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Can new discoveries finally tell us what led to one of the biggest catastrophes on the Great Lakes?

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00:00:08,000 --> 00:00:11,000

The sinking of the mighty SS Fitzgerald.

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The highest waves were up to 25 to 30 feet, and that was exactly the place where the Fitzgerald was,

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00:00:18,000 --> 00:00:21,000

and exactly the time they were there.

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Could newly declassified information explain a mysterious encounter between the US Navy

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00:00:28,000 --> 00:00:32,000

and an unidentified underwater craft?

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00:00:32,000 --> 00:00:35,000

The science we have today can't explain it.

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00:00:35,000 --> 00:00:37,000

It has me boggled.

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00:00:39,000 --> 00:00:45,000

And what's making one of Egypt's top diving spots one of the most deadly in the world?

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00:00:45,000 --> 00:00:49,000

200 fatalities for a single dive site is very, very high.

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00:00:49,000 --> 00:00:53,000

This makes it only second to Everest in terms of the dangers.

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00:00:54,000 --> 00:00:59,000

The underwater realm is another dimension.

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00:00:59,000 --> 00:01:08,000

It's a physically hostile place where dreams of promise can sink into darkness.

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00:01:08,000 --> 00:01:10,000

I'm Jeremy Wade.

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00:01:10,000 --> 00:01:17,000

I'm searching the world to bring you the most iconic and baffling underwater mysteries known to science.

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00:01:17,000 --> 00:01:20,000

Shipwrecks can't just disappear, or can they?

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00:01:20,000 --> 00:01:25,000

It's a dangerous unexplored frontier that swallows evidence.

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We know more about the face of Mars than we do our deepest oceans.

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00:01:28,000 --> 00:01:34,000

Where unknown is normal and understanding is rare.

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00:01:34,000 --> 00:01:41,000

I've been out on boats that have suddenly become caught in a storm.

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00:01:41,000 --> 00:01:48,000

There's nothing quite as terrifying as the destructive power of wind, water and waves.

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00:01:48,000 --> 00:01:52,000

Sometimes these forces can prove too much to be true.

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00:01:52,000 --> 00:01:58,000

But I've been out on boats that have suddenly become caught in a storm.

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00:01:58,000 --> 00:02:02,000

There's no wind, water and waves.

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00:02:02,000 --> 00:02:08,000

Sometimes these forces can prove too much for even the strongest craft.

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00:02:08,000 --> 00:02:14,000

In 1975 a devastating maritime disaster shocked the world.

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00:02:14,000 --> 00:02:17,000

And it still has experts baffled to this day.

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00:02:17,000 --> 00:02:25,000

But could new hydrodynamic research finally tell us what happened to the SS Edmund Fitzgerald?

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00:02:29,000 --> 00:02:32,000

November 9, 1975.

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00:02:32,000 --> 00:02:40,000

Freight carrier the SS Edmund Fitzgerald sets off on her regular five-day journey across Lake Superior.

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00:02:40,000 --> 00:02:46,000

She's made more than 700 similar voyages during her career.

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00:02:46,000 --> 00:02:53,000

The weather's calm in port, but storm warnings have been issued for a section of the lake along her route.

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00:02:53,000 --> 00:03:01,000

These were rough conditions for smaller boats, but for a ship like the Fitzgerald, not something that was overly concerning.

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00:03:01,000 --> 00:03:05,000

The ship's nickname is the mighty Fitz.

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00:03:05,000 --> 00:03:12,000

At over 700 feet long she's a Leviathan, built to deal with the roughest weather.

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00:03:12,000 --> 00:03:16,000

And she has an incredibly experienced skipper at the helm.

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00:03:16,000 --> 00:03:22,000

Captain Ernest McSawley has been navigating the Great Lakes for most of his life.

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00:03:22,000 --> 00:03:25,000

He is known for his mastery of the lakes.

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00:03:25,000 --> 00:03:29,000

You don't become a captain of the largest vessel on the lake.

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00:03:29,000 --> 00:03:32,000

By not being a good captain, he had a great reputation.

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00:03:32,000 --> 00:03:39,000

After 44 years on the Great Lakes, McSawley is set to retire in a few weeks' time.

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00:03:39,000 --> 00:03:45,000

Overnight, the Fitz reports increasingly stormy weather to the Coast Guard.

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00:03:45,000 --> 00:03:51,000

The waves were increasing in height, but the waves usually didn't affect them.

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00:03:53,000 --> 00:04:01,000

Then, at 3.30pm on November 10, the Fitzgerald makes a call to a ship travelling a few miles behind.

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00:04:01,000 --> 00:04:05,000

McSawley reports that the Fitz has suffered some damage

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00:04:05,000 --> 00:04:11,000

and asks the other ship to stay with them until they reach the safety of the nearest port.

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00:04:11,000 --> 00:04:21,000

He did make a request that a ship would shadow him, which basically means that he was concerned that in case they did have to leave the ship, that there would be another ship nearby.

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00:04:22,000 --> 00:04:28,000

The waves are now so high, they're interfering with the Fitz's radar systems.

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00:04:28,000 --> 00:04:37,000

McSawley puts in another call to the ship that's following to ask for radar plots to help guide them into shore.

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00:04:37,000 --> 00:04:41,000

It's clear from the communications that the captain was concerned.

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00:04:41,000 --> 00:04:46,000

I mean, it was a big storm and they were taking on water, but he also felt that they could continue.

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00:04:46,000 --> 00:04:51,000

He basically said that things were going fine, that she was moving along like an old shoe.

