

Volcanic vent in Caribbean may reveal new marine species, clues to early life

Written by Administrator
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Scientists using a remote-controlled submarine have discovered the deepest known volcanic vent and say the superheated waters inside may contain undiscovered marine species and perhaps even clues to the origin of life on Earth.

Experts in the British scientific expedition said they found the vent more than three miles beneath the surface of the Caribbean Sea in an area known as the Cayman Trough. That is a half a mile deeper than any previously discovered volcanic vent. To view a video and a photo of the "black smoker," go to [this site](#)

These vents, known as "black smokers" because of how they look, are areas where seawater seeps into small cracks that penetrate deep into the Earth's crust; some reach down more than a mile. Temperatures there can reach 750 degrees, heating the water to the point where it can melt lead. When the blazing hot mineral-rich fluid is expelled into the icy cold of the deep ocean, it creates the smoke-like effect and leaves behind towering chimneys of metal ore, some two stories tall. The spectacular pressure -- 500 times stronger than the Earth's atmosphere -- keeps the water from boiling

The environment in volcanic vents may appear brutal: The intense heat and pressure combine with toxic metals to form a highly acidic undersea cocktail. But vents host lush colonies of exotic animals such as blind shrimp, giant white crabs and large, red-lipped tubeworms. At the base of this ecosystem are chemical-eating bacteria that draw on the hydrogen sulfide and methane erupting from the vents to make food.

Geologist Bramley Murton, the unmanned submersible's pilot, said exploring the area was "like wandering across the surface of another world," complete with spires of multicolored mineral deposits and thick collections of fluorescent blue microorganisms thriving in the waters around the chimneys. The scenes "were like nothing I had ever seen before," Murton said

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