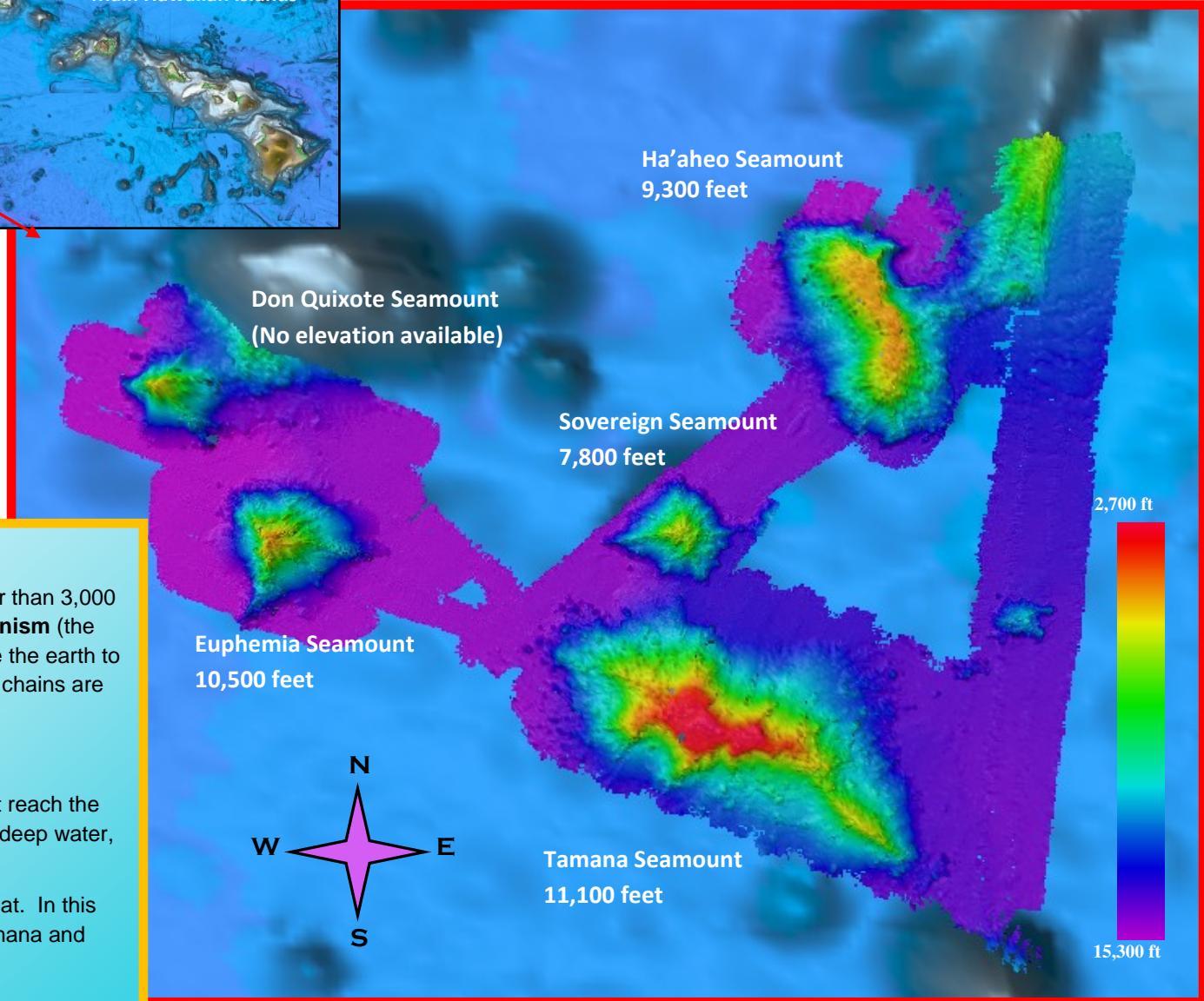
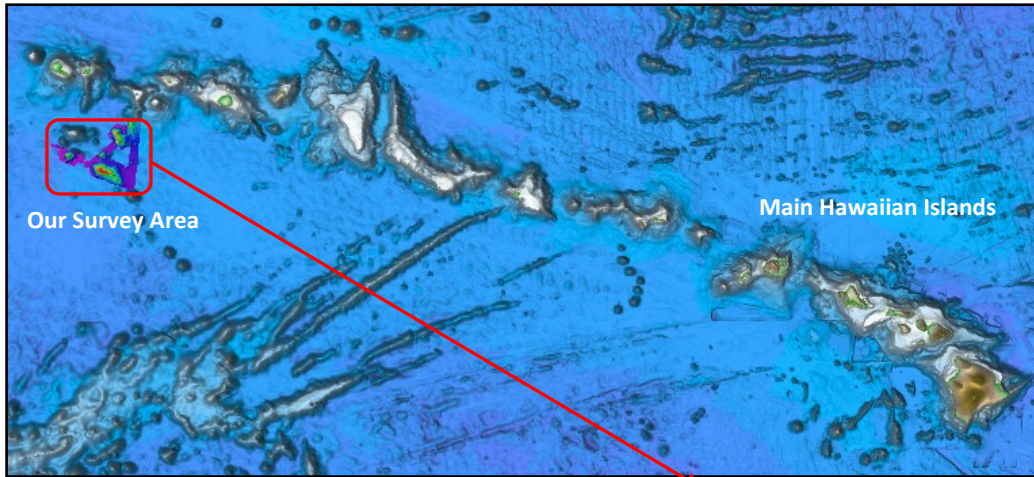


