



OCEAN EXPLORATION TRUST

DESSC | DECEMBER 2019



MISSION

Explore the ocean, seeking out new discoveries in the fields of geology, biology, maritime history, and archaeology while pushing the boundaries of **STEM education** and **technological innovation.**

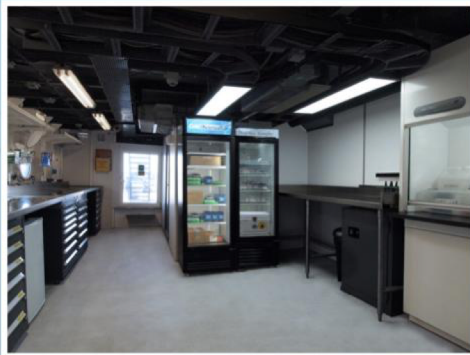
SHIP UPGRADES

2019 (COMPLETED)

- Traction winch installation below deck
- DP upgrade
- Wet lab renovation

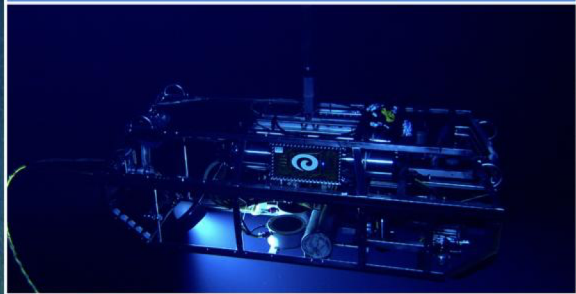
2019/20 (IN PROGRESS)

- Re-engining
- Funnel redesign, and
- Fabrication of configurable 3-van ROV control center

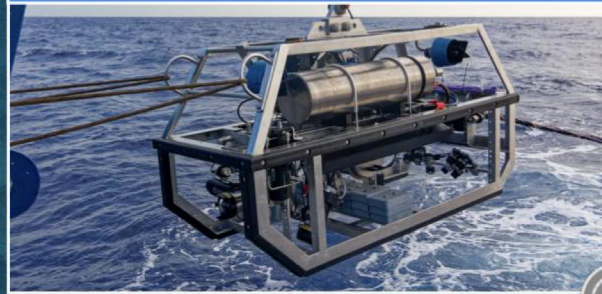




**ROVs Hercules
& Argus (4000-m, 6000-m)**



**ROVs Little Hercules
& Atalanta (6000-m)**





THUNDER BAY

PACIFIC SEAMOUNTS

GORDA RIDGE

MONTEREY
CORDELL BANK
GREATER FARALLONES
NATIONAL MARINE SANCTUARIES

OSBORN BANK

HAWAII

JOHNSTON ISLAND

CLARION-CLIPPERTON
FRACTURE ZONE

KINGMAN REEF

PALMYRA ATOLL

HOWLAND ISLAND

BAKER ISLAND

JARVIS ISLAND

GARDNER ISLAND

AMERICAN SAMOA

2019 EXPEDITION SPONSORS





2019 HIGHLIGHTS

CRUISES

13 cruise legs

193 days (175 aboard *Nautilus*)

150+ participating scientists

MAPPING

135,342 km² of seafloor mapped

ROV OPERATIONS

65 dives, **1,044 hrs** dive time & video

639 samples, **618** subsamples (1,257 samples)

LIVE STREAM

1.5M+ views

PRESS

2,000+ news features



2019 TECH COLLABORATIONS

Applied Marine Sciences | **PCB pump**

Coda Octopus Group | **Echoscope sonar**

National Geographic Society | **Deep ocean drop cameras & Aerial drones**

Scripps Institution of Oceanography | **Wave buoys**

Pacific Marine Environmental Lab | **MAPRs**

SoFar Ocean Technologies | **Spotter buoys**

University of New Hampshire CCOM | **ASV & Aerial drones**

University of Rhode Island | **Laser mapping system & Norbit multibeam sonar**

University of Texas Rio Grande Valley | **Suspended particulate rosette (SUPR)**

Woods Hole Oceanographic Institution | **MISO GoPro, IGTs**



MAY 6, 2019

NOAA announces

**\$94-million
Ocean Exploration
Cooperative Institute**

THE
UNIVERSITY
OF RHODE ISLAND



OCEAN
EXPLORATION
TRUST



University of
New Hampshire



THE UNIVERSITY OF
SOUTHERN
MISSISSIPPI

Woods Hole
Oceanographic
INSTITUTION

New America

Robert Ballard embarks on a ten-year expedition to discover what lies beneath the waves of this country's latest frontier.

In 1983 Ronald Reagan expanded America's sovereign rights over the natural resources within 200 nautical miles of its coasts. This region—roughly the size of the continental United States—has not been fully explored.

THE REVISED UNITED STATES

- EXCLUSIVE ECONOMIC ZONE (EEZ) limit, 200 nautical miles
 - Likely EXTENDED CONTINENTAL SHELF (ECS). Portion of the continental shelf that lies beyond the EEZ
 - Study area for potential EXTENDED CONTINENTAL SHELF (ECS)
- 0 500 1000 NAUTICAL MILES
0 500 1000 STATUTE MILES
0 200 1000 KILOMETERS

JAMES OWEN, ILLUSTRATION AND PHOTOGRAPHY COURTESY OF THE U.S. NAVY
RYAN MICHAEL, DATA EXPERT, THE GEORGE & ANNE
BROWN FOUNDATION FOR THE OCEAN, OCEANOGRAPHY CENTER, AND OCEANIC MANAGEMENT CENTER

SUPPORT VESSELS

2019



E/V NAUTILUS (OET)

2020



EDISON CHOUEST



R/V POINT SUR (USM)

2022



R/V RESOLUTION (URI)

2023



R/V G.R. MASON (USM/LUMCON)

MARINE FACILITIES

AltaSea at the Port of Los Angeles San Pedro, CA



2019 — \$40 million investment in upgrading marine facility and dock to support AltaSea partners, including Ocean Exploration Trust and E/V Nautilus.

USM Marine Research Center & Ocean Enterprise Facility Gulfport, MS



2019/20 — Investment of \$55 million in the new USM Ocean Enterprise Facility and \$9 million in equipment and start-up. Recent \$12 million invested in the construction of the new Marine Research Center, now operational.

University of Rhode Island Narragansett, RI



2018 — \$45 million RI State Bond to enhance GSO Campus that enlarges its dock with ROV test facility, constructs new Marine Operations Building, constructs new AUV development and mobilization building, and upgrades the Inner Space Center.

FIELD PROGRAMS (2019 - 2023)



2019

2020

2021

2022

2023

E/V NAUTILUS

Eastern & Western Pacific

Eastern Pacific

Eastern & Central Pacific, Guam

Eastern & Central Pacific, Guam

Pacific

EDISON CHOUET

Gulf of Mexico & Puerto Rico

Gulf of Mexico

Gulf of Mexico

R/V POINT SUR

Gulf of Mexico

Gulf of Mexico

Gulf of Mexico

Gulf of Mexico

R/V RESOLUTION

Western Atlantic

Western Atlantic

R/V G.R. MASON

Gulf of Mexico



2020 OPPORTUNITIES!

visit us at NautilusLive.org

Scientist Ashore Program
Science & Engineering Internship Program
Science Communication Fellowship



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