CURSE OF THE BLUE GEM

A story in the style of Doc Savage

By William Skelly

A MESSAGE FROM THE DEAD sets off a quest leading Mike Cribb and his team of engineers extraordinaire deep into the arctic circle to stop a destructive operation before it wipes out a life form capable of saving humanity. Their only certainty is treachery and peril at every turn as they are haunted by a menace that leaves men dead with metallic gray stains on their fingers.

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Chapter I

HUNTED

THE pelting rain was almost loud enough to drown out the metallic whine of a bullet ricocheting off one of the shipping containers. Streetlamps illuminating the shipyard provided the only source of light in the midnight storm. The figure of a man waited just a second too long in one of the cones of light.

Another bullet whistled through the downpour as it grazed the man's arm.

"Damn that Patterson!" he hissed under his breath before he ducked behind a shipping container. No one heard him because of the pounding deluge. He looked down his left arm where blood was starting to soak through his Oxford work shirt.

The figure was tall and slender. His thin, white hair betrayed that he was in his mid-seventies. The rain had long soaked through his blue-jeans.

The old man took long strides between the shadows cast by the shipping containers. He stopped frequently to look over his shoulder. His eyes darted like those of a rabbit who just escaped the fox. He knew what terror was hunting him through the shipyard.

The bleeding figure made a dash for the next shipping container. His leather street shoes made splashes in the puddles. A glance over his shoulder assured him that he had not been seen. He slipped his smartphone out of his pocket and quickly opened his email. His only hope now lay in his protégé robotics student.

Mike, the bleeding man started his message, *I have to show you something urgently. Meet me in my office as soon as you can.* His eyes caught a massive crane carrying a shipping container overhead. He pushed himself further into the shadow he was hiding in. *You must not let the Blue Gem fall into their hands. They have enough men and enough guns. Destroy it if you have to. More than my fate rests on it.* He signed the message, *Professor Hugh Campbell.*

He picked up a fist-sized rock and smashed his phone-screen with it. Glass shards sprayed onto the concrete.

Another dash, and the professor was at the water's edge. He looked down at his phone. The tips of his fingers that held it were stained a dull, metallic, gray. He shuddered.

Holding his phone out over the edge of the dock, he slowly loosened his grip. The device slid between his fingers into the black waters of the harbor. It made no splash.

He found cover again behind a small crate. He crouched to hide himself. He heard something over his left shoulder.

"Yeah, I saw him slink over here," came a voice from a bald figure. He was standing in one of the lights a hundred yards away.

"I'm comin toward yah!" another voice shouted. It came from the same direction as the first, but its owner was obscured by the curtains of rain.

The professor heard a click behind his head. The wet barrel of a silenced handgun pressed through his dripping hair. Someone was standing on the crate.

"Thought you would get away so easy, now did you?" The gunman taunted. The professor froze. He knew what evil awaited him if he fell back into their hands.

Damn that Patterson! He thought to himself.

The professor had only one option. He took it. The old man's hands shot behind him with the speed of a jungle cat. The gunman's face recoiled with shock. He was caught off-guard as the professor grabbed the pistol grip.

Both sets of hands now held the pistol to the old professor's head. His fingers fished for the trigger. He pulled it.

The silencer-muffled gunshot was gobbled up by the thundering storm.

Chapter II

THE TUNNEL BENEATH INFINITY

AT six feet, even, Mike Cribb had only a couple inches of headroom below the ducts and pipes that ran along the ceiling of the hallway. Linoleum tiles covered the floor. The concrete walls were painted a bright white that reflected the harsh, fluorescent lighting. Were it not for the exposed pipes in the ceiling, he would almost forget that he was standing in a tunnel underneath MIT's Infinite Corridor.

Mike stood before the wooden door to Professor Campbell's office. Through the smoked glass window in the door, he could see that the lights were out in the professor's office.

"Professor Campbell seemed pretty urgent in his message," Mike began. "Strange that he isn't here."

A man behind Mike asked, "That message was the only thing you got from him today?" The man was a giant: six foot, six inches, and 250 pounds. He had to duck in order not to hit his head on the ceiling. He kept his hands deep in the pockets of his MIT Sailing hoodie, exaggerating even further the size of his chest.

His voice was loud, with a mild Maine accent. The world knew him as Sammy Scott, master mechanical engineer and renowned expert on ciphers. Back when he was at MIT, he had a hobby of building replica Enigma machines and leaving them around campus.

"Yesterday, Sammy. Midnight was seventeen minutes ago," a short man to Sammy's left quipped. Five feet tall, and skinny, Alex Chui's small size stood in stark contrast with Sammy. What Alex lacked in size, he was determined to make up for with personality. He was a fast talker, and put his quick wit to good use against Sammy. They had a rivalry going back to when they were both on MIT's sailing team.

To the outside world, Alex was known for his dual skill in chemistry and electrical engineering. He was famous for his ability to be handed a circuit diagram in the morning, and before the end of the day hand back a PCB that took up half the space thought possible.

"What, you still salty over that spin, Chui?" Sammy retorted.

"You know I would have won that race if it weren't for that Harvard boat that cut me off!" Alex fired back.

"I wonder more," a fourth man's interruption halted their arguing. He continued slowly, "about that blue gem he mentioned." The man was Teddy Carlson. He was leaning up against the wall opposite the door. His eyes remained closed as he talked.

Teddy was an expert computer programmer. From taking a look at him, one wouldn't have realized he was also a self-defense instructor and mixed martial arts guru. His curly, blond hair came down to his shoulders, and he usually went to work in sweat pants and a tie-die shirt.

While at MIT, he ran their Ju-Jitsu program and went undefeated in both fencing and wrestling. He currently ran an independent self-defense studio in Cambridge.

The four of them had all recently graduated from MIT. They first met in Professor Campbell's multidisciplinary robotics class, where the four of them had stood out by excelling in

the notoriously difficult course. They were the first team in Professor Campbell's entire tenure to get As on every one of his project assignments.

Mike had distinguished himself among them as the team leader. During their Junior year, Mike approached them about the idea of starting a prototyping firm in Cambridge. Their start-up took off, and the team of engineers all worked at the prototyping lab in addition to their other pursuits.

Their prototyping lab was one of the most advanced in the world, sporting a full machine shop, circuit lab, and high-performance workstations. Orders frequently came in from research firms across the country, as well as from local universities and major robotics companies.

Mike jiggled the doorknob. It was locked.

"Something's wrong. Let's check his office," Mike said.

He pulled a wad of paper out of his pocket and began unfolding it. The inside of the paper was covered with a pattern of black stripes.

He kneeled down and slid the paper underneath the door. Still holding the sheet mostly through the crack, he slid it from left to right across the closed doorway.

The door unlocked with a click. Mike's paper had tricked an infrared motion sensor that opened the door from the inside.

Chapter III

BLANK PAGES

EVEN after flicking all the lights on, Professor Campbell's office was dimly lit. There was only just enough light to read by.

A massive oak desk dominated the office. The desk took up more than half of the room. It wrapped in a U shape around an old, studded leather office chair. A small bookcase behind the desk was the only other piece of furniture in the room.

Technical drawings covered the desktop. Stacks of ANSI D drafting paper obscured every square inch of oak. Drawings of parts and assemblies even covered the walls.

Mike pushed aside a pile of drawings (the order of the day seemed to be caterpillar treads) to reach a landline on the desk. He picked it up and advanced through the recent call log.

"He seemed to be talking an awful lot with a professor named Werner," Mike commented. "A handful of long-distance calls, too. Say, Teddy, can you look up this area code?"

Teddy pulled out his phone.

"The long-distance calls are to somewhere in Scandinavia, possibly Norway," he answered, after taking a glance at the number. He started to try to find Professor Werner in the MIT directory.

"Hey, look at this," Sammy boomed as he ran his finger over one of the technical drawings. "What a caterpillar tread! That thing looks environmentally sealed. He even specified how much oil on the materials list!"

"I'm not a mechanical engineer like you, Mr. Metric," Alex cut in, "but even I know that oiled treads have nothing to do with a 'Blue Gem.' Didn't the old prof say that's what we should be looking for?"

Teddy slowly looked up from his phone.

"It looks like this Professor Werner guy is a geologist," he reported.

Mike started to walk toward the bookcase. Technical books ruled the shelves: 'Practical PCB Design,' 'Mechanical Analysis 3rd Edition,' 'Heat Transfer.' He noticed a King James Bible on the top shelf and started to reach for it.

Just when he had his hand on it, Alex called out, "hey look at this, I think I found something: Letters." Alex motioned to a stack of envelopes. He had discovered them underneath a mess of technical drawings on the professor's desk. Each of the letters had four stamps, marking them as international mail.

Mike made his way over. Each envelope was stamped with a seal that read "LONGYEARBYEN." The letters were addressed from Ny-Ålesund, Svalbard.

Alex picked up one of the envelopes. It was already open. He carefully withdrew the neatly-folded paper from within.

"It's blank!" he said with surprise. He grabbed another. It was blank, too. He grabbed another and another – they were all blank!

"Let me see that," Sammy asked. He knew dozens of kinds of invisible ink, and could identify some on sight. He held the mysterious paper up to the light, scanning for stains, splotches, and crinkled areas. He saw something.

"They're not blank," he concluded. "They're gray. Each square centimeter of the paper is a different shade of light gray. This first one's pure white, the next one is a couple shades darker, the third is somewhere in between, and on it goes. It's some kind of steganography, of course, but I'd have to give it a closer look to see exactly what cipher he used. Say, Teddy, do you think it would be possible to convert these to numeric values?"

Teddy ambled over. His curly hair bounced as he walked. He took out his smartphone to take pictures of the mysterious pages.

"Probably," he answered as he started typing. His fingers moved with amazing swiftness and precision. His eyes darted back and forth along the phone's screen as he wrote.

The rest of the team knew not to interrupt Teddy when he became like this. He was speed-programming. Before a minute had passed, Teddy spoke up again.

"I just sent you grayscale values for the first letter," he declared without inflection. "I'll have to work a little longer to get something that will work on the rest, but this should at least give you a good start."

Sammy pulled his phone out of his pocked. The eerie blue light of the screen illuminated his grin.

He strode over to the bookcase and thumbed the King James Bible that Mike had been looking at earlier.

"What caught your eye about this?" Sammy asked.

"Professor Campbell wasn't Christian," Mike answered.

Before Mike could say anything further, his phone started buzzing in his pocket. The trilling jingle cut through the room. The others were silent as Mike withdrew his phone and looked at the number. He recognized it as the one from the recent call log belonging to Professor Werner.

"Hello," Mike answered the call. Heavy breathing came through the speakers.

"This is Professor Werner," the voice on the other end of the line began. "Professor Campbell said you might be able to help us. Where are you now?"

"I'm in his office," Mike answered with seriousness. His senses started to become more acute, and his muscles tensed.

“I’m under Building 2,” Werner said before pausing again for breath. “I’m being pursued.” Gunshots came through over the line. “Come quick,” Werner whispered before hanging up.

The office was thrown into pitch blackness. A power surge must have blown the lights! Outside the office: footsteps! Work boots squeaked against the linoleum.

“Hit the deck!” Teddy urgently whispered.

They flattened themselves against the floor. The door to the late professor’s office creaked open slowly. The linoleum squeaked as a boot stepped into the room.

Mike’s brilliant mind shifted into high gear. Now was a time for quick decision-making. While still hiding under the desk, he fished a cylindrical, aluminum device out of his pocket. His fingers probed for a switch on the back of the housing. He pressed it. Careful not to let go of the switch, he listened for the footsteps.

The intruder was in the center of the room now, walking closer and closer to the young roboticist’s hiding place. Mike waited a moment. His chance was now.

He leapt up like a rocket and pressed the device against the intruder’s eye. He released the switch. The whole room lit up a bright white. The intruder screamed as he was blinded by 3000 lumens.

The young roboticist kicked the thug’s legs out from under him. The intruder was knocked unconscious when his head hit the floor.

“Leave him here,” Alex yelled as he ran to the door. “We’ve got to get to Building 2!”

Chapter IV

ON DEATH’S TRAIL

GUIDED by the powerful pocket flashlight, the men ran with surprising speed through the otherwise emergency-lit tunnels. Ahead they saw a stairwell. They rocketed up the steps and into the Infinite Corridor.

