

HISTORICAL DEVELOPMENT OF OCEANOGRAPHY

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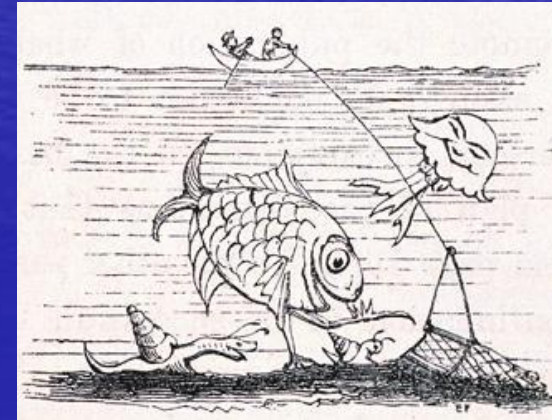
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INTERNATIONAL SCENERIO

- Human interest in the biology of the oceans made in the **fourth century B.C** by **Aristotle**. He described **180 species of marine animals**
- In **fifteenth** and **sixteenth** centuries increased the geographical knowledge of the oceans
- But modern studies on the biology of the oceans did not really start until the middle of the **nineteenth** century.



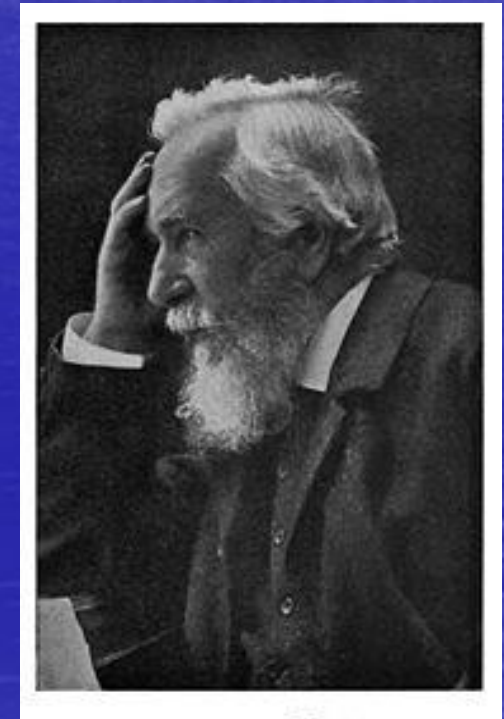
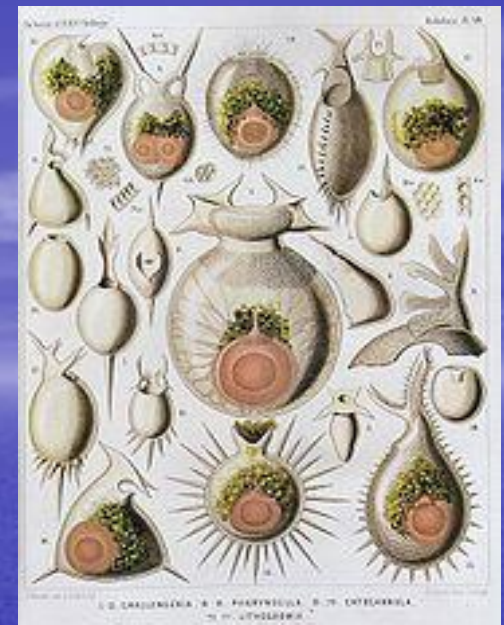
- The British naturalist, **Edward Forbes** (1815-54) is **founding father of Oceanography**. He was one of the first person to conduct systematically studied the marine biota.
- He studied the **benthic marine fauna** and he recognized that different species occupy different depth zones.
- The book, ***"The Natural History of the European Seas"*** was published five years after his death.



