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Could an invisible underwater force have changed the course of world history?

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00:00:07,000 --> 00:00:12,000

How could this fleet have enormous warships remain stationary?

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This is a huge puzzle.

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

How does a modern-day pirate ship evade capture for 10 years?

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Just as it seems like it's going to get caught, it's gone.

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00:00:24,000 --> 00:00:29,000

Can a treasure trove of gold coins found in the waters off the Holy Land

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

shed new light on the mysterious disappearance of an ancient city?

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

To say that these coins are virtually priceless is no exaggeration.

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00:00:38,000 --> 00:00:41,000

And there's hundreds of them littering the sea floor.

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00:00:44,000 --> 00:00:48,000

The underwater realm is another dimension.

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00:00:48,000 --> 00:00:57,000

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

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00:00:59,000 --> 00:01:04,000

I'm Jeremy Wade and I'm searching the world to bring you the most iconic

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00:01:04,000 --> 00:01:09,000

and baffling underwater mysteries known to science.

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00:01:09,000 --> 00:01:15,000

The vast majority of our ocean is unobserved, unmapped and unexplored.

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00:01:15,000 --> 00:01:20,000

It's a dangerous frontier that swallows evidence.

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00:01:20,000 --> 00:01:23,000

Do you have nowhere to run?

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00:01:23,000 --> 00:01:30,000

Where unknown is normal and understanding is rare.

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The Battle of Actium, the decisive naval conflict in the last war of the Roman Republic.

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00:01:49,000 --> 00:01:55,000

The defeat of history's most famous couple, Anthony and Cleopatra, shaped the world.

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00:01:55,000 --> 00:02:01,000

But no one knows exactly what caused their unexpected downfall.

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00:02:01,000 --> 00:02:09,000

Now scientists might be one step closer to solving this 2,000-year-old mystery.

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00:02:09,000 --> 00:02:14,000

And the answer might be hiding just beneath the surface.

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00:02:19,000 --> 00:02:23,000

September 2nd, 31 BC.

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An epic naval battle is about to take place off the coast of Greece.

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The Battle of Actium is one of the most famous naval engagements in ancient history.

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On one side, Mark Anthony and Cleopatra, Queen of Egypt,

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

with an impressive fleet of 500 ships.

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

They're pitted against the leader of the Roman Republic, Octavian Augustus.

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00:02:53,000 --> 00:02:59,000

A 13-year rivalry will end here, in a battle that will shake the world.

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00:02:59,000 --> 00:03:09,000

The stakes of this battle are high. Whoever wins, rules the Roman world, and the Roman world is the world.

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00:03:09,000 --> 00:03:14,000

Anthony and Cleopatra's ships advance towards the enemy.

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00:03:14,000 --> 00:03:19,000

Then something bizarre starts to happen in the waters of Actium.

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00:03:19,000 --> 00:03:24,000

The fleet behaves very sluggishly. The boats are moving very slowly in the water.

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00:03:24,000 --> 00:03:30,000

So the question is, why were these ships not able to maneuver like they should have been able to maneuver?

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00:03:30,000 --> 00:03:36,000

What causes the Egyptian ships to almost stop dead in their tracks?

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00:03:36,000 --> 00:03:40,000

It's one of the most baffling military mysteries.

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00:03:40,000 --> 00:03:45,000

Octavian ships swoop in and destroy the fleet.

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00:03:51,000 --> 00:03:55,000

It's a shocking defeat.

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00:03:55,000 --> 00:04:02,000

When you look at the numbers in the battle, you say, my God, why didn't Mark Anthony win?

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00:04:02,000 --> 00:04:08,000

He has more boats. He has bigger boats. He has the backing of Cleopatra.

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00:04:08,000 --> 00:04:14,000

In just one extraordinary day in history, the battle of Actium is over.

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00:04:14,000 --> 00:04:23,000

Anthony and Cleopatra's cataclysmic defeat brings an end to the Roman Republic and ushers in a new chapter in world history.

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This marks the beginning of the Roman Empire.

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00:04:27,000 --> 00:04:32,000

So what causes Anthony and Cleopatra's ships to slow down?

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00:04:32,000 --> 00:04:36,000

The crucial factor that gives rise to history's greatest empire.

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That question has been puzzling historians and mariners for centuries.

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In 2020, a major investigation into a strange ship-stopping phenomenon may finally provide some answers.

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Researchers begin to piece together clues hidden in ancient texts.

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Many ancient writers have discussed what happened at the Battle of Actium.

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And one of them, Pliny the Elder, says that the ships were held back by the remora.

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Remoras are flat-headed fish that sucker onto other boats and other larger fish in the sea floor.

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00:05:22,000 --> 00:05:28,000

They use high-powered suction discs to attach to anything that's moving.

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00:05:28,000 --> 00:05:30,000

They are the hitchhikers of the ocean.

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Is it really plausible that these moderate-sized fish could have slowed down the Egyptian fleet?