On the ground level, the corridor was illuminated by dim, red emergency lights. Students dodged to avoid being run over by the gang. They were quite a sight, these men, as they ran through the hall.

Mike was a hundred yards down the corridor in just under ten seconds. The rest of his crew wasn’t far behind.

The giant Sammy took a glance out one of the windows.

“There!” he shouted.

He pointed toward the Great Lawn. A streetlamp illuminated two burly men in police uniforms as they carried a man with a bag over his head. They were headed toward a Ford police cruiser parked on Memorial Drive.

The team of engineers opened the door. They heard the man being carried shout, “These aren’t policemen!” before they saw the poor fellow heaved into the cruiser.

Sprinting across the Great Lawn, the team headed for a silver Mustang parked a few spaces behind the police cruiser. They got in just as the cruiser turned its lights on. Mike hopped into the driver’s seat and turned the key in the ignition. The 8-cylinder engine roared to life with the throaty growl of a pleased lion.

The cop-car leapt into the traffic of Memorial Drive. Its siren threatened to drown out the idling V-8. Mike pulled in behind the wailing cop-car. He brought the Mustang up to 500RPM off red-line before shifting. The Ford sportscar accelerated like a jackrabbit.

MIT's sprawling campus blazed past in a single blur as they raced down Memorial Drive.

The traffic parted ahead of the cruiser as drivers pulled over for what they thought was the police. Keeping in its wake, the Mustang quickly got up to the speed of the cop-car.

They were three car-lengths away. Now two. Now one.

Red brake lights blasted into the Mustang. The cruiser had come up on the first bridge across the Charles. The cop-car screeched around the corner, then slammed back onto the gas.

Mike braked hard. He blipped the throttle with his heel to rev-match as he downshifted through the gears. Once he was on the bridge, he let the engine back out.

The cruiser was making a break for I-90. It came around the ramp and accelerated onto the highway. The Mustang followed just behind. Its V-8 roared.

Alex pulled his phone out of his pocket and dialed a number.

"Hello, this is Alex Chui calling for Chief Rita," He talked calmy into the phone despite the chaos around him. Alex was an old friend of the Cambridge police chief.

"Hey there!" Alex began talking into the receiver. "Sorry I can't chat much now, but it might be great if you could do a favor for me." Alex looked at the cop-car's license plate. "Yeah, if you might be able to run a plate for me... Yeah, it's 314AE7. Let me know what you find."

The entrance to the I-90 tunnel grew closer. The two Fords plunged underground at 90 miles an hour. Harsh, orange lights illuminated the tunnel. The police siren's wail echoed through the cavernous passage.

The muzzle of a .38 stuck out the passenger window of the cruiser. The gun was aimed at the Mustang. A crack resounded through the tunnel as the bullet hit the Mustang's windshield. The entire windshield instantly turned into a spiderweb of cracks. A dime-sized circle of pulverized glass marked where the slug hit. Glass shards sprayed into the tunnel.

The roboticist swerved to avoid further fire. Teddy started fishing underneath the front passenger seat. He retrieved a bright-orange flare gun. The long-haired coder stuck the signaling device out the front passenger window and took aim at the cop-car.

A bright-orange meteor launched out of the wide-mouthed flare gun and streaked into the cruiser's rear right tire. The tire exploded when the flaming magnesium slug hit, sending shreds of thick tread flying into the roadway. Sparks sprayed from where the bare rim now hit the concrete.

The Mustang swerved to avoid the flying debris. Mike then followed the cruiser up an exit ramp into a ground-level neighborhood. The cruiser stomped on the brakes and pulled over.

The two phony policemen leapt out with handguns ready, and took aim from behind the wrecked cop-car.

One of the guns spat flame. A new web of cracks interlaced with the existing damage on the Mustang's windshield. Glass flew into the Ford sportscar where the bullet entered. Mike swerved hard and braked, spinning the Mustang into position just opposite the cop car.

The team of young engineers speedily crawled out the doors on the sheltered side of the Ford and took cover. Just as Teddy was about to fire another flare into the attackers, a black sedan screeched to a halt behind the police car.

Another magnesium meteor launched out of the flare gun. It went a few degrees off-course, and smashed into the drivers-side window of the now-vacated police car. The glass shattered as the flare punched a four-inch diameter hole in the window.

Before Teddy could get off another shot, the phony police officers hopped into the sedan and sped off into the depths of the city.

Alex ran from cover to reach the back door of the cruiser. He flung the door open and checked the pulse of the body inside.

"We're too late," he said, somberly. He eyed the gaping knife-wound in the poor victim's chest. "The professor's dead." Alex looked down at the tips of the victim's fingers. He gasped. The corpse's fingers were stained a dull, metallic gray!

Teddy slowly walked up to the wrecked cop-car and took a look inside. He gingerly slipped the bag off the victim's head, showing his frazzled, brown hair. The poor bloke looked about twenty years old.

Teddy's face betrayed no emotion as the rest of the crew lamented the loss of Professor Werner.

"That's not the professor," he said flatly. "Professor Werner's directory photo shows a gray-haired man in his late sixties."

"What!" exclaimed Alex. "Well, then who's this? And where's Professor Werner?"

Chapter V

THE GEOLOGIST'S GAMBIT

PROFESSOR Werner's office was the epitome of neatness. His books were in even rows with the spines aligned. His desk was mostly clear except for a computer monitor, a small assortment of office supplies, and a fist-sized, white stone. The pine bookshelf behind him was interspersed with display pedestals holding various rare minerals. Each rock was labeled by a bright yellow tag pinned to the shelf it sat on.

Mike, Sammy, and Teddy sat across from the professor on the opposite side of a large, pine desk. His sun-lit office was on the tenth floor of MIT's Green Building.

Professor Werner was a short, slightly overweight man in his late sixties. The only hair on his head was collected in his eyebrows and a scruffy mustache. His mustache had a manner of twitching as he spoke.

"Yes, just after I hung up with you, I got on the line with campus police. They told me to stay where I was until they came. Thankfully, my would-be assailants didn't stumble onto where I was hiding in the meanwhile. By the time campus police showed up to rescue me, the villains were gone."

"We heard gunshots on the line. Who was shooting at you?" Sammy asked.

The geologist's mustache twitched.

"I didn't get a good look at my pursuers, but the police said that they saw bullet holes in the ceiling. Presumably those were warning shots fired in the hopes that they would get me to betray where I was hidden," he answered.

Alex came in from outside the office. He quickly dropped his phone back into his khaki pocket.

"I just got off the line with Chief Rita," he reported. "As we suspected, that police cruiser had been stolen from the department a few days prior to our little escapade. She was also able to confirm that the Globe was correct in identifying the victim as Justin Allen, a 19-year-old MIT student."

Alex paused. He continued slowly, “The Globe was also right about Professor Campbell. He was found murdered around the same time we got to his office last night.”

None of the young engineers spoke a word.

“I am very sorry to hear about poor Justin,” The tubby professor broke the silence. “I wouldn’t have the slightest idea why on earth anyone would want to kill him.”

“Did Justin know Professor Campbell?” asked Mike.

“Well of course he did,” answered Professor Werner. “He was Hugh’s star student. Very much like you when you were here.” He pointed at Mike before continuing,

“I don’t know how much Hugh told you, but his most recent project had been trying to help me out. He always spoke very highly of you. I wonder if you might be able to try to finish where Professor Campbell left off? Before I continue, though, I must add that the project was very secret.”

“Does it have anything to do with a ‘Blue Gem?’” Mike asked.

The geologist’s mustache twitched as he replied, “How much did Hugh tell you about it?”

“Not much more than that,” Mike said. “I figured, though, you being a geologist, you may be able to tell us some more about the stone.”

Werner sat back in his office chair and closed his eyes. He seemed to be thinking.

“There are many minerals that can form blue varieties,” the professor spoke as he slowly opened his eyes. “For instance, there are several varieties of kyanite. There is also lazurite or dumortierite or shattuckite.”

He stood up and walked over to his bookcase. He pointed to a fist-sized stone on one of the shelves “there is even that variety of Beryl that you know as ‘aquamarine.’ In fact, some blue varieties that don’t occur in nature can even be lab-created by treating with cobalt ions. Without more information, I can’t identify it further.”

Alex eyed the aquamarine crystal that Werner had just pointed to. The stone took the shape of a single hexagonal column. Its peak was crowned by a pyramid that tapered to a blunt point. The blue mineral was so clear that he could see the titles of books on the shelf refracted through it.

“You had mentioned Professor Campbell’s last project,” Teddy cued Werner.

The geologist sat down.

“Right,” Professor Werner began again. “I know that you all are eager to continue Professor Campbell’s mission, but you have got to realize that this is something serious. The stakes are high. There are some exciting discoveries, but there’s also danger, and quite a bit, too. I’m leaving the country shortly on this matter, and you would have to join me if you sign on.”

Mike looked around the room. His eyes asked a question of each of his comrades. He liked their answer.

“What do you say, gentlemen?” The young roboticist asked, smiling.

The volume in the office jumped by forty decibels as the crew of engineers started yelling with excitement.

“Oh yeah!” Sammy shouted, cracking his massive knuckles.

“I say we go for it!” Alex chimed in with excitement.

“I’m down,” Teddy answered quietly in the chaos.

“You have yourself a team, Professor,” Mike concluded.

The excitement calmed as the professor resumed. “I had been engaged in a research project with a man named Dr. Fisher, a chemist. We were collecting data from an autonomous underwater vehicle, an ‘AUV,’ a sort of robot if you will.”

Werner made eye contact with Mike before continuing, “It was mapping the Arctic Ocean floor. Dr. Fisher was based with the robot in Svalbard, while I stayed here at MIT and sent him targets. A few months ago, he wrote to me very excitedly that the robot had discovered a previously unknown seamount in the Arctic Ocean.”

“What’s that, some sort of underwater mountain?” Sammy asked.

“Yes that’s exactly it, a sort of underwater mountain,” the geologist continued. “But that’s not the most exciting part. The flat top of the seamount is covered in a bacterial mat. Dr. Fisher wrote to me that data collected from the AUV indicated that these bacteria had evolved the ability to cause a chemical reaction that turns CO_2 into sugar! He believed that if we could harvest this bacteria, we could solve the carbon crisis and feed the world with a single piece of technology.”

“Why didn’t you guys just grab a sample of the bacterial mat?” Sammy cut in again.

“Because,” continued Werner, almost somberly, “we didn’t have the right robot. Our AUV was essentially a torpedo with sensors and sonar. It could analyze water chemistry and make maps, but it’s completely useless for collecting samples. That’s why I contacted Professor Campbell. I knew he could build us an AUV capable of harvesting these amazing bacteria. And he almost did.”

“How far did he get?” asked Mike.

“The prototype is 80% done. He and I had gotten space for it on the next research ship to Svalbard, the *Horizon*. She’s docked in Boston Harbor now. The almost-complete machine is sitting in the *Horizon*’s cargo bay as we speak. The ship leaves within the next few days, but it has fabrication facilities onboard. If one of you comes with me, you could finish it during the boat ride up to Svalbard.”

“How long is the trip?” Mike asked.

“It’s a five-week cruise from here to Svalbard.”

“If it’s almost done, then between the four of us we can finish that bugger, now can’t we!” Sammy shouted.

Professor Werner frowned slightly. His mustache drooped.

“Unfortunately, only one of you can come,” he declared.

Teddy had been looking down at his phone since Werner had mentioned the boat. He looked up now. He tapped Mike’s shoulder and handed him his phone. Mike nodded when he saw the screen.

“We’ll have to think about that one. When does the ship leave?” he asked.

“In four days,” professor Werner answered. “And another thing: Not a word about this to anyone.”

Chapter VI

ABOARD HORIZON

STACKS of corrugated shipping containers stood like a maze as Mike's men navigated through the shipyard toward the *Horizon*.

Excited shouts filled the air while a huge crane loaded supplies onto a container ship. Mike and his team moved through the chaos toward the eastern end of the shipyard.

"While Werner was talking, Teddy found an advertisement from the *Horizon*'s captain for an engineer position," Mike explained. "I put an application in to Captain Patterson. He seems pretty desperate to find a qualified engineer to take the post. What he doesn't know is that we go as a team, or we don't go at all."

Alex looked up at the crane.

