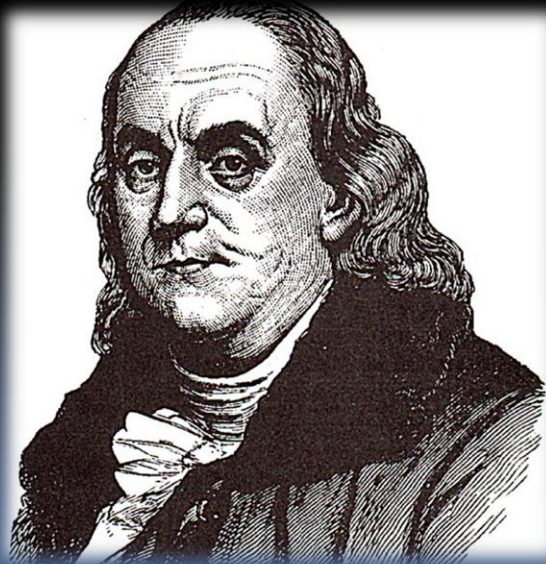


# MARITIME HISTORY



# Benjamin Franklin (1706-1790)

- Published the 1<sup>st</sup> map of the Gulf Stream
  - To increase postal speed
  - To gain advantage in war time



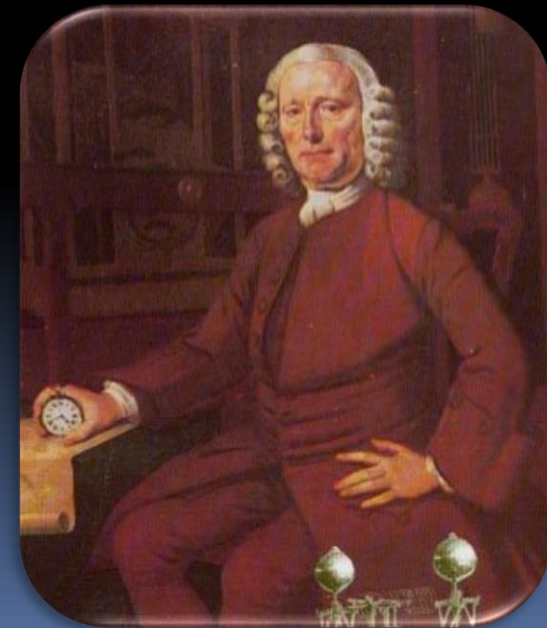
# Franklin's Gulf Stream Map





# 1761 – John Harrison

- Working class carpenter who solved the longitude problem by inventing the 1st clock accurate at sea called the *Chronometer*.



# Captain James Cook

- Great navigator & discoverer
- From England
- 3 noteworthy expeditions



# Cook's 1<sup>st</sup> Voyage: The Endeavour

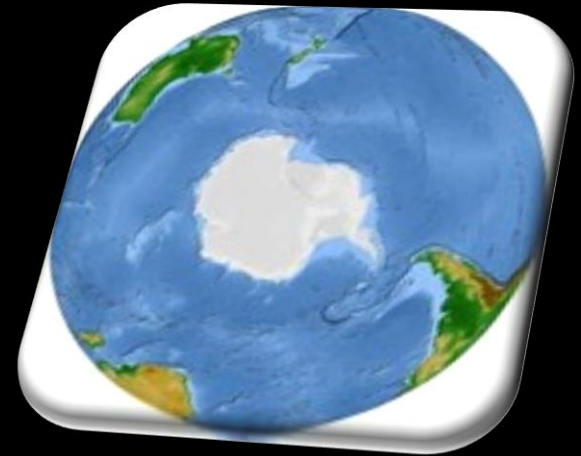
1768-1771

- Circumnavigated the globe
- Built an observatory in Tahiti to document the Transit of Venus.
- Disproved the theory of a giant continent between Tahiti & New Zealand.



# Cook's 2<sup>nd</sup> Voyage: The Resolution 1772-1775

- Less than 1% fatality due to his new dietary reforms.



- Tried to prove the existence of Antarctica, but could not land there.
- Was the 1<sup>st</sup> to circle Antarctica.