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Scientists today believe the remoras' reputation for incapacitating ships is an ancient mariners myth.

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When remoras hitch a ride on a vessel, they do create drag, but not enough to bring a ship to a halt.

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It seems highly unlikely that remoras had anything to do with the outcome of the Battle of Actium.

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If remoras aren't to blame for stopping the Egyptian fleet from advancing, something else must have been at play.

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Recent archaeological work near the naval battleground is unraveling another clue to Antony and Cleopatra's mysterious defeat.

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Following his triumph at Actium, Octavian builds a great victory monument.

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Octavian is a warlord, effectively, so monumentalizing his victory is very important to him.

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00:06:33,000 --> 00:06:39,000

In niches in front of the monument, he displays 35 great bronze rams,

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00:06:39,000 --> 00:06:45,000

taken as war trophies from some of Antony and Cleopatra's most important warships.

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Archaeologists discover something surprising.

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00:06:49,000 --> 00:06:57,000

These stone niches are still there today, and by 3D scanning these niches, it's possible to calculate the size of the ships.

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Historical texts have always described Cleopatra's Egyptian warships as large galleys,

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but new technology is revealing that the size of the ships was truly exceptional.

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00:07:11,000 --> 00:07:15,000

The ships were huge even by their day.

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00:07:15,000 --> 00:07:23,000

They were as long as a Boeing 767 and twice as wide, and they would have been rowed by 600 men.

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Can the extreme and unconventional dimensions of the warships explain their mysterious slow behavior?

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00:07:31,000 --> 00:07:42,000

What we have is these big armored ships, but on the opposing side, you've got a smaller, lighter kind of galley, much quicker.

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00:07:42,000 --> 00:07:48,000

Smaller, more nimble ships may have given Octavian the upper hand.

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00:07:48,000 --> 00:07:55,000

Having a smaller ship, you might think, is a disadvantage. How it takes less energy to get them up to speed?

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00:07:55,000 --> 00:08:02,000

The bigger, heavier ships can't ram them because they can maneuver and then get out of the way quickly.

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

But is there more to this mystery than just flawed ship design?

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

A groundbreaking scientific discovery is finally unraveling what really happened that day,

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00:08:14,000 --> 00:08:21,000

and the answer lies beneath the surface.

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00:08:27,000 --> 00:08:35,000

How Anthony and Cleopatra lost the Battle of Actium has puzzled historians and scientists for centuries.

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But a new study of a powerful underwater phenomenon could finally solve this ancient naval mystery.

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In 2020, scientists are researching a strange nautical anomaly called dead water.

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Could this have held back Anthony and Cleopatra's ships and caused their devastating defeat?

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Dead water can slow down ships and in some instances can even stop them.

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The first person to really observe it was a famous Arctic explorer called Fridt Hof Nansen.

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00:09:19,000 --> 00:09:25,000

And what he saw was that when he was in the fjords in Norway, however much he tried to push his ship through the water, it just didn't go anywhere.

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When Nansen encounters dead water in 1893, he has no idea what's causing his ship to slow down.

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00:09:34,000 --> 00:09:44,000

But we now know much more about this phenomenon. It occurs where there are different levels of temperature or salinity, such as in fjords.

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00:09:45,000 --> 00:09:52,000

In the fjords you have cold, fresh, glacial water that is sitting on top of ocean water that's more dense.

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00:09:53,000 --> 00:09:59,000

Anthony and Cleopatra's fleet is positioned in what's known today as the Ambration Gulf.

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00:09:59,000 --> 00:10:05,000

So do the waters here have the right features for the dead water effect?

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00:10:05,000 --> 00:10:16,000

The Ambration Gulf has fresh water flowing in from two rivers, creating two different layers of water similar to the waters where Nansen was sailing,

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00:10:17,000 --> 00:10:21,000

and therefore a possible location for dead water to occur.

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00:10:23,000 --> 00:10:28,000

But could this phenomenon really have slowed down the Egyptian fleet?

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00:10:28,000 --> 00:10:32,000

French researchers set out to solve this puzzle.

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00:10:32,000 --> 00:10:42,000

So the way we tackled the problem of the defeat of Marc Antony and Cleopatra was first we performed some experiments in towing tanks.

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00:10:42,000 --> 00:10:48,000

We put two layers of different densities and we just towed a plamobile boat.

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00:10:49,000 --> 00:10:57,000

When a ship travels through water with two different densities, it creates an internal wave where the two layers meet.

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00:10:57,000 --> 00:11:04,000

And the water tank reveals that how a ship is affected by an internal wave depends on its speed.

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00:11:04,000 --> 00:11:10,000

If you can push yourself fast enough, you can actually get yourself out of the regime in which it happens.

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00:11:10,000 --> 00:11:17,000

But if you can't, then you're basically stuck in it and nothing you can do is going to push your ship along any faster.

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00:11:20,000 --> 00:11:29,000

On that day in Actium, Antony and Cleopatra's huge cumbersome ships would have struggled to escape the internal waves that they created.