"This is the place that Campbell was killed, isn't it? Kind of gives me the creeps." Alex said with a note of worry.

"They found his body over closer to the other end of the shipyard," Sammy replied. "But you can just admit all these boats remind you of losing races." Sammy grinned, then ducked to avoid a karate chop from Alex.

"Quit it you two," Mike interrupted. "There it is." He pointed to a ship docked on the eastern end of the pier.

The ship was quite a sight to behold. Her dark blue hull was almost 300 feet long and over 70 feet wide.

The bright white, four-tier superstructure towered above the water. Each deck had more square footage than the one above it, creating a cascade effect.

The bow had a large bulb, and the hull curved upwards to the wide foredeck, which sported a helipad.

A white helicopter was tied down on the pad. Mike recognized it as an AS350 AStar. A red stripe ran diagonally across the helicopter's fuselage.

Strangely, the ship's stern had the shape of the back of a spoon. It looked more like the bow of an icebreaker than the stern of an ocean-going ship.

The stern also featured a massive A-frame crane. It looked plenty large enough to carry a tank.

HORIZON was emblazoned on the ship's side in six-foot-tall letters.

A towering, lanky man strode toward the group of young engineers. He looked like he was in his early forties, with brown, close-cropped hair.

As he got closer, they could see he was even taller than Sammy. The man looked nearly seven feet tall. An olive fatigue shirt gave the impression of a military officer long off-duty. Mike noticed an old Marines patch sewed into the shoulder of his fatigue shirt.

"You would be Captain Patterson?" Mike asked.

"Yes," the tall man answered. "You had inquired about the engineering position. Come on, now. Let's get you a tour of the ship."

He motioned for the band of engineers to follow him up the gangway. They fell in line behind him and entered the walkway rimming the first deck.

"She's a double-acting ship," he began, talking while he walked along the deck. "She goes forwards in open water, and, in reverse, her ice-breaking stern can punch through up to three feet of sea-ice. She's an ex-tanker. The research expedition got her during the oil crash."

Captain Patterson led them to the afterdeck. A tarmac track covered much of the area. The track led from a garage door in the back of the superstructure.

They now could see the giant A-frame crane up-close.

"She can lift forty tons," the captain said, motioning toward the A-frame. "Thanks to her omni-directional bow thruster, she can also stay stable during deployments in any sea conditions."

Before they could ask any questions, Patterson led them through a personnel door next to the tall garage door.

Alex's phone buzzed in his pocket. He moved to the back of the group to take a look at the message.

The team kept moving while the captain led them up a flight of stairs and onto a catwalk. Below them, blue sparks flew into the air as men welded together an enormous machine.

The giant vehicle was thirty feet long, fifteen feet wide, and twenty feet tall. It rested on heavy caterpillar treads.

A set of thick, corrugated hoses ran from the front of the machine up to a tangle of machinery inside its main body. Large blocks of bright yellow foam adorned the housing.

"What'd I tell ya: sealed caterpillar treads," commented Sammy, triumphantly. He stopped grinning when Alex elbow-jabbed him. Seeming not to notice, the captain continued,

"This is our vehicle bay, which also doubles as our weld shop. Below us, you can see our autonomous vehicle being assembled. They'll have to stop in a few days once they catch up to where our previous engineer left off. It also needs some mechanical redesign as well as software and electrical work."

Captain Patterson led them through another door at the end of the catwalk. They emerged into a brightly lit machine shop.

The main floor machines were a knee mill and a fifteen foot long lathe. The team also recognized a laser-cutter, injection molder, and plasma cutter.

"As you can see, we also have fabrication facilities onboard, including this machine shop, for precision fabrication," Patterson motioned toward the machines. "All of our machines have 3-axis CNC capability. We also have a PCB manufacturing lab and a high speed local area network for software development. On the lower deck we have full SCUBA dive support for up to four divers."

Alex quietly tapped Mike on the shoulder and showed him the message on his phone. Mike nodded.

"We'll take the position," Mike declared, "on the condition that all four of us get to go."

Captain Patterson frowned. His heavyset eyebrows drew together.

"We have a position for one engineer, not four," he said slowly.

Mike locked glares with the captain.

"You get either all of us, or none of us."

Patterson saw he was cornered. He badly needed that engineering position filled fast. Otherwise, his boss would be displeased.

"Alright," the captain said, surrendering. "We leave in three days – lines off. That means you and everything you're bringing needs to be on this ship before then. Consider yourselves dismissed until that time."

The four engineers filed out. Once they were out of earshot, Alex reported what he had shown Mike:

"I just got a message from Chief Rita. The police have finally identified the metal dust from the victim's fingers. It's cobalt."

"Why cobalt? It's not poisonous or anything, is it?" Teddy asked.

"Once the oxide is smelted away, it's pretty safe stuff," Alex answered, drawing on his knowledge of chemistry.

"I wonder where somebody would be getting cobalt around here. It's not common stuff," Mike noted.

The team walked down the gangway off the ship as they continued talking.

Captain Patterson was still alone in the machine shop. He made sure the engineers were gone before pulling out his smartphone. He furtively dialed a number.

"Boss," he whispered into the microphone. "We got 'em. Only problem is that we got to deal with all four of 'em."

"I was worried that might be the case," a voice hissed out of the speaker. It was garbled and hard to recognize. "That makes it harder for us, but we can still deal with them. If we play our cards right, they will never see what hit them."

Chapter VII

HIDDEN QUARRY

THE three days were up. The band had loaded all of their equipment for the journey onto the *Horizon*. Mike had made special note that they bring SCUBA equipment to take advantage of the *Horizon*'s dive support.

Men in orange deck suits and blue helmets hurriedly prepared the ship for departure. The captain was busy up at the bridge. Professor Werner watched the undocking procedure from one of the observation decks.

The four engineers stood around a table inside the briefing room. Mike was explaining the technical drawings Professor Campbell had left behind.

"The AUV uses these slow-rotating blades to make gentle incisions in the bacterial mat," he said, pointing to the front of the machine on a technical drawing.

He unrolled another drawing that showed the corrugated tubes they had seen earlier. "These tubes siphon the bacteria samples into a collection tank."

"If this thing has treads, it must be negatively buoyant, but then how does it get back to the surface?" asked Sammy. "Professor Campbell's ballast system looks totally inadequate."

"What happened to 'Nil nisi bonum?'" Alex quipped. "Professor Campbell probably just didn't finished the ballast system. Either way, we have to design and build that ourselves."

"It will have to be light, too," Mike added. "Even without ballast, my preliminary calculations project this thing will weigh about 38 tons on land. It will take every ounce of the A-frame crane to hoist it back on deck."

"How complete is the communication system?" asked Teddy.

"Not very," Mike answered. "There's also no hoist reinforcement, no sensor motherboard, and no emergency retrieval system. The *Horizon* has a small software team, but they're behind schedule, and they don't have any sort of experience with a system this complex."

Mike looked back at the mess of drawings before finishing. "We certainly have our work cut out for us," he observed.

After discussing a few more details, each man knew exactly what he needed to do.

Alex ran off to the PCB lab to begin working on circuit components. His first task was the sensor motherboard. Sammy went into the machine shop to begin working on the hoist reinforcement system. Teddy would assist the existing software team. Mike handled the communications and ballast systems.

* * * *

The ship was asleep. The night was well into the third watch, which had only enough active crewmembers to wake the rest if there was an emergency.

Teddy was the first to arrive in the deserted AUV bay. Sammy came in next, although it was hard for him to be stealthy. Alex furtively closed the door behind him as he entered.

"What did you guys find?" Mike's voice came from the shadows. He waited to make sure they were alone before he stepped out into the light.

Silence overcame the bay for a few moments until Teddy answered in his usually quiet voice, "there's something suspicious about the source control repository. The others on the software team keep pushing code that contains large deprecated functions. I took a closer look at the deprecated functions, and they're being actively worked on."

"What do the deprecated bits of code do?" asked Alex.

"There are lots of minute adjustments. The machine cuts through the bacterial mat and into the seamount itself. The siphons are dialed to move heavier material. It seems appropriate for if they were trying to mine the seabed," Teddy answered.

"Isn't deep sea mining illegal?" asked Alex.

"It is," answered Mike. "Seafloor mining is very illegal because it's so destructive. Scientific studies indicate that in addition to killing anything on the seafloor, it sends up a sediment plume that spreads for hundreds of miles. Not to mention that it releases thousands of pounds of CO_2 that had been trapped in the sediment."

"That's right," interjected Sammy. "The only long-term experiment so far tested by dragging a large rake across the seabed. They found it kicked up a plume that spread further than all predictions thought possible, killing everything it settled on. The area of that test still has yet to recover after over thirty years."

"If they go ahead and kick up this huge plume, then people will see it and they'll be prosecuted, right?" Alex suggested.

"Not in some random spot in the Artic Ocean they're not," answered Sammy. "Nobody has monitoring equipment for that kind of thing out there."

"That's why an undiscovered, Arctic seamount would be so attractive to them," explained Mike. "Nobody knows to be monitoring for illegal mining. The only thing standing between them and their destructive plan is the four of us."

"Why don't we just delete their code?" Sammy proposed.

"It's not that simple," Teddy explained. "The code is kept in a source control repository, which keeps not just the code, but also a distributed version history. If I tried to delete the code, they could just reload it. You'd be better off changing the hardware."

"Whatever we do, we have to keep it quiet," Mike noted. "This conspiracy seems to be perfectly willing to bring things to blows and worse. If we go ahead and remove critical components, somebody in on the mining gig is going to notice. For now, we continue to finish their AUV. We need to find out who is in on this plot."

"Speaking of which," the spry chemist interjected. "Any progress on that blank-paper code yet, Mr. Enigma? Surely any self-respecting cryptanalyst should have solved that by now. "

"It's a pseudo-prime based Diffie-Hellman cipher scheme. No one has ever solved anything like this before," Sammy answered. "I've got a working solution, but it's very close to being NP-complete. It's been running on the lab's quantum computing cluster for a couple days now. Without more messages, it may take another month."

The meeting was over. Sammy and Teddy left through the main door. Alex went to take a back route, but stopped halfway through the doorway.

"Where're you off to, Mike?" he asked.

"I'm going to check in on our friend, the captain," Mike replied before disappearing into the shadows.

* * * *

No phantom could have rivaled Mike's stealth as he moved through the ship. He slinked from shadow to shadow, silently making his way toward the captain's cabin. He went out on deck to cover more distance under the cover of darkness.

He saw a flashlight beam ahead. Two watchmen were walking toward Mike on their rounds. One of them was waving his flashlight closer and closer to where the young roboticist stood.

Mike noticed a catwalk above him. It would have been an impossible jump for an ordinary man.

The roboticist hurled himself upward. At just the right moment, his hand tightened around the base of the catwalk like a hydraulic vise. Using his remaining upward momentum from the leap, he silently hoisted himself up onto the catwalk.

The two watchmen passed below. They had noticed nothing.

While Mike waited for them to pass under the catwalk, he noticed something seemed off about the name of the ship, *HORIZON*, painted above him.

He ran his fingers over the base of the giant white letters, probing the bumps and brushstrokes. He did a second pass to confirm his conclusion.

The name had been painted on recently – over a different name! Mike could only reach the first two of the obscured letters comprising the original name. They read: "B L."

He dropped down from the catwalk and continued through the decks of the *Horizon*. He went through another set of bulkhead doors and down a flight of stairs. The proverbial mouse could not have done it more quietly.

He finally reached the bulkhead door that lead into Captain Patterson's cabin. Mike pressed his ear up to the door. His acute sense of hearing revealed what was beyond the bulkhead.

He heard the captain snoring. The absence of electricity buzzing informed him that the lights were off.

He pushed the door open and slid into the room. In the darkness, Mike pulled a small flashlight from his pocket. He flipped a switch on the housing before turning it on.

The cabin was still pitch dark. The flashlight was shining in a frequency of infra-red just invisible to normal sight.

As far as the sleeping captain was concerned, the lights were still out, but Mike had trained his eyes to detect these wavelengths outside the range of ordinary vision. He could see the room in complete clarity.

The cabin was furnished with a wooden desk and a couple of chairs. Captain Patterson's mattress was right next to the door.

