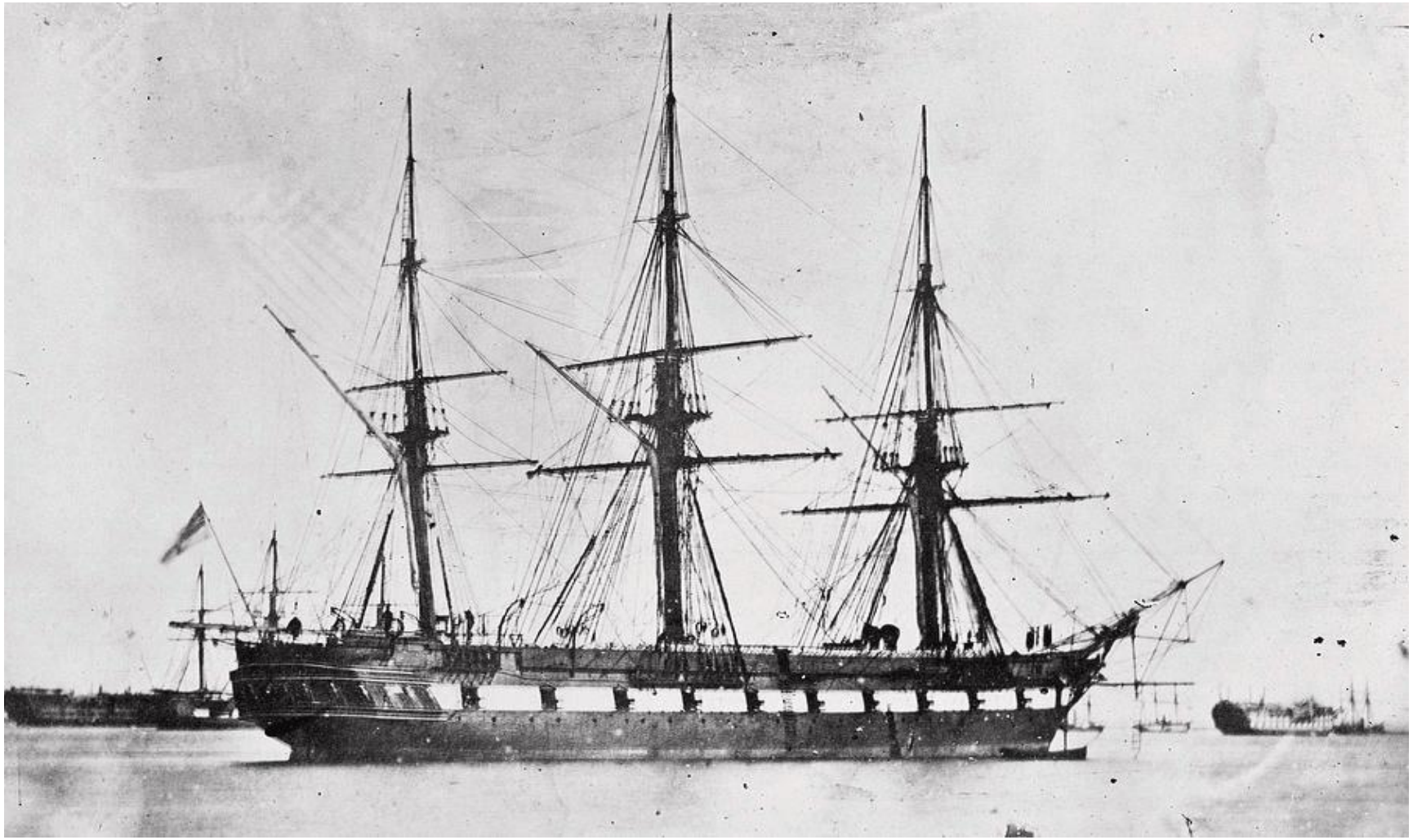