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With a scale model of an Egyptian ship, Germain Rousseau and his team noticed something else extraordinary

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00:11:35,000 --> 00:11:40,000

that could help to decode Pliny the Elder's ancient record of the battle.

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00:11:41,000 --> 00:11:46,000

We did observe the fact that the wave pattern is modified in shallow water.

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00:11:46,000 --> 00:11:50,000

The scale model ship creates a very familiar pattern.

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What is very peculiar is the fact that the pattern of the wave is very similar to the suction disk of a remora.

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00:12:00,000 --> 00:12:07,000

In an extraordinary twist, Germain and his team now believe that Pliny the Elder could have been right all along.

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00:12:07,000 --> 00:12:12,000

He was referring to the remora patterned wake and not the fish itself.

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00:12:14,000 --> 00:12:25,000

It's likely then that the combination of huge warships and dead water created a perfect and devastating storm for Antony and Cleopatra.

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So, after 2000 years, this ancient mystery might finally be solved.

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00:12:41,000 --> 00:12:52,000

In the South Pacific, a marine biologist sees her life flash before her eyes as she's thrown around violently underwater by a humpback whale.

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00:12:53,000 --> 00:12:59,000

The mystery of this encounter deepens when another danger is spotted lurking nearby.

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00:12:59,000 --> 00:13:04,000

Could there be more to this extraordinary event than meets the eye?

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00:13:07,000 --> 00:13:10,000

September 14th, 2017.

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00:13:11,000 --> 00:13:18,000

In the spectacular waters of Rarotonga in the Cook Islands, an extraordinary confrontation is about to take place.

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

Marine biologist Nan Hauser is snorkeling in crystal clear water when she spots a 25 ton humpback whale.

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00:13:29,000 --> 00:13:37,000

Thrilled by this once in a lifetime opportunity, she starts filming, but her initial excitement turns to fear.

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00:13:38,000 --> 00:13:42,000

The enormous creature pushes her with its head and mouth.

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00:13:42,000 --> 00:13:47,000

Then it pulls her under its pectoral fin and throws her out of the water.

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00:13:52,000 --> 00:14:00,000

This woman must have been absolutely terrified to be scooped up by a multi-ton wild animal in the ocean.

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

The seemingly aggressive ordeal lasts 10 minutes.

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00:14:05,000 --> 00:14:09,000

At first, she thinks that the humpback whale is trying to attack her.

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00:14:10,000 --> 00:14:16,000

But as the marine biologist recovers, she notices something more dangerous in the water.

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00:14:19,000 --> 00:14:23,000

When she gets close to the boat and all her colleagues are telling her,

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00:14:23,000 --> 00:14:30,000

It kind of changes the context in what that battering or that movement meant.

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00:14:32,000 --> 00:14:36,000

Has the whale just saved Nan Hauser from a shark attack?

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00:14:39,000 --> 00:14:46,000

If so, could this be the first instance ever recorded of a humpback whale protecting a human?

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00:14:55,000 --> 00:15:04,000

This remarkable footage shows the heart-stopping moment when a marine biologist comes face to face with a humpback whale.

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00:15:05,000 --> 00:15:12,000

I guess the most outrageous day I've ever had, and it was quite frightening.

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00:15:12,000 --> 00:15:17,000

I mean, he's huge and your organs will rupture, your bones will break,

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00:15:17,000 --> 00:15:20,000

but I see something and I looked and I went,

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00:15:20,000 --> 00:15:28,000

Oh, that's the most huge, incredible tiger shark I've ever seen.

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00:15:28,000 --> 00:15:32,000

And just at that moment, the whale was protecting me from the shark.

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00:15:33,000 --> 00:15:36,000

You've been studying humpback whales for three decades.

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00:15:36,000 --> 00:15:41,000

Have you ever heard stories of humpbacks protecting humans like this?

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00:15:41,000 --> 00:15:46,000

I work with a lot of people that study humpback whales underwater,

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00:15:46,000 --> 00:15:50,000

and this has never happened before or nor has it been reported to us.

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00:15:51,000 --> 00:15:54,000

This humpback's behavior is baffling scientists.

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00:15:54,000 --> 00:15:58,000

Is this whale really trying to protect Nan Hauser?

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00:15:58,000 --> 00:16:04,000

Can other marine mammal encounters help explain this rare event?

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00:16:05,000 --> 00:16:13,000

Dolphins have been known to surround swimmers or surfers who have gone astray and protect them from sharks.

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00:16:14,000 --> 00:16:19,000

And it seems it's not only dolphins who have donned their heroic capes.

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00:16:19,000 --> 00:16:26,000

This incredible photo shows another whale species coming to the aid of freediver Yang Yun.

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00:16:26,000 --> 00:16:30,000

Her legs become paralyzed and she cannot reach the surface.

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00:16:30,000 --> 00:16:39,000

Just then, a beluga whale swims up and uses her mouth to gently guide the freediver to the surface, in essence, saving her life.

