

PROTECH  
SCUBA

# the last

**October 12, 1992**, the North Atlantic. The wind mounted steadily throughout the night as Chris Rouse, cocooned in his sleeping bag, braced himself against the boat's bunk. He felt a bit uneasy, his stomach tossed by the dark waves that slammed against the 60-foot dive charter boat the *Seeker*. The vessel was about 60 miles off the coasts of New Jersey and New York, but it may as well have been in the middle of the Atlantic Ocean. Chris peered out from his sleeping bag in the bunk. In the dawn's soot gray light, all he could see through the boat's windows was a blanket of sky and dark blue waves with white spray blowing off their crests. He judged the waves to be five feet high, with occasional rollers topping eight feet. Not a good day to continue the exploration of the most technically challenging wreck site he had faced in more than 700 dives.

The previous day, the 39-year-old Rouse and his 22-year-old son, Chrissy, had conducted two dives to an unidentified submarine 230 feet below. The wreck lay in three pieces, like a cigar with its middle torn out and angled between each end. The middle section included the conning tower, which had been thrown aside by a violent explosion. Next to the conning tower were the remains of the control room—a jumble of debris and jagged steel plates. Chrissy Rouse had crawled under and between those plates, wriggling inside the wreck while his father hovered outside. Somewhere in those ruins lay something that would identify the sub, and the Rouses were determined to find it. A discovery would fill in a piece of missing military history—and elevate the Rouses to the pantheon of diving's elite. The men hoped for the captain's

By  
Bernie Chowdhury

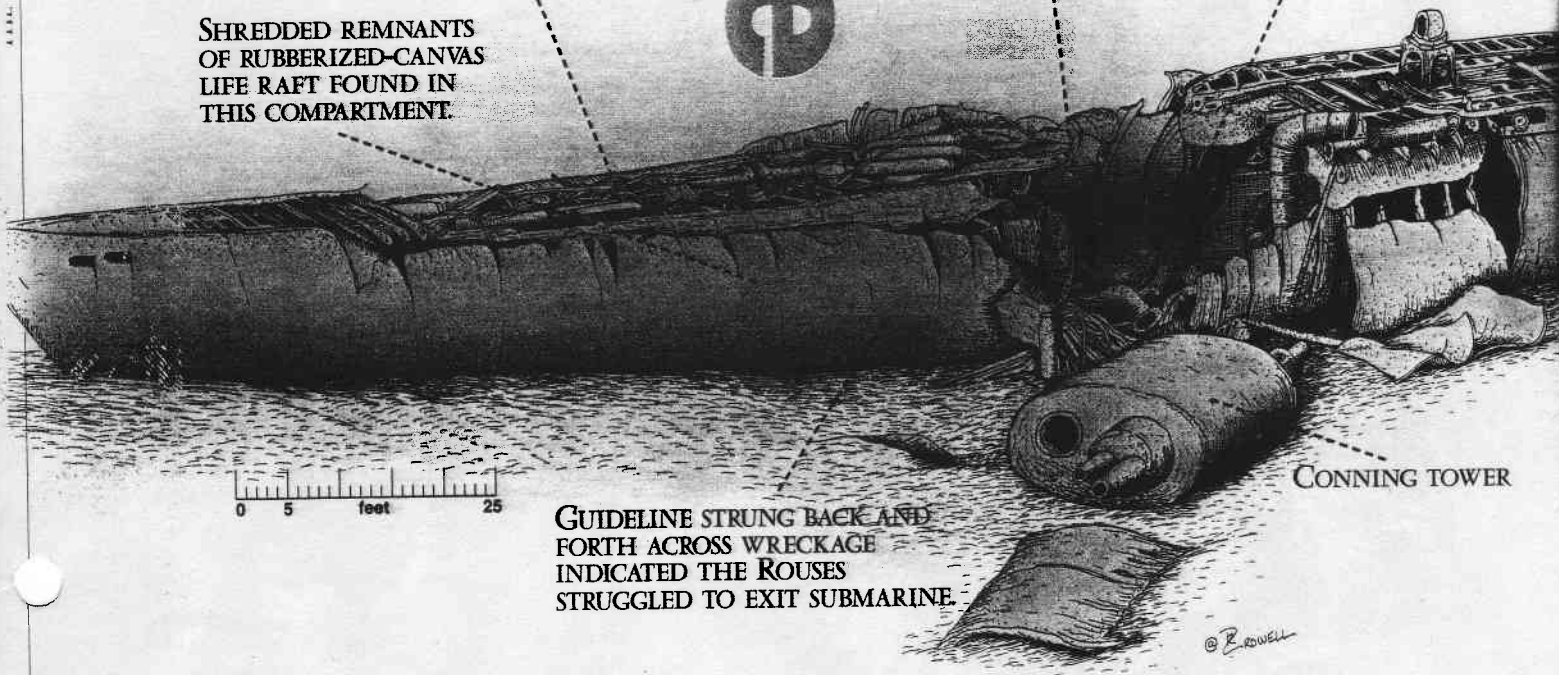
# the last dive

CHRISSY ROUSE  
SEARCHED HERE FOR  
CAPTAIN'S LOGBOOK.

SHREDDED REMNANTS  
OF RUBBERIZED-CANVAS  
LIFE RAFT FOUND IN  
THIS COMPARTMENT.

HATCHWAY  
CONNECTING  
CONTROL ROOM AND  
CAPTAIN'S QUARTERS.

THE ROUSES'  
DISCARDED  
GUIDELINE REEL  
FOUND HERE.



GUIDELINE STRUNG BACK AND  
FORTH ACROSS WRECKAGE  
INDICATED THE ROUSES  
STRUGGLED TO EXIT SUBMARINE.

CONNING TOWER

logbook—it had to be in the wreckage. Chrissy hadn't found it during the previous day's dives, but the Rouses knew they were close.

The *Seeker* bobbed and tugged at its anchor line like a trapped animal trying to break its tether. It had fought the ocean throughout the night, and its wood creaked in protest at the restraint. John Chatterton, a commercial diver, sport-diving instructor, highly respected wreck diver, and the co-captain of the *Seeker*, burst into the main cabin and threw the light switch. "It's six o'clock," he announced. "If any of you want to do two dives today, you need to hit the water early. Weather report is calling for steadily increasing seas, and you can see"—he nodded toward the window—"it's snotty already. I'm gonna blow off my personal dive. I'll just go down to pull the hook."

The 41-year-old Chatterton, who looked as if he'd fit in more readily on a college campus than on a dive boat, was on intimate terms with the wreck that Chris and Chrissy Rouse aimed to conquer. He was the diver who had identified the mysterious object as a submarine. On Labor Day, 1991, Chatterton had headed out to check a potential wreck site that the boat's owner, Bill Nagel, had heard about from another captain. On a follow-up dive, Chatterton had recovered a single dinner plate bearing the German eagle and swastika, with the date 1942 stamped on it. The wreck was a World War II submarine—a U-boat. For lack of an official name, Chatterton and other divers dubbed the discovery the *U-Who*.

American, German, and British naval archives list the location of every U-boat on the ocean bottom, but they have no reference to

anything in the *U-Who's* location, just half a day's sail from New York Harbor. Chatterton's discovery made headlines. Why was this U-boat not listed with other German submarine wrecks? What was its mission? Had it been carrying spies? Or Nazi Party members fleeing the fall of the Thousand-Year Reich? The search was on for identifying artifacts.