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00:04:51,000 --> 00:04:54,000

But that was the last that anyone heard from the ship.

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00:04:55,000 --> 00:05:04,000

At 7.15pm, just 17 miles from the safety of shore, the Fitzgerald disappears from the other ship's radar.

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00:05:05,000 --> 00:05:10,000

They try to radio through to the Fitz, but she's gone.

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00:05:11,000 --> 00:05:20,000

The only sign of the mighty Fitzgerald's existence is two empty lifeboats.

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00:05:21,000 --> 00:05:25,000

There are no survivors and no eyewitnesses.

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00:05:25,000 --> 00:05:34,000

What was it that caused such a massive ship, almost as long as the Titanic was, to sink in a lake, not in the ocean?

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00:05:34,000 --> 00:05:38,000

One of the big mysteries is why didn't the captain send a distress call?

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00:05:38,000 --> 00:05:40,000

He would have known he had the experience.

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00:05:40,000 --> 00:05:47,000

He'd already reported that they were bringing on water, so it's really unusual that there was no additional distress call.

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00:05:50,000 --> 00:05:55,000

What happened to the SS-Edmond Fitzgerald that fateful day?

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00:05:55,000 --> 00:06:03,000

It's a mystery that has haunted the Great Lakes maritime community for half a century.

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00:06:06,000 --> 00:06:12,000

Lake Superior is known for its quick and violent gale-force storms.

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00:06:12,000 --> 00:06:16,000

But Captain McSawley had weathered many of these in his time.

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00:06:17,000 --> 00:06:25,000

The event was incredibly quick because between the communications and the loss of communications was a very short period of time.

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00:06:27,000 --> 00:06:36,000

There was no Mayday or SOS call, which is quite strange from a boat there, but it might have happened so quickly that nobody actually was able to get to the radio.

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00:06:37,000 --> 00:06:41,000

Crews are immediately scrambled to look for the Fitzgerald.

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00:06:42,000 --> 00:06:48,000

But hampered by bad weather, it takes four days before the ship is located using sonar.

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00:06:50,000 --> 00:06:54,000

She's resting on the lake bed over 500 feet down.

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00:06:56,000 --> 00:07:02,000

It's a further six months before remote underwater cameras can be deployed to take a proper look.

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00:07:03,000 --> 00:07:06,000

No one can believe what they find.

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00:07:07,000 --> 00:07:14,000

When they found the vessel, it was split in two, which means it usually caused by a catastrophic event.

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00:07:16,000 --> 00:07:18,000

It's unlike anything they've seen before.

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00:07:20,000 --> 00:07:26,000

Initially, they thought that they would find the entire hull intact, but researchers knew that it had broken up.

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00:07:26,000 --> 00:07:29,000

The question is, why did that happen?

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00:07:30,000 --> 00:07:38,000

For nearly half a century, no one has known for sure what caused this mighty titan of the Great Lakes to break in half.

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00:07:39,000 --> 00:07:45,000

But can new research finally tell us what happened that fateful night?

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00:08:00,000 --> 00:08:09,000

In November 1975, Lake Superior's largest freighter, the SS Edmund Fitzgerald, vanishes with all her crew.

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00:08:10,000 --> 00:08:13,000

Those who find her wreck are shocked by what they see.

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00:08:14,000 --> 00:08:18,000

From the remains at the bottom of the lake, it appears she's broken in two.

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00:08:19,000 --> 00:08:27,000

Now, more than 40 years later, experts may be about to solve the mystery of what sank the fish.

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00:08:30,000 --> 00:08:42,000

Lake Superior reaches depths of over 1,300 feet, but lurking just below the surface are natural ridges that are catastrophic for any ship that comes too close.

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00:08:43,000 --> 00:08:50,000

There's a question of whether the Fitzgerald struck bottom going over some of the shoals near Carriable Island, north of where it sank.

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00:08:51,000 --> 00:08:56,000

With his navigational tools wiped out, could the captain have smashed his ship on the shoals?

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00:08:57,000 --> 00:09:04,000

I highly doubt a captain of McSorley's experience would have issues not knowing where shoals are.

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00:09:05,000 --> 00:09:08,000

The official investigation blames the ship's failed hatch covers.

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00:09:09,000 --> 00:09:16,000

Edmund Fitzgerald had 26,000 tons of ore in it. Therefore, she's going to be low in the water.

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00:09:17,000 --> 00:09:20,000

If you have waves washing over the deck, they should wash off.

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00:09:20,000 --> 00:09:25,000

If your hatch covers aren't dogged down properly, it's going to let water in.

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00:09:26,000 --> 00:09:29,000

But not all experts are convinced by the hatch theory.

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00:09:30,000 --> 00:09:35,000

I don't really believe in that because of the size of the ship. You would have to leave them open for quite a long time.

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00:09:36,000 --> 00:09:40,000

It would be gradual. It would have to flood slowly. And this was a very sudden event.

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00:09:41,000 --> 00:09:49,000

What's more, the ship was equipped with two powerful 7,000 gallon per minute water pumps, which were both running at the time.

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00:09:51,000 --> 00:09:58,000

What it really looked like was that there had been a stress fracture and that the ship had broken in two.

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00:09:59,000 --> 00:10:04,000

And then both pieces spun away from each other and eventually sank.

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00:10:05,000 --> 00:10:10,000

Dave Schwab was a rookie scientist working on the Great Lakes when the FITs disappeared.

