The Great Blue Hole

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A hole in the sea with the complete absence of water currents and acute temperature changes is one of the most astounding dive sites on the Earth.

Despite thundering waves and spooky storms, the ocean often offers amazing natural wonders below its otherwise uncertain surface. The great blue hole is one of such existing wonders. And the curiosity lies in the fact that this great blue hole was once an island.

The giant submarine sinkhole is located just 100 kilometres (60 miles) off the coast of Belize. It lies near the centre of Lighthouse Reef, where coral atolls encircle the shallow, light turquoise-coloured waters of a lagoon. Water levels there are so shallow that parts of the ring surrounding the dark blue sinkhole are even known to crest the surface at low tide.
The world’s largest natural formation of its kind, the Great Blue Hole is a part of the larger Belize Barrier Reef Reserve System, a world heritage site of the United Nations Educational, Scientific and Cultural Organization (UNESCO). It was formed during several Episodes of quaternary glaciations when sea levels were much lower. The hole is almost perfectly circular in shape, 318 m across and 124 m deep. This site originated as typical limestone cave during the ice age. When the ice age ended, glaciers melted and sea levels began to rise. As a result, the entire cave system was flooded and eventually collapsed creating a vertical cave in the ocean. The sinkhole when viewed from above has a dark blue tinge because of its depth.

The uniqueness of the Belize hole came to light first when the underwater explorer Jacques Cousteau sailing on his ship Calypso made a pioneering discovery about the sinkhole’s depths in the early 1970s. Investigations confirmed that it had, indeed, originated from a limestone cave formation and the hole was formed before rises in the sea level in at least four stages leaving ledges at depth of 21m, 49m and 91m.

Huge stalactites and stalagmites were retrieved from submerged caves. Analysis of stalactites found in this giant hole shows that the formation took place 153000, 66000, 60000 and 15000 years ago. Some of these stalactites were also off-vertical by 5˚ in a consistent orientation, indicating that there had also been some past geological shift and tilting of the underlying plateau, followed by a long period in the current plane. The tilt indicates that this was a movement of the land, rather than a downfall in sea level alone.

A superlative destination to dive in crystal clear water and see myriad species of marine life, the great blue hole is one of the top scuba diving sites in the world. The Belize blue hole is home to several species of fish including Caribbean reef shark, Midnight parrotfish, angelfish, occasional bull shark and hammerhead sharks.

A plethora of different coral types thrive in the shallower portions of the blue hole, including elkhorn and brain corals. This spot is popular among divers, who flock to the area to see the geological formations that now lie in the ocean’s depths.

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