**In 1992, diving to 230 feet was considered** to be well beyond what amateurs should undertake. The main limiting factor was an impaired state much like drunkenness, brought on by breathing compressed air, which consists of about 80 percent nitrogen and 20 percent oxygen—the same mixture as on land. Since our bodies metabolize only oxygen, nitrogen is normally expelled during exhalation.

Underwater, however, nitrogen causes a condition known as nitrogen narcosis, which becomes more pronounced the deeper a diver descends. The mechanics of the syndrome are not well understood. One theory is that the nitrogen blocks neurotransmitters and receptors in the brain, disrupting electrochemical signals. Time can grow distorted, and divers may feel euphoric, sad, or paranoid. Problem-solving skills are compromised, including the ability to assess danger. Divers sometimes hallucinate and hear voices calling them to go deeper.

"Martini's Law" is a rule of thumb for narcosis. According to one definition, every 50 feet you dive is like having a martini on an empty stomach. Diving to the *U-Who* while breathing compressed air, as the Rouses planned to do, would be like drinking four and a half martinis.

After a dive he and his father had done to 300 feet on air, Chrissy

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Chris Rouse



Chrissy Rouse



THREE DECOMPRESSION  
TANKS LEFT HERE.

had described sounds as being distorted, as if vibrating in different pitches. When he related that story to me, Chrissy laughed like a boy who has discovered something mischievously satisfying. In an amazed tone, he said, “Being at 300 feet on air, I felt like I was hallucinating. It was really weird being underwater and all buzzed out.”

Because both Rouses had experienced extreme narcosis at depth, they felt they could manage anything they would encounter during the U-boat dive. What they did not take into account was the increase in narcosis that their efforts in rough seas would bring on and how it would affect their reactions to unforeseen problems. They had become perhaps too familiar with the underwater environment and overly confident in their own excellent diving skills.

Sport divers like the Rouses who went beyond 130 feet were often considered cowboys, taking unnecessary risks, especially since they used compressed air and not one of the expensive special breathing gases that in 1992 were just becoming available. Back then, 130 to 165 feet was as deep as most amateurs needed to go, and each year millions of divers safely stayed within those limits, which were recommended by recreational-diving training agencies. But there is a big difference in desire and ability between these recreational divers and sport divers like the Rouses, just as there is a big difference between casual rock climbers and mountaineers who attempt Everest.

In 1991, I had passed up the opportunity to join Bill Nagel and John Chatterton on the trip on which they discovered the *U-Who*. Nagel quickly planned a second trip to the wreck. After his first dive of that trip, Steve Feldman remarked to another diver, “My regulator sure feels hard to breathe from on the bottom. It’s like sucking pea soup through a straw.” On his next dive, Feldman apparently passed out from his exertions in a strong current, and he drowned. Divers could not recover his body, which drifted along the sea bottom for many months until commercial fishermen caught it in their trawler nets among the seafood destined for New York City restaurant tables. After Feldman’s death, many hard-core divers saw the *U-Who* mission as even more challenging and appealing.

For the rest of the 1991 dive season, and again the following year, Chatterton led expeditions to the *U-Who*. Feldman’s death had prompted some divers in the original group to give up the sport entirely or to pursue shallower, less dangerous wrecks. Chatterton rounded out his roster by recruiting other members of the tiny technical-diving community, including the Rouses.

Chris found Chatterton’s invitation hard to believe even though most divers who knew the Rouses would agree that they had earned their spots over several years of intense activity. Chris remarked to a friend, “Can you believe that we got invited to be part of these expeditions with so many great divers? I mean, us, the Rouses. We’re nobodies from nowhere. I just can’t get over it!”

The Rouses’ expertise included the ability to rescue other divers. One time, a friend had become disoriented in a cave and swam in the wrong direction through the winding maze of tunnels, looking for a way out. Chris and Chrissy methodically searched the cave, found him before he ran out of air, and led him to safety. One month before their *U-Who* expedition, Chrissy was diving alone on a shipwreck in 170 feet of water when a diver he did not know signaled frantically to him. In spite of the danger that a panicked diver poses to a would-be rescuer, Chris swam to the other man without hesitation and saw that the diver had little air in his tanks. Chrissy provided air, made the ascent with the diver, and stayed with him until they were both safely back on the dive boat.

After Chatterton invited the Rouses on the *U-Who* expedition, they excitedly declared that they were going to find something to identify the wreck and why it sank. Chrissy went a step further than his father. “I’m going to solve the *U-boat* mystery,” he confided to me. “I think I’m destined to be the next Sheck Exley.”

It was a tall statement, comparing himself to someone who, at the time, was regarded as the world’s best at the sport. (Two years later, in April 1994, Exley would die in a Mexican cave called Zacatón while attempting to dive to a depth of more than a thousand feet.) Chrissy was very much his father’s son—handsome, enthusiastic, even cocky. I figured he was going to be even better than Exley, because he would be an expert at diving ocean wrecks and flooded caves. Chrissy thought that solving the mystery of the *U-Who* would be the next of many notches in his diving belt.

**Aboard the Seeker**, at the sound of Chatterton’s voice, Chris Rouse sprang up, glad to get out of the bunk. He went over to his son and prodded him with

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Let's just

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"What, a big,

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Chrissy shot

back, "I'm not

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than you."

hand. "C'mon, get up, ya lazy bum. We got a dive to do."

Chrissy groaned. "Ohhh, I can't get out of bed now."

Unperturbed by his son's intransigence, Chris spotted Barb Lander, the only woman on board, still lying in her bunk. "Hey, Barb, I've been waiting almost eight hours to pick on you. You awake yet? The sink's full of dirty dishes." Lander was an experienced diver familiar with the macho wreck-diving scene. She gave a grinning Chris the finger.

Chris laughed. "Hey, Barb, ya gotta do something about your hair. Ya got a serious case of the uglies this morning."

Lander set aside the comments. She had learned early that Chris Rouse prodded and needled everybody—especially his son, who gave as good as he got. Chris's banter prompted the others to get up. They were all veteran wreck divers: Steve Gatto, Tom Packer, Richie Kohler, Steve McDougall, Brad Henderson, and John Yurga. Chatterton had given everyone a last dive time of 1:30 that afternoon; Gatto and Packer decided to hurry and get a dive in. They started to get their suits on.

Chrissy Rouse emerged from his bunk, shook his head, and ran his hands through his brown, shoulder-length hair, pulling out the tangles. He moved carefully around the carpeted cabin, his usual swagger replaced by cautious steps among the clothing and grocery bags littering the heaving floor. The odor of a boatful of divers, their dirty, sweaty clothes, and the food left in the sink all reminded him of the frat-style house in Pennsylvania that he had shared with diving buddies—when he could afford it on the earnings of his dive-shop job. Lately, he had been living at home with his father and his mother, Sue, thanks to a couple of minor but costly car accidents. When he could, he escaped to his friend's house with his girlfriend.

Chrissy squinted out the window. "Sure is a crappy day out here. Who started the boat rocking anyway?" Then he asked no one in particular, "What's for breakfast?"

