

## **Diving to the Titanic...first there were the 'oohs and ahs'**

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**By Dean Nelson**

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It reminded him, Ralph Hollis said, of the pictures he had seen of the legendary Flying Dutchman with the moon shining through the moss-covered masts and beams.

Only this was more frightening.

"If you told an artist to draw the most spooky graveyard scene he could imagine, that would be what we saw," Hollis said.

What he saw, closely enough to look in the windows, was the massive hull of the Titanic rising out of the ocean floor two miles below the North Atlantic surface.

Hollis is the chief pilot of a three-person submersible vehicle called the Alvin. He and two other researchers got a close look this July at the luxury liner that went down 74 years ago after only five days into its maiden voyage. More than 1,500 people died when the ship sunk after striking an iceberg.

The story of Alvin's dive leads this month's National Geographic magazine.

Hollis and the crew visited San Diego earlier week on their way to Hawaii for another research dive. They discussed their Titanic experience with the Deep Submersible Pilots Association, a San Diego-based group.

The dives in the Alvin are organized jointly by the Navy, the National Science Foundation, the Office of Naval Research, and the National Oceanography and Atmospheric Administration.

The Alvin and its mother ship, the Atlantis II, are based in Woods Hole Oceanographic Institution in Massachusetts. While in San Diego, the ships docked at the B Street pier.

"We went right up to the windows and were really taken by the mystery of it all," Hollis said. "What was in those rooms? What was going on when the ship went down?"

The crew sent a tethered robot, or a "Swimming eyeball," inside the ship, which was strewn with cups and saucers, silverware, ceramic dolls, electric heaters and metal benches -- evidence of the Titanic's luxurious, albeit brief, existence.

Wood-boring mollusks have eaten nearly all of the exposed wood from the ship, giving it a skeleton-like appearance.

Around some of the portholes "rust-rivers" have formed, giving the hull an even eerier effect.

"They were rust tentacles," Hollis said. "It looked like the giant ship had been crying."

The Titanic wreckage was discovered in September 1985 by a joint U.S.-French expedition, but the extended research visits by Alvin weren't made until this summer.

Jim Aguiar, one of the researchers on board, said it took two hours for Alvin to descend to the Titanic from the Atlantis II.

"Once we found it, the first 10 minutes were oohs and ahs," he said. "Then we had to work like hell for the next four hours."

The work included operating cameras attached to robotic arms, identifying specific pieces of the wreckage, overcoming underwater currents and, most importantly, watching out for debris while moving about the huge site.

"You can get trapped in some of that debris, get caught under the cables sticking out everywhere, or get your propeller entangled," Aguiar said. "You've only got life support for 72 hours in the Alvin, so you have to be careful."

The Alvin is, in a way, as mysterious as the Titanic. Climbing into the three-man boat is like trying to crawl into a tube of toothpaste. Once inside, the scientists have a 6-foot, 5-inch round bubble within which to work. There are three windows, 3 1/2 inches in diameter each. The titanium hull can allow for a dive of more than 13,000 feet.

The boat is 25 feet long, eight feet across and weighs 17 tons. It has been operating since 1964, has taken 1,800 dives and is powered by the same kind of batteries used by forklift trucks and golf carts.

The Titanic dive was remarkable, but Hollis, who has been diving for 12 years and has spent more than 2,000 hours submerged, said his most memorable was a dive to what is known as the Mid-Atlantic Ridge.

"Riding along the ocean floor, we came upon these huge mountains made of shiny black glass," he said. "They were obsidian (volcanic ash), and you could hear it crunch beneath the boat. The mountains were beautiful -- like something you've never seen before.

"We could drive down into these huge lava lakes, or drive completely around them. It was like driving around a lake in your car, only this is thousands of feet underwater."

Despite the potential for disasters underwater, Hollis said he has never experienced fear on any of his dives. The attitude doesn't appear to have come from a macho John Wayne approach either.

Fear seems to be programmed out of the diving procedure.

If a robotic arm gets entangled, it can be jettisoned, although Hollis said he has never had to do that. The reason fear doesn't exist is that the pilots know that they cannot be rescued if they get into real trouble.

"If we knew we could be rescued it would make us more reckless," Hollis said. "We discuss and rehearse every possible situation and alternative, because if we get stuck in the bottom of the ocean, there is no way to get us out. I'm so calm down there that I've fallen asleep in the Alvin.

"My real fear is getting back on land and walking across the street to Bernie's Bar. Diving is much safer than even driving a car, because cars have no alternatives built into them. If you get a flat tire, you have no alternative but to get out and change it. In the Alvin we have lots of alternatives. And we're very careful.

There were no real close calls on the Titanic dive, Hollis said; only mysterious feelings.

Caption: 1 PIC

Alvin, a three-person submersible vehicle, photographed the Titanic. (D-4) The San Diego Union/Peter Koeleman

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