

## Exploring World War II's Battle of the Atlantic

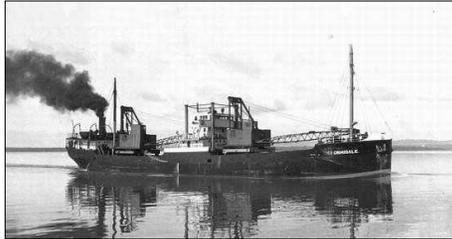


Photo: Bowling Green State University

*Bluefields* under its previous name *Ormidale*

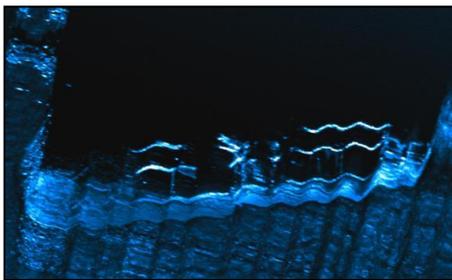


Image: NOAA

Sonar image of the *Bluefields* wreck site

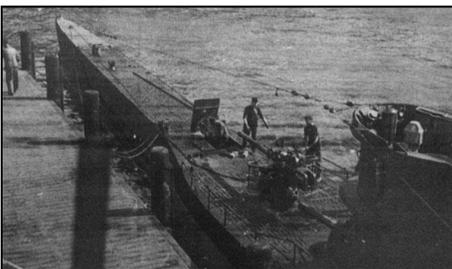


Photo: Courtesy of Ed Caram

U-576 docked at pier

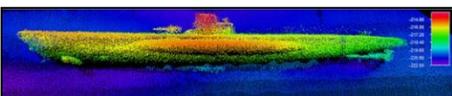


Image: NOAA and SRI International

Multibeam sonar image of U-576

### Research Expedition Overview

From August 22 to September 6, 2016, Monitor National Marine Sanctuary, NOAA's Office of Exploration and Research, Project Baseline and other partners will survey several shipwrecks and collect data from a World War II naval battlefield off Cape Hatteras, North Carolina. The expedition is part of a multi-year project to research and document a number of historically significant shipwrecks tragically lost in the Battle of the Atlantic during World War II.

During the first half of 1942, war raged off the shores of North Carolina. Explosions were seen and heard from the shore, oil washed up on the beaches, and dozens of Allied war ships, merchant vessels and German U-boats were sent to the bottom.

Since 2008, NOAA maritime archaeologists and partners have researched and documented World War II shipwrecks off North Carolina, creating a plethora of data on this significant but little-known chapter of our nation's history.

In 2014, maritime archaeologists using sonar imaging technology discovered the German U-boat U-576 and the freighter SS *Bluefields*, two casualties from the Battle of Convoy KS-520 in 1942. The vessels, located 35 miles off Cape Hatteras, sit in approximately 700 feet of water, just 200 yards apart. The battlefield site not only

represents one of the most historically significant naval engagements of the war but is also a microcosm of the entire battlefield.

NOAA maritime archaeologists and marine biologists will use Project Baseline's two submersibles to survey and document the SS *Bluefields*, U-576, and several other historically significant shipwrecks including U.S. and British naval vessels, as well as U.S. Merchant Marine ships. The primary objective is to acquire exciting new visualization and interpretive products, such as laser scans, high resolution multibeam sonar images, high definition video, and photogrammetry to create models of the shipwrecks and virtually "raise them" from the seafloor.

While maritime archaeologists document the sites, NOAA marine biologists plan to study the habitat of the natural resources associated with the shipwrecks and surrounding seafloor. The combination of the two objectives will give scientists a more complete picture of the battlefield and the current condition of the shipwrecks.

### Battle of the Atlantic Historical Background

On July 14, 1942, the convoy KS-520, with 19 merchant ships and five escorts, set sail from Hampton Roads, Virginia. The convoy code 'KS' that identified the group, indicated that the ships were headed south along the eastern seaboard with Key West, Florida, as their final

### Partnering Organizations

This expedition would not be possible without the support and funding from the many organizations participating.

- Project Baseline
- NOAA's Office of Ocean Exploration and Research
- Bureau of Ocean Energy Management
- NOAA's National Center for Coastal Ocean Service
- 2GRobotics
- University of North Carolina's Coastal Studies Institute
- SRI International

destination.