# Seamounts of the North Pacific

Mapping Survey on the NOAA *Okeanos Explorer*

October 26-November 15, 2009



## What are seamounts?

**Seamounts** are underwater mountains that are higher than 3,000 feet above the seafloor! Many are formed by **volcanism** (the process that brings up hot, molten material from inside the earth to the surface). This is the same way that many island chains are created.

## Is a seamount an island then?

No, seamounts are *not* islands, because they do not reach the surface of the ocean. Usually, they are found in very deep water, thousands of feet below the surface.

Waves can erode a seamount, leaving its top very flat. In this case, the seamount is referred to as a **guyot**. Tamana and Ha'aheo are guyots.

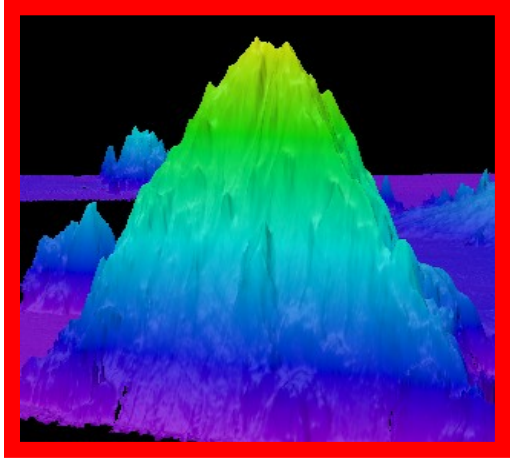
There are more than 10,000 seamounts in the Pacific Ocean. During the October 26-November 15, 2009 cruise on the *Okeanos Explorer*, 4 seamounts were completely mapped.