# Cook's 3<sup>rd</sup> Voyage: The Discovery

1776-1780

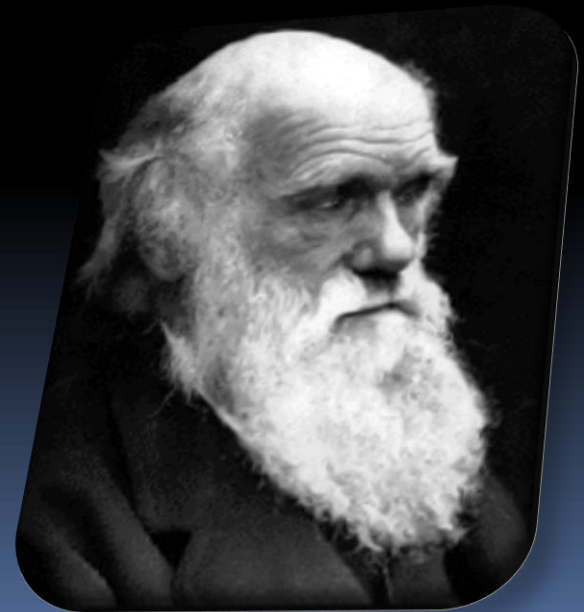
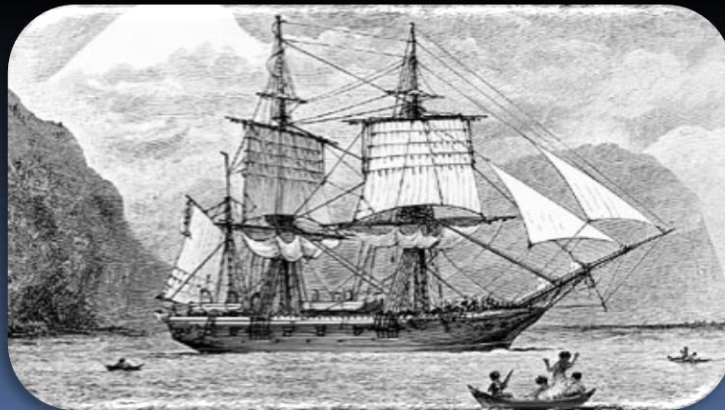
- Attempted to find a Northwest Passage from the Pacific to the Atlantic, but failed.
- Rediscovered the Hawaiian islands.
- Murdered by natives in Hawaii.





# HMS BEAGLE (1831-1836)

- Mission was to map the coastline of South America & take oceanographic measurements.
- Charles Darwin categorized 1000s of species in the Galapagos Islands



# Matthew Maury (1806-1873)

## The Father of Oceanography

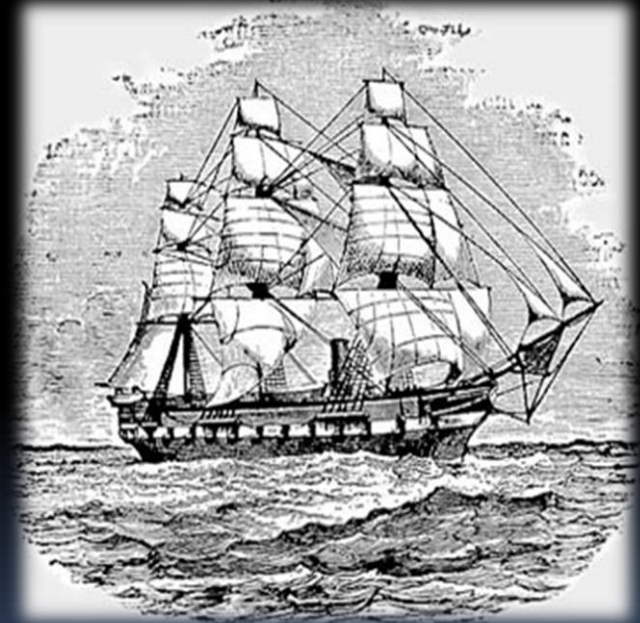
- Born in Fredricksburg, VA.
- Joined the USN at age 19
- Developed maps of wind & current patterns.
- Professor of Meteorology at VMI
- Published *The Physical Geography of the Sea*, in 1855 - called the 1<sup>st</sup> modern oceanography textbook



