



Photo by Jack McKenney

Hillary Hauser floats underwater in Devil's Hole, a flooded earthquake fault in Death Valley.

Underwater fault devil of adventure

By Hillary Hauser
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I was standing in my scuba gear on a narrow board placed over a shallow habitat of endangered pupfish — and about to make a dive into a flooded earthquake fault.

The idea of diving into a bottomless pit underneath a volcanic mountain in Death Valley was so strange I could hardly wait to get started. The scientist I was diving with, however, took the necessary time to make sure the narrow bridge was securely in place before we began.

Underneath the bridge was a shallow submerged shelf of green algae, and around this miniature submarine field, a few dozen fishes no bigger than minnows milled around, picking at their algae food.

They were the endangered Devil's Hole pupfish and there were about 300 of them left in the world.

Their precarious position on the planet is the reason Devil's Hole has been closed forever to divers wanting to explore the bottomless, water-filled caverns that stretch far

below the shelf.

Additionally, a number of divers had disappeared beneath this nameless mountain in the Death Valley National Monument — in one of the tunnels, air-filled chambers, or the enormous main cavern so deep that no one has reached the bottom.

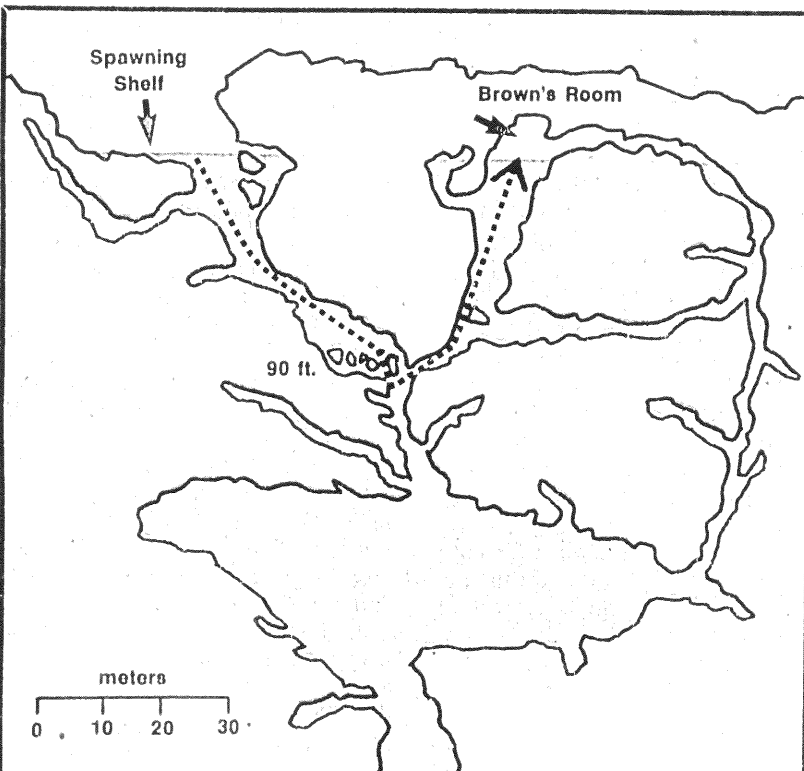
Visitors approaching Devil's Hole will find that it looks like a prison camp sunk into one side of the mountain. Giant coils of tangled barbed wire rim the top of a tall fence to seal off the rocky pit from the outside world. From the other side of the fence, one can see into the deep granite crevasse that leads to the water's surface.

Jim Deacon, the scientist I was diving with, is a Devil's Hole pupfish expert from the University of Nevada. Twice a year, he counts the fishes in the hole, to record the stability of their population.

He had agreed to let me dive with him as his safety diver.

It was June and 100 degrees at 8 a.m. when photographer Jack McKenney and I arrived at Devil's

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News-Press drawing by Gaylon Floy

Dotted lines traces diver's path into Devil's Hole.

Flooded earthquake fault is a prehistoric fairyland

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Hole. Because of the heat, those of us who were diving were anxious to get in the water.

For the first dive, I was to accompany Deacon and Park Service safety diver Bob Todd. While they worked with the fishes, I would have the opportunity to look around.