His father grimaced at him. "Ha! The lord of the manor has awakened and wants to be served!" He turned to Lander. "Hey, Barb, rustle us up some eggs, will ya? Make yourself useful."

As Chris and Chrissy continued arguing about what they should eat for breakfast, Lander shook her head. The Rouses were at it again.

By the time Chatterton's cool warning reverberated aboard the *Seeker* that October morning, most of the divers had already decided that conditions were bad enough; they wouldn't risk diving at all. The previous day, the wind had been lighter, the waves only three feet high,

but even then the current had been forceful, making divers work hard to propel their 150 pounds of gear through the water and then back up the *Seeker's* ladder after the dive. This morning, looking at the roiling surface, Chris felt in his muscles the effects of yesterday's effort. But he was a strong man, and he scoffed at friends who trained for diving and suggested he do the same. "An exercise program? Yeah, right," he would snort. "Try doing my job for one day and then diving the next. That's plenty enough exercise program for me." Chris owned an excavating business in eastern Pennsylvania; when his heavy machinery couldn't do the job, he'd dig with pickax and shovel.

On deck, the wind whipping around them, Chris looked over at his son, who was frowning at the ocean. "Dad, I'm not going to dive today," Chrissy said.

His son wasn't going to dive! That meant Chris would be left without a partner. They always dove together. "I'm gonna dive," Chris said. "What's the matter with you?"

Chrissy swallowed. "I don't think it's a good idea," he retorted. "Let's just forget it."

"What, a big, strong kid like you is afraid?" said Chris.

Chrissy shot back at his father, "I'm not afraid—I'm just smarter than you."

Chris grinned. "Ha! That's a good one: My load is smarter than me. I taught you everything you know. I carry you through the dives."

Chrissy's face reddened in anger. "You couldn't even keep up with me if I didn't swim real slow!"

Back and forth they went, hurling insults and digging until they finally goaded each other into going down to the wreck. Chatterton went about his business as the two Rouses argued. He had seen them do this so often that it was as ordinary as wind. The Rouses were widely known as the Bicker Brothers, or Bickers for short. Though Chris and Chrissy Rouse were father and son—their identical builds and facial features left no doubt about that—they were only 17 years apart, and they acted less like parent and child than siblings strutting on the high school parking lot. Chatterton always wondered how much of their jousting was real and how much was just for show. Each of them personified the diver as cowboy, all rugged swagger. Many divers were amused by the Rouses and looked at their bickering as a polished comedy routine that kept them at the center of attention. Others thought the bickering got old fast. That October morning, Chatterton worried once again that their thrust and parry was a signal of conflict that could get them in serious trouble underwater. ▶



## Steve McDougall, an instructor

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how smoothly  
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their way down  
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its distant  
end tethered  
to the U-boat  
230 feet below.

The anchor line  
snapped  
violently as  
waves slammed  
the dive boat.

The water turned  
from green  
just below the  
surface to  
mourning black,  
as clear and cold  
as a moonless  
autumn sky.

Two hours went by as the waves and wind thickened. When Gatto and Packer returned from their dive, Gatto remarked, "The waves toss ya around like a milk shake. It's pretty bad out there." Chris pondered this news for a moment and then went back to putting on his dive suit.

In full gear, the Rouses looked as if they were about to explore another planet. Chris and Chrissy were clothed in dry suits made of watertight rubber; underneath, outfits resembling ski suits insulated them from the 42-degree water. Chris had attached several battery-powered lights to his plastic helmet. Their masks made them seem like otherworldly insects. Strapped to their arms was an array of gauges and knives. Each man carried two large scuba tanks on his back, which would allow—at best—a one-hour stay on the wreck. Two other tanks, attached to their harnesses at two points each and dangling under their arms, would allow a safe return to the surface.

**I spoke with the Rouses** two weeks before their *U-Who* expedition. As a fellow cave diver who took the techniques learned in Florida's caves and applied them to wreck diving, I often talked with the Rouses and occasionally dove with them. We were men who shared a passion for underwater exploration, and, like aficionados of golf or cars, we discussed everything from equipment to dive adventures, ambitions to dive-scene gossip.

Chris told me they planned to dive the wreck using compressed air as their main breathing gas. I thought of the four-and-a-half-martini buzz they would experience, and I was alarmed. As a diving instructor, I knew Chris and his son were taking a big chance. "Why aren't you diving mix?" I asked. This was a breathing mixture that included expensive helium gas to lessen the narcotic, martini effect of breathing air at depth.

"Well, I can't afford the gas right now," Chris said. "Business has been real slow."

The difference in cost between using air and using a helium-based gas was a few hundred dollars. I could hear the shrug in Chris's voice and was shocked. "If you can't afford helium to make the dive safer, why risk the dive? Why not leave it for another day?"

"Oh, Chrissy and I have been deeper than two-thirty on air. We can handle it," replied Chris dismissively.

"Have you done any dives on U-boats other than that one trip we made to *U-853*?"

"Well, I dove the *U-Who* a few weeks ago," Chris said. "Besides, going inside a wreck isn't really any different than

going inside a cave. And, Bernie, you know how good I am at that." When I didn't respond, he added, "Chrissy will be going in, and I'll just wait outside as a safety diver."

No mix and minimal experience inside U-boats—I was more than uneasy about what my friends were up to. I knew firsthand how treacherous subs can be. I had repeatedly dived three boats off the East Coast and had entered their cramped interiors. Those U-boats were all much shallower than the *U-Who*; the deepest one I'd explored was the *U-853*, which rested in usually murky, cold water at a depth of 130 feet. I shuddered, thinking of the one dive that the Rouses had done with me on the *U-853*. On that trip, one diver had severed a breathing hose on the sharp metal inside the wreck, causing torrents of air to be released, reducing the already low visibility to practically nil as silt and rust were knocked loose. The diver exited the wreck, and Chrissy Rouse shut off the supply to the leaking hose, preventing him from losing all his gas.

I tried one last question. "Hey, Chris, why don't you build up your U-boat experience on shallower wrecks like the *U-853*, wait until you can afford helium, and then try for the *U-Who*'s logbook? It's a hairy dive you're planning."

"Naw, we'll be OK."

**Tom Packer and Steve Gatto finished** getting out of their diving equipment. They looked at the Rouses, fully geared up, and could not believe that others would want to dive in these conditions. Gatto turned to Packer and quietly remarked, "These guys are nuts. They don't know what they're in for." Packer agreed.

As Lander helped Chris finish gearing up, he looked at her and said, "I hope I don't regret making this dive."

"Don't dive, Chris," Lander said. "Bag it."

"Junior's diving," came the surprisingly somber reply. "I've got to go with him."

Chrissy lifted himself to his feet. Bearing four scuba tanks, he lumbered in his swim fins across the deck to the entry point. As the boat heaved, he fell, crushing a piece of another diver's upline reel. Gatto and Packer helped him up, and again he shuffled toward the boat's side. He fell again, this time rolling over so that his back-mounted double tanks were pinned against the deck and his feet waved in the air. He resembled a helpless, upside-down turtle. Some of the other divers swallowed their laughter and helped Chrissy to his feet. He managed to roll over the boat's side and into the ocean without falling a third time.

Chris Rouse followed his son into the water with a loud



## The sub's crumpled interior

was only  
five feet high  
and less than  
ten feet across.