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00:10:11,000 --> 00:10:21,000

When the Fitzgerald sank, no one could understand how there could be a storm bad enough to sink one of these Great Lakes freighters.

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00:10:22,000 --> 00:10:28,000

They were designed to run through the largest waves they thought they would encounter.

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00:10:31,000 --> 00:10:39,000

But what if they came up against the most unpredictable force that mariners can face during a storm? Rogue waves.

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00:10:40,000 --> 00:10:49,000

Rogue waves are mysterious. Some oceanographers like to say that it's a wave that's bigger than two and a half times the average waves that are occurring.

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00:10:50,000 --> 00:11:01,000

Also known as freak or killer waves, rogue waves have been recorded in the Great Lakes. And they can be deadly.

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00:11:02,000 --> 00:11:16,000

Rogue waves are an extremely real thing on the Great Lakes because the water is not very deep. A lot of people are surprised by this because they would think, oh, well, you only get really big waves in the ocean.

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00:11:17,000 --> 00:11:25,000

The thing that makes waves in a lake body, particularly a problem, is that that wave energy has nowhere to go but up.

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00:11:26,000 --> 00:11:35,000

The Great Lakes are really like inland seas, but they have these sides. So the effects of waves and the way that waves can be produced and produced quickly is rather different.

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00:11:36,000 --> 00:11:40,000

You can get these very, very large, very sudden waves. It's sort of like a big bathtub.

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00:11:40,000 --> 00:11:58,000

And these waves can be changed in their shape by the surrounding topography. So that means that if it's close to the shore and there's a big wall, it can bounce off and just create a wave with different pattern and make that wave grow higher.

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00:12:00,000 --> 00:12:05,000

Lake Superior is legendary for a strange phenomenon called the Three Sisters.

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00:12:05,000 --> 00:12:12,000

There's an old saying with waves that waves come in threes. Oftentimes the third wave can be the biggest.

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00:12:13,000 --> 00:12:23,000

When you have rogue waves that occur, one after another after another, the ship doesn't have a chance to recover after the first one hitting the ship, and this can cause it to sink.

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00:12:24,000 --> 00:12:30,000

But how do we discover if rogue waves appeared on Lake Superior on that day more than 40 years ago?

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00:12:31,000 --> 00:12:41,000

Oceanographer Dave Schwab does what nobody has ever done before. He converts the records of weather conditions into a detailed hour-by-hour model.

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00:12:42,000 --> 00:12:52,000

We could estimate, based on the output from the meteorological model, what the wave conditions were at any point in time and any point in space during those three days.

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00:12:53,000 --> 00:13:00,000

Schwab recreates wave heights across the lake for every hour during the ship's tragic crossing.

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00:13:01,000 --> 00:13:21,000

We basically split the lake into a number of grid boxes. Each of those boxes that's within the lake is represented in the computer as a cell that can interact with wind from the surface and with its adjacent cells.

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00:13:22,000 --> 00:13:29,000

Can this new mapping of the water's dynamics bring us a step closer to understanding what happened that terrible night?

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00:13:30,000 --> 00:13:43,000

The wave model predicted that the highest waves were occurring, maybe up to 25 to 30 feet, and that was exactly the place where the Fitzgerald was and exactly the time they were there.

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00:13:43,000 --> 00:13:53,000

And the model reveals one other crucial clue. As the waves were growing in height, the distance between them was also growing.

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00:13:57,000 --> 00:14:04,000

Wave crests in the area of the Fitzgerald sink were becoming hundreds of feet apart.

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00:14:04,000 --> 00:14:07,000

The same length as the SS Edmund Fitzgerald.

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00:14:08,000 --> 00:14:18,000

So one end of the ship is on the crest of one wave, the other end of the ship is on the crest of another wave, and there's nothing in the middle to hold that ship above water.

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00:14:19,000 --> 00:14:30,000

If this ship was so long that it was actually riding two waves at the same time, it was on each peak, then the part of the middle of the ship would just be hanging in midair and that would create a lot of stress on the whole.

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00:14:30,000 --> 00:14:34,000

And if you have very big cargo, it could just split in half.

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00:14:35,000 --> 00:14:54,000

The distance between wave crests becomes longer and longer. During this storm, I don't know whether that had some effect on the dynamics of the buoyancy of the ship or how it reacted to waves that long, but these are unusually long waves for the Great Lakes.

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00:14:55,000 --> 00:15:08,000

Dave Schwab's work offers a new and very plausible explanation of the unique set of circumstances that could have caused this terrible tragedy.

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00:15:08,000 --> 00:15:18,000

But until more evidence is uncovered, it remains a theory and our deep waters often have a way of swallowing the evidence we need.

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00:15:25,000 --> 00:15:36,000

Where used are stories of UFOs spotted in our skies, mysterious visitors from outer space. But could there be alien craft in our oceans?

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00:15:36,000 --> 00:15:49,000

In 2004, mysterious underwater objects are detected by US warships on a training exercise in the Pacific. It appears that no one knows what they are.

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00:15:50,000 --> 00:15:58,000

Can newly declassified information finally reveal the secret of what's going on beneath the surface?

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00:16:00,000 --> 00:16:07,000

November 14, Navy carrier the USS Nimitz is 100 miles off the coast of San Diego.

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00:16:09,000 --> 00:16:14,000

Reports come in of strange unidentified objects in the water.

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00:16:14,000 --> 00:16:21,000

Four F-A-18 Hornets are sent to investigate. What they find astounds them.

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00:16:21,000 --> 00:16:33,000

The pilots observed an object in the water roughly the size of a 747. Basically right at the surface and the water around it seemed to be boiling or churning.

