

Deep-Sea Discoveries

The ocean covers two thirds of our planet yet we know more about the moon than what lies beneath the waves.

For hundreds of years scientists have been studying the deep sea and to this day are still discovering new species, new habitats, and new ways to study our ocean. In 1843 Edward Forbes, a british naturalist, derived the Azoic Hypothesis. It stated that life could not exist in the deep sea. This sparked a lot of debate which spearheaded a new era in deep sea exploration.

Our timeline of deep-sea discoveries begins in this new era and highlights some of the key moments in the history of ocean exploration.

1857

Monterey Bay Canyon was the first underwater canyon to be discovered. It is around 3.6km deep and 153km long. **James Alden** found it over 100 years ago but scientists are still studying it today.

1868

The **H.M.S Porcupine** and **H.M.S Lightning** set sail from Orkney, Scotland, equipped with deep-sea dredges to investigate the Azoic Hypothesis. They discovered an array of deep-sea life in European waters disproving the debated theory.

1872

After the discoveries of the previous expeditions, the **HMS Challenger** was sent on a global voyage with Charles Wyville Thomson as Chief Scientific Officer. It was a great success and was celebrated as the birth of Oceanography.

1934

William Beebe and **Otis Barton** were the first humans to explore the deep sea. They descended nearly 1000m in the **Bathysphere**, a small sphere with just 3 portholes attached to the ship by a cable.

1960

The first people to reach the bottom of the **Challenger Deep** were **Don Walsh** and **Jacques Piccard** in a submersible called Trieste. After a 5-hour descent they spent just 20 minutes taking in the first views of the deep sea.

1964

Alvin was the first US submarine dedicated to research. When Alvin was first launched it could reach depths of around 1.8km, nowadays, it can travel down to 4.5km. It still makes around 200 dives a year collecting data.

1977

While exploring an oceanic ridge near the **Galápagos Islands**, scientists noticed a series of temperature spikes. A closer look revealed **hydrothermal vents**. Although they can be up to 400°C, lots of specialised animals still call them home.

2010

After 10 years, 540 expeditions, 1,200 confirmed new species, 2,600 scientific publications and 2,700 scientists the first **marine census** was completed, finally achieving its aim of recording diversity, distribution, and abundance of life in the ocean.

2017

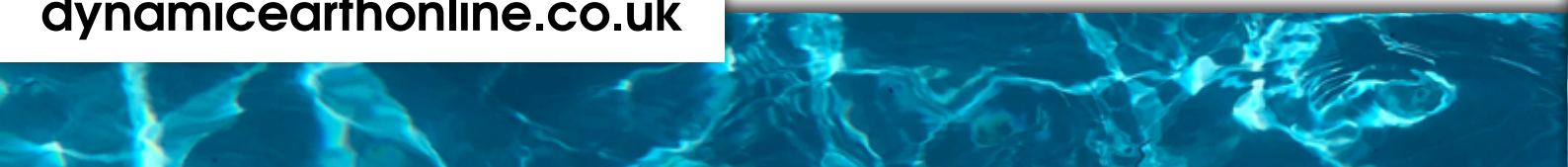
Around **80%** of the sea floor is still unmapped and unexplored. The **SeaBed 2030 project** set out to change this and made a target of mapping the whole ocean floor by 2030. Find out more [here](#).

2020

In June 2020, **Kathy Sullivan**, the first American woman to walk in space in 1984, made history again by becoming the **first woman** to visit **The Challenger Deep**. This was 60 years after the first man.

Match it Up

Each of our deep-sea discoveries has a picture to go along with it. Your task is to figure out which one it is! On the next page we have 10 pictures and a list of years; draw a line from the photo to the year you think it comes from. Using the timeline above, think about what happened that year and how long ago it was. The answers are on the last page so don't peek!