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00:16:41,000 --> 00:16:46,000

But an incident in Australia in 2020 gives a very different perspective

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00:16:46,000 --> 00:16:50,000

into the behavior of the humpback that Nan Hauser encountered.

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00:16:51,000 --> 00:16:55,000

Two women appear to have been attacked by a humpback.

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00:16:57,000 --> 00:17:01,000

Both snorkelers were injured by a whale's tail.

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00:17:02,000 --> 00:17:05,000

Fracturing a rib and causing internal bleeding.

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00:17:06,000 --> 00:17:13,000

The humpback whale is much, much larger than these small human beings in the water, and you could potentially get injured.

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00:17:14,000 --> 00:17:19,000

One snorkeler is left in a serious condition after being hit by a humpback's fin.

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00:17:20,000 --> 00:17:28,000

The aggression is shocking, but this case does offer a critical clue to help understand such threatening behavior.

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00:17:29,000 --> 00:17:37,000

In terms of trying to explain why these women might have been injured by this whale, the whale was with a calf.

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00:17:39,000 --> 00:17:46,000

In that case, it looks very much like the mother humpback whale was protecting her young from the snorkelers.

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00:17:47,000 --> 00:17:52,000

This shows that humpbacks are at least capable of protecting their own.

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00:17:53,000 --> 00:17:59,000

So is Nan Hauser, like the snorkelers in Australia, a victim of a vicious attack?

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00:18:01,000 --> 00:18:05,000

Was this the activity of a mother whale trying to protect its calf?

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00:18:06,000 --> 00:18:10,000

There was another whale that was tail-slapping and swishing the shark.

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00:18:11,000 --> 00:18:13,000

And was this second whale a calf?

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00:18:13,000 --> 00:18:18,000

This was not the case. There was not a calf anywhere around. There were two grown adults.

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00:18:19,000 --> 00:18:25,000

Turns out that these particular whales were not female. That kind of rules out that idea.

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00:18:26,000 --> 00:18:32,000

So what other information do we have that will help us better understand what happened?

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00:18:33,000 --> 00:18:36,000

Humpbacks are highly protective of their offspring.

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00:18:37,000 --> 00:18:43,000

But is it possible their caring capabilities reach beyond their calves?

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00:18:44,000 --> 00:18:57,000

Over five decades, scientists in the US have recorded more than 100 cases of humpbacks disrupting attacks carried out by their number one enemy, Orcas.

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00:18:58,000 --> 00:19:02,000

Orcas are known as killer whales, and there's a reason for that.

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00:19:02,000 --> 00:19:07,000

They are the top of their food chain, which includes humpback calves.

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00:19:08,000 --> 00:19:14,000

It's natural for humpbacks to go into protection mode when an orca gets close to their young.

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00:19:16,000 --> 00:19:21,000

But scientists recording orca hunting behavior make a bombshell discovery.

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00:19:22,000 --> 00:19:29,000

This extraordinary photograph shows humpbacks coming to the rescue of a sea lion about to be attacked by orcas.

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00:19:29,000 --> 00:19:33,000

It defies popular and scientific belief.

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

I'm kind of surprised about it because you would think naturally the well must be protecting its own interests.

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00:19:42,000 --> 00:19:48,000

But in this case, the wells may be protecting individuals outside of their own species.

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00:19:49,000 --> 00:19:54,000

To witness one animal saving another from a different species is incredibly rare.

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00:19:55,000 --> 00:20:01,000

And this could be the crucial evidence that supports Nanhauser's claim that she was saved by a humpback.

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00:20:02,000 --> 00:20:07,000

It shows that humpback whales could be compassionate altruistic creatures.

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00:20:08,000 --> 00:20:15,000

Altruism is when somebody does something selfless for somebody else, not expecting anything in return.

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00:20:16,000 --> 00:20:24,000

So now we see humpback whales putting themselves at risk to protect creatures that are more vulnerable, just as a human might do.

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00:20:26,000 --> 00:20:31,000

Nanhauser's unprecedented humpback incident has left scientists stumped.

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00:20:32,000 --> 00:20:37,000

But she will never forget that remarkable day in Rarotonga.

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00:20:38,000 --> 00:20:47,000

What was so amazing about the encounter is that if someone had told me this story, I never would have believed it.

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00:20:48,000 --> 00:20:51,000

I'm serious, I had to sort of doubt myself.

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00:20:52,000 --> 00:20:57,000

But this was something that you could never expect, ever, ever expect.

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00:20:58,000 --> 00:21:05,000

So today I still think about it and I just can't get tears in my eyes.

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00:21:07,000 --> 00:21:09,000

But I'm not sure what it is.

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00:21:18,000 --> 00:21:25,000

Billions of dollars worth of treasure from biblical times to only yesterday is buried deep in the ocean.

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00:21:26,000 --> 00:21:31,000

But the vastness of the sea floor means the chances of finding any are slim to none.