Cables hung  
everywhere,  
torn loose by  
the explosion  
that had ripped  
off the conning  
tower. Metal  
fragments,  
pieces of  
instruments,  
and rusted  
machinery  
marked the jaws  
of the U-boat.  
Chrissy felt as  
if he were  
swimming down  
a monster's  
gullet, a sure  
sign of nitrogen  
narcosis.



splash. As Chatterton, Lander, and the other divers watched, father and son disappeared below the raging waves.

Steve McDougall had finished his dive and was decompressing on the *Seeker's* anchor line when Chris and Chrissy dropped past. McDougall, an instructor who had been diving for 18 years, noted how smoothly and quickly the Rouses tugged their way down the thick rope, its distant end tethered to the U-boat 230 feet below. As the Rouses pulled farther down the line and away from him, McDougall saw their exhaled bubbles expand into silver oblongs. The anchor line snapped violently as waves slammed the dive boat. For the descending Rouses, the water turned from green just below the surface to mourning black, as clear and cold as a moonless autumn sky.

To get safely back to surface pressure, McDougall had to spend more than an hour coming up slowly while his body eliminated the excess nitrogen it had absorbed during the dive. He knew that he would see the Rouses again when they began their own lengthy decompression, which would start well before his own obligation was over.

**Narcosis would later distort** Chrissy Rouse's memory of the events that occurred during the dive. But it's possible to piece together the story of what happened in the *U-Who* from a combination of Chrissy's postdive ranting, video images of the wreck's interior taken later by John Chatterton, an analysis of the Rouses' diving gear, and knowledge of the father and son and the underwater world.

Chrissy had always swum faster than his father, and since Chrissy led the way down the anchor line, the distance between the two men probably grew, just as it had a month earlier when Chrissy had dangerously swum ahead of his father to recover artifacts inside the ocean liner *Empress of Ireland*. Once Chrissy reached the wreck of the U-boat, he unclipped his two extra scuba tanks and laid them on the deck. Then he swam alongside the cigar-shaped vessel, his dive light stabbing the water's blackness with a spotlight beam that played along the curved steel hull. Particles of dirt and sand were still suspended in the water from Steve McDougall's foray into the warship.

The Rouses probably reached the shattered control room within four minutes of beginning their descent. A gaping hole had been blasted in this section of the U-boat, and the jagged metal mouth looked like a strange deep-sea fish poised to swallow the unwary.

Although veteran wreck divers scoff at the cave-diving technique of paying out a guideline, the Rouses' cave-

diving training at Ginnie Springs in northern Florida and their experiences on some of the world's most challenging wrecks had convinced them that a guideline was the only sure way out of an underwater hulk, especially in the zero visibility caused by sand and silt that billow up during digs for artifacts. Chrissy probably nonchalantly tossed the brass clip attached to his guideline back to his father, just as he had done on a dive the previous month. It's unlikely that Chrissy tied off the line to a piece of wreckage—the accepted procedure—since that would have taken up precious time. He needed to be economical and precise if he was going to find that logbook, or anything historically significant, in the precious 20-minute span of the dive. He assumed his dad would tie off, as he'd done before.

As planned, Chris waited outside while Chrissy crawled into the wreck. Due to all the protruding machinery, the submarine's crumpled interior was only five feet high and less than ten feet across. Cables hung everywhere, torn loose by the explosion that had ripped off the conning tower. Metal fragments, pieces of instruments, and rusted machinery marked the jaws of the U-boat. Chrissy later ranted that he had felt as if he had been swimming down a monster's gullet, a sure sign of nitrogen narcosis.

When divers enter a wreck, their exhaled bubbles often loosen fine particles of silt from the ceiling. Rust flakes start their slow fall. The rust storm makes everything darker, and when the flakes hit the bottom, they send swirls of silt curling upward slowly, like smoke from smoldering embers. Even powerful dive lights are useless in these conditions, serving only to fix a fuzzy circle on a dark brownish-red blanket as divers feel their way farther into a wreck.

One of the frustrations Chrissy later expressed was that no matter how carefully he had tried to move through the U-boat, he would come into contact with some part of the wreckage. If he moved a leg, his fin touched something, maybe a dangling cable or a slab of torn metal. When he turned from one side to the other, he rubbed his shoulder or the hose to his breathing apparatus against some piece of debris. Every movement, every exhalation caused silt to billow from the bottom and rust particles to flake from the ceiling. It's easy to imagine him resembling the *Peanuts* character Pig-Pen, perpetually surrounded by a cloud of dust.

To enter the compartment where he planned to dig, Chrissy had to wiggle through a round hatchway that separated the control room from the captain's quarters. Once inside, he settled on the bottom and started digging with his right hand in the elbow-deep silt beneath some

& with the author,  
Bernie Chowdhury



the last

# DIVE

Since 1986, Bernie Chowdhury has been part of a pioneering group of technical divers who use advanced technology to push to new depths. The founder and co-publisher of *Immersed* magazine and a frequent speaker at diving conferences, he is still haunted by the Rouses' accident—and by his own nearly fatal dive in 1991.

**NGA: How did your accident happen?**

**BERNIE CHOWDHURY:** On the second day of a diving expedition to the *Northern Pacific*, a troop ship that sank in 1922 in 150 feet of water off Cape May, New Jersey, I woke up feeling sick. Soon, though, I was talked into diving—nobody's fault but my own. After exploring the wreck, I became disoriented from nitrogen narcosis. Unable to find the upline and running out of time, I went straight to the surface and was choppered to Philadelphia, where I spent six hours in a recompression chamber. The Rouses were really interested in my accident; we spoke about it a lot.

**Were you a close friend of the Rouses?**

As in any sport, those of us at the top of the game all knew one another. In the early 1990s, the sport of technical diving was evolving, so the Rouses and I talked about controversies, dives we were planning, and their discoveries. I did 20 to 30 dives with them, and we'd get together occasionally. What happened to the Rouses rocked many people. I lived with a lot of guilt: Why did I survive?

**Was the Rouses' accident preventable?**

Some people contend that they would have made it—even with everything that happened—if

they'd been using a helium-based gas, instead of just air. With a helium mix, you have less risk of narcosis. But since helium is lighter than other diving gases, there is less breathing resistance, and you consume it more quickly. So they could have blown through their tanks while still in the wreck. The Rouses might also have been saved if they'd had underwater communication devices to call for help or if there had been a recompression chamber on board the *Seeker*. Though this kind of equipment is expensive, divers need to consider using it now that we're going deeper and deeper—to 400 feet and beyond.

**What lessons did the diving community learn from the Rouses?**

Many people close to the Rouses gave up technical diving, thinking that if this could happen to two exceptionally skilled divers, it could happen to anyone. Others thought that the Rouses had been going too deep, too fast, and that what happened was inevitable. For me, the lesson from their accident and my own is that if something doesn't feel right, don't be afraid to sit a dive out. Sure, the logbook would have been a dramatic discovery, and maybe Chris and Chrissy were fulfilled because they were doing what they loved, but that kind of logic will always ring hollow for Sue Rouse. —**McKenzie Funk**

shelving while his left hand maintained a firm grip on his guideline reel, which led outside the wreck to his father. Neither Chrissy nor anyone else realized that the shelving was no longer attached to the hull; it was held upright only by silt, sand, and a few metal objects at its base. Pressed for time, Chrissy dug feverishly, feeling for anything that he might put into his bag to examine later.