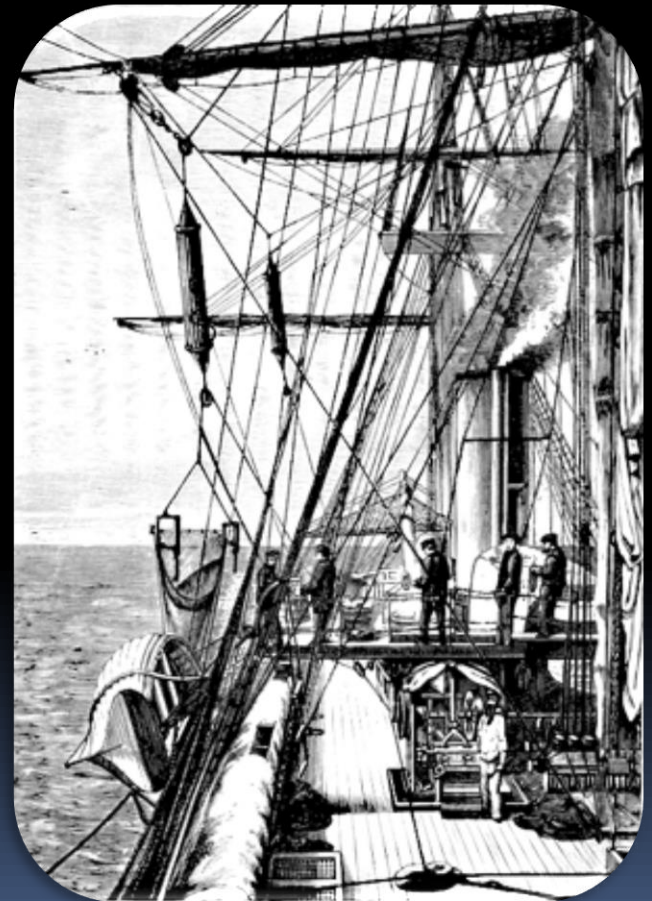
# Challenger Expedition

## 1872-1876

- 1st modern, deep-ocean, global sampling expedition.
- Scientists studied the deep ocean's water chemistry, sea floor deposits & distribution of organic life.
- Measured the depth of the Marianas Trench (8,185m).
- Classified 4,717 new marine species.



# Glomar Challenger





# Fridtjof Nansen

## (1861-1930)



- 1895: Designed a boat named the *Fram* capable of withstanding ice pressure.
- Mapped the Arctic ocean by purposely getting frozen into sea ice & drifting across the ocean for 3 years.
- Invented the Nansen bottle for water sampling.

# The Fram



# 1914 – Ernest Shackleton

- Skilled captain who's life goal was to cross Antarctica
- His ship the *Endurance* was frozen into sea ice & crushed.
- He & his crew spent 15 months on Antarctica before they got home - no one died.



# Jacques Cousteau (1910 - 1997)

- Most famous undersea explorer in the world.
- Invented SCUBA
- Pioneered unaided deep sea diving & underwater photography.
- Filmed over 150 TV shows & wrote over 50 books.
- Cousteau Foundation was founded in 1973.





# SYLVIA EARLE (1935- )



- Explorer in Residence at the National Geographic Society
- First female chief scientist of NOAA
- Called "Her Deepness" b/c she is the deepest diver in the world right now
- Has led 70 expeditions & has logged over 6,500 hours underwater

# ROBERT BALLARD (1942- )



- Geographic oceanographer

- One of the most well known of the world's deep-sea explorers.
- Discovered the sunken Titanic w/ deep sea submersibles.





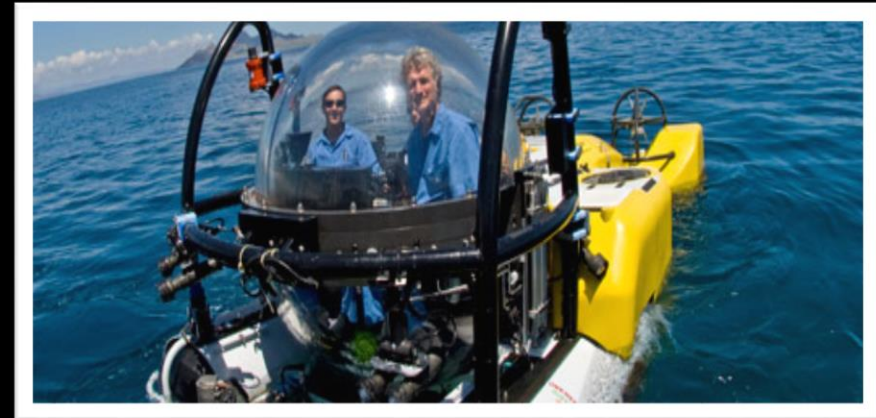
# OCEANOGRAPHIC INSTITUTIONS

## RESEARCH INSTITUTIONS

# SCRIPPS INSTITUTION OF OCEANOGRAPHY

- Founded in 1905
- San Diego, CA
- Research spans the realms of sea, air, land, & life in efforts to determine how Earth systems work & interact.