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00:21:31,000 --> 00:21:39,000

So a group of divers in Israel can't believe their luck when they stumble across gold that the sea has been hiding for centuries.

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00:21:40,000 --> 00:21:47,000

Not only is it ancient and priceless, it's also one of the biggest treasure troves ever discovered in the Mediterranean Sea.

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00:21:48,000 --> 00:21:51,000

How did it survive for so long?

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00:21:54,000 --> 00:21:55,000

2015

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00:21:56,000 --> 00:22:05,000

Diver Zaviak Fire and his friends are swimming among the sunken remains of an ancient harbour off the coast of Caesarea in Israel

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00:22:06,000 --> 00:22:09,000

when they see something glinting on the seabed.

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00:22:10,000 --> 00:22:13,000

At first they think it's some sort of fake coin.

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00:22:14,000 --> 00:22:21,000

You can imagine the first thought is that it can't be real, it must be some sort of toy.

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

But they couldn't be more wrong.

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00:22:26,000 --> 00:22:30,000

As the divers sweep the sand away and pick up the tiny pieces of glinting metal,

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00:22:31,000 --> 00:22:34,000

they are astonished to discover that this is no fake coin.

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00:22:35,000 --> 00:22:37,000

This is real gold.

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00:22:39,000 --> 00:22:41,000

What they discovered was absolutely incredible.

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

The divers don't just find a single coin, there are more of them.

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00:22:46,000 --> 00:22:50,000

They have a treasure trove in the palm of their hands.

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00:22:51,000 --> 00:22:58,000

They have literally struck gold and they immediately alert the Israel Antiquities Authority.

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00:22:59,000 --> 00:23:02,000

The divers do absolutely the right thing.

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00:23:03,000 --> 00:23:05,000

It doesn't belong to them, they can't keep it.

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00:23:06,000 --> 00:23:12,000

Armed with metal detectors, the divers lead the archaeologists to the site a thousand feet from the shore.

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00:23:12,000 --> 00:23:16,000

What they discover next is mind-blowing.

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00:23:18,000 --> 00:23:22,000

Around 2,650 gold coins were discovered here.

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

There was no silver, there was no bronze, it's more than 16 pounds of gold.

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00:23:29,000 --> 00:23:35,000

Making it the largest sum of gold coins ever discovered in Israeli coastal waters

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00:23:36,000 --> 00:23:40,000

and perhaps the greatest treasure ever discovered in the Mediterranean.

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00:23:40,000 --> 00:23:47,000

The mystery is how did such a large amount of gold coins end up in one spot on the sea floor?

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00:23:48,000 --> 00:23:52,000

Where are they from? What their purpose was? How much they're worth?

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Archaeologists pull out all the stops in their attempt to solve the mystery of this massive treasure

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00:23:59,000 --> 00:24:05,000

and new clues are about to bring to light a shocking revelation about Caesaria's past.

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00:24:11,000 --> 00:24:26,000

Forensic investigators face a mammoth task identifying over 2,600 gold coins found off the coast of Israel.

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00:24:27,000 --> 00:24:33,000

Fortunately, the ocean has immaculately preserved them and they're as pristine as the day they landed on the sea floor.

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But can details imprinted on the coins give up the treasure's secrets?

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Clues to a coin's origin can often be found in images but there are no illustrations on this currency.

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As these are Arabic coins they have just Arabic writing.

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So the representation of human beings and rulers, you just don't have those because it's part of that religion.

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

They do however feature names of Islamic rulers and words from the Quran.

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00:25:04,000 --> 00:25:11,000

Fortunately, we can study the Arabic writing and that can give us an indication of the date of the coins.

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00:25:12,000 --> 00:25:19,000

The text reveals the coins are gold dinars and Islamic currency used in medieval times.

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00:25:20,000 --> 00:25:26,000

And the dates on the coins span a very specific period of 220 years.

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Scientists were able to pinpoint these coins from the 9th to 11th century AD.

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Can events in Caesarea in this period provide a clue to the origin of these coins?

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One theory as to why these coins may be there is that in 1033 there was an earthquake and a subsequent tsunami.

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The gold coins could have been washed out to sea by a massive wave.

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00:25:56,000 --> 00:26:04,000

A great tsunami with such strength that it pulls the massive stone blocks into the sea floor.

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00:26:05,000 --> 00:26:10,000

If you dive on Caesarea today you can still see the remains strewn out all over the sea floor.

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00:26:11,000 --> 00:26:16,000

And that tells us that actually things could be moved around.

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So potentially this is what has happened to the gold coins.

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But analysis of all the coins casts doubt on this theory.

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Studying the dates imprinted on the coins shows that at least 12 of them were dated a year after the tsunami hit the coast.

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This disproves the tsunami theory.

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00:26:40,000 --> 00:26:44,000

So the coins were not swept into the sea by a tsunami.

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00:26:44,000 --> 00:26:49,000

However the dates give the investigation team another vital clue.