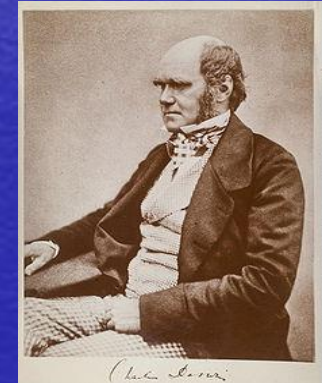
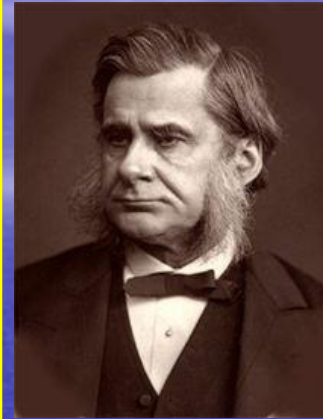
- **Charles Wyville Thompson** became professor of natural philosophy at the University of Edinburgh. In 1873, he published the first texts of, *The Depth of the Sea*.
- **Thompson** leader of the first oceanographic expedition called **Challenger Expedition** was made in 1872-76, which travelled 1,10,900km visiting all the major oceans except Arctic. The expedition was organized by The Royal Society specifically to survey the physical, chemical and biological features



- The challenger voyage attempted to integrate **biology, chemistry, geology** and **physical phenomena** and established systematic data collection, so that, the challenger expedition is considered the beginning of modern oceanography
- Over **76 scientists** analysed the collections and produced a basic map of the seafloor
- The biological samples yielded 715 new genera and 4417 new species of marine organisms. 3508 of new species of **Radiolaria** (Protozoans) described by German Biologist **Ernst Haeckel**



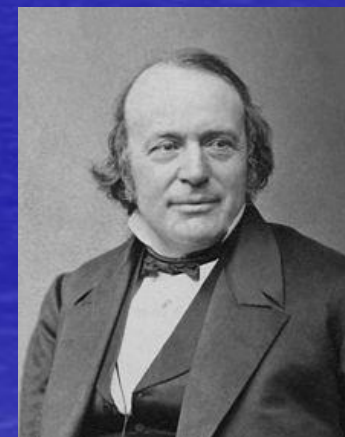
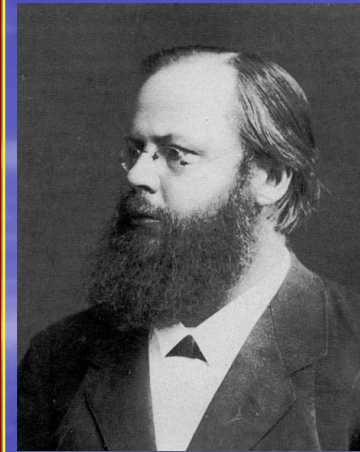
- The Challenger Expedition also discovered the mucus like jelly thin layer called **Bathybius haeckelii** covering the surface of preserved mud samples, discovered by **Thomas Huxley** in 1868.
- **John Murray** organize the **Michael Sars Expedition 1910 and 1912**
- The first person reported the **marine plankton** was **J. Vaughan Thompson** from the coast of Ireland in 1828.
- **Charles Darwin** collected marine plankton during the **voyage of the Beagle** from 1831 to 1836



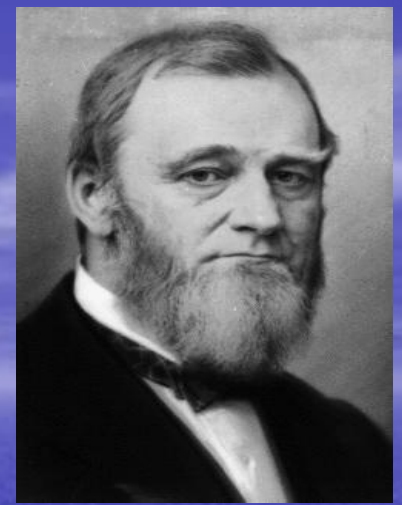
- **Joseph Hooker** identified that the **diatoms** collected and he says that they played the same ecological role in the sea as plants do on land.
- **Victor Hensen**, a Professor at Kiel University who also led the first oceanographic expedition entirely devoted to **quantitative collections of plankton**.
- In late 1800s and early 1900s several marine and oceanographic laboratories have been established, many of them are founded by **biologists**.



