floor animals for offshore renewable energy (2017, July 7) retrieved 25 April 2024 from <https://phys.org/news/2017-07-surveying-sea-floor-animals-offshore.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.