[Click Here!](#)





## *RESEARCH INSTITUTIONS*

# Woods Hole Oceanographic Institution

- Founded in 1888
- Largest private non-profit oceanographic institution in the world.
- Located in Woods Hole, MA.
- Largest fleet of research ships & submersibles.
- Robert Ballard is affiliated with WHOI.



*RESEARCH INSTITUTIONS*

NOAA - NATIONAL OCEANIC AND ATMOSPHERIC  
ADMINISTRATION

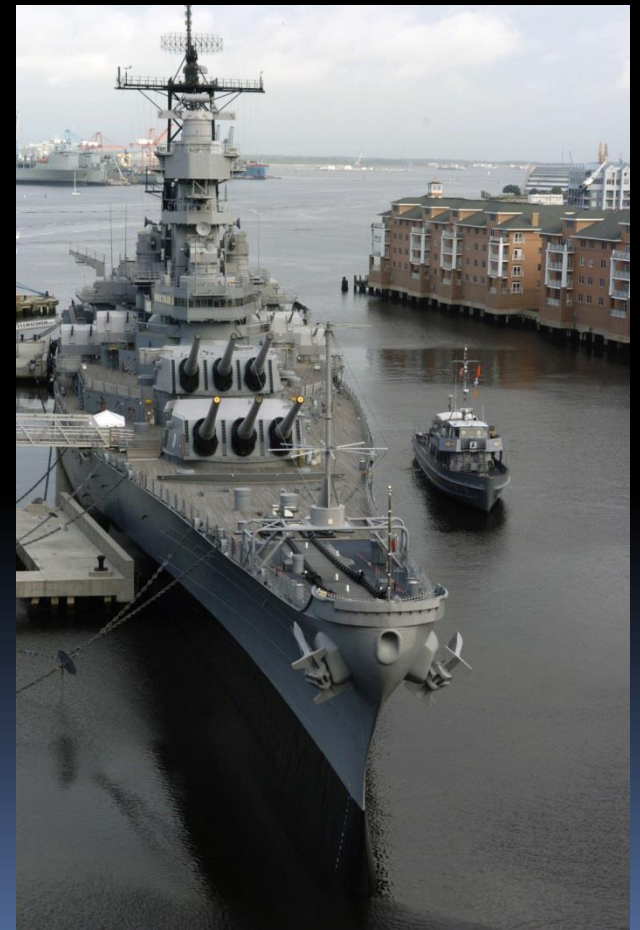
- Federal agency focused on the condition of the oceans & atmosphere
- Fisheries management, climate monitoring, severe storm warnings, daily weather forecasts



## *RESEARCH INSTITUTIONS*

# THE OFFICE OF NAVAL RESEARCH

- ONR is a branch within the Department of Defense that provides technical advice to the Chief of Naval Operations and the Secretary of the Navy



*RESEARCH INSTITUTIONS*

VIMS - VIRGINIA INSTITUTE OF MARINE SCIENCE

- Part of William & Mary
- Conducts research in coastal ocean & estuarine science, educates students & citizens, & provides advisory services to policy makers, industry, & the public.





## *RESEARCH INSTITUTIONS*

### CCPO - CENTER FOR COASTAL PHYSICAL OCEANOGRAPHY

- Part of Old Dominion
- Studies physical oceanography of the coastal ocean such as:
  - Climate Change and Sea Level Rise
  - Coastal Wind Energy
  - Chesapeake Bay Mouth Cruise Data
  - Tide and Temperature Conditions: Hampton Roads and Chesapeake Bay





# IMPORTANT RESEARCH VESSELS

# Trieste

- First launched in 1953 near Naples, Italy by Auguste Piccard
- Bought by the U.S. Navy several years later
- January 23, 1960 historic dive to the bottom of the Mariana Trench



# HOV Alvin

Human Occupied Vehicle

- Located a lost hydrogen bomb in the Mediterranean Sea in 1966
- Explored the first hydrothermal vent sites in the 1970s
- Surveyed the wreck of the Titanic in 1986