Bathysphere



1857

1868

1872

1934

1960

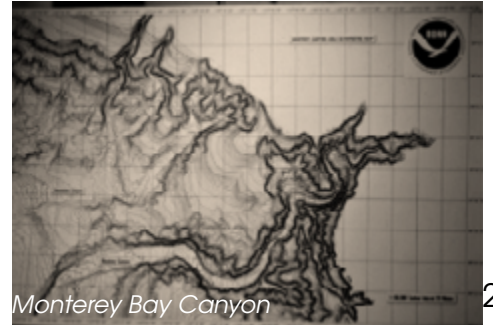
1964

1977

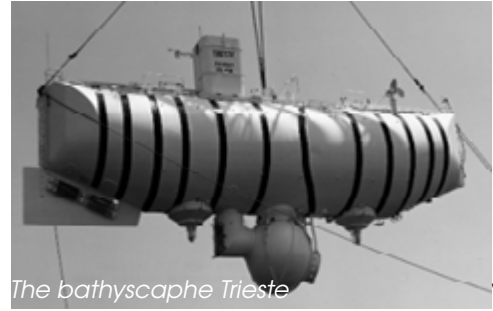
2010

2017

2020



Monterey Bay Canyon

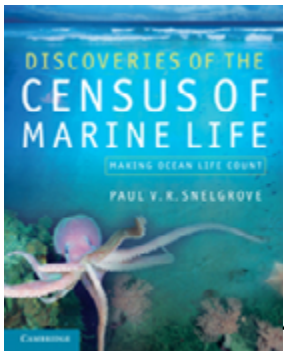


The bathyscaphe Trieste



HMS Challenger

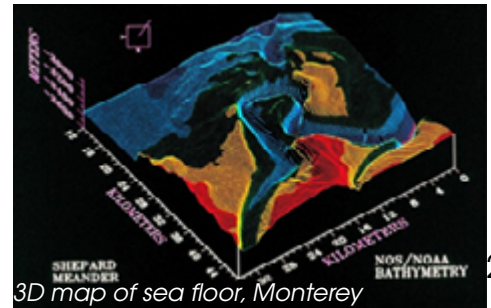
HMS Porcupine



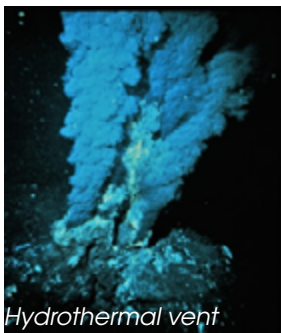
4



Kathy Sullivan



3D map of sea floor, Monterey



Hydrothermal vent

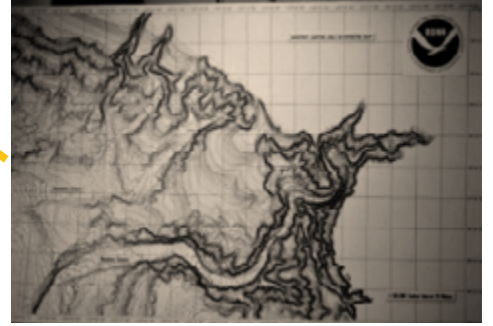


Alvin

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1857



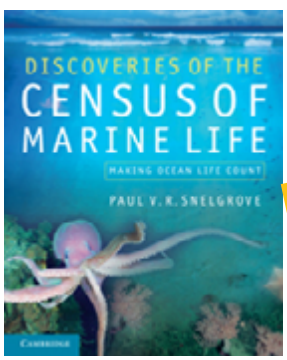
1868



1872



1930



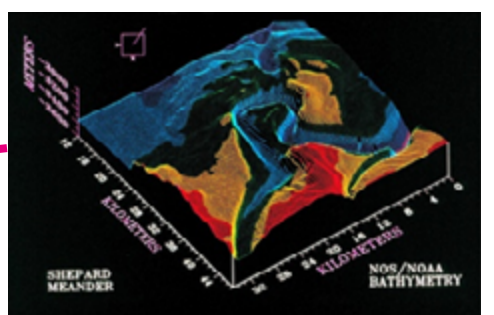
1960



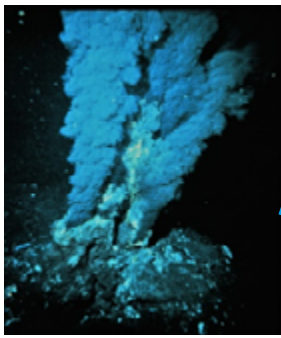
1964



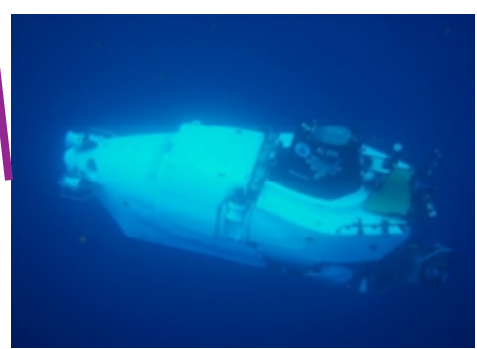
1977



1995



2010



2020