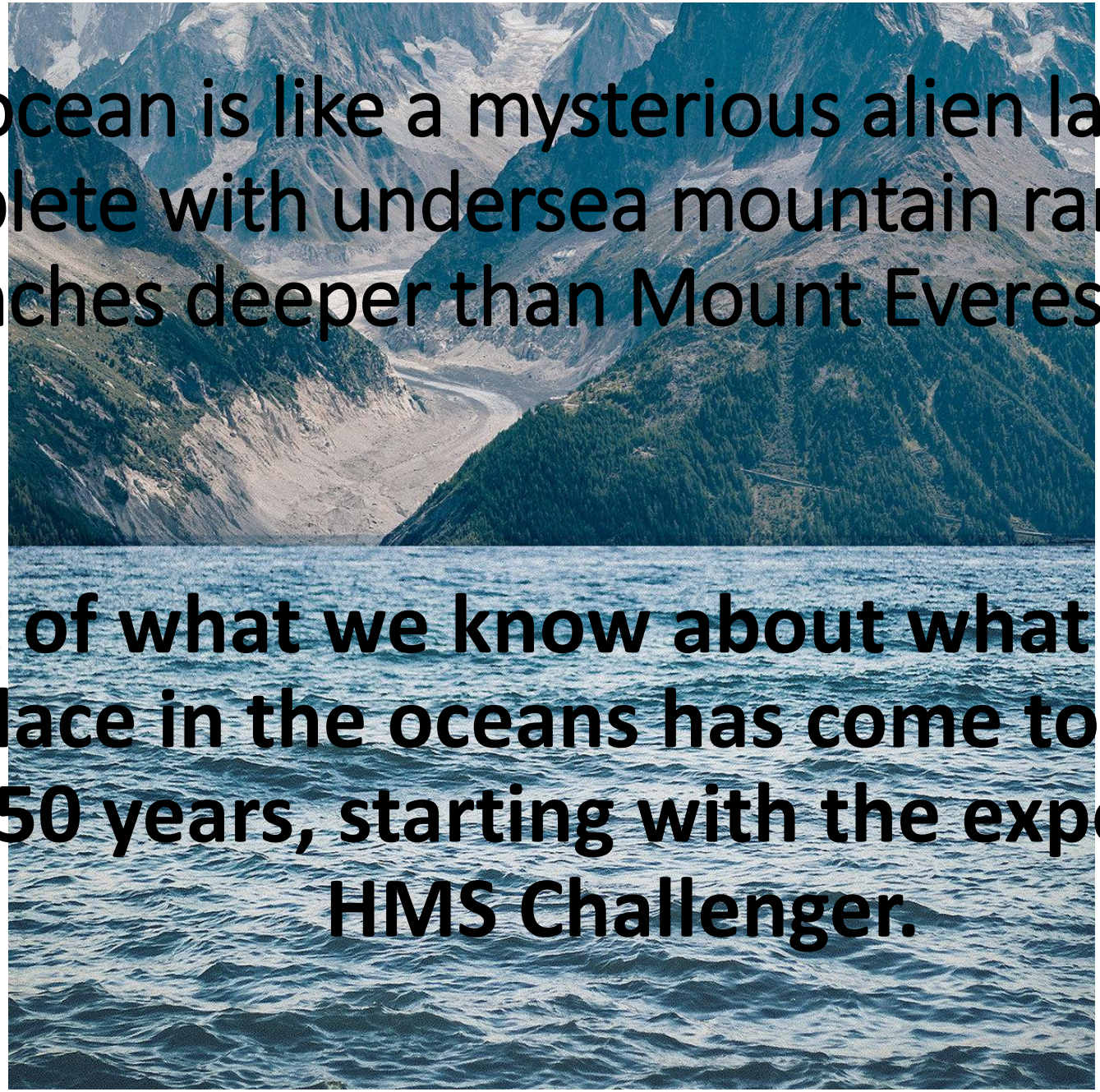
HMS Challenger 1872-1876