The first thing that caught Mike's eye on the desk was a strange-looking stone. As he moved closer, he saw that is was actually a potato-sized lump of metal. The nodule had an irregular surface like a natural rock.

He picked it up. It was heavy, weighing about two and a half pounds. As he handled it, he noticed a dull grey dust starting to stain the tips of his fingers.

Mike carefully replaced the lump of metal. As he did so, he noticed a stack of blank papers on the captain's desk.

A closer inspection confirmed that they were not blank, but actually messages written in the same code as those found on Professor Campbell's desk. Mike placed a an infrared vision lens on his phone's camera before taking photos of each of the pages.

Careful not to wake the sleeping captain, Mike closed the door without a sound. When he arrived back in the room where he and his team were quartered, he found the rest of his team was still awake.

"Have I got something to tell you!" he said excitedly.

Chapter VIII

THE BLUE GEM

IT had been almost a month. There was only one more week before the *Horizon* reached its destination. Men in thick welding jackets scurried around the monstrous robot to weld together the final assembly.

They were far enough north that, even inside the ship, they needed to wear wool long underwear under their clothing.

The AUV was almost done. Just a few more hours and it would be ready for preliminary tests. Mike and his crew had finished it in record time. It would have taken a typical engineering team over eight weeks, but Mike's team did it in just under a month.

While the final touches were being put on their AUV, the young engineers had gathered in their cabin in the lower decks of the ship.

"I was finally able to crack this blank-paper code," began Sammy. "It turns out the key was Genesis 7:23, the part about the Flood and Noah: 'And every living substance was destroyed which was upon the face of the ground…'"

"What do the secret notes say?" Alex asked.

"The ones we found in Professor Campbell's office are from that chemist up in Svalbard, Dr. Fisher. He doesn't really say anything we haven't already heard from Professor Werner. To my surprise, though, the ones Mike found in the captain's cabin use the same key, and they're real interesting."

Sammy paused before continuing. "It seems like the captain is in on the plot to use the AUV for illegal mining, and he's giving someone daily reports on our progress."

"If Captain Patterson knows the blank paper code," began Alex, "then why does he keep Werner on the ship? Can't he find out the location of the seamount from Dr. Fisher on his own using the code?"

"He keeps Werner on the ship to keep up the ruse," answered Sammy. "Patterson still needs us to finish the AUV so he can use it. We won't finish it if we don't think we can use it to study world-saving bacteria, so he keeps Werner on the ship."

The rest understood. Werner was only safe until the machine was finished. The final touches were being put on as they spoke.

"Do any of the letters shed light on this mysterious 'Blue Gem' that Campbell warned us about?" Teddy asked in his usual quiet manner.

"We're on the Blue Gem," Mike declared.

It was as though Mike had dropped a bomb into the room. Looks of confusion overcame the rest of his team.

"What!" Sammy shouted.

"I was able to go out at night and read the rest of the name on the side by touch," Mike continued. "It turns out the name *Horizon* was painted over the ship's old name a few days before we left. It took a couple trips to be able to read the name underneath. The ship's old name – the real name of the boat we're on now – is the *Blue Gem*."

Mike stopped. His sensitive ears had picked something up.

"There's someone outside," he said quietly.

He moved over to the cabin door and put his ear up against it. Deciphering the sounds through the door, he could tell precisely how many people were outside listening to them. Mike held up three fingers to the rest of his crew.

A knock sounded against the door. Mike stepped back.

"Mike, are you in there?" began Captain Patterson. "Professor Werner told me to get you. He wants to speak with you urgently."

Mike slowly opened the door. Captain Patterson had to duck to fit his towering frame in the hallway. His face was hard set as usual. There were two burley men behind him, each wearing blue overalls. They looked like they would be fearsome opponents in a fight.

The captain gestured, commanding Mike's team to follow the two men out into the hallway. Mike fell in line just behind the escorts. Sammy came next, then Alex. Teddy brought up the rear, followed by Patterson.

The two men in overalls led the crew down the hallway and out onto the deck walkway. Spray splashed up onto the hull below them, but it fell short before hitting their level. It was almost 30 feet to the water from where they stood.

Mike sensed something as they passed another hallway leading out on deck. Something seemed wrong.

He whipped around just in time to see a huge man barrel into him. His attacker must have weighed 300 pounds.

Mike was thrown backwards into the deck railing. The blow would have knocked a normal man out cold, but Mike still had enough sense to send a uppercut into his attacker's chin with the strength of a hydraulic piston. The huge man didn't even blink as the folds of his chin absorbed the impact of the roboticist's punch.

The thug swung his massive, hairy fist toward Mike's skull. Mike ducked before it hit home, and he returned the favor by hurling a kick into the huge man's side.

One of the escorts landed a blow into Alex's chin. The electrical engineer caught himself against the railing just in time to receive a kick right in the stomach.

The spry chemist dodge-rolled the next kick. He got back up on his feet and shot his elbow into his assailant's side.

With the element of surprise gone, Mike's men became formidable fighters. They had all been trained personally by Teddy in mixed martial arts.

Captain Patterson tried to land a punch into Teddy's neck. Teddy caught Patterson's arm and used the captain's remaining momentum to hurl him into the bulkhead.

An amazing change had come over Teddy. The normally aloof computer programmer showed the alertness of a hawk. His knees were bent, head up, fists poised. The Ju-Jitsu master was ready for a fight.

The captain was a fast fighter, too. Before he hit the bulkhead, he positioned his leg to absorb the impact. He landed in fighting stance just in time to dodge a punch from Teddy.

He was quick, that Patterson. Before Teddy's punch could hit home, the captain was already behind him. Teddy whirled. Without time to dodge, he blocked a kick from Patterson with his upper arm.

While the captain's kick was still airborne, Teddy slid his forward foot into Patterson's only ground contact point. The captain fell fast, but not fast enough that he couldn't catch himself against the railing.

Sammy was having his own time of it. One of the assailants had learned the hard way not to try to charge the huge mechanical engineer. Sammy lifted the man over his head in a fireman's carry before dropping the goon onto the deck below.

Even in the heat of the fight, Mike's team all knew their most important mission was to rescue Werner. The MIT geologist was in danger. Patterson would not risk killing the engineers unless the robot was done, which meant Professor Werner was his next target.

Mike flung himself over the side, but he kept his grip on the railing. The huge attacker was caught off-guard. Sammy landed a fist into the thug's back while Mike leapt up and climbed onto the walkway above him.

More men were coming on deck. Before they got overwhelmed, Alex and Teddy followed Mike's lead and clambered up to the next level. Sammy found a clear path up the stairs and met the gang as they ran into the ship toward Professor Werner's cabin.

Time was of the essence. They might already be too late.

The team flew down the corridors to save Werner. Soon, they came upon the bulkhead door. It was closed. Sammy wrenched the door open with terrific speed and the team leapt into the room with fists ready.

To their surprise, Werner was alone. They had interrupted him in the middle of a phone call. He looked up from his desk and smiled when he saw the band of engineers.

"Don't worry, Captain Patterson," Professor Werner spoke calmly into the receiver. "I've got them right here."

Professor Werner's grin widened as Patterson arrived behind Mike's men. A crew of men in blue overalls arrived shortly after the captain.

Professor Werner cackled like a hyena. The geologist remained seated as he began slowly clapping

"Well done, gentleman!" he congratulated the team, sarcastically. "The AUV completed its preliminary tests swimmingly. You really are talented engineers. As the cherry on top, you conveniently turned yourselves right in once your time was up!"

The cackling professor withdrew a revolver from his desk and aimed it at Mike's forehead. He continued in a calm voice,

"Won't you join Mr. Patterson and I as we escort you to your quarters?"

Chapter IX

THE LAND OF GLACIERS

BEFORE locking Mike's team in their quarters, Captain Patterson had taken the liberty of confiscating any and all equipment. The only thing left in the room was a small desk.

"So it seems Professor Werner was in on the mining gig the whole time," Alex commented from the corner of the cabin turned prison-cell.

"The four of us are the only ones on this ship who weren't working for the conspiracy," answered Mike. "Werner probably also orchestrated the murder of Professor Campbell, and the death of his student, Justin."

"This also explains how the fake cops knew we were in Professor Campbell's office," Teddy said. "Werner pretended to be attacked as a diversion to get us away from all that evidence."

"Dr. Fisher must be his next target," Sammy warned. "I bet Werner will try to kill him the moment he gets the precise location of the seamount out of him."

Alex looked out the porthole at the top of the cabin. It was too small to escape through. He could see the heaving sea illuminated by the rising sun. It had only been a few hours since they were locked up, but the new day was already beginning.

"You know," began Alex, "the nights are already getting shorter from our high latitude. By the time we get to Svalbard, the sun won't set at all. We must be getting close, anyway."

"You know what we're getting close to, breakfast, that's what," quipped Sammy. He patted his huge stomach.

"Breakfast, is that what you were thinking of when we raced Tufts?" Alex gibed.

"Quiet all of you," Mike interrupted. He held a finger up. They heard the shuffling of footsteps outside the door. The team readied themselves for combat.

A plastic mealtray slid underneath the bulkhead door.

"What'd I tell ya about breakfast! At least these guys are civil captors," Sammy shouted in delight.

"It seems that we're in it for the long haul," Teddy said to himself before joining the rest of the team for breakfast.

* * * *

Alex could see land through the porthole. It had been almost a week since they were captured. They would be in Svalbard soon.

Mike looked down at the floor of the cabin. They had tried everything. Cooking utensils bent into lock picks littered the floor. The porthole latches were dented and bent from unsuccessful attempts at prying. Various failed origami escape devices had been crumpled up into balls and strewn about the room.

Nothing had worked. The door lock was pick-proof. Even a professional with specialized tools would have found difficulty opening that lock. Making the pins click with a fork was impossible.

The porthole was deadbolted from the outside, and even the compactly built Alex would not have been able to fit through.

The whirr of the engine changed pitch. The team heard crew members running about the ship. The engine stopped. The boat lurched.

Alex turned away from the porthole.

"We've arrived. That's Svalbard," he said, pointing out the porthole.

The ship had been docked in a Fjord harbor. Massive canyon walls towered hundreds of feet above them. Small pieces of ice bobbed in the green-blue water.

Glittering snow covered the landscape. Along the Fjord, they could see a cluster of about three dozen single-story buildings. Snow-covered mountains loomed beyond the town.

"Ny-Ålesund," whispered Mike.

He could make out a group of figures in bright red Arctic survival suits making their way toward the buildings from the dock.

"We got to get out of here. We got to warn Dr. Fisher before it's too late!" Alex urged.

"We've tried everything!" Sammy lamented. "That door won't budge, nor will the porthole. The only ones who can open that door are our captors."

"There's one thing we haven't tried," Mike said.

"What?" Asked Sammy.

Shuffling footsteps outside meant that their breakfast was on its way.

"Watch," Mike answered. He moved over the porthole before continuing, "Teddy, Can you pass me that line? I'm almost through!"

The porthole was still locked shut. There was no line. Sammy and Alex were dumbfounded.

Teddy caught on, and replied,

"Here you go. I can't believe the spoon trick actually worked!"

Sammy realized what Mike was trying to do.

"Look out below! I'm dropping down next!" the giant cipher expert shouted.

The mealtray slid halfway under the door, then stopped. The lock started jiggling.

"Common, Chui!" Sammy continued, "This isn't a race against BU. There's no need to slow down!" Sammy grinned ear to ear.

"Oh, shut up, you. I'll let go of this rope!" Alex retorted.

The door opened.

Teddy's elbow shot into the shocked guard's chest with the force of a sledgehammer. The guard tumbled backwards and landed flat on his back.

Mike's hand clamped down over the crewman's mouth like an iron gag. The brute's face turned red. His eyes were wide as an owl's. Sweat started to trickle down his forehead, even though it was 50 degrees in the cabin.

"Don't scream," Mike commanded in a stern whisper. "Where are the exposure suits? It will be painful for you if you lie."

His captive pointed down the hallway to the right. The guard started to turn blue in the face. He had been without breath long enough

Mike let go. The guard gasped for breath, then turned just in time to see Sammy's fist. The thug collapsed onto the floor. Sammy's punch had knocked him out cold.

"Let's go. We better get off this boat before somebody misses our friend here," Alex urged.

The team tore off in the direction indicated by the guard. Finally, they found a bulkhead door labeled: EXPOSURE GEAR.