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00:26:50,000 --> 00:26:56,000

The coins all date to a period when the area was ruled by the Fatimid dynasty,

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00:26:57,000 --> 00:27:00,000

whose empire dominated North Africa and the Middle East.

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00:27:01,000 --> 00:27:05,000

This was an extremely wealthy and opulent dynasty,

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00:27:06,000 --> 00:27:09,000

hinting that these coins could be incredibly valuable.

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00:27:09,000 --> 00:27:14,000

Following this new lead investigators set out to examine the purity of the gold.

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One technique of analyzing metal artifacts we call X-ray fluorescence.

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

The machine itself basically looks like a gun and it shoots back spectra that tell you the elemental composition of the metal artifact.

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00:27:28,000 --> 00:27:34,000

X-ray fluorescence analysis confirms that these gold coins are 24 karat.

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00:27:34,000 --> 00:27:36,000

The purest gold possible.

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00:27:37,000 --> 00:27:40,000

These coins are basically priceless.

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00:27:41,000 --> 00:27:44,000

We're not talking about day to day money that someone would have had in their pocket.

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00:27:45,000 --> 00:27:51,000

As the investigators piece together the evidence, another unexpected mystery emerges,

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00:27:52,000 --> 00:27:55,000

surrounding the historical port city where the coins are found.

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00:27:56,000 --> 00:27:59,000

Cisarria was a very important port since its fact.

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00:27:59,000 --> 00:28:01,000

In the first century BC by King Herod the Great.

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00:28:02,000 --> 00:28:06,000

But in the seventh century Roman Cisarria falls to Muslim invaders.

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00:28:07,000 --> 00:28:11,000

Its importance declines and it eventually disappears from the history books.

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

It's believed that Cisarria fades from glory and becomes a fishing village until the 19th century.

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00:28:17,000 --> 00:28:22,000

But the treasure is so incredibly valuable, the history of the city is so great.

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

The 2668 pure gold coins suggest that far from being a remote rural backwater,

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00:28:29,000 --> 00:28:33,000

Cisarria continues to be a major busy port under the new Islamic rule.

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00:28:34,000 --> 00:28:41,000

And now investigators believe the horde was probably lost in an accident on one of the most important sites in the world.

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00:28:42,000 --> 00:28:45,000

The history of the city is still a very long history.

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00:28:46,000 --> 00:28:55,000

And now investigators believe the horde was probably lost in an accident on one of the many ships sailing in or out of the port.

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00:28:57,000 --> 00:29:01,000

The Arabic text on the coins reveals another exciting clue.

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00:29:02,000 --> 00:29:06,000

The coins showed that they weren't minted locally in Cisarria.

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00:29:07,000 --> 00:29:12,000

So chances are very likely that these coins were being imported for some purpose.

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00:29:12,000 --> 00:29:16,000

The question is, why were these coins being brought there?

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00:29:17,000 --> 00:29:24,000

It's likely the coins were transported into Cisarria from the Fatimid Empire's capital in Cairo, Egypt.

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As for the reason, the coins could have played a part in one of the bloodiest conflicts of medieval times.

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00:29:43,000 --> 00:29:55,000

A devastating religious war that shakes Cisarria to its foundations could tell us how a horde of priceless gold coins ended up on the Mediterranean sea floor.

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00:29:57,000 --> 00:30:05,000

The first crusade was launched by Pope Irwin II as a military campaign to recapture the Holy Land for Christendom from Muslim forces.

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00:30:06,000 --> 00:30:09,000

It was an incredibly bloody and violent conflict.

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00:30:10,000 --> 00:30:15,000

A strong military garrison was based in Cisarria to protect it and the area around it.

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00:30:16,000 --> 00:30:21,000

Another theory is that this treasure of coins was meant to pay their salaries.

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00:30:22,000 --> 00:30:27,000

But does the timing of this violent uprising fit the dates written on the treasure?

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The city of Cisarria was destroyed in 1101 by the crusaders.

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00:30:35,000 --> 00:30:44,000

And this dates quite interestingly towards the end of the time when that gold collection was put together.

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00:30:45,000 --> 00:30:52,000

With matching dates, experts can now link the coins to this brutal massacre that kills most of Cisarria's citizens.

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00:30:53,000 --> 00:30:58,000

You can imagine that as the Christians swept through the country, the people in the city would have been terrified.

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00:30:59,000 --> 00:31:07,000

Amidst utter panic and chaos, could someone have thrown the horde into the sea to protect it from the Christian crusaders?

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00:31:09,000 --> 00:31:16,000

The gold coins could be a silent witness to one of Cisarria's most dramatic and grisly events.

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00:31:17,000 --> 00:31:19,000

We will never know for sure.

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00:31:20,000 --> 00:31:27,000

The mystery of where this priceless horde came from and how it ended up on the seabed may never be solved.

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00:31:28,000 --> 00:31:38,000

But its discovery is a dramatic reminder to archaeologists of the enduring promise of the sea as a hiding place for clues to our past.