The ocean is like a mysterious alien landscape complete with undersea mountain ranges and trenches deeper than Mount Everest is tall.



Most of what we know about what lives and takes place in the oceans has come to light in the last 150 years, starting with the expedition of HMS Challenger.

Just how deep is the ocean?

https://www.youtube.com/watch?v=GE-lAftuQgc





HMS Challenger sailed around the world dredging samples of never before seen creatures from the ocean floor in the world's first large scale oceanographic expedition.



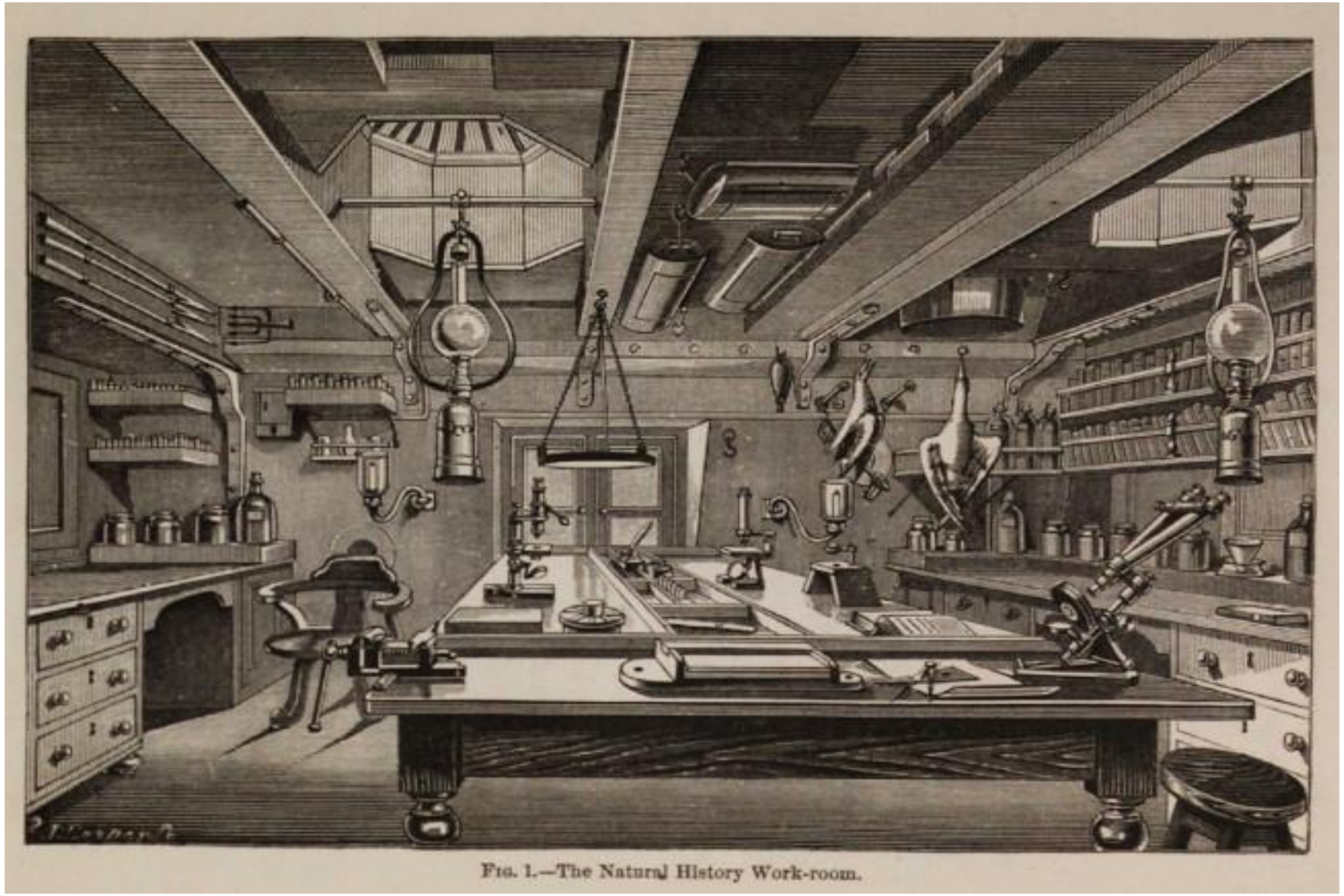


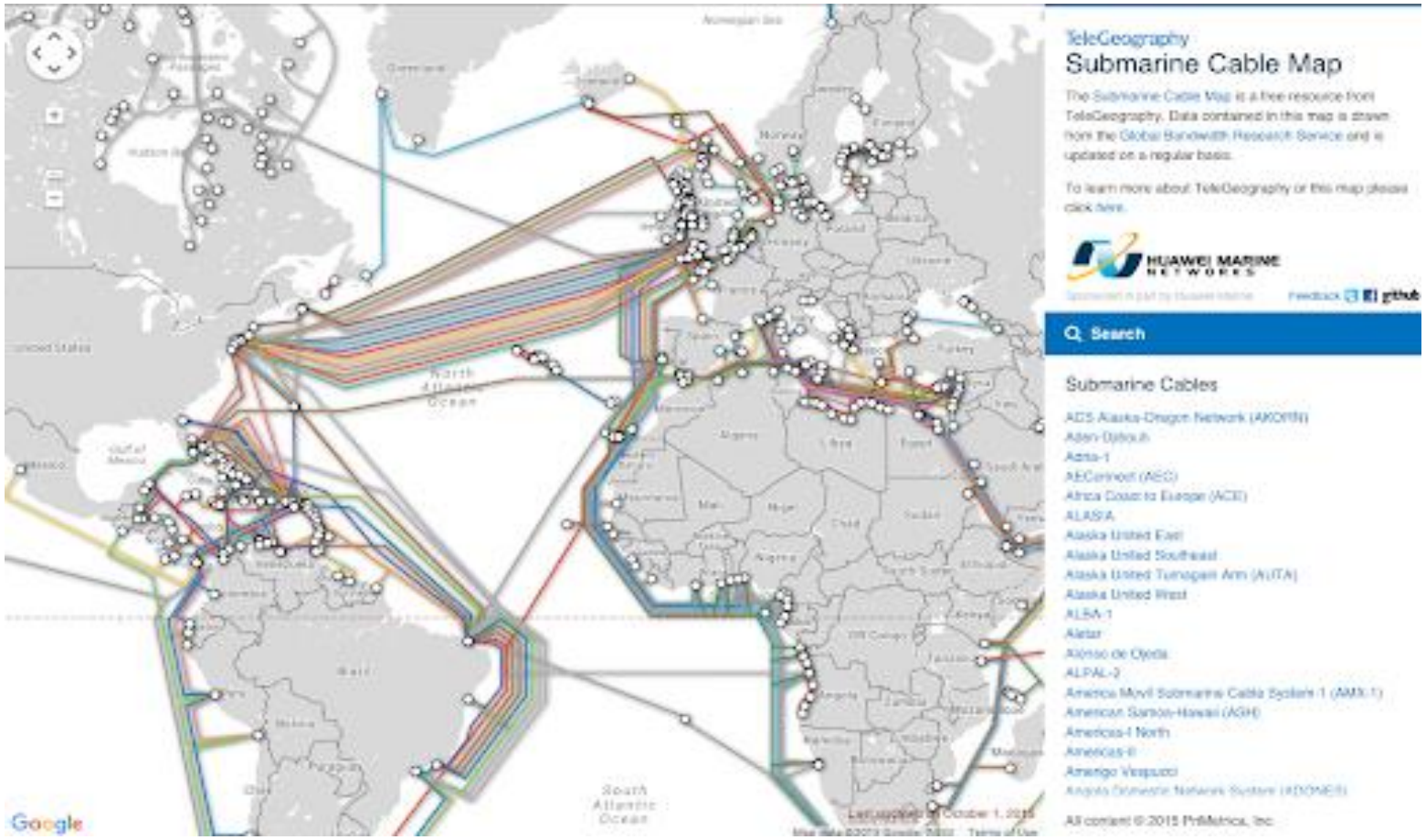
Fig. 1.—The Natural History Work-room.