Rows of equipment lockers lined the room inside. Mike's men found lockers with their size and started suiting up.

They piled on layer after layer of wool, fleece, and Gortex. For the final layer, they found the ship was equipped with insulated Arctic survival suits.

The parka-hooded jumpsuits were bright red, and marked with strips of silver, high-visibility reflective tape. Special zippers sealed the waterproof outer layer of the suits.

Before putting up their hoods, the team donned reflective ski goggles. It was impossible to see their eyes through the metallic blue visors.

The escapees were unrecognizable. The thick insulation and the fluffy parka hoods even disguised their heights and weights.

It was time to move. The young engineers walked slowly through the *Horizon*. The big suits were ungainly in the tight corridors.

A group of crewmen were disembarking ahead. The team of engineers got in line behind them and followed them out into the Arctic snowscape.

Chapter X

MANHUNT

NY-Ålesund was a very small town. The complex was comprised of only three dozen buildings, most of them a single story tall. Its population was just over 100 residents, all of them either scientists or support personnel.

Even though it was late April, the air was only 10 degrees. A thick layer of snow covered the town. There were no roads. Snowmobiles off in the distance moved like ants between the settlement and its outposts.

Even through coated visors, the terrain was blinding. The snow reflected the low sun. That sun would not set until the end of August.

Four figures in bright red survival suits were making their way across the snow toward the town. Mike's voice came from one of them.

"Ny-Ålesund has only one dining hall," he began. "They'll be eating lunch soon. If Dr. Fisher plans to eat today, that's where we'll find him."

The Arctic air worked its way through their clothing like a snake. It found every seam, every zipper. The snow crunched underfoot as their boots punched through the wind crust.

"How will we be able to recognize him if we don't know what he looks like?" asked Teddy.

"We won't," answered Mike. "Ny-Ålesund is a small place. After a few months on the ice, it's hard for 100 people to not know each other. If we can get one person talking, we'll find Dr. Fisher."

The four men made their way toward a large, gray building at the far end of the settlement. It was one of the only three-story buildings in the entire town. A sign above the glass door read: SERVICEBYGGET.

"See that, big guy?" Alex said to Sammy. "It means I don't have to listen to your rumbling stomach much longer."

They opened the door and entered a wardrobe room. Snow-covered survival suits hung from racks. Water pooled in a tray where ice and snow melted off the gear.

A sign reminded residents that outside clothes and boots are not allowed in the mess. Mike and his crew took off their survival suits and hung them up with the rest. They placed their boots in the boot rack and continued into the building wearing socks.

The dining hall was a large room with a wooden floor and big floor-to-ceiling windows along one wall. Bare wood 4x4s supported thick beams running along the ceiling.

The four men had come in during the tail end of a safety briefing. The presenter stood in the middle of the floor and motioned to a portable projector screen.

There were about ten dining tables, mostly full with listeners to the safety talk. Mike recognized a man at one of the tables as a *Horizon* crew member. The shoreman was sitting with a group of scientists at the far end of the hall. Luckily, he didn't seem to notice the escapees.

"Now remember," the presenter continued loudly. He pointed to a slide with a picture of a charging polar bear. "Every time you leave the perimeter of the settlement, you *must* have your weapon on your person."

He advanced to a slide with a map of Ny-Ålesund. A dotted, red line marked the perimeter of the settlement.

He continued, "when you pass the signs at the perimeter of the settlement, you *must* load your weapon and test fire into the ground. Rifles can be rented from the community armory so long as you return them by the end of the day. If you see a polar bear within this perimeter, use the nearest wall-phone to call the watchman *immediately*."

Mike and his crew took seats at a table at the end of the dining hall farthest from the table with the *Horizon* shoreman.

They sat next to a lone researcher. Mike smiled as he recognized the scientist.

"Dr. Morrison! Funny to see *you* here!" Mike said, shaking the hand of a middle-aged man across the table.

Back when the team was just starting their prototyping lab, Dr. Morrison was one of their first customers. They had worked together on a project making camouflaged remote control cameras for filming wildlife.

"I could say the same to you," Dr. Morrison replied. "I've been working on cold-weather cameras for filming polar bears in The Labyrinth."

"Labyrinth?" asked Teddy.

"The Labyrinth is a glacier," Dr. Morrison clarified. "We call it 'The Labyrinth' because the glacier's crevasses form a maze of interconnecting pathways. It's nearly impossible to navigate since the formations shift as the glacier crawls into the sea. By the time you make an accurate map, the pathways have changed enough that you couldn't use it."

"Why not just travel along the peaks of the crevasses?" Alex inquired.

"The peaks are too narrow to walk on, let alone drive a vehicle," the Arctic scientist answered. "Even if they were wider, the ice is so unstable that it would be suicidal to trust your weight on it. More than one man has been killed in trying."

"If this place is impossible to navigate, how are you testing equipment there?" Teddy asked.

"Well, that's exactly the trick!" Dr. Morrison responded. "By sending a camera drone out ahead of me, I don't need a map or GPS. I can get a real-time birds-eye view, in addition to early

warning of obstacles and hazards. Now, I've said my piece. What brings you guys up to the Arctic Circle?"

Mike looked at the table with the *Horizon* conspirator. The crewman would hear nothing over the din of the dining hall. Dr. Morrison was an old friend, and Mike knew he could be trusted.

"We're up here trying to help out a chemist named Dr. Fisher," answered Mike. "Do you happen to see him here in the dining hall?"

Dr. Morrison thought a moment, then answered, "I don't think I've heard the name yet. I'll admit that I only got here a week ago, so I haven't met everybody yet. What kind of project was he working on? Maybe I can direct you to someone who would know more."

"He was doing a biochemistry project involving an AUV survey of marine microbes," Mike answered.

Teddy had stopped paying attention to the Arctic scientist. The coder was intently watching something through the window. A group of three was standing outside. It was hard to recognize them through their exposure suits, but one of the figures looked nearly seven feet tall.

Dr. Morrison continued, matter-of-factly, "well, if the guy you're looking for was doing anything with an AUV, then you could probably talk to Dr. Taylor. He's is the only AUV technician at the station. You can see he's the one talking to those men over there."

Dr. Morrison pointed to the table at the far end of the dining hall. His finger indicated a man with short, black hair who looked like he was in his early 30s. He was talking to the man who had come from the *Horizon*.

Sammy tapped Mike on the shoulder. A burly figure had entered the dining hall and sat down at a nearby table. It was one of the thugs who had attacked the gang of engineers just after they had completed the AUV.

Mike lowered his voice to a whisper.

"If we wanted to talk to Dr. Taylor later, where would we find him?" he asked.

Another familiar face from *Horizon*'s security team entered the dining hall from another door. Werner's goons were waiting for the perfect moment to strike.

"He does most of his work in the machine shop." Dr. Morrison answered. "He'll probably head there right after he finishes eating."

Mike nodded and reached for a wall-phone at the end of the table. He dialed a single digit.

"Watchman! I'm up on the observation deck of the service building," he spoke into the handset, feigning worry. "I just saw a polar bear break through the security perimeter. It's walking toward the service building!"

He hung up. Just as Werner's thugs moved to get up from their tables, blinding emergency strobes activated.

A voice came over the PA system,

"All institutions present. This is the watchman. Polar bear sighted near the service building. I repeat: polar bear sighted near the service building. Take shelter immediately!"

Klaxons blared. Footsteps thundered from the entrance as people entered the building to take shelter.

The room was drowned by the din of worried whispers. The sea of people flooding into the dining hall blocked the thugs from making any headway toward Mike and his men.

"Now's our chance, let's move!" the roboticist urged.

Working against the flow just faster than the heavily-built shoremen, the four engineers made it to the wardrobe room.

Alex was the last to get his suit on. Just as he slipped out the door, a hand grazed his shoulder. The spry electrical engineer slammed the door shut behind him and tied it closed with his scarf. The cloth would hold just long enough for them to disappear into the snow.

Chapter X1

BROKEN SILENCE

THE dusty shop reeked of machine oil. Piles of metal chips littered the bare concrete floor. An insulated garage door faced the ocean.

A large torpedo-shaped machine rested on an aluminum cradle at one end of the room. It was about ten feet long and a foot in diameter. A blunt nose-cone faired in the front, and a skinny, 2-bladed propeller stuck out the rear of the tube.

The bright-yellow cover was lying in a corner, exposing the clear acrylic pressure hull. Inside the pressure hull, a mess of electronics pressed up against the acrylic.

Dr. Taylor sat at a desk nearby. A cable from his laptop ran into the open compartment.

"Dr. Taylor," Mike began, "we're friends of Dr. Fisher. We understand you have been working on a project with him."

The technician did not look up from his laptop. Teddy noticed something on the laptop's screen and furtively scrawled a note.

Dr. Taylor finally spoke up.

"I was warned that somebody might come looking for Dr. Fisher," he said with a slight drawl. "I don't know where he is."

"Dr. Fisher is in danger. Can you at least give us a contact for him so we can warn him?" Alex pleaded.

"I don't know where Dr. Fisher is!" the technician declared. "You won't get another word outa me!"

It was a lost cause. Professor Werner's men had gotten to the technician first.

The team was downcast after leaving the machine shop. There wasn't much more time before the shoremen found and killed Dr. Fisher. There were few buildings to hide in.

Mike spoke up, "We now know at least one group of people here who know exactly where Dr. Fisher is: those shoremen from the *Horizon*."

"Well, we can't just walk up and ask them to tell us where the chemist is. We'd be shot!" Sammy said.

"They won't tell us," Mike continued, "but they will tell Werner. Ny-Ålesund enforces radio silence on most frequencies to reduced interference for all the sensitive scientific equipment around here. Only twenty channels are exempt, and the *Horizon* will be on one of those channels."

"But if we want to intercept their transmission, we need to know when to tune in. For all we know, they've already made their report." Alex noted.

Teddy pulled the note from his pocket, then chimed in: "There's only one ship-to-shore radio service in Ny-Ålesund. and they publish their schedule. I noticed that Dr. Taylor was looking at the schedule, so I copied it down. The *Horizon* isn't up for another hour."

“If Dr. Morrison is willing to lend us a scrapped camera system, I should be able to get a receiver put together in half that time,” Alex declared.

* * * *

The team of engineers huddled around Alex’s speed-built radio receiver. They were staked out in a small shed across from the ship-to-shore service facility for better signal strength.

The spry electrical engineer had been able to scavenge capacitors, coils, and other electronic components from one of Dr. Morrison’s cooked cameras.

From the radio schedule, they had learned what channel the *Horizon* would be on.

Alex clicked on the speaker. Static hissed through. There were only a few minutes before *Horizon*’s slot started.

Mike had a strange feeling they were being watched. He shot a glance at the window. Nothing was there except the radio building. Its small, multi-pane windows were too dark to see through, but one of Werner’s men was somewhere inside that building.

A voice came through the crackling static. The audio quality was poor, but the voice was still recognizable as belonging to Captain Patterson.

“*Horizon*, *Horizon*. This is Ny-Ålesund,” he began.

There was a pause. Werner’s voice hissed out of the speaker,

“I hear you, captain. What’s the report on Dr. Fisher?”

“It turns out he hasn’t been at the settlement for the past week,” Patterson continued. “He’s been doing fieldwork at a campsite up in the mountains.”

The engineers’ faces brightened. This meant there was still a chance for Dr. Fisher.

“Do you know where the campsite is?” Werner asked.

“That techy said Dr. Fisher is set up near the summit of Mount Loki,” the ex-Marine answered. “There’s a catch, though. There’s a glacier the locals call The Labyrinth, and it’s between us and Mount Loki. We’ll have to take a longer route if we value our skins.”

“How much time will you lose?” Werner questioned.

“It’s a two-day journey by snowmobile. In theory, if you went straight through the glacier, it would take a day, but that assumes you don’t get lost,” the captain replied.

“Go ahead and take the long route. Fisher isn’t going anywhere. I’ll meet you there by air. Consider yourself late if you leave after six pm.”

The line clicked as Werner hung up. The speaker went back to static. Alex turned off the radio.

“Looks like we have quite the trip ahead of us,” he concluded

“We’ll have to go straight through The Labyrinth. It’s the only way we can head them off,” Mike declared.