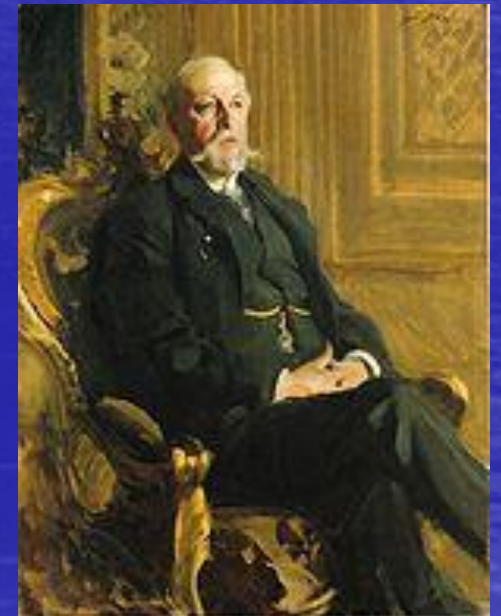
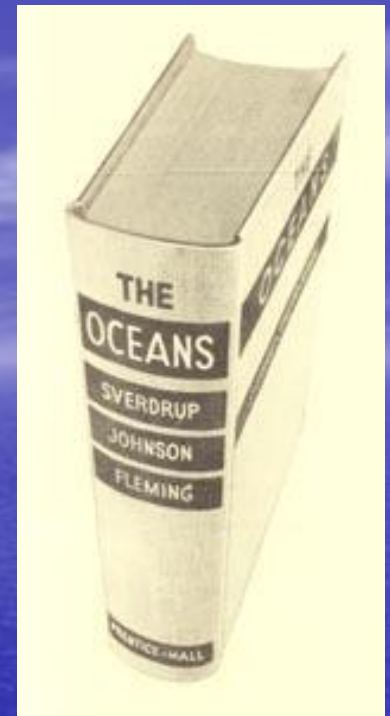
- **Anton Dohrn** established the Stazione Zoologica de Napolia in 1872.
- The Marine Biological Association of the United Kingdom started a laboratory in **Plymouth, England** in 1888.
- In 1906, **Prince Albert I** of Monaco established an **oceanographic museum and aquarium**
- In America **Louis Agassiz** established the first marine biological laboratory on the east coast in 1873, this was later (1888) moved to Woods Hole.



- **Spencer Baird** started the first laboratory to **fisheries studies** in Woods Hole.
- In 1930, the **Woods Hole Oceanographic Institution** was officially established
- On the west coast of America, **William Ritter** founded a research organization in 1905 that eventually in 1924 became the **Scripps Institution of Oceanography** in California
- Now almost all countries bordering the ocean have **Oceanographic** or **Fisheries** stations.



- One of the earliest and most comprehensive texts in Oceanography is *The Oceans* published by Sverdrup in 1942.
- In 1902, the International Council for the exploration of the Sea (ICES) was established in Sweden by King Oscar II. This organization attempted to integrate physical studies of the oceans with biological investigations of fish