I carefully lowered myself backward into the clear blue water. It was 92 degrees — almost like swimming in nothing. As I waited for the others, I looked down and could see the first underwater ledge below at about 30 feet. The water was so clear it seemed almost non-existent.

As we sank through that giant, water-filled crack in the earth, I looked at the sides of the main shaft. They were of white limestone, which had been laid down 550 million years ago and which had been chiseled over the years by water into smooth slopes on either side. Rusty-colored organic material on top of elevated ridges of stone created an ethereal effect.

The geologic history of this desert tells us how the unusual water system of Death Valley came to be. In late Precambrian and Early Cambrian time, the entire area was beneath the sea, as much of the world was. The shoreline, it is estimated, lay to the east, near modern Las Vegas.

By about 550 million years ago, the skeletal carcasses of innumerable generations of corals, shellfish and other sea animals had created an enormous mass of lime and sand, and this mass was then consolidated into a limestone and dolomite layer more than two miles thick in some areas, perhaps only tens of feet in others.

The earthquakes came in Mesozoic time (225 million to 65 million years ago), when a chain of volcanoes arose, one along the present Sierra Nevadas. The sea withdrew, and the limestoned Death Valley region became a highland.

Devil's Hole, which extends into the earth from the base of a mountain in the Amargosa Desert (on the Nevada side of the Death Valley National Monument), was first formed by one of the earthquakes or

faulting actions of the Mesozoic period.

This hole eventually filled with rain water, which began to eat away at the porous limestone fissures, enlarging the caverns and creating new passageways, new tunnels, new chambers.

At 60 feet, I turned and looked toward the surface. I could see people standing on the rocks above, almost as clearly as if there had been no water between them and me.

I turned again toward the bottom, and the three of us turned on our lights. We sank to 90 feet, where an enormous flat stone, named Anvil Rock, signaled the deepest part of

the line.

With my light picking the way through the narrow, dark crack, I followed the line with my left hand. The back of my tank scraped against the limestone wall over my head, and I pulled myself along on my stomach through the opening.

I was now at the bottom of the cavern I'd been told about. My light illuminated the entire room, and I could see the limestone walls rising up from 80 feet and the conglomerate of granite jutting through the whiteness of the limestone.

I had to move quickly.

With my hand on the line, I continued up toward the surface, through clear, transparent water.

One dive. That was all I was going to get. I would be one of the last persons in the world to see this underwater phenomenon.

our dive.

This stone, shaken loose from above, also marks the deepest spot where the pupfish wander from their shallow shelf.

Jim started counting fish at this point, and after I watched him for a while, I began to explore again.

I knew that below Anvil Rock was the narrow funnel that leads to 160 feet and the deeper chamber. Only a few divers in previous expeditions had seen this chamber, and to explore it, one had to have good lights and a safety line.

However, there was another area of Devil's Hole I'd heard about — Brown's Room. This is a huge, air-filled underground chamber accessible only through a narrow slot that angles off to the left of Anvil Rock.

As I poked around Anvil Rock, I saw a safety line, tied permanently around a rock and trailing up through the narrow passageway.

I looked up at the other divers. Jim was counting fish at about 60 feet and Bob was watching him count.

One dive. That was all I was going to get. I would be one of the last persons in the world to see this underwater phenomenon.

So, I turned and quickly went for

Finally, I was at the surface inside Brown's Room. With my head above water, I took off my mask and looked around in amazement.

The cavern of Brown's Room is enormous — probably 50 feet from the surface of the water to the ceiling. About 10 feet above me, a dry passageway led off into the dark. The walls of the chamber were rusty brown, and the whole cavern looked like a scene from *The Phantom of the Opera*.

I was sealed off from the outside world.

It was time to get back to dry land.

I free-fell along the safety line until I came to the narrow slot that led to the main shaft of the cave. I squeezed through, came out at Anvil Rock, and looking up toward the bright blue of the main shaft, I saw Jim and Bob at about 30 feet, still doing their work.

I swam up beside Bob and waited for a sign from him. He signaled for me to look up at the incredible sight of sun rays that beamed down from the surface opening.

The Devil's Hole pupfish were living in a palace fit for the king of fishes.