“How are we going to get through? Even Patterson isn’t willing to risk it,” Sammy warned.

“He doesn’t have Dr. Morrison’s cold-weather drones,” Mike replied.

The team left the shed to get equipment from the Arctic camera scientist.

In the radio building, Captain Patterson put down a pair of powerful binoculars. The windows were only dark one-way. He had seen everything.

The towering captain picked the radio handset back up.

“Boss,” he whispered into the mic. “They took the bait. I’m sending them your way.”

Chapter XII

THE ARCTIC MAZE

MIKE turned off the engine as he dismounted a bright red snowmobile. A signpost marking the edge of the settlement stood by the side of the snow trail.

Sammy, Teddy, and Alex each sat ready on their own snowmobiles. They had brought extra gas for the long journey into the mountains. A pair of five-gallon jerry cans was tied to each machine.

Each of the young engineers kept a .308 rifle strapped to his back. The community armory had given them an allowance of ten bullets per gun. A charging Polar Bear would be fast enough not to give them the chance to fire an eleventh round.

Mike loaded his rifle. Live fire checks were mandatory before leaving the settlement. He aimed the .308 into the ground and fired a test shot.

The crack of the firing gun echoed through the fjord. A puff of snow sprayed up into Mike's face. Nine bullets left.

The rest of the band did the same. Each fired in turn to check his gun before getting back onto the mechanical beasts.

Normally, they would drive with a passenger on each snowmobile, but the terrain they were going to journey over required agility.

Teddy had a special cargo strapped to the back of his machine. It was one of Dr. Morrison's cold-proofed camera drones. This one was the scientist's most advanced prototype.

It was a VTOL "tailsitter." It could vertically take off and hover in a nose-up attitude, then pitch forward ninety degrees and fly like a plane for long distances.

"Ready gang!" Mike called as he mounted his snowmobile.

"Let's start this show!" Sammy shouted over the idling engines.

Mike made a slow pumping motion with his fist like a train conductor. It was the signal to get moving.

He gunned the throttle and accelerated out of the settlement.

The snowmobiles were able to make 65 miles per hour over the first leg of the journey. Plumes of snow sprayed from the treads as they tore down the hard-packed snow. The easy going wouldn't last for long.

As they approached the entrance to The Labyrinth, they gained a truer perspective for how huge it was. Azure ridges of ice towered a hundred feet above them. No sunlight penetrated into the narrow channels between the ridges. Instead, the crevasses were only illuminated by the eerie glow of their glacial walls.

Mountains loomed in the distance. The peaks were as sharp as knife-blades. One of them was Mount Loki.

They were speeding past the mouth of the glacier now. Mike raised his left fist high above his head. At the signal, they cut their throttles and coasted to a stop.

"Where to next?" Sammy shouted over the din of the idling engines. He stared into the endless crevasses.

"Into the ice, of course," Alex joked.

Teddy had already retrieved the drone from its case and set it up for takeoff on the back of his snowmobile.

The long-haired software engineer pulled on an FPV headset, which beamed down an HD view from the drone.

The drone beeped, then took off. It climbed vertically two hundred feet before pulling over in a half Immelmann Turn. It came out of the maneuver flying level, and buzzed off into The Labyrinth.

The smell of gasoline and oil permeated the Arctic air. The rest of the team watched Teddy intently.

"Looks like there is a good path starting about a hundred feet away from us," Teddy called out. "I'm going to bring the drone back now."

Once Teddy had repacked the drone, Mike gave the signal to go off into the Labyrinth.

The immense size of the terrain had masked its steepness. The glacier climbed hundreds of feet into the base of the mountains. After their initial momentum died, it became impossible to make any further direct ascent.

Mike turned his snowmobile and jumped onto the uphill sideboard to bring the sled on edge. He leaned his body weight hard over and counter-steered the snowmobile.

Mike was now moving up the slope at an oblique angle. Sammy, Teddy, and Alex hopped over to sidehill stance and followed Mike.

The frozen canyons branched off into endless twists and turns. It was dangerously easy to get lost. Each turn meant hopping over to bring the snowmobiles on the opposite edge.

The gang made frequent stops for Teddy to scout ahead with the drone. The drone's dual ability for forward flight and hover allowed it to make long-range excursions deep into The Labyrinth, but still navigate the tight crevasses to take off and land.

After a couple hours of twists and turns, it was time to refuel. The stop was brief. They quickly got moving again after filling their tanks.

After another hour, the crevasse walls started getting shorter and shorter. Eventually, the once-towering ridges of ice were mere mounds – mounds short enough to see over. They were out of The Labyrinth.

Mountain slopes rose ahead of them. It was time for the next leg.

"Mount Loki should be to the north. That's the first ridge we have to cross ahead, right?" Alex asked, pointing.

Sammy looked at the steep slope ahead of them, then answered,

"Just another three like it and we're there. Let's go."

Before starting up, Sammy moved his feet back on the boards to give a more forward stance. He opened the throttle wide to gain speed and momentum, then started flying up the slope.

The rest followed. They were able to open up to 30 miles an hour in the straightaway.

They broke out of line to gain flexibility over the steepening terrain and weaved between each other as they used different routes.

Alex had broken out in front. He swerved to dodge a boulder protruding out of the snow.

"Watch it!" Mike called out. "We'll be seeing more of those as we get closer to the peaks."

After several more hours of hard terrain, they made it to the peak of Mount Loki. This is where they knew to find Dr. Fisher's camp. Even though it was nearly midnight, the Arctic sun shone just as brightly as it had at noon.

Mike signaled for the team to slow down. He saw something in the snow.

He drove near it and stopped his snow mobile about 30 feet away. He cut the engine and dismounted. The rest of his team pulled up behind him.

Mike moved slowly toward the strange object. It wasn't a tent or a sleeping bag. As he got closer, he realized it was a man!

Sammy hopped off his snowmobile and started trudging through the deep snow. He sank up to his calves.

Mike noticed that much of the mysterious man's body was buried several inches into the snow.

Something in the sky caught the roboticist's eye. Mike looked up and saw a white airplane painted with a red stripe. It was a twin engine. He recognized it as a Dornier 228, flying well above them on a course for the mainland.

Sammy's face recoiled with revulsion as he got closer to where Mike stood. The victim not only was without an exposure suit, he was completely naked.

It was 20 degrees below freezing, and windy. The naked man's skin was blue-gray. They were too late. He had long since frozen to death.

Mike looked up and thought he saw red specs moving toward them from the valley on the far side of the ridge. Engines whined faintly in the distance.

Alex had made his way over to the corpse and began digging in the snow. The short electrical engineer shuddered when he uncovered the victim's hands. There were a set of handcuffs around the dead man's wrists. Somebody had chained him here and left him to freeze!

The tips of the corpse's fingers were stained the familiar dull, metallic gray.

The whine of an engine grew louder. Looking at the specs off in the distance, Mike could see they were coming closer.

"We were too late to warn the him! That bastard Werner smoked him!" Sammy shouted, shaking his fist.

Mike was trying to uncover the corpse's face. The roboticist shoveled snow with his gloved hands and turned the corpse over. The dead face of Dr. Taylor stared at them with frozen eyes.

"If this is Dr. Taylor," Alex began, "then where's Dr. Fisher?"

He was cut off by the deafening roar of engines. Mike looked down at the valley. The specs were still too far off to be making that loud of a noise. He saw something out of the corner of his eye and whirled.

The Dornier 228 was bearing down on them from the other direction! It was now only 100 feet off the top of the snow.

"Incoming!" Mike shouted as he dove for cover. The air erupted with the rattle of machine gun fire.

Chapter XIII

TERROR IN SUNLIT MIDNIGHT

MIKE buried his face into the snow as he sprawled behind a protruding rock. Teddy dodged behind his snowmobile. Sammy and Alex flattened themselves against the steep slope. Their high-visibility survival suits were of little use for camouflage.

A man with an M2 was hanging out of the side of the Dornier. A line of snow sprayed into the air as a stream of machine gun lead spewed from the plane.

The gunner missed Teddy by a couple inches. .50 caliber rounds pounded into his parked snowmobile. The twin-engined transport flew directly overhead as it finished its strafing pass.

While it was peeling up to turn, Mike ran over to his snowmobile and started the engine. Alex had grabbed his polar bear rifle.

"Get on!" Mike yelled. "There's no good cover here! We have to get moving to avoid their fire!"

Alex hopped on the back seat of Mike's snowmobile, and they tore off down the mountain. Sammy started his machine, while Teddy got on the back with his gun ready. They weren't far behind Mike.

The snowmobiles shot down the mountain at 70 miles an hour. The Dornier was getting ready to come in for another pass.

Alex took aim at the plane with his .308. He fired a couple rounds at the oncoming Dornier. One of the rounds hit the underside of the nose, but the ship kept coming.

The screaming turboprops grew louder as the 228 bore down. The gunner took aim at the remaining parked snowmobile. The snow around the sled erupted like a geyser.

One of the rounds hit the gas tank. The air was pierced by a thunderous roar. The fireball from the exploding snowmobile engulfed Dr. Taylor's corpse.

Sammy swerved to avoid the flaming debris.

"Watch out!" Teddy called, pointing to the valley on the far side of the ridge.

The red specks that Mike had been watching earlier turned into a fleet of snowmobiles. There were five of them, and they were coming right at the team of engineers.

There were two men on each snowmobile. The riders all held rifles – aimed at Mike and his men!

The snowmobiles barreled at each other at high speed. Mike turned his sled back toward the mountain peak. Sammy turned his snowmobile in the opposite direction to split up the attackers.

Two of the enemy sleds peeled off to pursue Mike and Alex. The rest turned toward Sammy and Teddy.

One of the gunmen took aim at Sammy's snowmobile. The assailant's rifle spat flame.

Sammy's engine coughed and jolted. One of the valves had been hit, but the rest of the cylinders were still running.

A marauding snowmobile pulled up alongside Mike and Alex. Mike drifted his machine into it. The skis locked.

The driver looked down in disbelief. Alex took the opportunity and swung his rifle like a baseball bat.

The rifle butt struck the thug on the skull. Even through the thick parka hood, the blow was enough to knock him out.

Mike jolted the steering bar. The gunman passenger of the attacking snowmobile was flung off into the snow.

The spry electrical engineer leapt onto the now-abandoned machine and grabbed the controls. Just before they would have hit a boulder at 60 miles an hour, Mike and Alex unlocked the skis and turned away.

It was now four on three.

A pair of snowmobiles pulled up on each side of Sammy and Teddy's machine. One of the gunmen levelled his weapon for a point-blank shot at the treads.

Before the goon could pull the trigger, Teddy whacked the gun away using his own rifle. Loathe to fire upon an unarmed man, Teddy jabbed the muzzle of his rifle into the attacker's jaw.

The passenger from the snowmobile on the other side plugged another round into the sputtering engine and jumped on. He was trying to throw Teddy off the sled.

The twin-engined Dornier screamed around a low turn for another pass. The gunner let loose at Alex's sled.

M60 lead poured into the treads. The snowmobile jolted as the treads snapped. Metal shards flew into the air.

Mike opened his throttle wide as he sped to Alex's rescue. Before the roboticist could reach him, another attacking snowmobile headed him off.

Mike had to pull hard right to avoid a collision. He pulled out his rifle and fired into the attacking machine's engine.

Meanwhile, Teddy had almost been wrestled off the back of Sammy's snowmobile. He landed a punch on one of the attackers, but it did little good through the thick exposure suit.

Sammy was preoccupied with his own problems. He fishtailed uncontrollably as he wrestled with his attackers for the steering bar.

One of the men grabbed his brake. The huge mechanical engineer clamped down on the thug's wrist.

The bruiser's scream penetrated through his layers of survival gear.

Sammy looked up just in time to see that he was headed right at another snowmobile that had halted in his path.

He didn't have enough control to change course. There were only two options: brake, or collide.

Sammy hit the stopped machine at forty miles an hour.

The impact launched Teddy thirty feet forwards. The deep snow broke his fall.

By a feat of near super-human strength, Sammy had held on through the impact. One of the snowmobiles that had been chasing him coasted to a stop alongside. Its passenger fired into Sammy's treads and finished off the already crippled engine.

Before he could scramble off his wrecked snowmobile, Sammy felt the muzzle of the rifle jab into his hood. He slowly raised his hands above his head.

