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SEARCHING FOR THE TITANIC

The amazing true story of one man's quest to find the most famous shipwreck in the world

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SEARCHING FOR THE TITANIC

Can the most famous shipwreck in history ever be found?

By Lauren Tarshis

As You Read What obstacles did Robert Ballard face in his search?

On the night of April 14, 1912, the *Titanic* sped across the Atlantic Ocean. The sky glittered with stars over a sea as still as glass. On board were more than 2,200 people—bejeweled millionaires and hopeful immigrants, passengers from all over the world.

This was the *Titanic*'s first voyage, but the luxury passenger liner was already world famous. Built from the strongest steel, according to the most modern designs, the *Titanic* was said to be unsinkable.

Then disaster struck.

At 11:40 p.m., the *Titanic* collided with an iceberg. As icy seawater flooded the ship, it quickly became clear that the *Titanic* was doomed—and so were most of those on board.

Two hours and forty minutes later, the magnificent ship disappeared into the inky-black waters of the North Atlantic. Would it ever be seen again?

"*Titanic* Sinks! 1,500 people lost!"

News of the *Titanic*'s **demise** shocked the world. Immediately, people demanded that the ship be found. Some families held out hope that their loved ones could still be alive, sealed off somewhere inside the wreck. But in truth, no one who went down with the ship could have survived.

What's more, there was simply no way to reach the wreck. The *Titanic* had come to rest on the ocean floor more than 10,000 feet beneath the surface. At that depth, the water pressure—the force that water puts on its surroundings—is incredibly powerful. (Water pressure becomes increasingly crushing the deeper you go.) The submarines that existed in 1912 could not venture that far down. Had one tried, it would have been crushed like a soda can.

The *Titanic* was lost in a world as mysterious and unreachable as outer space.

HUMAN-SIZED WORMS

In the following decades, new inventions slowly opened the deep sea to exploration. The most important was a technology called sonar, which uses sound waves to create images of objects underwater.

Then, in 1960, two researchers in a submersible—a tiny, submarine-like vehicle called the *Trieste*—reached the deepest known part of the ocean on Earth, a region in the Pacific Ocean known as Challenger Deep. They descended 7 miles down into the murky blackness. They didn't see much, but their submersible withstood the water pressure and the men made it back to the surface alive.

Their achievement inspired a new generation of undersea explorers. One of them was Robert Ballard.

As Ballard was growing up in Southern California, his friends loved to surf. But Ballard was more interested in what was happening *underneath* the waves. He went to college to become an oceanographer—a scientist who studies the sea. By the late 1970s, Ballard had spent more time in deep-sea submersibles than almost any other human.

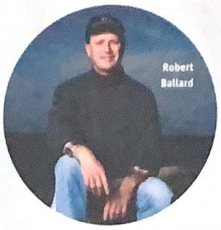
What wonders he saw! Eyeless fish. Worms the size of humans. Foot-long clams. Plants that thrived without a speck of sunlight and mysterious **plumes** of boiling-hot fluid shooting up from vents in the seafloor.

But there was another undersea wonder that Ballard longed to find: the *Titanic*. Decades had passed since its sinking, yet millions of people, like Ballard, remained entranced by the ship. Like an invisible hand reaching up from the bottom of the sea, the *Titanic* held tight to hearts and imaginations.

FROZEN TERROR

What about the *Titanic* was so fascinating? There was the ship itself, of course. At the time it was built, the *Titanic* was the biggest moving object ever constructed and few ships were as luxurious. But more than the *Titanic*'s powerful engines or **opulent** first-class cabins, it was the heartbreaking tragedy of the sinking that captivated people like Ballard. More than 1,500 people perished when the *Titanic* went down—and most of those deaths could have been prevented.

The *Titanic*'s crew had been warned that icebergs lurked in the ship's path, yet the captain kept the ship steaming across the ocean at close to top speed. Even after the collision, it might have been possible to save all the passengers, but the ship carried only enough lifeboats for half those on board.



In the years following the disaster, survivors shared their terrifying memories: the haunting cries they heard as the ship sank, their hours of frozen terror in the lifeboats, their tears of relief when, at dawn, the ship *Carpathia* arrived to rescue them.

Reading these **poignant** stories, Ballard became more determined to find the wreck. But where exactly was the *Titanic*? Nobody was sure.

The *Titanic*'s crew had relayed the ship's location after striking the iceberg—about 400 miles south of Newfoundland, Canada. But the ship had surely drifted during the more than two hours it took to sink. Ballard scoured historical records until finally settling on a 100-square-mile area to search.