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00:16:33,000 --> 00:16:42,000

For the Navy to see an object they don't recognize is unbelievable, but that it's acting in this way is even more mysterious.

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00:16:43,000 --> 00:16:46,000

Then the pilots spot something totally incredible.

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00:16:47,000 --> 00:16:54,000

The pilots first observed a bigger object in the water, but then they subsequently see a smaller object about 40 foot.

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00:16:55,000 --> 00:16:59,000

Come up to it, dock with it and then take off into the air.

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00:16:59,000 --> 00:17:10,000

The smaller craft suddenly starts to move erratically pinballing around. The larger craft disappears into the depths, leaving no trace.

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00:17:11,000 --> 00:17:17,000

So here we have this monster or size, whatever thing, bubbling underwater and going away.

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00:17:18,000 --> 00:17:23,000

The smaller craft shoots off through the sky with the hornets giving chase.

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00:17:25,000 --> 00:17:34,000

They describe it as 40 feet long and shaped like a giant tic-tac. It has no wings or visible means of propulsion.

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00:17:34,000 --> 00:17:36,000

They're obviously tracking a mysterious object.

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00:17:36,000 --> 00:17:43,000

And it does something else that truly defies logic. It plummets into the water at incredible speed.

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00:17:43,000 --> 00:17:52,000

The calculations that they made of the speed that this went from about 20,000 feet to the surface of the sea was in about a second, which is completely ridiculous.

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00:17:55,000 --> 00:18:02,000

That's obviously traveling faster than the speed of sound. Where are the shock waves? Where are the sound waves that would emanate from it?

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00:18:03,000 --> 00:18:10,000

But then the physical impact of going from gas to the other medium liquid without having some kind of catastrophic failure.

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00:18:11,000 --> 00:18:14,000

What we're seeing doesn't seem possible in terms of physics.

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00:18:17,000 --> 00:18:22,000

Missile cruiser, the USS Princeton, is also taking part in the exercise.

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00:18:22,000 --> 00:18:27,000

Her sonar picks up multiple small objects moving through the water.

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00:18:28,000 --> 00:18:34,000

The fact that these objects are moving really, really quickly through the water, we simply don't see this.

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00:18:34,000 --> 00:18:39,000

The fastest submarine can reach a maximum speed of 51 miles per hour.

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00:18:39,000 --> 00:18:46,000

But these objects are reported to be traveling at 10 times that speed over 500 miles per hour.

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00:18:46,000 --> 00:18:50,000

The science we have today can't explain it. It has me boggled.

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00:18:51,000 --> 00:19:00,000

Evidence of this encounter remains classified until the US military finally releases it in 2017.

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00:19:00,000 --> 00:19:06,000

What are these incredible craft that appear to defy the laws of physics?

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00:19:06,000 --> 00:19:13,000

Is this proof of an underwater alien encounter or something else entirely?

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00:19:21,000 --> 00:19:29,000

In 2017, the US Navy releases evidence of an encounter with unidentified submersible objects

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00:19:29,000 --> 00:19:34,000

traveling at extraordinary speed through the Pacific Ocean.

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00:19:34,000 --> 00:19:41,000

No known craft can travel that fast through water. So what on earth could they be?

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00:19:42,000 --> 00:19:50,000

While we have planes that can achieve supersonic speeds through air, water is 800 times more dense.

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00:19:50,000 --> 00:19:56,000

When objects move through an underwater environment, there's a lot more friction along the hulls of vessels.

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00:19:56,000 --> 00:20:02,000

So they have to produce more power to be able to push through whatever they're trying to move through.

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00:20:02,000 --> 00:20:08,000

So in water, there's more friction, more barriers to push through versus than in the air.

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00:20:11,000 --> 00:20:17,000

The interaction between a fluid and an object's surface causes a phenomenon called skin friction drag.

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00:20:17,000 --> 00:20:23,000

The faster you go, the more power you need at an exponentially increasing rate.

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00:20:23,000 --> 00:20:28,000

So for something to be going down fast through water, it's got to be overcoming this friction.

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00:20:28,000 --> 00:20:35,000

There are very real limits to how fast you can travel underwater, and these objects completely defy those limits.

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00:20:35,000 --> 00:20:38,000

Could they have come from another world?

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00:20:38,000 --> 00:20:42,000

The first thing that came to my mind is that this is a meteorite, and if it were a meteorite,

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00:20:42,000 --> 00:20:48,000

you would see a burning rock and then you'd see a gigantic splash when it eventually hit the ocean.

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00:20:48,000 --> 00:20:55,000

There's also the option of extraterrestrials, which is beyond my knowledge and beyond anyone's if they're extraterrestrial.

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00:20:55,000 --> 00:21:02,000

But there is one scientific theory that might explain how an object could move through water at great speed

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00:21:02,000 --> 00:21:08,000

without the involvement of extraterrestrial beings. It's a technology called supercavitation.

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00:21:08,000 --> 00:21:11,000

This is where something is working in an air bubble.

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00:21:11,000 --> 00:21:17,000

So instead of it having friction of water to deal with, it's got the friction of moving through an air bubble,

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00:21:17,000 --> 00:21:22,000

and the air around it is what's interacting with the water, so it's friction of air and water,

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00:21:22,000 --> 00:21:26,000

which of course is very, very small, so it manages to go that much faster.

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00:21:26,000 --> 00:21:32,000

Over 20 years ago, Russian scientists developed a supercavitating torpedo,

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00:21:32,000 --> 00:21:36,000

said to travel six times faster than its predecessors.

