

# Pioneering Marine Biology: Firsts, Inventions, and Discoveries

Marine Biology · Practice Test · 15 Questions

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**1. What was the first scientific expedition to systematically explore the deep ocean and its inhabitants, often credited with inaugurating modern oceanography?**

- A) The Challenger Expedition (1872-1876)
- B) The Beagle Voyage (1831-1836)
- C) The Meteor Expedition (1925-1927)
- D) The Albatross Expedition (1888)

**2. Who is credited with inventing the first practical, self-contained underwater breathing apparatus (SCUBA) in 1943, revolutionizing underwater exploration?**

- A) Jacques Cousteau and Émile Gagnan
- B) Hans Hass
- C) Robert Ballast
- D) Auguste Piccard

**3. The discovery of hydrothermal vents in 1977 at the Galapagos Rift was a groundbreaking moment. What unique ecosystem did this discovery reveal?**

- A) Chemosynthetic communities based on sulfur compounds
- B) Bioluminescent deep-sea organisms
- C) A previously unknown phylum of invertebrates
- D) Giant squids with exceptional intelligence

**4. What invention, first successfully used in the mid-20th century, allowed scientists to collect sediment samples from great depths, providing crucial data on past ocean conditions?**

- A) The Piston Corer
- B) The Bathyscaphe
- C) The Submersible
- D) The Sonar System

**5. Which scientist, often called the 'father of marine biology,' was the first to systematically classify marine organisms and extensively study their habitats in the 19th century?**

- A) Sir John Murray
- B) Alexander von Humboldt
- C) Edward Forbes
- D) Charles Darwin

**6. The development of what technology in the early 20th century enabled the first accurate mapping of the ocean floor, revealing its topography in unprecedented detail?**

- A) Echo Sounding (Sonar)
- B) ROVs (Remotely Operated Vehicles)
- C) Deep-Sea Cameras
- D) Trawling nets

**7. What was the first significant discovery of a marine mammal's ability to echolocate for navigation and hunting, a phenomenon widely studied since the mid-20th century?**

- A) Dolphins
- B) Whales
- C) Seals
- D) Sea Otters

**8. The discovery of the 'living fossil' coelacanth in 1938 was a major paleontological and biological find. In what ocean region was it first found?**

- A) Off the coast of South Africa
- B) In the Mariana Trench
- C) Near the Galapagos Islands
- D) In the Arctic Ocean

**9. What early invention, dating back to the late 19th century, was crucial for collecting specimens from various depths and understanding the vertical distribution of marine life?**

- A) The Dredge
- B) The Plankton Net
- C) The Submersible
- D) The Gyrocompass

**10. The first successful observation of marine life from a manned submersible in the deep ocean occurred in the 1930s. What was the name of this pioneering submersible?**

- A) Bathysphere
- B) Alvin
- C) Nautilus
- D) Triton

**11. What discovery in the 1950s demonstrated that the ocean floor was not static, but was actively spreading from mid-ocean ridges, a cornerstone of plate tectonics?**

- A) Seafloor Spreading
- B) Abyssal Plains
- C) Ocean Trenches
- D) Continental Shelves

**12. The identification of bioluminescence as a widespread phenomenon in marine organisms, particularly in the deep sea, was significantly advanced by studies beginning in the late 19th and early 20th centuries. Which of these is NOT a primary function of bioluminescence in marine life?**

- A) Predator deterrence
- B) Communication and mating
- C) Camouflage (counter-illumination)
- D) Generating heat for survival

**13. What was the first fully submersible research vessel capable of prolonged dives to great depths, launched in the 1960s, which greatly expanded direct observation capabilities?**

- A) Alvin
- B) Bathyscaphe Trieste
- C) Deepsea Challenger
- D) Joides Resolution

**14. The understanding of coral bleaching as a stress response to environmental changes, particularly rising sea temperatures, gained significant scientific attention starting in the late 20th century. What is the primary cause of coral bleaching?**

- A) Expulsion of symbiotic algae (zooxanthellae)
- B) Bacterial infection
- C) Increased salinity
- D) Pollution from microplastics

**15. What groundbreaking invention by Willard Bascom in the mid-20th century allowed for more efficient and safe study of coastal processes and marine life by establishing a fixed observation platform in the surf zone?**

- A) The Stepping Stone
- B) The Floating Laboratory
- C) The Underwater Observatory
- D) The Wave Rider Buoy