In 1977, he and a team set out for the North Atlantic. Hopes were high. But then, just days into the voyage, a 50-ton piece of Ballard's ship came loose and crashed down. Six hundred thousand dollars' worth of sonar and other borrowed equipment plunged into the sea.

Devastated, Ballard returned home.

OTHER DREAMS

Ballard's failure made it hard for him to get support for another search. And soon he had a rival: a millionaire named Jack Grimm.

THE RACE TO THE DEEP

Humans have been trying to reach the deep ocean for centuries.

1620

The First Submarine

The invention is credited to a Dutch engineer named Cornelis Drebbel. The vessel can go down a whopping 15 feet.

1888

The First Military Submarine

The French navy launches the first fully functional military submarine, called the *Gymnote*. The steel, battery-powered vessel can reach a depth of about 240 feet. In the coming decades, research on military submarines will contribute to the development of new technology for deep-sea exploration.

1934

An Alien World

Two scientists, William Beebe and Otis Barton, reach a depth of 3,000 feet off the coast of Bermuda. The scientists travel inside a small metal sphere attached to a ship. They witness an alien world of **bioluminescent** creatures that had never been seen before.

Grimm loved spending money on attention-grabbing quests. Over the years, he'd searched, without success, for Bigfoot and the Loch Ness monster. In 1980, Grimm set his sights on the *Titanic*.

He hired top scientists and purchased the best equipment. Ballard felt certain Grimm's team would **prevail**. He tried to let go of his *Titanic* dreams.

Fortunately, he had other dreams to pursue. For years, Ballard had longed to create a better way to explore the deep sea. Submersibles enabled scientists like Ballard to glimpse the undersea world, but those journeys were perilous. Plus, submersibles could remain underwater for only a few hours at a time.

Ballard had an idea for a new kind of remote-controlled submersible, one he called *Argo*. It was essentially an underwater robot covered with cameras. Like an octopus with cameras and lights clutched in every tentacle, *Argo* would capture footage over large underwater areas that scientists on the surface could view on TV screens.

With money provided by the U.S. Navy, Ballard and a team got to work on *Argo*. Meanwhile, Grimm's *Titanic* search went on and on—without success. Finally, after three missions costing millions of dollars, Grimm ended his *Titanic* quest.

SHIP OF DREAMS

When the *Titanic* set sail, it was the most luxurious ship ever built. It had a gym, a swimming pool, and a dining room where a live orchestra played during meals. In today's money, a first-class ticket would cost upward of $100,000!

For more on the *Titanic*, watch the slideshow at Scope Online.

TITANIC TREASURES

Ballard vowed never to remove anything from the shipwreck of the *Titanic*. For him, it was a memorial to those who died. But in later years, other explorers removed thousands of objects, including these.

BOMB CRATERS

By 1984, Ballard had decided to try again to find the *Titanic*. This time would be different, though, because this time, he had *Argo*.

The new submersible worked just as Ballard had imagined it would. In one of the first tests, Ballard used *Argo* on a secret U.S. Navy mission to explore two sunken submarines. Both subs had vanished in the Atlantic in the 1960s. Using *Argo*, Ballard quickly located the missing subs—and **gleaned** a key lesson in the process. The submarines had broken up as they sank, and debris was scattered across more than a mile of the seafloor. *Argo*—and Ballard—spotted the debris and followed the trail to the wrecks.

Surely the *Titanic* had also broken apart as it sank, Ballard realized. Furniture and dishes and other objects would have spilled out and been carried by ocean currents. Like a trail of breadcrumbs, the *Titanic*'s debris could lead to the main part of the wreck.

Or so Ballard hoped.

On August 24, 1985, Ballard and his team were

1942

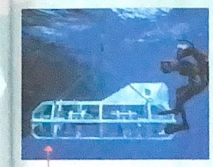
The Aqua-Lung

Underwater explorers Jacques Cousteau and Emile Gagnan invent the first modern scuba system, called the Aqua-Lung. It enables them to stay underwater longer than ever before possible. In the 1950s, Cousteau develops sophisticated underwater videography tools and produces several documentaries about the ocean. These films allow many people at home to experience the wonders of the world's oceans for the first time.

1960

***Trieste* and Challenger Deep**

At approximately 36,000 feet beneath the ocean's surface, Challenger Deep is the deepest known part of the ocean on Earth. In 1960, a steel submersible called the *Trieste* becomes the first manned vessel to reach the seafloor of Challenger Deep.