At this point in the dive, an estimated 11 minutes had passed since the Rouses had left the surface. The water at 230 feet was just over 40 degrees—cold enough for a diver to feel through a dry suit and a layer of underwear. But artifact fixation and the adrenaline rush of getting into a U-boat help a diver's mind adhere to the task, even as his body feels fuzzy and drunken from nitrogen narcosis.

Later, Chrissy said that his hands had bumped into an object, and, although he could see nothing through the silt tornado, he knew what he held was large. Maybe it was the box in which the captain had kept his logbook. He struggled and pulled hard at the box with both hands.

When Chrissy removed the object, the shelving unit slowly started to fall. Chrissy later reported that he had not seen the shelving tumble, but he'd suddenly felt a crushing weight, which pinned him to the bottom. Getting trapped underwater is terrifying, and such a scare increases narcosis. It's like swallowing a huge drink of hard alcohol in one gulp.

Chrissy was in trouble, but he later asserted that he had tried to steady himself, tried to focus. He attempted to do a push-up and lift himself out from under whatever was trapping him—the kind of effort that makes divers breathe even faster and harder, using up more of their rapidly diminishing air. Perhaps Chrissy heard what sounded like heavy drumming and knew at some level that it was the sound of his own heart. But maybe he thought that the sound was the monster's heart beating, as his postdive, pain-induced ranting suggests. At this point, Chrissy was probably beyond holding back the hallucinations.

It's impossible to know for certain what happened next, but here's a plausible scenario. Chrissy started banging the metal guideline reel against the steel hull as a signal to his father that he was in trouble. The banging got louder, more frequent, more urgent as Chrissy's desperation escalated. Underwater, noise is muted, but vibrations are felt more dramatically than they are on land. At the opening where Chrissy had entered, Chris held his breath so that he could hear something other than his own exhalations. Convinced that the banging was real, he followed the line he had tied off hand over hand into the wreckage, where brownish red silt billowed out of the hatchway like smoke from a raging fire. As we know from Chrissy's rantings, Chris squirmed through the hatchway and, though he could not see his son, reached out and grabbed him. Chrissy said he had thought he was under attack by the monster. He tried to get away, flailing wildly. (Continued on page 164)



**Above and right: The author near his home in upstate New York.**

*(Continued from page 152)*

Although Chris also labored under the weight of hallucinatory narcosis, his head was probably much clearer than his son's, and he maneuvered slowly, relying on feel to determine what was trapping Chrissy. The elder Rouse had to move behind his son to find the shelves that had fallen on him. With an adrenaline-fueled fury, he grabbed the shelving and heaved, bracing himself against the floor for leverage.

**On a later trip to the wreck,** Chatterton, Gatto, and others became the first divers to enter the compartment since the Rouses. They saw shredded, rubberized canvas from one of the warship's life rafts, which had not been seen before the Rouses' dive. The life raft may have inflated on top of the shelves, further jamming Chrissy in place. (This is not so hard to believe as it might seem: The automatic inflation system of a life raft recovered from the *U-853* still worked after more than 40 years.) Once he surfaced, Chrissy screamed incoherently about a life raft. If the raft had inflated on top of the shelves, Chris probably took out his knife and shredded the material. If Chris was able to lift the shelves, perhaps the pair then came across the raft and shredded it like knights in armor battling a dragon.

As if the two divers did not have enough to contend with, a postdive analysis of their equipment revealed that bits of rusted metal had lodged in Chrissy's primary regulator, causing water to enter along with air during each breath. Despite having what was undoubtedly a high level of narcosis, Chrissy managed to spit out the malfunctioning unit and replace it with his secondary regulator.

When Chrissy was freed, the two divers faced yet another problem: trying to follow the guideline out of the wreck. The line was later found strung back and forth across the debris of the U-boat's compartment before it exited the wreck via a different opening than the one the Rouses had used to enter. The tangled guideline confirmed how difficult it was for father and son to get out of the steel coffin that had entombed its German sailors.

Once in open water, the Rouses were out of immediate danger, but what was supposed to have been a 20-minute dive had now taken more than 30 minutes, and time was racing. They had to retrieve the extra scuba tanks they had left on the U-boat's deck so that they would have enough gas for decompression.

Chrissy later said that he and his father had searched the deck for 11 minutes, desperately trying to find the tanks. Narcosis disoriented both divers, and, to add to the confusion, they had exited on the opposite side of the U-boat.

They never found the tanks they had cached on the deck. When Chris recovered the tank he had left outside the opening he had swum through to rescue his son, he clipped it to Chrissy's gear and signaled for them to ascend. Chris must have known that there was not enough gas for both of them to decompress, but he probably thought that he could surface and direct other divers from the *Seeker* to bring them more gas so that they could complete their decompression.

The Rouses did not find the anchor line before beginning their ascent, but they had no more time to look for anything. Their decompression obligation was about three hours, which meant that they should come up slowly, stopping at various depths. If they did not decompress, their bodies would be like soda cans—shaken, then opened in one brutal motion, their blood vessels blasting bubbles of nitrogen. And if they did not find the anchor line, they would drift underwater with the current while decompressing and would likely be lost at sea. Even in calm waters, it's a challenge to locate people floating on the ocean's surface, but with the winds mounting and the waves running five to six feet high, the crew on board the *Seeker* would be extremely lucky to find Chris and Chrissy.

As the needles on their tanks' pressure gauges rapidly dropped toward zero, the Rouses started to return to the surface. They probably kept looking up, as they had been taught, to avoid hitting their heads on debris. Turning slowly, they searched for the anchor line, knowing it couldn't be far away. It is not certain that they ever found the line. If they did, it was their first piece of good luck.

By this time, Steve McDougall was at a depth of 15 feet, still decompressing on the anchor line. He wondered where the Rouses were; he should have seen them already. Unlike commercial or military divers, sport divers do not routinely use underwater verbal-communication equipment, so the Rouses had no way of letting others know how desperate their situation was. McDougall, though he wasn't far away, had no idea where father and son were. Otherwise, he could have provided them with some of his breathing gas.

At a depth of about a hundred feet, Chrissy was able to switch from his nearly depleted tanks to the oxygen-rich mix in the spare bottle that his father had given him. But instead of air, water came through the mouthpiece, which postdive analysis revealed to be torn. Some divers at the scene think that Chrissy tried repeatedly to purge the regulator so that he could get air through the unit instead of water.

A large quantity of air is released from a tank each time the purge button is pressed. The tank was later found to be less than half full.

Chris's situation was also grim. After more than 40 minutes at a depth of 230 feet, he was probably running out of air. Indeed, the analysis of his tanks revealed that little gas remained, though it's uncertain how much he used on the surface while swimming to the dive boat and then waiting in the water for his son to be brought on board the *Seeker*.

At this point, both divers may have had no option but to risk crippling decompression sickness by shooting to the surface. Or they may have still suffered from narcosis, which rendered them unable to make rational decisions. Perhaps the Rouses simply panicked. Or Chris may have tried to save Chrissy by ascending to get more gas for himself and his son so that they could complete their decompression. Some people even speculate that Chrissy saw his father ascending and then followed him to render assistance.