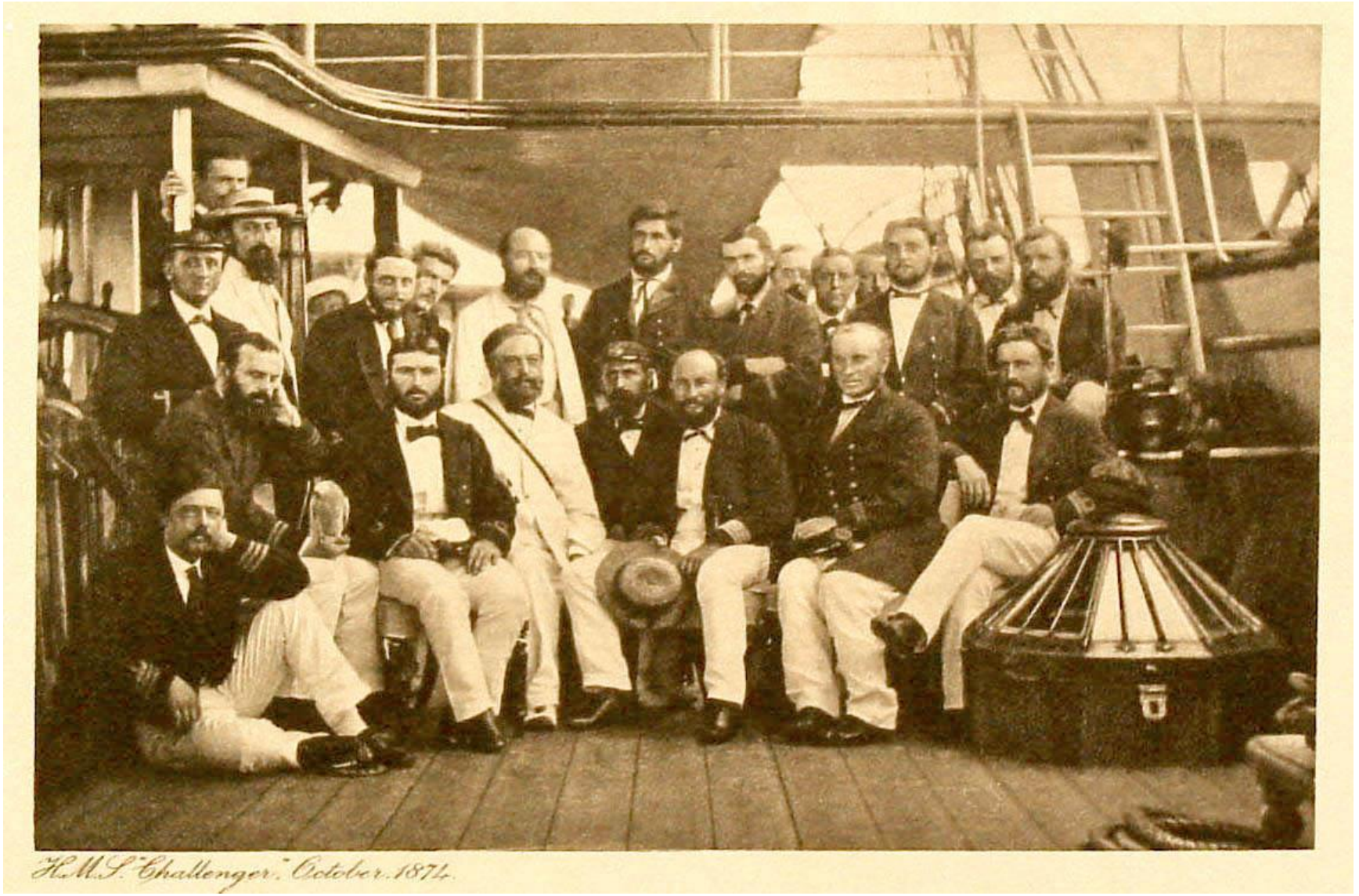
From 1872 to 1876 the 200 foot warship was repurposed as a floating lab.