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00:21:36,000 --> 00:21:42,000

The Russian Sval torpedo is alleged to use supercavitation to achieve unmatched high speeds,

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00:21:42,000 --> 00:21:45,000

but it's never been used in combat, so we're not really sure.

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00:21:45,000 --> 00:21:53,000

New evidence is emerging which suggests the Russians may not be the only ones working on underwater supercavitation technology.

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00:21:53,000 --> 00:21:58,000

Recently, the US Navy have filed for several mysterious patents.

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00:21:58,000 --> 00:22:04,000

Three of these patents are suggestive of a high speed, aerospace, underwater craft

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00:22:04,000 --> 00:22:07,000

that could potentially be capable of these kinds of speeds.

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00:22:07,000 --> 00:22:11,000

The other question is, is this patent really a patent of something that already exists,

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00:22:11,000 --> 00:22:18,000

or is this a patent where this is the direction that they're thinking in terms of developing future technology?

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00:22:19,000 --> 00:22:23,000

Is it something Americans were developing and they're not admitting that they had?

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00:22:23,000 --> 00:22:26,000

Is it something someone else was developing?

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00:22:26,000 --> 00:22:29,000

We don't know, so that's what the mystery is.

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00:22:29,000 --> 00:22:32,000

The Nimitz sighting happens in 2004.

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00:22:32,000 --> 00:22:39,000

The patents aren't lodged until more than a decade later, but could they somehow be linked?

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00:22:39,000 --> 00:22:42,000

Supercavitation has never been seen, it's never really been demonstrated,

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00:22:42,000 --> 00:22:46,000

it's never been proven, it is entirely a theory which we're working towards.

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00:22:46,000 --> 00:22:53,000

So if it was something man-made, then it is technology which has yet to be admitted to the world.

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00:22:54,000 --> 00:23:02,000

But if this really is top secret technology, why would the US military release the footage and publish the patents?

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00:23:02,000 --> 00:23:07,000

These sightings are so unusual and they defy physics in so many ways,

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00:23:07,000 --> 00:23:10,000

and the fact that we know about it, I think is highly unusual as well.

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00:23:11,000 --> 00:23:16,000

There is one possibility which could explain the sudden release of this information.

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00:23:16,000 --> 00:23:22,000

It could also be the US Navy putting a ruse out there to wind up and make the Chinese and the Russians

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00:23:22,000 --> 00:23:25,000

and everyone else spend a lot of money on something which is impossible.

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00:23:25,000 --> 00:23:28,000

Could this have been a function of war games?

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00:23:28,000 --> 00:23:32,000

Could one side have been toying with the other with some new technology?

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00:23:32,000 --> 00:23:34,000

That potential exists.

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00:23:35,000 --> 00:23:40,000

So are these extraordinary sightings a glimpse into our technological future?

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00:23:40,000 --> 00:23:43,000

Or evidence of extraterrestrial life?

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00:23:43,000 --> 00:23:46,000

Or an exercise in military deception?

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00:23:46,000 --> 00:23:49,000

The jury is still out.

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00:23:57,000 --> 00:24:03,000

The ocean floor is littered with shipwrecks, possibly as many as three million of them.

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00:24:03,000 --> 00:24:07,000

Many were sunk in battle or wrecked by rocks.

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00:24:07,000 --> 00:24:14,000

And there are some ships still intact on the seabed that date back over 2,000 years.

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00:24:14,000 --> 00:24:20,000

So how could one disappear from the bottom of the ocean overnight?

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00:24:20,000 --> 00:24:24,000

Shipwrecks can't just disappear. What can they?

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00:24:34,000 --> 00:24:41,000

I've witnessed up close the sheer size and bulk of some sunken vessels.

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00:24:41,000 --> 00:24:48,000

And for a huge shipwreck to suddenly vanish from the seabed seems impossible.

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00:24:48,000 --> 00:24:50,000

But is it?

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00:24:50,000 --> 00:24:58,000

Off the coast of Borneo are the wrecks of three Japanese cargo ships, which sank over 70 years ago.

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00:24:58,000 --> 00:25:04,000

Known as the Yusokan wrecks, they become rich artificial reefs.

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00:25:04,000 --> 00:25:10,000

On January 31st, 2017, a team of divers goes to see the wrecks.

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00:25:10,000 --> 00:25:13,000

But they've completely disappeared.

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00:25:13,000 --> 00:25:17,000

These are documented wrecks that have just gone missing.

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00:25:17,000 --> 00:25:22,000

People go back to look for these wrecks. They're gone. There's a giant hole in the seabed.

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00:25:22,000 --> 00:25:30,000

Where these huge hulks once lay, nothing but an eerie void and a few mangled scraps of metal

remain.

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00:25:30,000 --> 00:25:44,000

You would expect pieces of it to be left behind, but to go to a known shipwreck and to just see a depression in the sediment there and virtually nothing left behind, that is bizarre.

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00:25:45,000 --> 00:25:51,000

Many wrecks do slowly dissolve over time due to saltwater corrosion.

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00:25:51,000 --> 00:25:59,000

But the Yusokan wrecks disappeared much more suddenly. How is that possible?

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00:25:59,000 --> 00:26:03,000

There are a number of theories about what might have happened.

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00:26:03,000 --> 00:26:08,000

One of the possible reasons that's been proposed is that maybe it has to do with commercial fishing.

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00:26:09,000 --> 00:26:15,000

For years, shipwrecks have been disturbed by commercial fishing practices.