1985

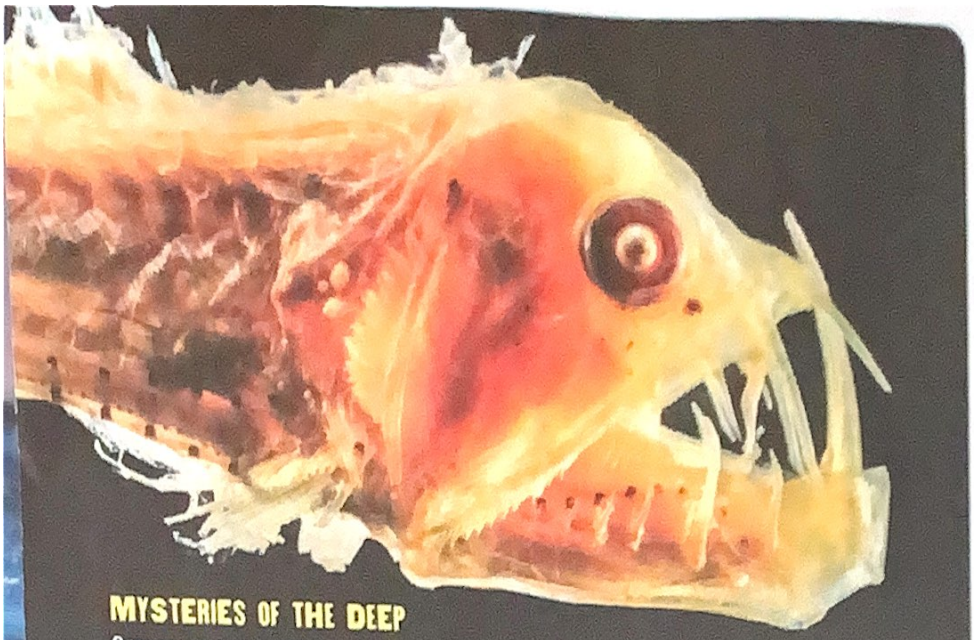
Argo

On September 1, using his new remote-controlled submersible *Argo*, Robert Ballard discovers the wreck of the *Titanic*.

2012

A New Record

Inside his submersible the *DeepSea Challenger*, explorer and filmmaker James Cameron becomes the first person to complete a solo trip to Challenger Deep. This is the first time a person has reached Challenger Deep since the *Trieste* in 1960.



MYSTERIES OF THE DEEP

Oceans cover more than two-thirds of our planet, yet we know more about the surface of Mars than we know about the ocean floor. In fact, humans have explored only about 20 percent of Earth's oceans. In recent years, however, new technologies have helped humans explore more of the deep ocean. We've discovered a world of near total darkness, where all sorts of creatures thrive—like this viperfish, which glows in the dark.

back in the North Atlantic. They directed *Argo* to the area where the *Titanic* had most likely sank. *Argo*'s images flashed onto TV screens. Just as Ballard had envisioned, *Argo* provided a window into the deep sea.

In the coming days, *Argo* would reveal deep undersea canyons, giant boulders, and enormous holes in the ocean floor. But mostly the team saw . . . nothing.

The days ticked by with no sign of the *Titanic*, not even a glint of metal. Ballard started to panic. The U.S. Navy was paying for this mission and had provided the ship and equipment. It had given Ballard a strict deadline, after which he and his team would have to head home.

Was Ballard's quest to find the *Titanic* going to end in failure yet again?

SHIP OF DREAMS

On September 1, Ballard went to his cabin to catch a few precious hours of rest. He was exhausted and deeply discouraged.

But then he was called back to the deck. He hurried to the control room and found his team studying an image on one of the screens. It appeared to be an enormous metal object covered in rust. His heart pounding, Ballard realized what he was looking at: one of the *Titanic*'s boilers—a part of the ship's engines. Soon other images appeared: a piece of twisted metal, portholes, a banister.

Cheers erupted.

They had done it.

In the coming days, Ballard and his team made more incredible discoveries. They found that the ship had cracked in half just before it sank; the front part of the ship was a third of a mile away from the back. They found jewels and dishes and shoes scattered across the seafloor. Ballard became world famous.

But in those first exhilarating moments of discovery, a chill ran through his heart. Ballard thought of the people who'd been on board. His mind filled with their voices, their cries. He hadn't found just an empty shipwreck. He'd found the final resting place of a magnificent ship of dreams—and of the hundreds who lost their lives on that starlit night in 1912. ●

What happened next? Watch the Beyond the Story video to find out.

Writing Contest

What challenges did Robert Ballard face in his quest to find the *Titanic*? How did he overcome those challenges? Answer both questions in a well-organized essay. Support your ideas with text evidence. Send your essay to Titanic Contest. Three winners will each get *Unsinkable* by Gordon Korman.

Entries must be submitted by a legal resident of the U.S. age 18 and older, who is the teacher, parent, or guardian of the student. See page 2 for details.

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