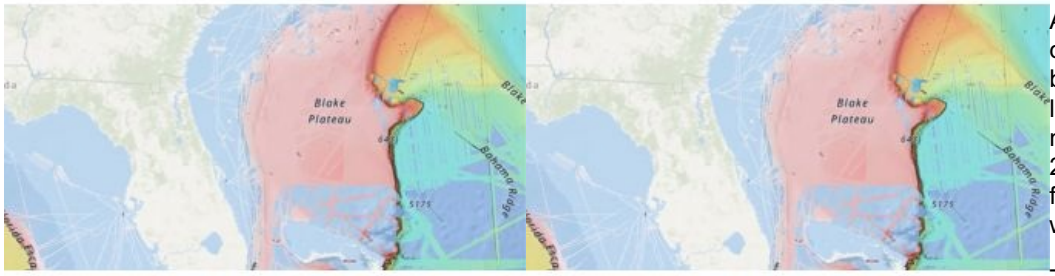
Giant coral reef discovered on Atlantic seabed



A groundbreaking study has unveiled the discovery of an immense coral reef on the bottom of the Atlantic Ocean, marking the largest deep-sea coral reef ever measured. Spanning approximately 26,000 square kilometres, this astonishing find sheds new light on the hidden wonders of the ocean's depths.

Teams of scientists from various institutions embarked on a multi-year exploration campaign across the Blake Plateau, located offshore of the south-eastern United States. Utilizing advanced technology and conducting 31 sonar mapping surveys between 2003 and 2021, including extensive efforts by NOAA Ocean Exploration aboard the *Okeanos Explorer* research vessel, researchers pieced together a comprehensive map of the region.

Automated terrain segmentation and classification

The study revealed the presence of what appears to be the most expansive cold-water coral (CWC) mound province ever discovered. These coral mounds, stretching up to 500 kilometres in length and 110 kilometres in width, represent a vital ecosystem teeming with marine life. Particularly noteworthy is a core area boasting high-density mounds spanning 254 kilometres in length and 42 kilometres in width, covering an area of 6,215 square kilometres.

Cold-water coral, distinguished by its white colour, thrives in deep-sea environments and plays a crucial role in supporting a diverse array of oceanic species. The reef serves as a habitat for a multitude of deep-sea bottom-dwelling animals, providing essential shelter and sustenance.

The study underscores the significance of employing advanced automated terrain segmentation and classification techniques for accurately characterizing complex underwater landscapes. Manual delineation of such features would have been impractical, highlighting the importance of technological advancements in ocean exploration.

As scientists continue to uncover the mysteries of the deep ocean, the discovery of this vast coral reef stands as a testament to the awe-inspiring wonders awaiting exploration beneath the waves. This groundbreaking research not only expands our understanding of marine ecosystems but also underscores the urgent need for conservation efforts to protect these fragile habitats for future generations.

Read the full study report here.

The Blake Plateau, off the south-east United States, is a significant area of interest for NOAA Ocean Exploration and partners. Their work informs sustainable management decisions, crucial for the National Ocean Mapping, Exploration and Characterization Council (NOMEC).