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00:26:15,000 --> 00:26:22,000

Could the vast net of a deep sea trawler have caught on one of the wrecks and dragged it across the seabed?

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00:26:22,000 --> 00:26:29,000

There's no fishing boat out there that's going to trawl and move a huge battleship on the ocean floor.

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00:26:29,000 --> 00:26:35,000

Our deep oceans also have strong currents running far beneath the surface.

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00:26:36,000 --> 00:26:43,000

Cold temperatures and high concentrations of salt make them much denser than the surrounding water.

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00:26:43,000 --> 00:26:51,000

We do know some currents can carve deep forges through the ocean, can give really deep trenches.

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00:26:51,000 --> 00:26:56,000

Ocean currents have been known to move aircraft debris large distances.

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00:26:56,000 --> 00:27:01,000

But we're talking about three huge shipwrecks weighing thousands of tons.

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00:27:01,000 --> 00:27:06,000

There is another force that lies beneath our ocean bed that could be powerful enough.

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00:27:06,000 --> 00:27:13,000

The ocean floor is very active geologically. You only have to look at footage of the deep ocean to know there are very strange things happening down there.

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00:27:13,000 --> 00:27:17,000

For example, vents giving off tall columns of gases.

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00:27:17,000 --> 00:27:22,000

There are underwater earthquakes and volcanoes. We're just not normally aware of them.

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00:27:22,000 --> 00:27:27,000

We do have equipment which monitors seismic activity underwater around the world.

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00:27:27,000 --> 00:27:32,000

But our data doesn't show any activity which correlates to where the ships are disappearing.

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00:27:32,000 --> 00:27:40,000

A deep sea tremor of the magnitude necessary to swallow these ships would surely have been picked up by seismic monitoring.

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00:27:40,000 --> 00:27:44,000

And new evidence has come to light that deepens the mystery.

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00:27:44,000 --> 00:27:50,000

The Yusrkhan wrecks are not the only shipwrecks to have gone missing in recent years.

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00:27:50,000 --> 00:27:54,000

This has become a widespread phenomenon.

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00:27:54,000 --> 00:28:01,000

There's this really unusual situation happening right now where worldwide shipwrecks are seemingly disappearing.

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00:28:01,000 --> 00:28:06,000

Ships like HMS Warrior in Danish waters.

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00:28:06,000 --> 00:28:12,000

The HMS were pulse and HMS Prince of Wales that were sunk in Malaysia.

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00:28:12,000 --> 00:28:16,000

And the question is what's going on here?

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00:28:25,000 --> 00:28:32,000

Divers revisiting the site of three sunken Japanese cargo ships discover they vanished.

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00:28:32,000 --> 00:28:36,000

And other shipwrecks across the world are going missing.

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00:28:36,000 --> 00:28:39,000

So what's going on?

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00:28:39,000 --> 00:28:48,000

The fact that it's happening all over the world in multiple locations and in the numbers that we're seeing, it's a catastrophe.

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00:28:49,000 --> 00:28:54,000

Perhaps there's a clue in the type of ships that are disappearing.

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00:28:54,000 --> 00:28:59,000

They have one thing in common. They were all sunk in World War II.

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00:28:59,000 --> 00:29:04,000

And fragments left at some of the sites give us further clues.

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00:29:04,000 --> 00:29:13,000

It appears that these wrecks have been taken by human hands in search of one particular commodity.

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00:29:13,000 --> 00:29:19,000

One of the reasons that they're disappearing is because of the valuable metals that are in these shipwrecks.

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00:29:19,000 --> 00:29:26,000

A shipwreck represents a literal treasure trove of metals. Brass, copper.

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00:29:26,000 --> 00:29:31,000

There is tons and tons and tons of metals in these things.

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00:29:31,000 --> 00:29:37,000

Under international law, these shipwrecks remain the property of the country they came from.

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00:29:37,000 --> 00:29:43,000

In the case of the Yusukan wrecks, the government had permitted a company to do archaeological research.

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00:29:43,000 --> 00:29:48,000

But someone went a step further and removed the wrecks entirely.

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00:29:48,000 --> 00:29:53,000

This is an example of what's referred to as metal piracy.

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00:29:53,000 --> 00:29:59,000

These are people who are illegally salvaging these shipwrecks.

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00:29:59,000 --> 00:30:05,000

Taking the metal, selling them, I would presume in the black market.

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00:30:05,000 --> 00:30:15,000

Who are these metal pirates? We don't know what nations they normally come from, what their underground network is like.

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00:30:15,000 --> 00:30:21,000

Many of these shipwrecks contain something that makes them especially valuable.

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00:30:21,000 --> 00:30:27,000

World War II ships are one of the few remaining sources of a particularly rare category of metal.

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00:30:27,000 --> 00:30:34,000

This metal is highly valuable because for most of it it was produced before the Second World War.

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00:30:34,000 --> 00:30:39,000

So it has what's referred to as the pre-nuclear signature.

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00:30:39,000 --> 00:30:44,000

We're talking about metal that was produced prior to nuclear testing.

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00:30:44,000 --> 00:30:53,000

Decades beneath the watery depths have protected the ships from radiation, which metal above the surface has been exposed to.

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00:30:53,000 --> 00:31:02,000

They're called low-grade metals, which means that they have a lower radiation value, and they're very useful for medical use, for technological use.

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00:31:02,000 --> 00:31:11,000

And it's also highly used in modern scientific equipment. So there's a big demand for this kind of metal.