If it had been any other dive team—say, two close friends—one diver would never have followed his buddy to the surface unless there were no other options. Risking paralysis or even death in surfacing prematurely goes beyond what is expected of a dive buddy. But the Rouses were no ordinary dive buddies.

Regardless of why Chris and Chrissy ascended, McDougall did not see the men underwater again. Father and son surfaced.

**On the *Seeker*,** co-captains Dan Crowell and John Chatterton had been anxiously listening to weather reports. As the two men surveyed the worsening conditions from the bow, the Rouses popped up a hundred feet in front of them. Chatterton had the impression that the Rouses both looked scared. He thought, These guys f---ed up.

Both men instantly knew that the Rouses should be decompressing, not surfacing.

Chatterton yelled, "Get down! We'll drop more tanks to you and send in a safety diver."

But the Rouses weren't getting ready to descend again: They were pressing their power-inflator buttons to put air from their tanks into their buoyancy compensators so that they could float on the surface.

Chrissy bobbed up and down in the waves, the current carrying him toward the *Seeker*. He had hit his limit: He could handle no more. He shouted back, "I can't breathe off my regulator. I'm coming aboard."

"Did you do any deco?" Chatterton shouted into the stiff wind.

"No!" Chrissy replied.

Before Chatterton could respond, Chrissy stuck his face into the water and started to swim toward the boat. Chris Rouse did the same. It looked as though he was struggling to swim. When the elder Rouse got closer, Chatterton saw him roll to one side in the waves. Chatterton thought that Chris's eyes already looked glassy. He raced toward the stern as fast as the rocking *Seeker* would allow.

Gatto was on the wheelhouse deck, above Chatterton and Crowell, and he had a commanding view of the Rouses. He was stunned; he could see that they were not swimming normally, even given the high waves. Gatto rushed to find a throw line. "Here," Gatto called out against the wind as he hurled the line, "grab hold. We'll tow you in!"

Inside the *Seeker's* main cabin, one deck below where Gatto stood, Lander looked out the windows and saw the line being tossed to the Rouses. She rushed out to help pull the divers in. Things were moving fast.

Chris and Chrissy floundered in the waves, but each managed to grab the line. Gatto strained to pull the two men toward the boat. He climbed down the wheelhouse ladder to the main deck, where Chatterton and several divers helped to pull the rope.

When Chris neared the stern, he let go of the rope and swam around the boat to the ladder. He was breathing hard as he put his feet on the bucking ladder's bottom rung and held on as if he were trying to ride a wild bull. Chatterton shouted, "Climb up!"

Chris replied weakly but without hesitation, "No. Take Chrissy first." Stepping off the ladder and back into the waves, he found the trailing line floating on the surface and swam backward so that his son would have room to get onto the ladder.

Just then, a big wave hit, and the surface current pushed Chrissy toward the boat's massive stern, which now hung in the air several feet above and perilously close to him. The hull came down hard, missing Chrissy's head by inches. The manifold bar connecting his tanks took the blow and cracked under the stern's weight. In a loud, high-pitched hissing, compressed air from the tanks escaped harmlessly through the crack.

Divers and crew members hung over the stern, desperately trying to grab on to Chrissy and pull him away from the boat so that he wouldn't be crushed. Somehow, they managed to get the younger Rouse to the ladder. Chrissy started to climb up, but the combination of more than 150 pounds of equipment, the wildly rocking boat, and the onset of decompression sickness robbed him of the

ability to climb farther. Chatterton commanded, "Climb up the ladder, Chrissy."

Chrissy replied faintly, "I can't move my legs." The bends had already paralyzed Chrissy from the waist down.

But Chatterton, attempting to motivate Chrissy, barked, "This is no time for joking around. Get your ass up the ladder."

"I'm not kidding," Chrissy pleaded.

Six sets of hands grabbed Chrissy, pulled him up the ladder, and dragged him, powerless, into the boat. He fell headfirst to the deck. It reminded Chatterton of fishermen landing a tuna. Stunned by the hard fall, Chrissy blurted, "I've got to go back down and decompress or I'm gonna die."

**But it was too late** to get either of the Rouses back underwater. The two men were undergoing "explosive decompression." The in-water recompression would have to be extended by several hours to eliminate the massive nitrogen bubbles that had formed in their bodies, yet the bends had already disabled both father and son. The only option now was evacuation to a recompression chamber, a pressurized capsule in which the Rouses would be put under simulated depth pressure and slowly brought back to surface pressure.

Lander, Yurga, Kohler, and Packer worked frantically to get the partially paralyzed Chrissy out of his equipment. Then they carried him to the large wooden platform in the middle of the aft deck, where divers suited up. Lander, who was a registered nurse and therefore could legally administer oxygen to an injured diver, put a regulator in Chrissy's mouth. "Here, breathe this," she said. "It's oxygen."

Chrissy spit the regulator out. "Everything hurts so bad."

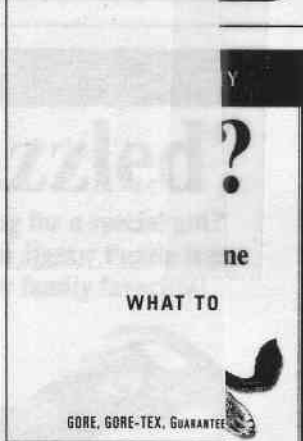
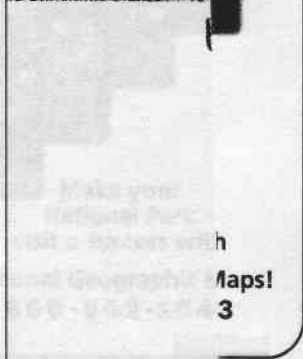
Lander put the regulator to Chrissy's lips again. "The oxygen will help ease the pain. You'll get better. Just breathe!"

Chrissy labored to speak. "Couldn't . . . breathe. . . . Only water. . . . Reg . . . broken. . . . Needed . . . air. . . . Had . . . to . . . surface."

Lander struggled to hear exactly what he was saying. She lowered her head so that her ear was right next to Chrissy's lips. She tried to filter out the background noises of the *Seeker's* diesel engines and Chrissy's tanks, which still emitted the high-pitched hissing of compressed air escaping from the cracked manifold.

Lander tried to calm the frightened diver. "OK, Chrissy, we can hear you. You're back on the *Seeker* now. What happened?"

He didn't respond. Packer handed Lander a plastic cup filled with water. Lander cradled Chrissy's head in her left arm, paying close



## THE LAST DIVE

attention to his breathing, which seemed to be labored and getting shallower. Chrissy needed water to keep his body hydrated so that his blood could carry the nitrogen bubbles through his system to his lungs, where they would be expelled during exhalation. Lander took the regulator out of Chrissy's mouth and held the cup to his lips; he drank eagerly.

Then Chrissy started screaming, trying to say something. His face was ghostly white. Lander tried to understand. Packer leaned closer, pencil and clipboard in hand so that he could write down what Chrissy said.