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00:31:38,000 --> 00:31:58,000

Modern day pirates steal millions of tons of fish a year in a sophisticated and lucrative enterprise worth an estimated \$23 billion.

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00:31:58,000 --> 00:32:09,000

One illegal fishing vessel with ties to organised crime is believed to have been secretly plundering our oceans for ten years, making it one of the most wanted pirate ships in the world.

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00:32:10,000 --> 00:32:19,000

It's a relentless game of cat and mouse between ocean authorities around the globe and this elusive outlaw of the high seas.

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00:32:19,000 --> 00:32:44,000

2018 off the coast of Madagascar. A dramatic high speed chase is taking place. A custom built high tech pirate hunter named the Ocean Warrior is chasing a notorious illegal fishing boat, the STS-50.

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00:32:45,000 --> 00:32:49,000

This chase has been going on for days. It's like something you see in a movie.

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00:32:50,000 --> 00:33:05,000

But after a near thousand mile chase across the Indian Ocean, the Ocean Warrior is running low on fuel. Captain makes an agonising decision to turn back and lets the modern day pirate ship go.

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00:33:06,000 --> 00:33:14,000

This is not the first time this dangerous threatening fugitive has escaped the clutches of the law.

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00:33:15,000 --> 00:33:20,000

The STS-50 is one of the world's most wanted ships.

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00:33:21,000 --> 00:33:25,000

The STS-50 has slipped through authorities fingers several times.

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00:33:26,000 --> 00:33:30,000

Twelve nations and interpol are trying to catch this vessel.

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00:33:31,000 --> 00:33:39,000

How has this elusive ship managed to operate secretly for a decade and repeatedly escape capture?

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00:33:40,000 --> 00:33:43,000

Two years earlier, 2016.

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00:33:45,000 --> 00:33:52,000

At this point the ship that later became the STS-50 is sailing under a different name, the André Dolgoth.

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00:33:54,000 --> 00:33:57,000

The vessel docks in a port in Africa.

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00:33:58,000 --> 00:34:04,000

The André Dolgoth as its hull filled with fish, it attempts to offload in Namibia.

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00:34:05,000 --> 00:34:12,000

It's carrying 125 tons of Antarctic tooth fish for \$3.6 million.

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00:34:13,000 --> 00:34:17,000

The tooth fish is the fish of choice for many pirates.

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00:34:19,000 --> 00:34:25,000

They're big here in North America. You go into any grocery store and you can buy Chilean sea bass, which is tooth fish.

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00:34:25,000 --> 00:34:29,000

And it's often referred to as white gold because it's so valuable.

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00:34:30,000 --> 00:34:37,000

But how do the André Dolgoth and other pirate vessels manage to loot such a staggering volume of tooth fish?

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00:34:38,000 --> 00:34:49,000

They use a variety of modern technologies to locate fish, such as sonar, and they have industrial sized machinery to operate illegal fishing nets.

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00:34:50,000 --> 00:34:57,000

The André Dolgoth is carrying 600 illegal nets, stretching out a staggering 18 miles.

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00:34:58,000 --> 00:35:01,000

These huge nets are known as curtains of death.

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00:35:02,000 --> 00:35:08,000

They destroy all the life on the bottom of the sea and they catch anything that's in its way.

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00:35:10,000 --> 00:35:17,000

In Namibia, with a jaw-dropping amount of tooth fish, the André Dolgoth is attracting unwanted attention.

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00:35:19,000 --> 00:35:22,000

And the ship is reported to international authorities.

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00:35:23,000 --> 00:35:27,000

But it moves on and continues to pillage the oceans.

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00:35:29,000 --> 00:35:34,000

Then, two months later, it's caught offloading tooth fish in China.

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

Chinese authorities investigate the vessel's documents.

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00:35:39,000 --> 00:35:43,000

They discover that the André Dolgoth's registration is forged.

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00:35:44,000 --> 00:35:50,000

But before anyone can take further action, the ship is gone.

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00:35:51,000 --> 00:35:53,000

Evading capture, once again.

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00:35:54,000 --> 00:36:02,000

Several countries are now trying to hunt down the André Dolgoth, desperate to crack its mysterious ways of operating.

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00:36:03,000 --> 00:36:08,000

New methods are constantly being developed to try to tackle the issue of illegal fishing.

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00:36:09,000 --> 00:36:12,000

Satellite technology grows every day.

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00:36:13,000 --> 00:36:22,000

Commercial vessels over 65 feet long are legally required to carry AIS tracking transponders, which beam location data to satellites.

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00:36:23,000 --> 00:36:30,000

Basically, that sends out a signal, gives your vessel's name so you can be tracked.

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00:36:31,000 --> 00:36:38,000

Even with all the technology, it's still incredibly hard to find single ships in the middle of the ocean.

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00:36:39,000 --> 00:36:47,000

Tracking the André Dolgoth becomes even more difficult when, in 2018, it changes its name to STS-50.

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00:36:49,000 --> 00:36:53,000

One of its first stops as STS-50 is Mozambique.