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00:31:11,000 --> 00:31:21,000

Metals with little or no trace of radiation are able to produce more accurate readings for finely tuned instruments, from Geiger counters to space sensors.

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00:31:21,000 --> 00:31:30,000

So they command a very high price. But the idea that these historic sites are being picked apart is for many people, abhorrent.

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00:31:30,000 --> 00:31:34,000

There are World War II wrecks with World War II dead on them.

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00:31:34,000 --> 00:31:40,000

War vessels with war dead on them should be considered war graves and sacred.

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00:31:40,000 --> 00:31:48,000

We're talking about places where people died. We're talking about military battles. And they're essentially a place that needs to be honored and respected.

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00:31:48,000 --> 00:31:56,000

Can anything be done to stop the illegal salvage before all these irreplaceable monuments are stolen?

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00:31:56,000 --> 00:32:03,000

These are well-organized professionals. They have to have the right equipment. It's not cheap. They're going out there. They're using commercial diving.

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00:32:03,000 --> 00:32:14,000

It's hard to police something that's underwater in vast areas of ocean. But new satellite technology could help the authorities catch the pirates in the act.

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00:32:14,000 --> 00:32:20,000

With all the satellites that we have today, if it's clear enough water and shallow enough, you can even see the shipwrecks themselves from space.

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00:32:20,000 --> 00:32:27,000

They can actually monitor subtle changes that are happening on the surface where these shipwrecks sites are and be able to recognize if something is happening.

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00:32:27,000 --> 00:32:36,000

When you try to move something as large as a shipwreck from the sea floor, you're undoubtedly going to leave a large sediment plume.

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00:32:36,000 --> 00:32:44,000

And Landsat can also be used to detect these sediment plumes to give some indication of where wrecks are under threat.

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00:32:44,000 --> 00:32:52,000

These plumes would show in discoloration or differences in water, and they could give us an idea that the water has been disturbed.

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00:32:52,000 --> 00:33:00,000

Satellites could prove vital in helping us to monitor these wrecks and to act quickly if we spot anything suspicious.

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00:33:00,000 --> 00:33:05,000

Technology is really our way to protect these wrecks.

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00:33:05,000 --> 00:33:13,000

It's important to remember that these are cultural heritage artifacts that need to be preserved for everyone.

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00:33:13,000 --> 00:33:23,000

Will these technological spies in the sky be enough to turn the tide on the mysterious metal pirates before it's too late?

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00:33:29,000 --> 00:33:39,000

I've been lucky enough to explore some amazing underwater sites, and among the most jaw-dropping I've visited are blue holes.

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00:33:40,000 --> 00:33:46,000

Diving these deep marine sinkholes is like venturing into an abyss.

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00:33:46,000 --> 00:33:54,000

But what has led to one particular blue hole being dubbed the most deadly dive site in the world?

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00:33:55,000 --> 00:34:05,000

30 miles east of Mount Sinai on the coast of the Egyptian Red Sea lies a remarkable underwater formation known as the Blue Hole of Dahab.

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00:34:06,000 --> 00:34:10,000

The Blue Hole in Dahab, Egypt is this really, really special place.

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00:34:10,000 --> 00:34:18,000

Dahab's Blue Hole is a giant circular sinkhole, a deep vertical shaft surrounded by coral and rock.

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00:34:18,000 --> 00:34:24,000

Its pristine waters and proximity to the shore have lured divers to it for decades.

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00:34:27,000 --> 00:34:32,000

But despite its beauty, this place holds a deadly mystery.

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00:34:32,000 --> 00:34:39,000

The Blue Hole off the Red Sea in Egypt is one of the world's most mesmerizing underwater phenomena.

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00:34:39,000 --> 00:34:42,000

The trouble is it's also a deft trap.

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00:34:46,000 --> 00:34:56,000

In August 2004, seasoned diver Andrei Nikitin embarks on his first Dahab Blue Hole dive with his buddy and their guide.

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00:34:56,000 --> 00:35:03,000

Knowing the challenges of the site, he has the right gear and has even completed several preparatory dives.

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00:35:03,000 --> 00:35:07,000

Despite all this, he never makes it out alive.

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00:35:10,000 --> 00:35:16,000

This is an experienced diver. He's well prepared. He's organised. It doesn't make sense.

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00:35:16,000 --> 00:35:19,000

This isn't an isolated incident.

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00:35:19,000 --> 00:35:28,000

The Dahab Blue Hole is estimated to have claimed the lives of around 200 divers, making it the world's deadliest dive site.

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00:35:28,000 --> 00:35:33,000

200 fatalities for a single dive site is very, very high.

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00:35:33,000 --> 00:35:38,000

This makes the Blue Hole only second to Everest in terms of the dangers.

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00:35:38,000 --> 00:35:44,000

It's very alarming for one spot, for one popular diving spot.

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00:35:45,000 --> 00:35:52,000

Is there something lurking at the bottom of this underwater chasm that's luring divers down to their deaths?

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00:35:52,000 --> 00:36:02,000

Despite its beauty, the Blue Hole is a place that the local Bedouin tribes have long avoided, because according to legend, it's cursed.

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00:36:02,000 --> 00:36:10,000

There's a Bedouin legend of a young girl who drowned while trying to escape an arranged marriage and her spirit now haunted.

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00:36:10,000 --> 00:36:15,000

This story indicates something very strange has been going on there for some time.

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00:36:15,000 --> 00:36:20,000

The curse of a Bedouin bride? Or is there something more tangible at work here?

