SCIENTIFIC EXPLORATION

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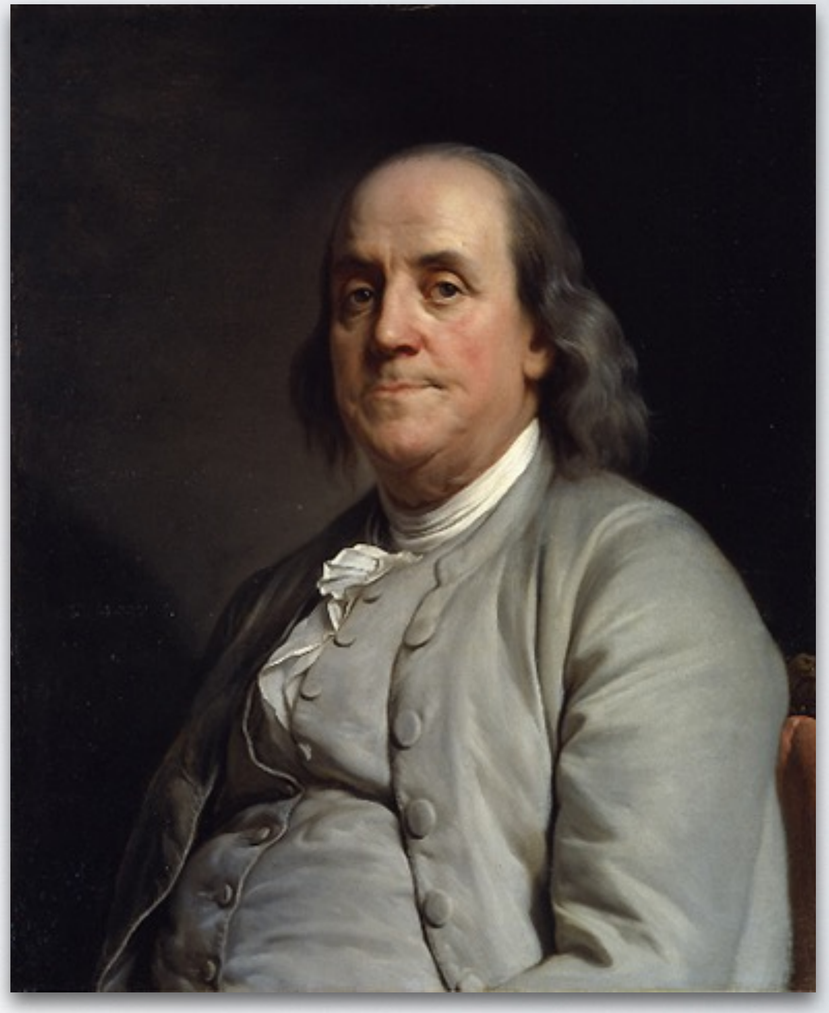
- Ocean scientists continued in the wake of early explorers and navigators by investigating the oceans in a quest for scientific knowledge
- This quest is on going and has resulted in a much deeper understanding of our oceans and planet which is 71% water

SCIENTIFIC EXPLORATION

- Benjamin Franklin (1706 - 1790)
    - First to map the Gulf Stream
    - Amazingly accurate map of the warm water current that runs north along the east coast of North America



REMARKS

Upon the Navigation from

NEWFOUNDLAND to NEW-YORK,

In order to avoid the

GULPH STREAM

On one hand, and on the other the SHOALS *that lie to the Southward of Nantucket and of St. George's Banks.*

AFTER you have paſſed the Banks of Newfoundland in about the 44th degree of latitude, you will meet with nothing, till you draw near the Iſle of Sables, which we commonly paſs in latitude 43. Southward of this iſle, the current is found to extend itſelf as far North as 41° 20′ or 30′, then it turns towards the E. S. E. or S. E. ¼ E.

Having paſſed the Iſle of Sables, ſhape your courſe for the St. George's Banks, ſo as to paſs them in about latitude 40°, becauſe the current ſouthward of thoſe banks reaches as far North as 39°. The ſhoals of thoſe banks lie in 41° 35′.

After having paſſed St. George's Banks, you muſt, to clear Nantucket, form your courſe ſo as to paſs between the latitudes 38° 30′ and 40° 45′.

The moſt ſouthern part of the ſhoals of Nantucket lie in about 40° 45′. The northern part of the current directly to the ſouth of Nantucket is felt in about latitude 38° 30′.