Mike was now the only one still fighting. He made a break for the top of the ridge.

If he made it over the ridge, he would be able to trade his height for speed, and maybe lose them on the way down.

He was almost there. Fifty feet. Thirty feet.

Machine gun impacts from the Dornier's M2 threw of a wall of snow in front of Mike. He pulled hard left in order not to speed straight into the deadly maelstrom.

His turn brought him right alongside the snowmobile that had taken out Sammy.

The enemy gunman fired three rounds into Mike's engine at point blank range. The engine jolted, and the young roboticist's snowmobile began coasting to a halt.

Mike jumped off his machine and leveled his .308.

He sent a slug into steering line of the nearest sled. It careened out of control down the mountain.

He plugged the next machine with two direct hits to the engine. It stopped a hundred yards away.

A third snowmobile was making its way up from three hundred yards below. Mike fired a pair of shots at it. Both hit home, one on the treads, the other into the engine.

The roboticist looked over his shoulder. The fourth snowmobile had snuck up from just behind the ridge, and was only fifty feet away. It was backed up by the incoming Dornier.

A trio of lead rounds stopped the incoming sled, but its occupants hopped off with guns ready.

The roboticist leveled his .308 and pulled the trigger. The gun clicked harmlessly. He had used all ten rounds of ammunition.

The dismounted riders had by now gotten within hand-to-hand fighting distance.

Mike slammed his rifle butt into one of the men's legs. The brute toppled like a bowling pin.

More of the riders were closing in.

While Mike was fighting a pair of men in front of him, a rifle butt cracked into the roboticist's skull, knocking him out cold.

Chapter XIV

SABOTAGE

A jab from the muzzle of an assault rifle woke Mike.

"Finally came to, huh!" Captain Patterson taunted.

Mike had been handcuffed to a deck railing aboard the *Horizon*. He looked over his shoulder and saw that Sammy, Teddy, and Alex were also chained. Werner must have also captured Dr. Fisher, otherwise he would not have risked fighting the engineers at the peak of Mount Loki.

Two guards stood watch in addition to Captain Patterson. All of them wielded Kalashnikov assault rifles.

"No funny business now," the towering ex-Marine continued. "Don't think you'll get away with what you pulled last time. One peep out of you and we pump your guts full of lead."

There was no land in sight. The *Horizon* was deep in a maze of icebergs. The frozen mountains were only a few hundred feet away from the ship in any direction.

Working in reverse to break through the pack ice between the icebergs, the *Horizon* had snaked a careful path through the floating behemoths. A mistake would have been fatal. Many of the icebergs were enormous. Even a nuclear ice-breaker would be stuck if those monsters closed in on its hull.

The engines stopped. Werner must have arrived at the seamount.

Behind the prisoners, men in bright orange deck suits strapped the huge AUV to the stern's A-frame crane. They were getting ready to deploy it for its first mining mission.

One of the men ran up to the captain.

"Sir," he began, "You're needed up at the bridge. The AUV is ready for deployment."

Patterson answered curtly before rushing off into the superstructure,

"I'll be there immediately. Make sure the prisoners don't try anything creative."

Deafening hydraulic pumps activated. The crane slowly lifted the robot off the deck.

The bow-thruster pulsed on and off to keep the ship steady. Once the AUV was over the water, the crane paused. The *Horizon*'s men were making their final checks.

A man standing on the superstructure said something into a handheld radio. He put the radio down and made a motion with his arm.

"Drop her!" He shouted.

The crane lowered the AUV the last few feet. The crew cheered when it hit the water.

Mike's men were downcast. They had lost. Werner was going to extract minerals from the seafloor, at the expense of any living organism within dozens of miles. Species unknown to humanity were about to go extinct, including the world-saving bacteria.

The AUV slipped below the surface. A few minutes passed.

The crew began exchanging nervous shouts. The crane winch tightened, then snapped. Something had happened to the machine underwater.

Captain Patterson stormed out of the superstructure. He went right to the gang of prisoners.

"What did you do?" the captain snapped.

"Huh?" Sammy said, confused.

"That thing is stuck on the bottom, and my men can't bring it back up! What did you take from the machine!" Patterson shouted.

"It's not what I removed," Mike began slowly. "It's what I left in. You didn't conduct an underwater test of the siphons until now, did you?"

Patterson aimed his assault rifle at the roboticist's skull.

"Spill it!" he shouted.

"I'll let you know if you tell me where Dr. Fisher is being held on board," Mike answered.

As badly as Patterson wanted to blow Mike's head off, he needed to retrieve the AUV.

"Dr. Fisher is in Werner's cabin," the captain hissed through gritted teeth.

"What you missed when you forgot to conduct a submerged test of the siphons," Mike explained, "is that I had designed an interlock between the harvester siphons and the buoyancy system. When you tried to turn on those siphons, the buoyancy tanks couldn't fill. There's a locking pin inside the front assembly. Pulling it will disable the interlock."

"I don't buy it," one of the rifle-wielding guards spoke up. "What happens if we go down there looking for this pin, and it turns out these guys lied to us? We have no way to confirm they're telling the truth until we get down there and see."

Captain Patterson glared at Mike.

"I have a better idea," the captain said. He jabbed the roboticist again with his Kalashnikov. "Your SCUBA gear is still in the hold. You and your team have three hours to bring that robot back to the surface before I throw Dr. Fisher into the Arctic Ocean."

* * * *

The team of engineers geared up in the *Horizon*'s dive support center under the supervision of Patterson and three armed guards. None of the guards let their guns stray from the gang of prisoners for even a second.

Mike checked the fill on his twin 100 cubic foot tanks. Instead of air, the team had filled their tanks with nitrox, a special gas mixture with boosted oxygen content, to maximize what little bottom-time they would have at the depth the AUV was stuck.

"Even with this nitrox mix, we still have only fifteen minutes of no-deco time," Alex noted as he checked his dive computer. "You sure that's enough time to pull the pin on the buoyancy tanks?"

"That should be plenty," Mike answered as he assembled his buoyancy compensator.

"We'll have to keep an eye out for dangerous wildlife," Sammy pointed out. "The ocean animals here has never seen humans before. They may get a little physical in their curiosity."

The men would wear drysuits and drygloves with thick insulation to protect against the frigid water. It would likely be just one degree above freezing at depth.

They would dive manifolded double tanks for redundancy against equipment failure. If a regulator free-flowed at depth, they could shut it down and still have access to their full nitrox gas reserves.

They checked and re-checked every piece of gear: buoyancy compensators, regulators, computers, manifolds, lights, drysuits.

Before finally suiting up, they went over every detail of the dive plan – down to the minute.

A personnel door led to the water from the dive support center. Once suited up, the engineers walked over to the dive platform.

"Ready?" Mike called.

"Ready!" Sammy responded.

"I'm ready!" Alex answered.

"Ready as I'll ever be!" Teddy answered.

It was the last time they would be able to talk until they resurfaced.

Mike inflated his buoyancy compensator, stuck his primary regulator in his mouth, and jumped in. He barely felt the chill of the Arctic water through his drysuit.

Once the others were in, all four of them bobbing at the surface, Mike held up a thumbs-down. The rest of the team repeated the signal before venting their buoyancy compensators and sinking below the surface.

Chapter XV

HUNGRY ABYSS

THE near-freezing water was as clear as gin. The visibility was nothing short of spectacular. The divers could see over a hundred feet in every direction.

The submerged sections of icebergs plunged hundreds of feet into the abyss. The columns of blue-green ice formed an underwater canyon around the seamount's peak.

Glowing cracks in the pack ice above cast rays of light into the deep. Thermoclines formed layers of shimmering water below the team.

The divers stopped descending at fifteen feet for one last check. They looked each other's gear over for bubbles. Everything was good. It was time to make the final descent to the bottom.

As they drifted down through the water, the divers periodically added puffs of air into their drysuits to keep up with the increasing pressure. Too little air would cause a potentially dangerous rapid descent.

When they hit fifty feet, Mike heard an eerie yipping noise. He slowly turned his head. A harp seal was cruising along the ice-wall formed by one of the icebergs.

The normally cumbersome seal was fast and agile in the water. It made a pass toward Teddy, then darted back into the ice.

The AUV grew larger and larger in their vision. They could start to make out details now.

Five feet above the bottom, the gang halted their descent. Their depth gauges read 97 feet.

The plateau peak of the seamount extended hundreds of feet beyond the edge of their visibility. The seafloor was littered with thousands of fist-sized nodules of dull, gray metal: cobalt!

It all fit in now. This was the metal Werner was after, so precious as to be worth an illegal Arctic expedition. Each of the nodules must have been worth well over a hundred dollars.

Strange anemones grew on the nodules. Foot-long giant isopods crawled along the bottom. Strangely, there was no bacterial mat on this section of the seamount's peak. The nodules sat on gravel.

The team flashed the OK symbol to each other. It was time to find the pin that would bring the monstruous robot back to the surface. The clock was not their friend.

Mike swam down to the front of the machine near the siphons and started removing an access panel. It was difficult to feel anything through his cumbersome drygloves.

A curious harp seal glided up alongside Sammy. The marine mammals were stealthy. The mechanical engineer didn't notice a second seal until it bumped into one of his SCUBA tanks.

Something tugged Teddy's leg. A seal was chewing on his fins. He jerked his leg to shake the whiskered animal.

Mike couldn't let himself be distracted as he continued to work on the AUV. Precious minutes were going by.

The roboticist felt a tugging force on his regulator. A seal had bitten down on his primary regulator hose. The whiskered mammal thrashed its head and jerked the regulator out of Mike's mouth!

A surge of escaping gas flowed from the regulator. The cloud of bubbles obscured the seal's face. Mike exhaled a stream of bubbles instinctively. If he held his breath, the change in pressure could pop his lungs.

While his pressure gauge dropped, the roboticist calmly dipped his head and clamped down on the mouthpiece of his redundant regulator.

The seal had meanwhile pulled all the slack out of Mike's seven-foot primary hose, and started tugging Mike by his tank valve.

Mike was forced to abandon fixing the AUV. Dealing with the rowdy seal was a more pressing threat.

He closed the valve on one of his tank posts to cut the flow of gas to the compromised regulator. The free-flow stopped, but he still had access to the gas in both tanks.

Mike pulled himself out of the machinery and turned to face the seal. He switched on his wrist-mounted dive light and pointed it into the mammal's huge eyes. The seal emitted a whooping noise and let go of the regulator hose.

Teddy had finally shaken the seal off his fins and turned around to see another bearing down on Alex. The electrical engineer tried to push the animal's nose away, but it was so agile that it was already behind him by the time he moved his hand.

Teddy swam toward the seal and flashed his dive light at it, hoping to scare it off. The seal bolted.

While Sammy was swimming along the side of the AUV, a whiskered face peeped over the top edge of the robot. The mechanical engineer whacked his dive knife against the hull of the AUV to make as much noise as possible. The metallic clang spooked the seal, and Sammy met Teddy and Alex by Mike by the front of the machine.

Mike had lost a lot of gas from the free-flow, but thanks to the hefty reserve they had planned, he still had enough to complete the repair.

He had to move fast. They only had five minutes of planned bottom time left. Each extra minute beyond would have to be paid for in decompression.

While Teddy, Sammy, and Alex distracted the seals, Mike went back to work fixing the AUV. His hand grasped around the interlock. He signaled for the rest to get clear before pulling the pin.

Mike pushed himself off the machine so he wouldn't be caught by it as it ascended. The seals scattered when they heard the ballast pump activate. The water level in the buoyancy tanks started dropping.

The AUV rose slowly at first, then accelerated. By the time it was ten feet off the bottom, the huge machine was rocketing to the surface.

Sammy grabbed Mike by the shoulders and tapped his computer. They only had one minute left. The mechanical engineer vigorously gave the signal to ascend.

Mike repeated the signal and joined the rest for the journey to the surface. As they approached their safety stop at fifteen feet, the team noticed that they were no longer under the *Horizon*. They must have drifted during their ascent.

Alex deployed a surface marker buoy from their stop so the ship would be able to see where they had drifted to. After a three minute stop, the four men broke the surface and inflated their buoyancy compensators.

The AUV bobbed next to them. Its big, foam flotation blocks kept it afloat. The *Horizon* was nowhere in sight.