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00:36:20,000 --> 00:36:41,000

Dahab's Blue Hole is the world's most dangerous dive site. The Bedouin believe it may be cursed by the ghost of a local girl who drowned there.

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00:36:41,000 --> 00:36:47,000

What is lurking in its depths that has claimed the lives of so many divers?

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00:36:48,000 --> 00:36:53,000

There are many unseen forces in our oceans that can kill.

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00:36:53,000 --> 00:37:03,000

The Red Sea is home to more than 40 types of shark, including the Tiger Shark, one of the few

species known to bite humans.

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00:37:03,000 --> 00:37:11,000

It also has deep water currents, capable of pulling a diver down into the depths.

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00:37:12,000 --> 00:37:19,000

But from the evidence so far, it doesn't seem either of these factors are responsible for the deaths at Dahab.

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00:37:21,000 --> 00:37:28,000

Could a new insight help us to understand what makes this beautiful Blue Hole such a killer?

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00:37:30,000 --> 00:37:37,000

It's a deep dive. You want to have training and experience, and it's a dive that you want to have your wits about you.

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00:37:37,000 --> 00:37:46,000

Its deepest depth is about 400 feet. The maximum depth for recreational divers is 130 feet.

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00:37:50,000 --> 00:37:56,000

Diving deep can come with a dangerous side effect, something known as nitrogen narcosis.

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00:37:58,000 --> 00:38:06,000

Narcosis is having a high amount of nitrogen that accumulates in your body, and that changes your perception of what's around you.

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00:38:06,000 --> 00:38:09,000

So it's very similar to being drunk.

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00:38:10,000 --> 00:38:15,000

Lightheadedness, a little dizzy, you're confused.

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00:38:17,000 --> 00:38:21,000

They say it's the effect of drinking a couple martinis on an empty stomach.

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00:38:22,000 --> 00:38:31,000

It can have a euphoric effect on the diver. They can be afraid all of a sudden. They can lose their orientation.

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00:38:32,000 --> 00:38:36,000

This is not something that you want to happen to you when you're at depth.

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00:38:38,000 --> 00:38:46,000

It doesn't matter how experienced you are, this will impact your judgment, it will impact your decision making, and it changes how you respond to things.

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00:38:47,000 --> 00:38:49,000

This can be totally lethal.

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00:38:51,000 --> 00:38:56,000

And there's another spectacular feature of the Dahab Blue Hole that could be involved.

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00:38:57,000 --> 00:39:04,000

Archaeologist Beverly Goodman experienced it firsthand when she dived the Dahab Blue Hole in 1997.

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00:39:05,000 --> 00:39:14,000

You're coming down the side of the coral wall. You have this beautiful coral all around the ring, and then you're going down in depth and below you it just goes into the blue and it gets darker and darker.

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00:39:15,000 --> 00:39:18,000

But then this light starts coming through this large arch.

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00:39:18,000 --> 00:39:29,000

The arch is a strange feature unique to the Dahab Blue Hole. At a depth of approximately 170 feet, it's a mysterious tunnel that connects the main shaft to the open sea.

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00:39:30,000 --> 00:39:36,000

Suddenly you find yourself into this cavern which link the sinkhole with the Red Sea.

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00:39:37,000 --> 00:39:43,000

Light reflective through the arch creates a mesmerizing but incredibly disorientating effect.

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00:39:44,000 --> 00:39:46,000

The arch is this incredible optical illusion.

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00:39:46,000 --> 00:39:55,000

It is this beautiful passageway that can appear both small and large depending on your position thanks to the fraction of the light going through it.

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00:39:56,000 --> 00:39:59,000

And then it opens up to this clear water going to 1,000 meters.

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00:40:00,000 --> 00:40:04,000

It's a huge temptation for divers to follow this passageway out to the open sea.

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00:40:05,000 --> 00:40:12,000

The dazzling underwater illusions can make it look like an easy 30 foot swim. In fact, it's over 80.

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00:40:12,000 --> 00:40:18,000

Judging distance underwater is quite tricky, especially when it's clear water. You really lose perception.

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00:40:19,000 --> 00:40:26,000

So what you think is close might not be as close as you think. What you think is far might not be as far as you think.

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00:40:27,000 --> 00:40:33,000

Could a deadly cocktail of Narcosis confusion and optical illusion be behind these divers' deaths?

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00:40:34,000 --> 00:40:38,000

You're feeling really good. You're feeling, oh this is basically laughing gas at this point.

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00:40:38,000 --> 00:40:42,000

So you're feeling a little bit high. You're seeing this beautiful light coming through.

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00:40:43,000 --> 00:40:52,000

You're not exactly where you're supposed to be, but the draw of going towards that light and going through it is really irresistible.

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00:40:53,000 --> 00:40:57,000

Being a confused diver at depth could be fatal.

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00:40:58,000 --> 00:41:04,000

Is the Bedouin's ghostly girl in fact the fatal attraction of this beautiful but deadly place?

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00:41:05,000 --> 00:41:11,000

Humans love to push the limits and I don't know if it's humans are attracted to these dangerous experiences,

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00:41:12,000 --> 00:41:17,000

but I think we really enjoy the spectacularness of the unknown.

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00:41:22,000 --> 00:41:27,000

We still have so much to learn about the spectacular underwater realm,

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00:41:28,000 --> 00:41:33,000

but the deadly Dahab Blue Hole teaches us a valuable lesson.

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00:41:34,000 --> 00:41:42,000

The world beneath the waves is a different dimension where the normal rules don't apply and we forget that at our peril.