An underwater robot finds more than a thousand species among underwater volcanos of the Gulf of Cádiz

LOCATION: Cádiz/Málaga
DURATION: 2:05

SUMMARY: More than a thousand vegetable and animal species have been discovered in the depths of the Gulf of Cádiz. A sea bottom full of mud volcanoes that counts on the highest biodiversity in Spain in an environment of these characteristics. This discovery has been made thanks to the images provided by an underwater robot, the Liropus 2000. The cause of this environmental richness is in the presence of bacteria feed by the methane emitted by volcanoes. This has been possible thanks to researchers of the Spanish Oceanigraphic Institute in Málaga inside the Chica Indemares project, with the collaboration of the Marine Hydrography Institute.

VTR:

These are underwater volcanoes of the Gulf of Cádiz shown to the human eye for the first time. Images of a sea bottom that counts on more than a thousand animal and vegetal species, the biggest biodiversity registered in the Spanish coast in this type of environment. It has just been discovered by researchers of Spanish Oceanigraphic Institute with the collaboration of the Marine Hydrography Institute

LUIS MIGUEL FERNÁNDEZ
Expedition Leader INDEMARES

"There is a higher biodiversity than we expected in the depths we are. We must take into account that we are working between 400 and 1.200 metres deep."

The environment where these species live is very rare so, why are they here? The key is the methane emitted by these volcanoes. Food for the bacteria that transform it into calcium carbonate, a compound that hardens the ground.

LUIS MIGUEL FERNÁNDEZ
Expedition Leader INDEMARES

"So a modification of the marine substratum is being produced We are going from the typical muddy sediment, typical of this area at this depth, to other hard sediment that permits the fixation of species different form the ones that we could find in muddy areas."

As for example these sponges that only grow on solid ground The depth in which they are have made necessary the intervention of an underwater robot, the Liropus 2000, to get to them.

VÍCTOR DÍAZ DEL RÍO
Main researcher INDEMARES

"The use of this robot facilitates us the work of taking samples and at the same time it allows us focusing and observing with a thoroughness never seen before."

But apart from reaching that depth, these scientists had to solve another problem.

VÍCTOR DÍAZ DEL RÍO
Main researcher INDEMARES

"One of the most difficult challenges is illuminating the darkest ocean bottom."

FCO. JOSÉ LÓPEZ
Technician INDEMARES

"We have created a system in which we have used leds to illuminate the bottom, what gives us a continuous light and allows us filming in high definition."

A power equivalent to 20 bulbs of 100 watts that have enlightened a surface more unknown than the Moon or Mars.

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