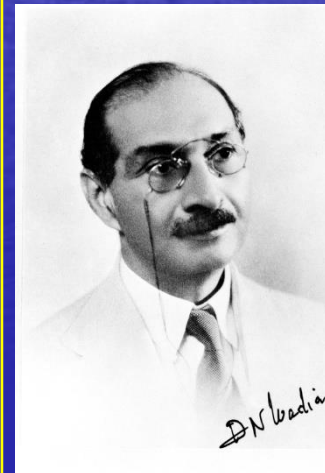


INDIAN SCENARIO

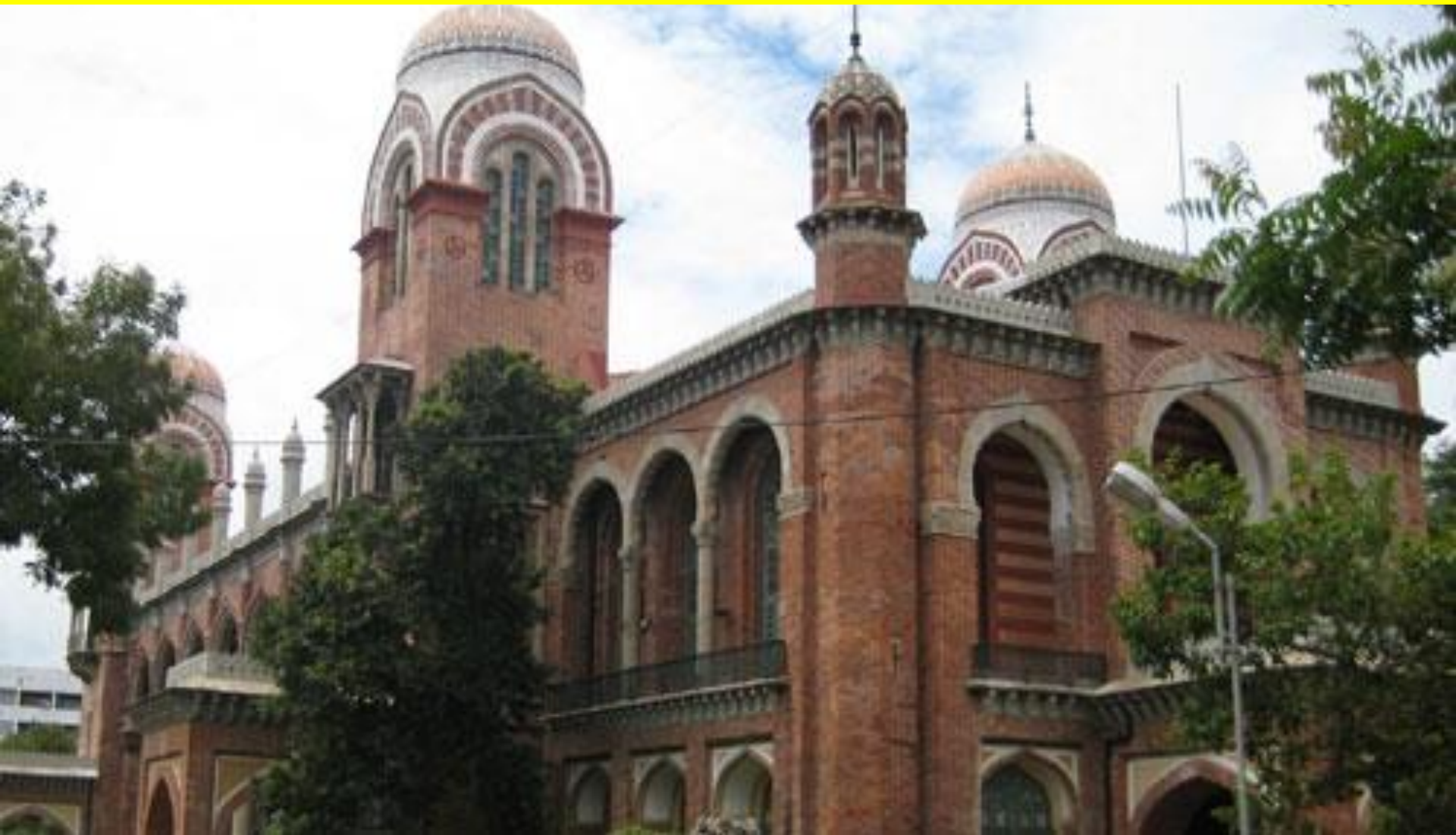
- Centre of Advanced Studies in Marine Biology established in the year 1959 by **Profesor R.V. Seshaiya** at Parangipettai, Tamil Nadu.
- The thrust areas of the Institute are **Physical, Chemical and Biological Oceanography**



- **National Institute of Oceanography** (NIO) is a 40 years old laboratory on 1 January 2006.
- The first proposal to set up the National Institute of Oceanography was placed by **Dr. D.N. Wadia**, in the 23 March 1964.
- **Dr Homi Bhabha** also seem to have a strong interest in this institute based on the discussions that have gone in the minutes of the meeting.
- These recommendations were then approved by the Governing body of CSIR on 24 March 1964



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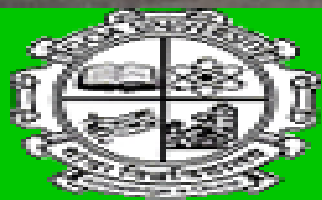


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