

Could Underwater Caribbean Volcano Threaten US?

Gio Benitez, Michael Cappetta, and Lauren Effron, ABC News Nightline, 5-15-14

A team of scientists is exploring the darkest corners of a huge underwater volcano in the Caribbean in hopes of better understanding the mysteries of earthquakes and tsunamis, ultimately saving lives.

Kick'em Jenny is a dangerous and active volcano sitting roughly 6,000 feet below the surface of the Caribbean Sea, and located off the coast of the island of Grenada, south of St. Lucia.

Robert Ballard, famous for discovering the Titanic 12,000 feet below the surface of the icy North Atlantic in 1985, set his sights on exploring the Kick'em Jenny to study its eruption history and learn more about how underwater volcanoes can pose a threat.

Ballard, the president of The Ocean Exploration Trust and the director of the Center for Ocean Exploration at the University of Rhode Island's Graduate School of Oceanography, said the Kick'em Jenny volcano has a history of explosive eruptions, which could have the potential to trigger tsunamis, the effects from which could be felt as far away as the northeastern United States.

According to the U.S. Geological Survey (USGS), the Kick'em Jenny volcano has erupted 10 times since 1939 with the most recent eruption in 1990.

"This is the most hazardous part of our planet, where [tectonic] plates are head-on," Ballard said, noting that the devastating 2011 Japanese earthquake and the 2004 Indian Ocean earthquake and tsunami were both underwater earthquakes.

"Nightline" accompanied Ballard and his team of 40 explorers aboard their exploration vessel Nautilus during the final 48 hours of their 90-day voyage, which was documented for an upcoming National Geographic special, "Caribbean's Deadly Underworld," which premieres Sunday on Nat Geo WILD.

The conditions around the Kick'em Jenny volcano are so dangerous to humans that Ballard and his team relied on the Remotely Operated Vehicle (ROV) "Hercules," a 5,000-pound submersible, to be their eyes and ears inside the volcano. As Hercules descends into the volcano, Ballard and his team watch the robot's live cameras from a control room aboard the Nautilus.

After hours of searching, the team made a startling discovery: life.

"It means that places that we thought there was very little life existing on our planet, we've just opened up a whole other area where life seems to be thriving," Ballard said. "A lot of the deep sea is sort of like you know you can think of it as a desert. We just found an oasis in that desert."

On its journey, Hercules took pictures of its surroundings, made maps and collected samples, including organisms living inside the volcano and even reaching inside the volcano's bubbling plume to gather materials.

Such discoveries on Ballard's trip could allow scientists to better understand the threats posed by underwater volcanic eruptions.

"And there's no reason to stop, there's 72 percent of the planet hardly explored," Ballard said. "I like to tell children that their generation is the generation that will explore more of earth than all previous generations combined."