Created by: Karma R. Kissinger, OER Intern

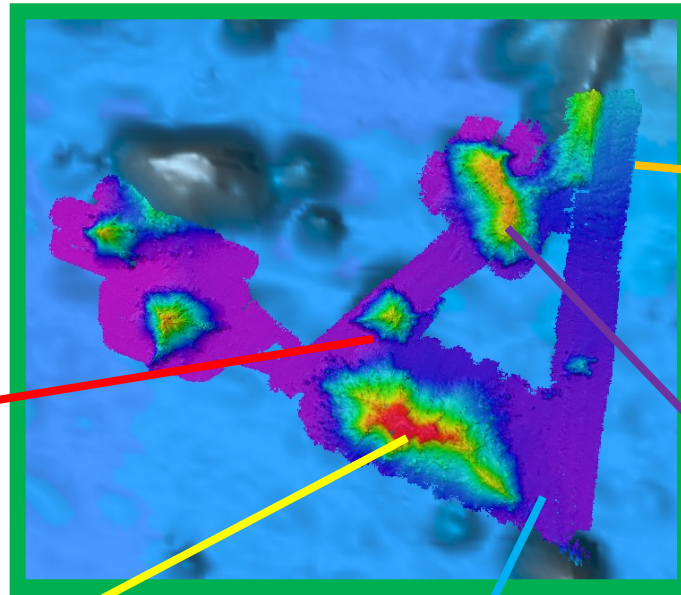




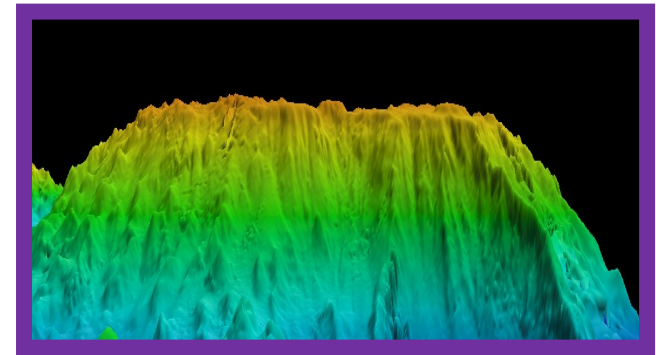
# Some cool features we found on our cruise!



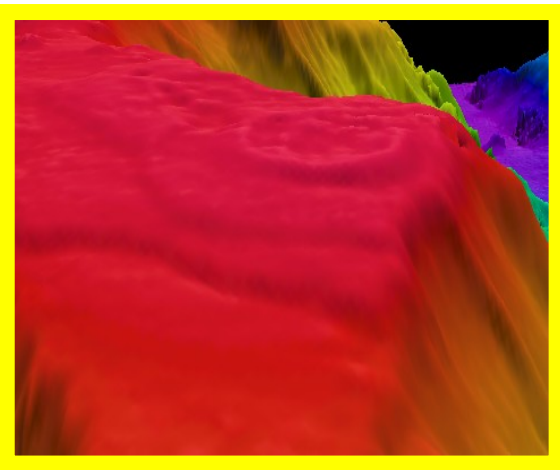
Sovereign is very pointed on top, meaning that it was never exposed to wave erosion.



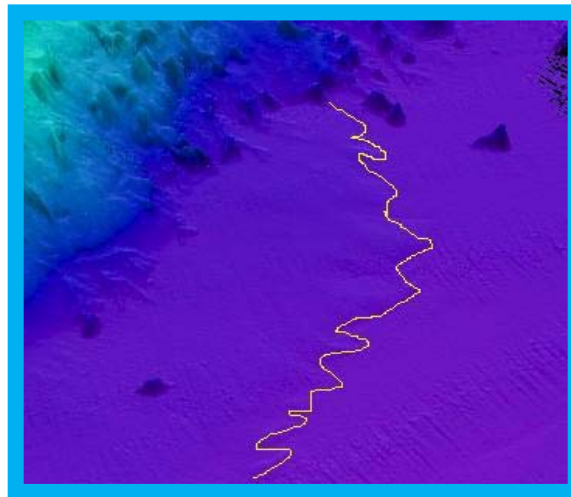
These ripples on the seafloor near Ha'aheo may be from a very old lava flow that was cooled underwater and frozen in this form.



Ha'aheo is a guyot, and its flat surface means that it was eroded by waves long ago.



The surface of Tamana, a guyot, shows possible old coastline that was once above sea level.



This darker purple area off of Tamana is where a large sediment slide likely occurred. See the feathery edges outlined in yellow?