The Challenger explorers brought to light thousands of new species and revealed the oceans to be huge depths full of untold wonders. We still rely on their findings today.

Challenger’s primary mission was to survey the seabed for suitable paths to lay telegraph cables on the ocean floor. Yet this was also the ideal opportunity to question the traditional view that life didn’t exist in the deep sea.





There were 250 men on board, including 6 scientists nicknamed, ‘The Scientifics’.

Challenger was a small war ship but it was refitted for this mission. 15 of the 17 guns were removed to make room for laboratories and equipment. Labs, extra cabins and a special dredging platform were installed. She was loaded with specimen jars, alcohol for preserving samples, microscopes and chemical apparatus, trawls and dredges, thermometers and water sampling bottles, sounding leads and devices to collect sediment from the sea bed and great lengths of rope with which to suspend the equipment into the ocean depths.

https://youtu.be/5_ikP-N6Zuw

Every few days Challenger sounded or plunged a weighted line into the water to find out how deep it was. They recorded the ocean temperature at various depths and dragged a weighted net across the ocean floor hauling up sea creatures and sediment.

One of the crew wrote to his cousin

When the dredge is hauled up the scientists stand round in their shirt sleeves and start looking. As soon as they find something they all dash down below to dissect and pickle them in glass jars.





Halfway through the journey, in Spring 1875, Challenger made one of its greatest discoveries: the Marianna Trench containing the deepest point on Earth.

One tectonic plate slips underneath another leaving a 1580 mile long groove in the sea floor.

https://www.youtube.com/watch?v=7tiZHrgc8Vc

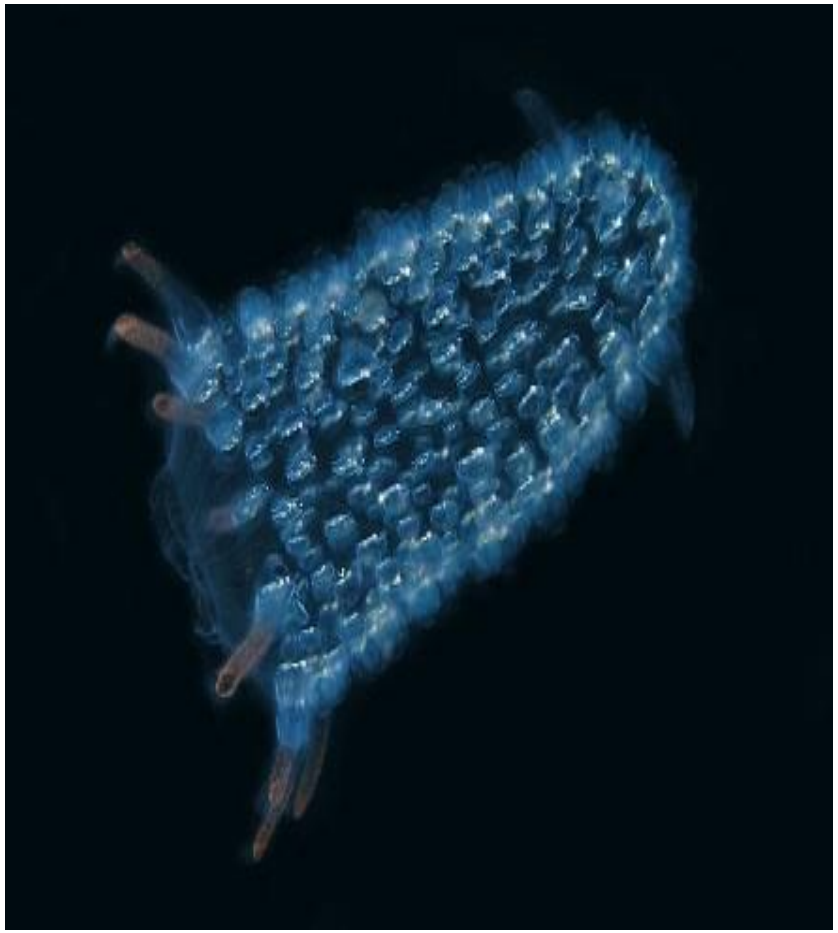
https://www.youtube.com/watch?v=eeW1DU05j7U

- At the lowest point Challenger recorded, the sea floor lay more than 5 miles below the water's surface. The crew wasn't expecting the spot to be so deep; the first time they sent down a weight to measure the depth, they ran out of rope. When they sent down a thermometer, the glass cracked.