By obſerving theſe directions and keeping between the ſtream and the ſhoals, the paſſage from the Banks of Newfoundland to New-York, Delaware, or Virginia, may be conſiderably ſhortened; for ſo you will have the advantage of the eddy current, which moves contrary to the Gulph Stream. Whereas if to avoid the ſhoals you keep too far to the ſouthward, and get into that ſtream, you will be retarded by it at the rate of 60 or 70 miles a day.

The Nantucket whale-men being extremely well acquainted with the Gulph Stream, its courſe, ſtrength and extent, by their conſtant practice of whaling on the edges of it, from their iſland quite down to the Bahamas, this draft of that ſtream was obtained from one of them, Capt. Folger, and cauſed to be engraved on the old chart in London, for the benefit of navigators, by

B. FRANKLIN.

Note, The Nantucket captains who are acquainted with this ſtream, make their voyages from England to Boſton in as ſhort a time generally as others take in going from Boſton to England, viz. from 20 to 30 days.

A ſtranger may know when he is in the Gulph Stream, by the warmth of the water, which is much greater than that of the water on each ſide of it. If then he is bound to the weſtward, he ſhould croſs the ſtream to get out of it as ſoon as poſſible.

B. F.

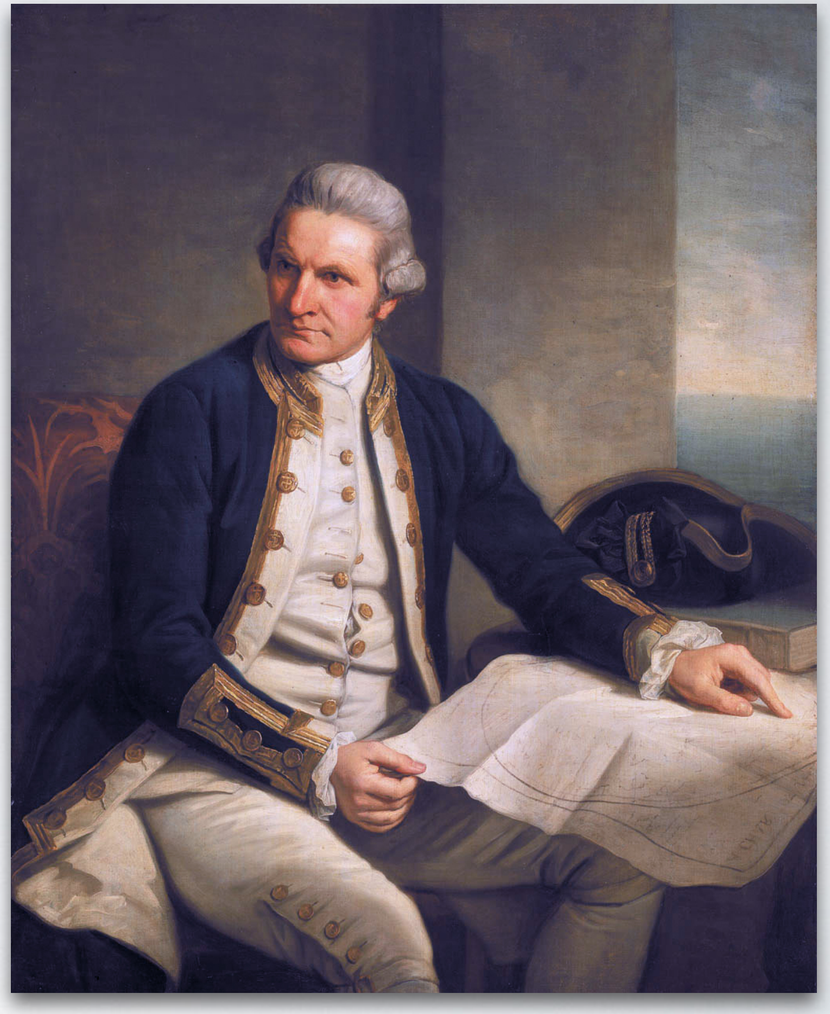
Gulf Stream Mapping

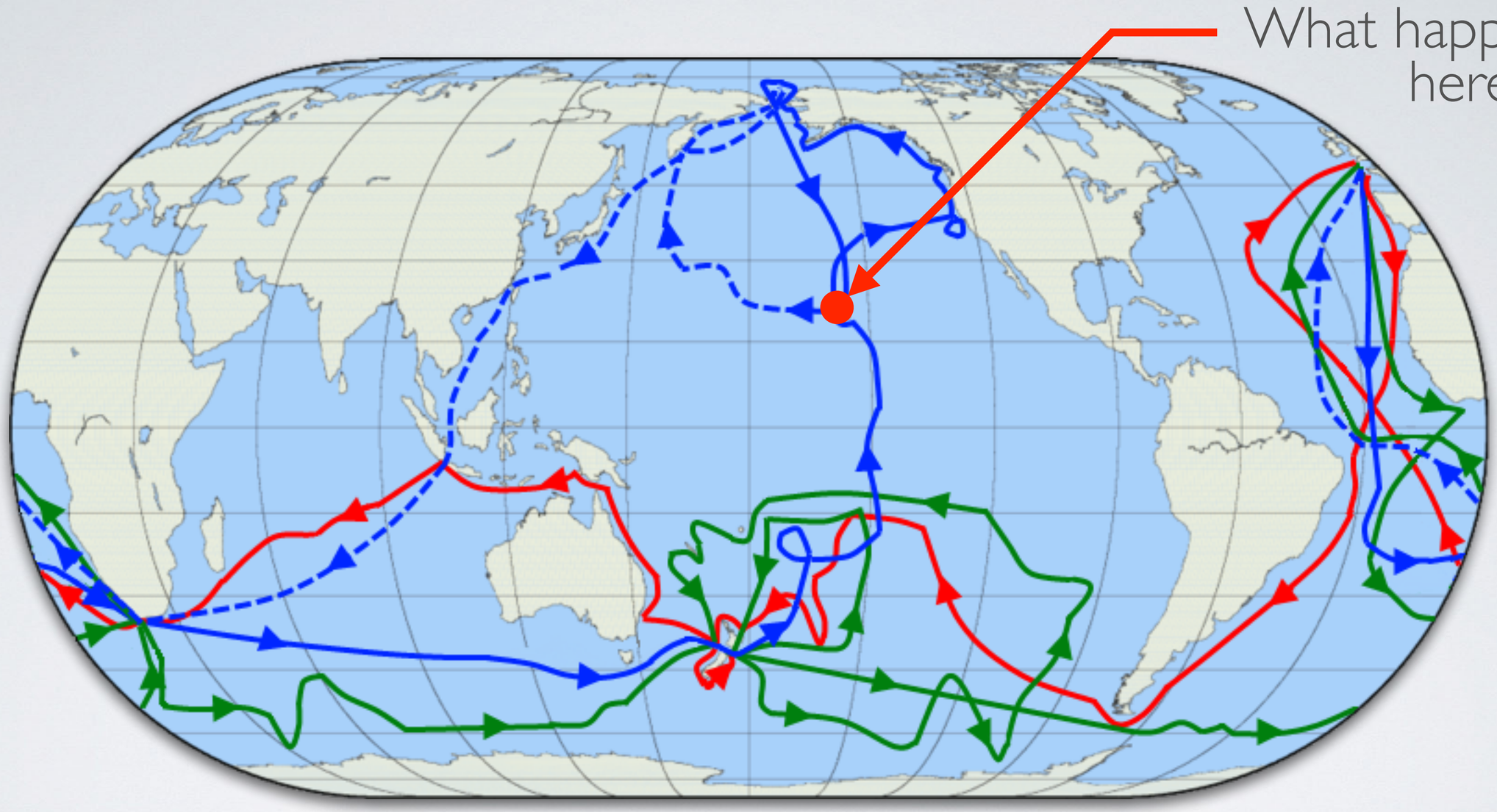
SCIENTIFIC EXPLORATION

- James Cook (1728 - 1779)
    - British explorer who mapped the South Pacific in search of Australia
    - Discovered the importance of vitamin C to prevent scurvy
        - Scurvy - a disease resulting from a deficiency of vitamin C which is required for the synthesis of collagen

SCIENTIFIC EXPLORATION

- James Cook (continued)
    - Excellent celestial navigator and understood latitude and longitude
    - Created many detailed maps
    - Killed while exploring Hawaii