Meanwhile, Steve McDougall had finally finished his decompression and surfaced. He swam toward the stern of the vessel, where Chris had wrapped his arms around the ladder's right rail. As Chrissy screamed up on deck, Chatterton leaned over the stern, shouting to Chris. To Chatterton, it looked as though Chris was unable to use his hands. Chatterton commanded, "OK, Chrissy's on board. Now you get up the ladder."

Chris's response was weak. Once he knew that his child was safe, he seemed to lose his ability to continue the fight.

He looked at Chatterton through glazed eyes. "I'm not gonna make it," Chris said, barely audible, limply riding the ladder up and down with each surging wave.

Gatto leaned over the stern next to Chatterton and tied a rope securely around Chris's tank manifold, then assured Chris, "Sure you're gonna make it. I've got ya. I'm gonna haul your ass right on up the ladder."

Chris went limp; the waves that rocked the boat and the ladder threw him into the water. Gatto held on to the rope that he had attached to the manifold so that Chris would not drift away. Chatterton jumped in, followed by Kohler. Both men wore only street clothes. The cold water shocked their systems, but their adrenaline surged. Chatterton lifted Chris's head out of the water.

"I'm dying," Chris said weakly but calmly. "Tell Sue I'm sorry and that I love her." Chris's head fell to his right, and his body relaxed completely. Life drained from him as the nitrogen bubbles overwhelmed his body and the sea continued its relentless pounding.

The large steel ladder swung dangerously toward the three men. Chatterton and Kohler knew they had to get Chris out of his heavy diving equipment, but they were stymied by the array of hoses, lights, tanks, and reels, as well as the battery pack and cave-diving harness, bobbing with the water's motion.

Chatterton tore Chris's shoulder knife from its holder as the waves pushed the two

men toward the stern. Kohler grabbed Chris's tank valve, holding both Rouse and Chatterton away from the boat so that they wouldn't be crushed in the waves. The three men were carried up and down as if on a roller coaster. Chatterton sawed through the shoulder harness, then ducked his head below the water. With one smooth pull, he disconnected the quick-release buckle on Chris's waist belt, then undid the buckle that held both the crotch strap and the harness in place. He worked Chris's left arm free of the other shoulder strap and then pushed away the harness, with its attached tanks and equipment. The tanks floated on the surface.

Chatterton threw Chris's limp body over his shoulder in a fireman's carry and struggled up the ladder. At the top, he dumped him into the boat. The stricken diver landed with a dull thud. Chatterton scrambled over the stern.

Chrissy Rouse was still lying on the wooden platform, his head cradled in Lander's left arm. He spit out the regulator and started screaming, "Something . . . fell on me . . . inside . . . the . . . wreck . . . I was . . . pinned! . . . Help! . . . Help!" Although the rest of Chrissy's body lay limp, he shook his head and screamed repeatedly for help.

Lander looked deep into Chrissy's dilated, terror-filled eyes. He was only a few years older than her son. She spoke firmly, trying to break into his thoughts. "Chrissy, Chrissy! You're on the *Seeker*. You're on the *Seeker*! We're giving you help! Stay calm."

Chatterton, leaning over Chris on the deck, thought for an instant of his battlefield experiences as a medic in Vietnam. During combat, he had treated several injured men at once, and his training and experience returned to him. He blocked out Chrissy's screams and positioned the elder Rouse on the deck, then checked for breathing and a pulse. He shouted, "Victim has a weak pulse, no breathing. I am initiating CPR. Call the Coast Guard and request an immediate evacuation."

Gatto kneeled beside Chris and prepared to assist Chatterton with cardiopulmonary resuscitation if Chris's heart stopped beating. Dan Crowell ran into the wheelhouse and grabbed the radio's microphone. "Mayday, Mayday. This is the vessel *Seeker*, calling U.S. Coast Guard. Two divers facing imminent loss of life. CPR started on one. Requesting immediate evacuation by chopper."

While Crowell was on the radio, Chatterton felt Chris's pulse stop. He called out the situation as John Yurga stood by, taking notes. Chatterton began heart compression, which was alternated by Gatto's deep breaths into

Chris's mouth: one breath, followed by five heart compressions, then one breath, five heart compressions, in an exhausting ritual. Chatterton noted that each compression was meeting with more and more resistance, which meant that Chris's blood was clotting. Even Gatto's breaths were meeting with resistance. Chatterton thought about intubating Chris, but he knew the problem was not in getting breaths into the airway—it was in Chris's lungs. They were now overwhelmed with nitrogen bubbles. And his blood had turned to sludge. Heart compressions couldn't move the blood, so even if the lungs could be filled with air, there was nowhere for it to go.

McDougall climbed over the top of the *Seeker*'s ladder and saw Chatterton working on Chris, with Packer now in relief of Gatto. Chrissy's howling was muffled by the regulator, but McDougall knew the situation was grave. He climbed into the boat and dropped his tanks, fins, and mask. He knelt down to help. Chatterton directed him to relieve Packer and perform the breathing on Chris.

A few feet away, Chrissy ranted like a madman. "My dad . . . came . . . in . . . and got . . . me . . . out . . . I . . . was . . . trapped . . . It . . . felt like I was . . . going . . . to . . . be eaten . . . The monster got me . . . My . . . dad . . . saved . . . me . . . We couldn't . . . we couldn't . . . find . . . deco . . . bottles. Help! Help! The monster's got me!"

Between screams, the young man managed to ask, "How's my father?"

Lander looked over at Chatterton, who was still performing chest compressions on Chris. Chatterton stared somberly at Lander, then slowly shook his head.

A wave of exhaustion hit Chatterton. He looked at McDougall, who continued to breathe into Chris's mouth, trying to force air into his lungs. Even though Chatterton thought Chris was dead, he felt it was the collective duty of everyone on the boat to continue doing all they could to keep the man's vital functions going until they were either relieved by a higher medical authority or a doctor declared Chris Rouse officially dead. They would not fail their fellow diver.

"Your dad's OK," Lander reassured Chrissy. Why tell him that his father lay dead only a few feet away when the young man needed to fight for his life?

Chrissy started ranting again. He complained of burning pain, then of feeling nothing, then of pain again. Chrissy shook his head violently back and forth and screamed in anguish, "It hurts too much. PLEASE GET A GUN! SHOOT ME! PLEASE!"

**The pilot of the Coast Guard** rescue chopper spotted the *Seeker* in the distance and alerted his Search and Rescue swimmer. On the dive boat's wheelhouse deck, Dan Crowell engaged the *Seeker's* propellers and headed northeast into the 20-knot wind, as ordered by the Coast Guard. The helicopter hovered above the boat's stern while lowering the rescue swimmer. When on board the dive boat, the swimmer quickly assessed the situation. He took one look at Chris Rouse's slate gray face and lifeless eyes and pronounced, "He's dead." Then he went to Chrissy, who was moving his head.

Chatterton was stunned at the finality of the pronouncement. He had hoped for some effort from the Coast Guardsman to treat Chris. But Chatterton knew about triage from his Army training and battlefield experience: You attend first to those who have a chance of surviving and put aside those like Chris Rouse whose lives you probably cannot save even with immediate attention.

After examining Chrissy Rouse, the swimmer pulled out a waterproof radio and called for the helicopter to drop a basket so that Chrissy could be airlifted to a hospital. "Put on your life vests!" the swimmer barked to the divers and crew. "Prepare for basket drop!" Everyone scrambled to obey orders.