- Challenger returned with 4700 never before seen species including sea pigs and faceless cusk eels.





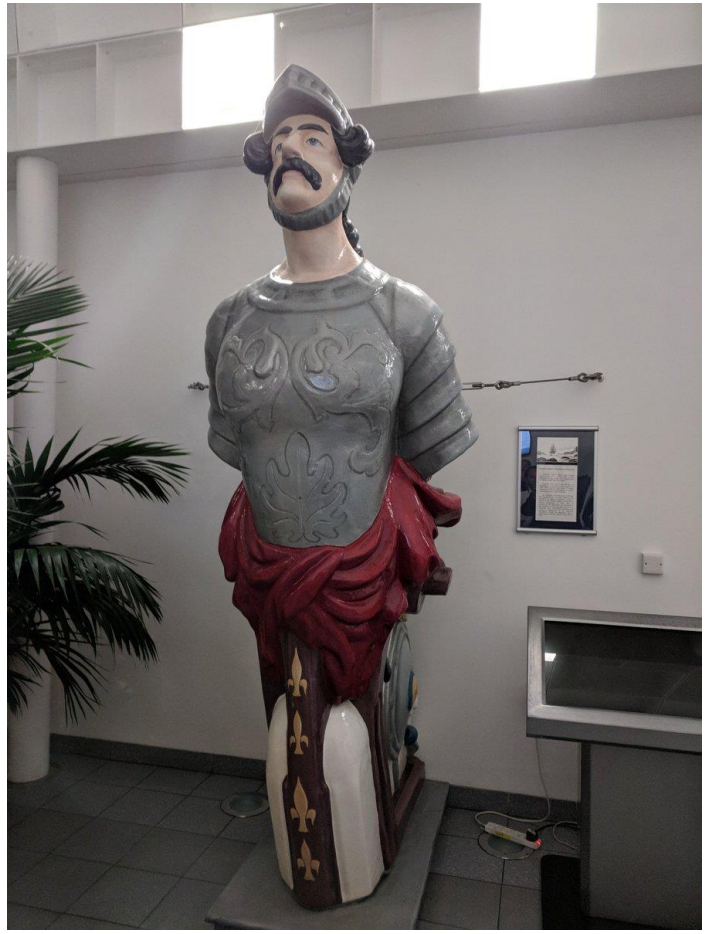
A giant Pyrosoma was caught in a deep sea trawl, one of the crew wrote, “I wrote my name with my finger on the surface of the giant Pyrosoma, as it lay on deck in the tub at night, and the name came out in a few seconds in letters of fire.”

The thousands of specimens collected by Challenger are now housed in museums all around the world. The specimens are still used in scientific research today.

- Today's scientists study the Marianna Trench to learn how tectonic plates shift and how plastic waste has reached even the remotest parts of the planet. All that work has its roots in the Challenger expedition.
- "Just because they're old, it doesn't mean that they lose value. In fact….in terms of looking at historical trends, they only increase in value with age."



Fun facts about HMS Challenger



Expedition crew: 243

Scientists: 6

Duration of expedition: 4 years

Distance sailed: 68,890 miles

Number of sampling stations: 362

Number of depth sounds made: 492

Number of dredges taken: 133

Number of new species of animal and plants discovered: 4700

Your task



You are going to write a diary entry as one of the crew or one of the Scientists on the HMS challenger.

- Describe what a typical day is like – what jobs do you need to do? What are you excited about? Are you seasick? Describe the journey so far. Does anything scare you? What has been the most remarkable thing that you have seen/found out about so far? Describe a new species that has been discovered. Draw and label a diagram of it. What would you call it?