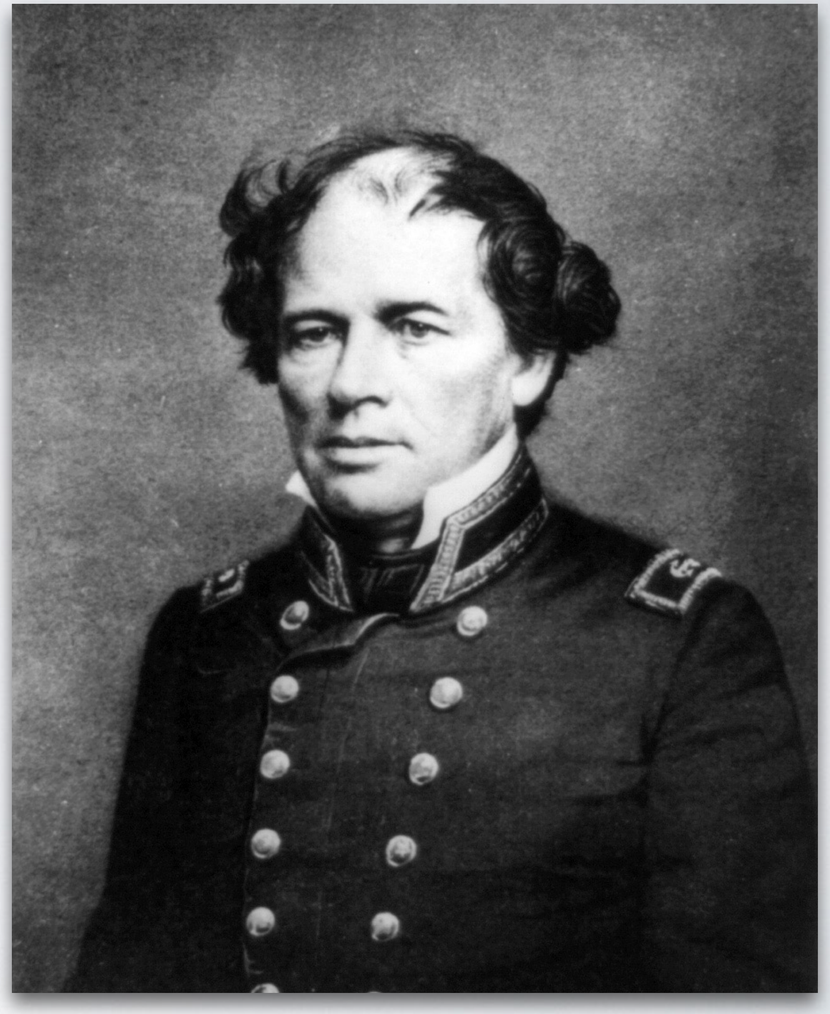


Cook's Journeys

James Cook Documentary

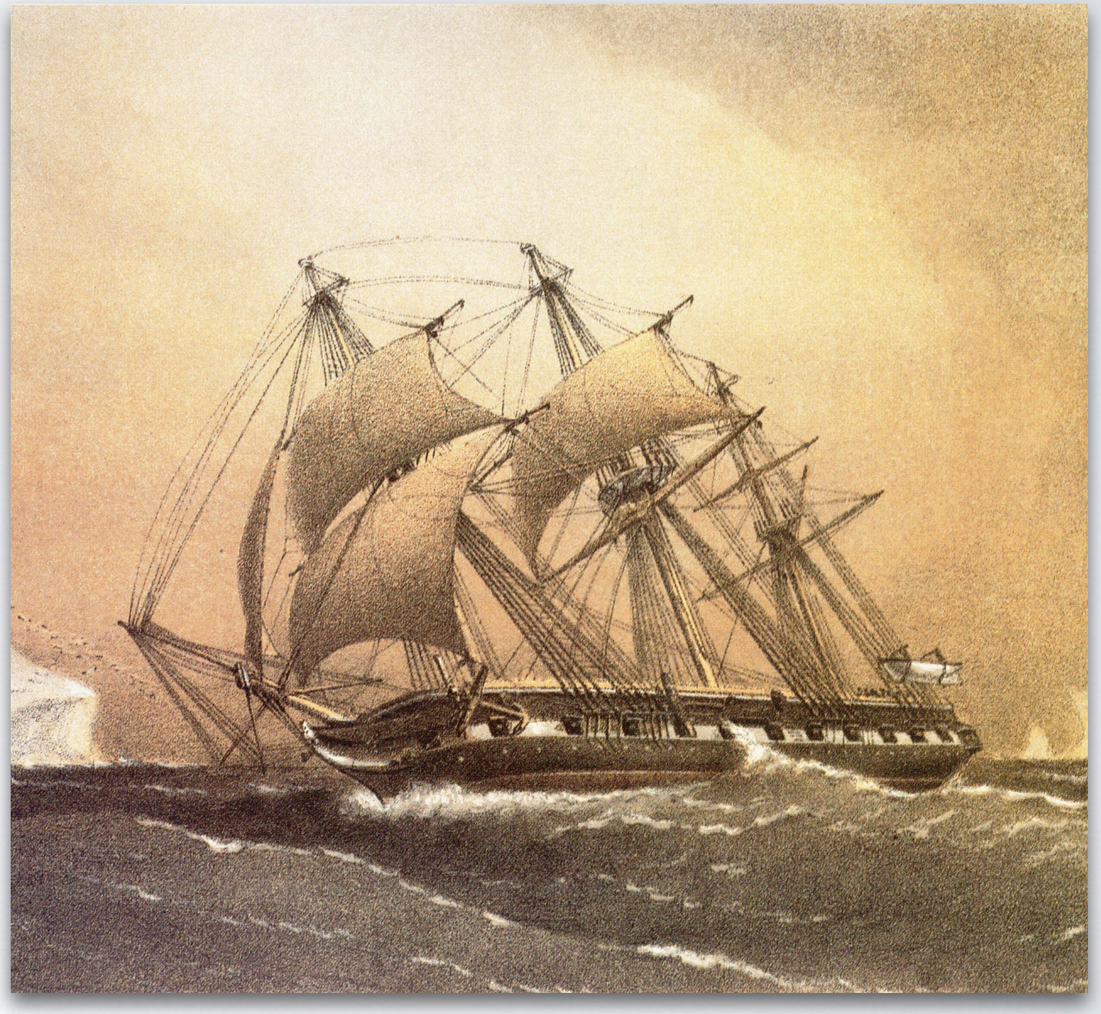
SCIENTIFIC EXPLORATION

- Matthew Fontaine Maury (1806 - 1873)
    - American naval officer
    - Father of Oceanography
    - Published "The Physical Geography of the Sea" and "Wind and Current Chart of the North Atlantic"



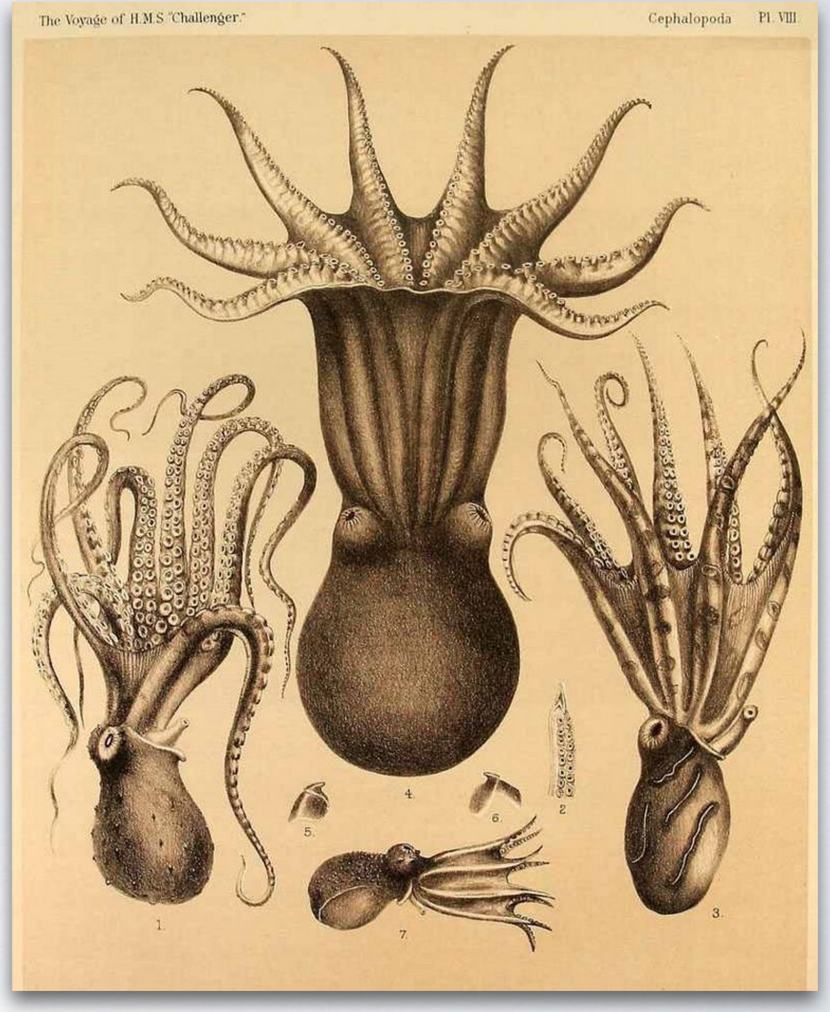
SCIENTIFIC EXPLORATION

- H.M.S. Challenger (1873-1876)
    - A refitted British warship which crossed all the major oceans collecting samples 50 volumes worth of data



SCIENTIFIC EXPLORATION

- H.M.S. Challenger (continued)
  - Scientific data included:
    - 4700 new species discovered
    - Temperature and pressure reading at different depths
    - Ocean-floor sediments
    - Tide data



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