



NOAA SHIP

Okeanos Explorer

Accomplishments

NOAA Ship *Okeanos Explorer* is the only federal U.S. ship dedicated to systematically explore our ocean. The vessel, formerly the USNS *Capable*, was transferred from the U.S. Navy to NOAA in 2004 and was converted to conduct telepresence-enabled deep ocean exploration for the purpose of discovery and the advancement of knowledge.

The ship methodically maps the deep seafloor, and conducts several major expeditions each year using remotely operated vehicles (ROV) to investigate seafloor habitats. Areas that *Okeanos Explorer* has explored include the U.S. Gulf of Mexico; the U.S. Atlantic Canyons and Seamounts; Indonesia’s Sulawesi Sea; Ecuador’s Galapagos Rift, and the U.K.’s Cayman Trough.

The ship is managed by the NOAA Office of Marine and Aviation Operations, in support of the mission of the NOAA Office of Ocean Exploration and Research. *Okeanos Explorer* also conducts cruises with other NOAA offices to support NOAA’s mission to explore and understand the ocean and our environment.

Between June 2009 and October 2014 *Okeanos Explorer* has:

- Completed 39 expeditions
- Mapped 759,749 square kilometers of seafloor in high resolution (equivalent to an area larger than California and Arizona combined)
- Conducted 168 remotely operated vehicle dives
- Conducted 14 autonomous underwater vehicle dives
- Trained more than 60 undergraduate and graduate students onboard and ashore

What’s in a name?

Okeanos Explorer was named by a team of five students from Woodstock High School in Woodstock, Illinois. The team won NOAA’s nationwide ship-naming contest with its name selection and supporting educational project. *Okeanos* is the ancient Greek word for ocean.

About the Ship

COMMANDING OFFICER

Commander Mark Wetzler, NOAA

EXECUTIVE OFFICER

Lieutenant Commander James Brinkley, NOAA

CHIEF MARINE ENGINEER

Vincent Palazzolo

LENGTH (LOA)

224 feet

BREADTH

43 feet

MAX. DRAFT

17 feet

FULL LOAD DISPLACEMENT

2,312 long tons

SPEED

10 knots

ENDURANCE

40 days

HULL NUMBER

R337

COMMISSIONED OFFICERS

6

LICENSED ENGINEERS

3

PERMANENT CREW

17

SCIENTISTS

20

LAUNCHED

October 28, 1988

DELIVERED TO NOAA

September 10, 2004

COMMISSIONED

August 13, 2008

BUILDER

VT Halter Marine, Inc.,
Moss Point, Mississippi

Why ocean exploration matters

Seventy percent of the Earth's surface is covered by the ocean, but only five percent of the ocean has been explored! The *Okeanos Explorer* explores the deep ocean for many reasons:

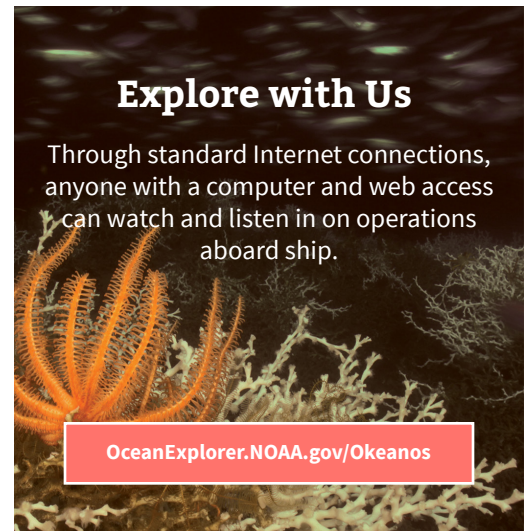
- Ocean exploration contributes to our understanding of the deep ocean, which we rely on for life.
- It helps to ensure that the ways we use the ocean are not just managed, but managed well.
- It delivers the knowledge, tools, and technology needed to respond when disaster strikes.
- It provides us with knowledge about environmental change.

Okeanos Explorer expeditions are carefully planned beforehand with the input of scientists, partners, and other stakeholders. After the expeditions, scientists use the data provided to prioritize research related to geology, chemistry, biology, archaeology, and many other disciplines. Resource managers, policy makers, and others use the baseline information ocean exploration provides to make informed decisions.

Technology

The *Okeanos Explorer* is equipped with three deep-water sonars (multibeam, subbottom, and single beam), an ROV that can dive to 6000 meters, a conductivity, temperature, and depth rosette with *in situ* sensors, and telepresence technology. Telepresence relies on real-time broadband satellite communications to allow data transfers and high-definition video feeds of at-sea operations to be streamed to shore in real time.

During ROV expeditions, two scientists sail onboard the ship and work closely with the at-sea team of engineers and technicians, as well as a much larger team of scientists participating from shore. During the expeditions, data, including seafloor mapping data and video, is streamed live to scientists on shore, as well as on the Internet for the public to follow.



NOAA Office of Marine and Aviation Operations

NOAA's fleet of research and survey ships ranges from large oceanographic research vessels capable of exploring the world's deepest ocean to smaller ships responsible for charting the shallow bays and inlets of the United States. NOAA ships and aircraft play a critical role in the collection of its oceanographic, atmospheric, hydrographic, fisheries, and coastal data.

NOAA Office of Ocean Exploration and Research

The NOAA Office of Ocean Exploration and Research catalyzes discovery to transform understanding of the global ocean. *Okeanos Explorer* expedition locations are chosen based on recommendations from the scientific community and other stakeholders.



About NOAA

NOAA conducts research and gathers data about the global oceans, atmosphere, space, and sun, and applies this knowledge to science and service that touch the lives of all Americans.