"Where's the ship? How far did we drift?" Alex asked, confused.

Teddy was slowly turning in place to get his bearings using the icebergs.

"We're right where we dropped down," the coder began. His eyes widened when he realized what happened. "We didn't drift. The *Horizon* left!"

"You mean they stranded us?" Sammy said, shocked. "Wasn't the whole point of sending us down there so that they could get their AUV back?"

"That AUV will last a long time floating at the surface," Mike answered. "We won't. This water's thirty three degrees. Even with drysuits, we won't last forever. Werner won't have to wait very long before we freeze to death."

"We'll last longer if we get out of the water," Teddy noted. He pointed to the shore of the closest iceberg. It was just a hundred feet to the south. "If we haul out over there, we'll be out of the water and shielded from the wind."

Chapter XVI

STRANDED

SCUBA tanks and other dive gear doffed to lighten the load littered the shore. The band of young engineers shielded themselves behind a cliff face of the iceberg they had hauled out onto. They kept their drysuits on for exposure protection.

The iceberg was gigantic. It was at least two miles across, most of it was dangerously steep and slippery. A journey over the floating mass would be perilous.

"How far can the ship have gone? It's not a speed boat, particularly in this ice." Alex commented.

"It could easily be three miles away by now," Teddy replied. "In this near-freezing water, we couldn't make it back if we set off in the wrong direction."

"With these icebergs blocking our view, we wouldn't even be able to see the ship until we were on top of it," Mike pointed out.

Alex's eyebrows shot up. He had an idea.

"The communications systems on that robot go two ways. If we can get the *Horizon* to send something to the AUV, we could get the direction if came from, right?" Alex said.

"We don't have a radio schedule for when the *Horizon* checks in on its AUV. We'll need to get them to send something if we don't want to spend hours freezing in the water," Teddy lamented.

"We can put it into homing mode by pulling the fuse to the guidance system," Mike said. "It will ask for a location fix from the mothership to re-align its IMU. By reading the location off the auxiliary display, we could find out where the *Horizon* is."

The team discussed a few details before confirming their plan.

Mike and Alex would swim out to the AUV. The fuse for the guidance system was on the opposite side of the machine from the auxiliary display, so Mike would pull the fuse while Alex read the location.

Sammy and Teddy would stay ashore on the iceberg and look for a better shelter. If something went wrong, two dead men would be better than four.

The spry electrical engineer entered the icy water. Mike followed. Their drysuits protected them once again as they swam the hundred-foot distance to the hulking robot.

Alex pulled himself around the machine to reach a panel above the waterline. He pulled the latch that opened the panel, revealing a single-line LCD display.

"I've got the display open!" he called to Mike.

Meanwhile, the roboticist swam around to the other side of the vehicle. He clambered onto the top of the AUV and opened the fuse box. Although the fuses were unlabeled, he knew perfectly which were which. He had designed them.

The roboticist used his dive knife to jimmy one of the tubes and pulled it free.

"The fuse is out!" he shouted.

Alex watched the display carefully. A stream of digits and symbols sped past on the single-line LCD. The critical location data came on screen.

"It's to the South!" the spry electrical engineer shouted. "Just two miles! It might be just the other side of the iceberg we were on!"

The two engineers rendezvoused at the midships of the AUV and headed for the iceberg. As they got closer, they saw Sammy standing on the shore in his drysuit.

Once the huge mechanical engineer pulled his comrades ashore, the swimmers relayed the location of the Horizon to him. Sammy had a surprise of his own.

"You won't believe what Teddy and I found," he said, grinning.

* * * *

Sammy and Teddy lead the gang to the mouth of an ice cave in the iceberg.

"It leads under the ice to the south," Sammy explained proudly. "Teddy saw light coming from the other end. We think it leads all the way to the other side."

"What are we waiting for?" asked Mike.

Isolated from the wind, the men were able to hear echoes through the tunnel. They were under almost sixty feet of ice.

The ice reflected deep turquoise in the beams of the team's dive lights. Smooth dimples textured the walls of the tunnel like a golf ball.

The cave grew lighter as they approached the exit. The sunlight nearly blinded them once the exit came in view. As their eyes adjusted, the form of the *Horizon* materialized. It was less than a half mile away.

Teddy was the first to notice that the *Horizon* wasn't moving. It had been caught between two icebergs!

Shouts drifted from the trapped ship. Figures in survival suits were out on the pack ice around the ship trying to free it.

Solid ice created an open path between the engineers and the stranded ship. As the team stealthily advanced, the chaos became truly apparent. They could hear the panicked crew.

"I'm going to need some explosives here on the port side! The jackhammers aren't doing much good!" one of the figures on the ice shouted.

"We got ice forming on the stern!" another man called.

"There's a big gouge above the waterline near the bow! It looks like the ice has pierced about four inches into the hull!" a panicked crewmember called from the deck.

The four engineers approached unnoticed. The *Horizon*'s crew had bigger problems.

A voice blasted out of the ship's PA system:

"Clear the starboard side! Clear the starboard side! We're emptying the ballast tanks!"

Mike and his team dashed through a personnel door and entered the ship. Metallic clangs echoed through the corridors from the footsteps of the crewmen on above decks.

"Follow me," Mike commanded. Instead of going straight to Werner's cabin, the roboticist led his team deeper into the bowels of the ship.

The groan of ice crushing the *Horizon* grew louder. On the lower decks, more and more exposed piping and wiring ran along the ceiling and walls.

Mike moved swiftly, but purposefully. At specific locations, he used his dive knife to cut the electrical lines. Near the midships, Mike found what he was looking for.

Large knobs, dials, and switches lined the walls. It was the switchboard room. He flipped the breakers for the main propulsion. The engine stopped.

"Time to rescue Dr. Fisher," Mike declared.

Sammy was the first to reach the door to Professor Werner's cabin. He wrenched it open and leapt in with Mike, Alex, and Teddy.

Werner was, once again, alone in his cabin.

"I've cut power to the engine," Mike said coldly. "The *Horizon* will never get out of this ice without its engine. I'll tell you which wires I've severed if you release Dr. Fisher."

The tubby geologist sat back in his chair. A grin slowly spread across his face.

"You won't let go of that chemist, will you?" he said. "What if I told you he's served his purpose?"

"Show him to us! Then we'll know you're telling the truth!" Sammy demanded.

Professor Werner leaned forward in his chair. His grin widened.

"You've made it this far and you still don't understand? There is no Dr. Fisher!" he declared triumphantly.

Mike and his team were dumbstruck. The murderous MIT professor stood up and continued,

"He's a fiction I created to convince Professor Campbell to build my AUV for me. I knew that old robotics professor would never build a mining AUV if I just asked him for one. I needed a story, so I sent him a bunch of fake letters from a supposed scientist in Svalbard. I made up a miraculous bacteria to entice him. Once you four came onto the scene, the imaginary chemist came in useful again. You see, he only ever existed in the minds of that old robotics professor, his student, Justin, and the four of you!"

"If Dr. Fisher doesn't exist, why did you go to Svalbard to get the seamount location out of him?" Teddy demanded.

"I didn't," Werner replied. "I went to get the location out of Dr. Taylor. Isn't it a shame you were so preoccupied with finding my chemist that you didn't save the real victim?"

Werner withdrew a switchblade from his pocket. He finished,

"Now, just like that technician, you have outlived your usefulness."

Mike unsheathed his seven-inch dive knife and jumped backward. The two men circled each other in the cabin. They moved constantly.

"You have so much in common with Justin, and you don't even know it," the professor taunted. He made a thrust at Mike.

The roboticist dodged and sidestepped.

Werner continued: "Right around the time Professor Campbell realized what I was doing, his pesky student showed up in my office. The pest had found cobalt dust in the machinery of the incomplete AUV. He had the stains on his fingers to prove it."

The geologist made another slash with the switchblade. Mike dodged again, but did not retaliate. He was buying time while Teddy sneaked behind Werner.

"Justin correctly surmised that I had been secretly testing the robot to pick up cobalt nodules. That will not do! So much for Justin!"

Werner feinted left and jabbed to the right. Mike predicted the trick and dodged to the left. Werner's thrust hit a mineral sample off the desk. The stone shattered when it hit the floor of the cabin. The mustached geologist continued,

"Professor Campbell investigates for himself. So much for Professor Campbell! Dr. Taylor knows where my seamount is. He gets his hands dirty in evidence. So much for Dr. Taylor! You know just as much as Justin. So much for–"

Just when the murderous professor was about to make another strike, Teddy grabbed Werner's wrist and twisted. The geologist yowled and dropped the switchblade.

Mike immediately sheathed his dive knife and helped Teddy tie up the cold blooded killer. Once Werner was bound, Alex grabbed a radio GPS emergency beacon off the wall and placed it within reach of Werner.

"This will call the Coast Guard," Alex explained. "If you want to be rescued, tell them you're caught in ice and your ship is sinking. Of course, they'll also notice all the illegal mining gear and throw you and your men in prison. It's your choice."

Werner was silent. He did not move for the SOS beacon.

The *Horizon* started listing to port. The team left the beacon by Werner and ran out into the hallway.

Chapter XVII

VENGEANCE OF THE SEA

RIVERS of Arctic seawater flowed down the port side of the hallways. The lower decks had already been completely flooded.

Mike's men ran for the nearest staircase. There wasn't much time to get out on deck.

The creaking of the *Horizon*'s metal hull had gotten louder. Abandon ship alarms sounded.

The young engineers made it up on deck. They saw utter chaos. Some crewmen scrambled to reach the lifeboats. Others simply clambered down onto the ice and ran for their lives.

The AStar helicopter was still on the foredeck helipad. Mike opened the door and climbed into the pilot's seat. He started the preflight checklist immediately.

Teddy and Alex worked quickly to remove the helicopter's tiedowns. Sammy fished around in the back seat and found flight helmets for the gang.

Once the tiedowns were off, the rest of the team boarded the AStar. Mike flipped the battery switch. The helicopter test-fired its alarms as it went through electrical startup. He checked valves, throttle, rotor break, control stops, instruments, fuel level.

Mike shouted for anyone still on deck to clear the helipad before he rolled the throttle to idle and started the engine. The turboshaft rose in pitch as it crescendoed from a low hum to a deafening whine. The team switched on the noise cancellation on their headsets.

"If we keep to five hundred feet off the deck, we should be okay despite our residual nitrogen level from our SCUBA dive," Mike said over the headset system.

The rotor blades spun faster and faster. Mike ran through the after-start checks and avionics. Everything looked good.

The roboticist twisted the throttle to flight position. The AStar lifted off the pad and climbed away from the sinking ship.

Once the helicopter got to five hundred feet, it pulled around and circled the ship.

As they circled the *Horizon*, they saw the ship sink deeper and deeper into the ice. Life-raft canisters jettisoned into the water. The men on the nearby pack ice scattered like flies.

The last of the hull disappeared below the water. The Arctic Ocean had consumed Werner's ship.

Sammy looked at the GPS readout and keyed the microphone:

"Mayday! Mayday! Mayday! This is N271WT. We just flew over a sinking ship about a hundred miles north of Svalbard. About seventy survivors are out on the ice. Over."

A voice came through their headsets: "This is the Norwegian Coast Guard. Search and Rescue is on its way. Over and out."

The AStar made one more circle over the survivors before it banked away and set its course for Ny-Ålesund.

The crewmen's treachery had earned them a place in Davy Jones' Locker, but Mike's men knew the thugs would face justice at the hands of the Norwegian Coast Guard. The giant AUV bobbing two miles away was evidence enough.

The team of engineers had plenty of fuel to get back to Ny-Ålesund. From there, it would be a short hop to the mainland and then back to their lab in Cambridge.

"What about the seamount?" Alex asked over the headset. "Once the location is out, what's to stop someone else from trying to strip-mine the place?"

"We'll have a little chat with the Coast Guard so they keep the location secret in the proceedings against Werner's men," Mike answered. "The legal arguments will give us plenty of time to come back and deploy monitoring equipment so we can ensure no one tries to pull a stunt like this again."

Teddy looked out the window behind them. Sea ice had already formed where the *Horizon* went down. Yellow life rafts and clusters of survivors were the only trace left by the sinking ship.

Werner and all his equipment now lay at the bottom of near-freezing water. The ocean had taken its revenge.