Above the *Seeker*, the helicopter moved in closer, and a metal basket was lowered to the tossing boat. It was allowed to touch a metal railing to discharge the powerful static electricity that would have severely injured anyone who came into contact with the basket before the charge was dissipated. The helicopter-induced wind turbulence caused soda cans, paper wrappers, bags of pretzels, rope, and cooler lids to be whipped around the vessel. Water sprayed. Chrissy Rouse had to be carried to the basket. As he was being hoisted upward, Chatterton pointed to Chris Rouse. "You've got to take him."

"We can't risk a basket drop for a dead guy!" said the swimmer.

"Are you a medical doctor?"

"No."

"Then you can't tell me he's dead for certain! You've got to take him."

"No!"

"Look, the kid thinks his father's still alive. We've been telling him that so that he keeps on fighting to live. He's got to see his old man on the chopper with him. Otherwise, he'll know he's dead!"

The swimmer stared at Chatterton. "Do you have any idea how risky a basket lift is? We just can't do it for a dead guy!" ➤

"I was an Army medic in 'Nam. I know all about dust offs! Nobody's shooting at you here! Stop f---ing around! Get this guy off the boat! NOW!"

The swimmer knew they were wasting valuable time. He turned from Chatterton and radioed: "Requesting a second basket drop!"

When both Rouses were on board the helicopter, the line was dropped down one last time. Instead of a basket at the end, it had a thick, padded strap. The rescue swimmer secured the strap around his waist and stepped up onto the *Seeker's* stern transom. He looked at the spotter, pointed his right index finger upward, and waved it in a circle. The helicopter rose. To those on the *Seeker*, it appeared as though the swimmer had stepped off the stern and was flying. He dangled from the helicopter as it flew up and away, while the spotter winched him back on board.

Those left on the boat slumped in exhaustion. One diver was dead, and another clung to the edge of life. In a rough and unforgiving sea, the *Seeker* had a long ride home.

**The helicopter headed 90 miles** northwest to the Bronx Municipal Hospital, now the Jacobi Medical Center. Glenn Butler, a former commercial diver, was the safety director of the hospital's hyperbaric-chamber facility. While en route, the Coast Guard pilot apprised Butler that two injured divers were being flown in for treatment and gave a summary of their symptoms.

When the helicopter touched down on the hospital landing pad, medical personnel rushed Chris and Chrissy into the emergency room, where they were met by Butler and his staff. Chris was ashen white, his body already rigid. A doctor officially pronounced Chris Rouse dead at 1:48 in the afternoon.

Chrissy still did not know that his father was dead. The gurney that held Chris Rouse's body was wheeled away to the morgue. As nurses worked on Chrissy, Butler tried to find out what had happened. "Were you diving mix?" Butler asked.

"No. We couldn't afford it," Chrissy said. "We were on air. We were crazy."

Chrissy was paralyzed from the nipples down and now felt little pain. Butler assessed Chrissy's speech and concluded that the diver was in relatively good shape. He was still able to think dimensionally, putting cause and effect together. This indicated that Chrissy's brain had not yet been overwhelmed with nitrogen bubbles. But the results of a blood sample taken from Chrissy were grim: Instead of normal blood, the syringe contained

foam—created by the nitrogen bubbling through his circulatory system.

The nurses worked fast to get Chrissy out of his diving garments. They could not put him into the chamber wearing anything but cotton; clothing made from synthetics could create static electricity, which might trigger a fire or an explosion in the high-pressure-oxygen environment. Within 15 minutes of his arrival at the hospital, Chrissy was in the chamber, attended by a doctor and a nurse. Butler worked outside the chamber. He decided to keep Chrissy on pure oxygen and take him down to a pressure equivalent of 60 feet. When Chrissy got to that depth, he cried out in pain, which is a common occurrence at this stage of treatment. It means that circulation is returning to the body.

Although a bent diver's pain can be excruciating, it is also a sign that treatment is progressing well. For the first time, Butler began to feel hopeful that one member of this diving team might survive. He decided to send Chrissy down to 165 feet, which was the maximum pressure of the facility.

Butler has since reviewed what transpired over the next few hours with many hyperbaric experts. All of them have given Butler the same answer: Nothing short of recompression to the equivalent of 300 to 400 feet for several days, along with a complete blood transfusion, could have effectively eliminated the nitrogen bubbles in Chrissy's body.

But medical technology has its limits, and one of those limits is the pressure rating of hyperbaric chambers. The few facilities in the world equipped to take a diver past 165 feet were constructed for navies, commercial diving companies, and researchers. They are generally not available to treat bent sport divers. The most advanced chamber in the United States belongs to the Navy Experimental Diving Unit in Panama City, Florida. Butler knew that even there, medical personnel would have their hands full with the complexities of treating a patient who was as ravaged with the bends as Chrissy was. At any rate, Chrissy would probably not survive long enough to be airlifted to Florida. For Chrissy, it was all or nothing in Butler's chamber.

At 2:30 in the afternoon, Chrissy regained some movement and feeling in his lower extremities. "Where's my father?" he asked, grimacing in pain.

"He's being treated in a separate chamber," the doctor lied.

Chrissy's pain was overwhelming. To Butler and his team, the diver's hideous cries were excruciating, as if their healing chamber had

been converted into a medieval torture device. Butler turned off communications between the inside and the outside of the chamber. The medical personnel switched to headset communications. They could not bear to listen to Chrissy's screams.

The pressure on Chrissy's body was reduced according to the schedule prescribed in U.S. Navy Treatment Table 6-A. After five and a half hours in the chamber, Chrissy had successfully gone from 165 feet to the pressure equivalent of 60 feet. He breathed pure oxygen as he was gradually brought up to 30 feet. Butler could see that Chrissy was not responding well to the decreased pressure. There were no more cries from the young man, who lay still on the gurney; Chrissy had passed out. Butler decided to take Chrissy back down to 60 feet, but before he could do so, Chrissy's strong, young heart failed. CPR did not revive him. Chrissy Rouse was declared dead at 7:50 in the evening.

**That afternoon, Sue Rouse** had been contacted by the Coast Guard and informed only that her husband and son had been in a diving accident and were now in the hospital. As friends drove Sue across Pennsylvania and northern New Jersey, she thought that she would be reunited with her loved ones. Her husband and son were tough, healthy, vigorous. They would beat the bends, or whatever had ambushed them.

Sue arrived at the hospital moments after Chrissy died. When she got to the emergency room, she was told that her husband and son were both dead. It was completely unexpected news, and it shattered her.

Chrissy's body had been wheeled out of the hyperbaric chamber and now lay on a gurney inside a curtained section of the emergency room. As Sue walked toward her son, it looked to her as if he were merely asleep. She gently reached over and touched his hand. It was still warm. Though she stood frozen in grief, she had an urge to grab her son, shake him, and say, "I'm here, Chrissy. It's all right now. Wake up!"

Her husband's body had already been taken to the Bronx morgue, which was closed. Sue would have to return to New York City the next day to identify it.

**Three months later**, after a brief ceremony, the ashes of Chris and Chrissy Rouse were scattered by friends in the Devil's Cave system at Ginnie Springs, Florida, where father and son had mastered the skills that earned them entry into the top ranks of underwater explorers. ▲