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00:36:54,000 --> 00:37:00,000

A vigilant port inspector immediately recognizes it as one of the world's most wanted ships.

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00:37:01,000 --> 00:37:06,000

Is the net finally closing in on this notorious pirate vessel?

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00:37:07,000 --> 00:37:26,000

Illegal pirate ship STS-50 has been operating secretly for years, but will a massive international effort bring its reign of terror to an end?

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00:37:26,000 --> 00:37:34,000

The STS-50 is detained by authorities in Mozambique. Will its secrets at last be revealed?

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00:37:57,000 --> 00:38:00,000

But the calls stop coming.

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00:38:01,000 --> 00:38:07,000

The ship turns off its transponder and leaves Mozambique without a trace.

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00:38:08,000 --> 00:38:11,000

And can you believe it? This vessel has managed to escape again.

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00:38:13,000 --> 00:38:15,000

It's a shocking move.

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00:38:16,000 --> 00:38:24,000

Navigating without GPS, it becomes what's known as a dark vessel, a common pirate ship MO.

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00:38:25,000 --> 00:38:31,000

Authorities now need to up their game if they're going to catch the STS-50.

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00:38:32,000 --> 00:38:37,000

After it escapes from Mozambique, a passing satellite spots this elusive outlaw.

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

Interpol summons specialist patrol vessels to finally take it down.

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00:38:43,000 --> 00:38:47,000

One is the ocean warrior. It manages to capture drone footage.

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00:38:48,000 --> 00:38:55,000

The ocean warrior circulates the footage to nearby authorities, and the STS-50 is back on their radar.

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00:38:56,000 --> 00:38:58,000

Its days are numbered.

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00:38:59,000 --> 00:39:04,000

Indonesian authorities finally catch up with it and capture the vessel.

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

The ship is seized along with 20 of its Russian and Indonesian crew, and its secrets are about to be exposed.

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00:39:15,000 --> 00:39:26,000

A specialized forensics team pours over a wealth of intelligence found on the ship, and the evidence they unravel is dark and disturbing.

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00:39:27,000 --> 00:39:32,000

They found links to organized crime in Europe. They found corrupt officials.

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00:39:33,000 --> 00:39:38,000

We're not talking about local fishermen here. We're talking about a very powerful mafia-like criminal network.

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

The vast majority of the crew were undocumented Indonesian fishermen who had been forced to work without pay for years.

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00:39:47,000 --> 00:39:54,000

During a decade of piracy, the STS-50 looted an estimated \$50 million worth of fish.

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00:39:55,000 --> 00:40:00,000

How has it managed to get away with such heinous crimes for so long?

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00:40:01,000 --> 00:40:04,000

The STS-50 is a master of disguise.

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00:40:05,000 --> 00:40:14,000

Investigators discover this pirate ship has changed its name a total of six times, and flown the flag of eight nations.

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00:40:15,000 --> 00:40:22,000

Illegal fishing vessels all over the world operate in complete secrecy, generating billions of dollars.

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00:40:23,000 --> 00:40:27,000

For the authorities, it's nearly impossible to keep track of them.

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00:40:28,000 --> 00:40:32,000

But an iconic seabird could help to bring an end to this dark industry.

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00:40:32,000 --> 00:40:39,000

The albatross, these oceanic birds spend over 90% of their lives at sea.

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00:40:41,000 --> 00:40:50,000

Albatrosses tend to gather around fishing vessels, and in 2019, a team of scientists sets out to research their flocking patterns.

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00:40:51,000 --> 00:40:57,000

They tag 170 birds with a specially designed GPS that logs their coordinates.

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00:40:57,000 --> 00:41:01,000

Officials then cross-check this with a boat's radar position.

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00:41:02,000 --> 00:41:05,000

But the data reveals something unexpected.

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00:41:06,000 --> 00:41:14,000

28% of the vessels the albatrosses flock around have their AIS switched off, and are likely engaged in illegal activity.

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00:41:15,000 --> 00:41:18,000

The albatross researchers get an idea.

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00:41:18,000 --> 00:41:25,000

Scientists have identified albatross as potentially being useful in tracking down illegal fishing.

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00:41:26,000 --> 00:41:30,000

These giant seabirds implanted with radar tracking technology.

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00:41:31,000 --> 00:41:39,000

When they dive into the shallow seas to get the fish that are being hauled behind these illegal pirate ships, the radars can show us where they are and when it happened.

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00:41:40,000 --> 00:41:45,000

This new technology allows us to use albatrosses as a flying spy.

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00:41:45,000 --> 00:41:49,000

In our attempts to stop illegal fishermen.

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00:41:52,000 --> 00:41:58,000

For years, these majestic seabirds have been the victims of pirate fishing nets.

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00:41:59,000 --> 00:42:01,000

But now, it's payback time.

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00:42:02,000 --> 00:42:08,000

As they take us one step closer to bringing this secretive and destructive industry to an end.