As the convoy left Virginia waters, five vessels formed Escort Group Easy to protect the convoy. The escort included two U.S. Navy ships, two U.S. Coast Guard cutters and a naval vessel that was formerly a British ship. The convoy was aware of the looming threat of German U-boats known to operate in the area, and Escort Group Easy kept a vigilant watch.

A German U-boat, U-576, had been patrolling off Cape Hatteras, North Carolina, and during its operation, it sustained damage and had decided to return to Germany. However, prior to leaving U.S. waters, U-576 encountered convoy KS-520 and decided to attack the convoy. Just before it could fire its torpedoes, one of the Coast Guard cutters picked up a sonar contact and dropped three depth charges, followed by five more 10 minutes later. Then about 15 minutes later, U-576 fired four torpedoes into the convoy hitting three merchant ships: *Chilore*, *J.A. Mowinkel*, and *Bluefields*.

U-576 surfaced in the middle of the convoy and immediately the Navy Armed Guard crew on the merchant ship, *Unicoi*, opened fire and scored a hit. Almost concurrently, two U. S. Navy Kingfisher aircraft straddled the U-576 with depth charges. The U-boat sank to the bottom of the sea with all 45 crew members.

To learn more about the Battle of KS-520 and the discovery of the battlefield site, visit <http://oceanexplorer.noaa.gov/explorations/16battlefield/welcome.html>.

## Operations

To achieve the goals of this project, a diverse group of partners have been assembled, each bringing a unique approach to the expedition. The team will begin in Beaufort, North Carolina on Pivers Island at the National Center for Coastal Ocean Science. There they will stage for the expedition on Project Baseline's flagship research vessel, *Baseline Explorer*. For 15 days, this 146 foot vessel will serve as the primary platform for the research crew and the primary research vehicles, two manned submersibles.

Project Baseline is providing two Triton 1000/2 submersibles for the expedition. The submersibles are capable of operating at a



Photo: Courtesy of Project Baseline

Project Baseline's research vessel, *Baseline Explorer*, will serve as the base of operations for the expedition. From the ship, two crewed submersibles will deploy daily to the wreck sites.

depth of 1,000 ft. for 10-hours a day while carrying a pilot and a scientist. Each submersible will also be assigned a specific task, with one collecting video and still imagery and the other conducting laser line scanning.

## About Monitor National Marine Sanctuary

Situated just 16 miles off the coast of Cape Hatteras, North Carolina, Monitor National Marine Sanctuary protects the shipwreck of the famed Civil War ironclad, *USS Monitor*, which sank in 1862. The sanctuary is managed through a combination of archaeology, marine science, education, and regulatory programs.

NOAA is currently considering an expansion of Monitor National Marine Sanctuary's

boundaries to protect the *Bluefields* and *U-576* and other historic shipwrecks off the North Carolina coast.

For more information, visit <http://monitor.noaa.gov>.



Photo: National Archives

The tanker *Dixie Arrow* sunk in 1942 by a German U-boat off North Carolina.

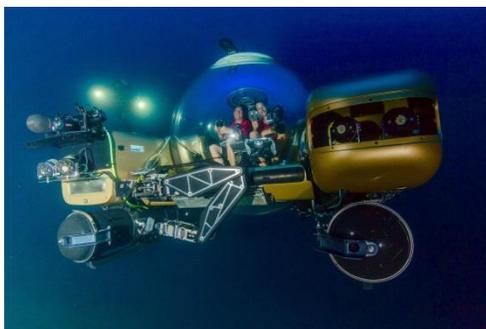


Photo: Project Baseline

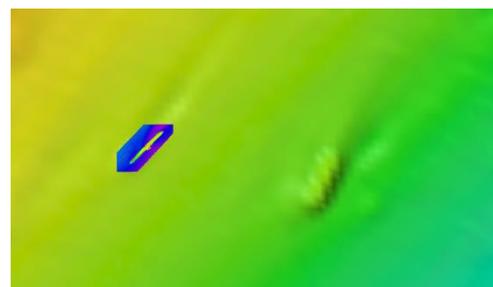


Image: NOAA and SRI International

Left: Triton 1000/2 submersible will serve as the primary instrument platform.

Right: Multibeam imagery collected in 2014 shows the relative positions of U-576 (left) and *Bluefields*