Origins

MEG, prequel

by Steve Alten, 1959–

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For my readers…
especially the Megheads.

Preface

Meg was my first and most important novel, as it launched my career as an author. The inspiration to write the story originated back in 1975 when I read *Jaws* as a teenager. Peter Benchley's novel made me want to "devour" everything I could about Great White sharks and the true accounts regarding their attacks on man.

Read about Great Whites and at some point you're bound to discover their prehistoric cousin, *Megalodon*. *Megs* were quite real, easily the most fearsome creatures ever to have existed. And yet hardly a word was written about them, at least when I was a teen.

Flash forward to the summer of 1995.

I was a married man in my mid-thirties, struggling to support my wife, her two kids, and our newborn daughter when I picked up a *Time* magazine, and on the front cover was the Mariana Trench. The article revealed the mysteries of the abyss, hydrothermal vents, and the wondrous life forms found in this unexplored realm… and the acorn of an idea took root. *What was the name of that huge shark I read about as a teen?*

A year later my first novel, *Meg*, was sold to Bantam Doubleday, the company that had published *Jaws*. Within a few months *Meg* was optioned to publishers in twenty-five more countries. Since then, *Meg* and its sequels have sold three million copies worldwide, with thousands of middle and high school reading, science, and

English teachers using the book as part of their curriculum to encourage teens to read, completing the circle that began when I read *Jaws*.

As for a *Meg* movie… fingers crossed for summer 2013!

So why, after four *Meg* books and a fifth one to be written, did I write a prequel? First, because the story lent itself to a prequel. This was what happened to Jonas Taylor seven years before the first book began—the back story that changed his life (and mine). And it was fun to write, allowing me to create details that I could tie into *Meg 5: Night Stalkers*. Most of all, the prequel gave me the opportunity to give something back to my readers. If you've never read any of the *Meg* books, then this story should whet your appetite for things to come.

I encourage you to visit my website where you can register to receive free monthly updates and even enter contests to become a character in one of my future novels.

Pleasant dreams.
—Steve Alten, Ed.D.
July 2011

Illustration:
H.M.S. CHALLENGER

Prologue

Aboard the H.M.S. CHALLENGER
Philippine Sea
October 5, 1874

Captain George Nares stood defiantly on the heaving gun deck, his weight giving at the knees as the broiling Pacific tossed his command within the valleys of its fifteen foot swells. Each rolling crest of blue levitated the British warship's bow, each rise ended with the crash of copper keel meeting ocean. For the Scot, the spray of sea and the flap of canvas from the three mainsails defined the mantra of the past seven hundred-odd days; despite the danger, he much preferred the ocean's fury to the mission's incessant ports of call.

He knew from day one that this command would be far different from his others. Once the flagship of the Royal Navy's Australia Station, the Pearl-class corvette had been stripped of all but two of her guns and her spars reduced. The extra space had been converted to laboratories brimming with microscopes and chemical apparatus, water sampling bottles and specimen jars filled with alcohol—and not the kind her captain much preferred. In addition to the equipment and labs, the main deck had been altered to accommodate dredging platforms. These stations projected outward along either side of the ship like scaffolds, so that their occupants could work without fear of running afoul of the fore and main yards. The men who worked on these platforms were scientists, their crew skilled in troweling and dredging the bottom. To accomplish this feat required netting and

containers rigged to great lengths of hemp, the coils of rope exceeding 140 miles, with an additional twelve and a half miles of piano wire reserved for sounding gear. Motorized winches released and gathered these lines—a chore that still took most of each work day to accomplish.

Science was the mission of the H.M.S. CHALLENGER, a voyage of discovery for the two-hundred and forty-three men aboard—a mission that would take four years while trekking nearly 69,000 nautical miles.

Popular among his men, Nares led with an even temperament; what he lacked in physical stature he more than made up for with his cunning. Standing by the mainsail, he watched with a mixture of trepidation and amusement as a heavily bearded professor warily made his way aft along the swaying deck. “Professor Moseley. What is it to be then?”

“Sink lines, followed by more dredging. The crew’s been rigging longer lines, the depths seem to have no end in this area of the archipelago.”

The captain glanced to starboard. For weeks they had been following a course that took them past the Mariana Islands, each mountainous mass carpeted in green jungle. “I would have thought the depths around these islands far more shallow.”

“As it turns out, these volcanic islands sit in the deepest waters we have yet come upon. The sea bed is ancient, yielding a treasure-trove of fossils and manganese nodules. This morning’s sink line exceeded thirty-five hundred fathoms and still there is no sign of bottom. We had to splice in another…”

The captain grabbed the teetering scientist and held fast as the bow lifted again, then crashed back into the Pacific. “How soon until a new length of cable can be made ready?”

“I’m told another twenty minutes.”

“Very well. Helm, come hard to starboard. Mr. Lauterbach, lower the mainsails; prepare to engage steam engines.”

“Aye, captain.” The first officer rang his copper bell, the signal mobilizing two dozen crewmen as the CHALLENGER leaned onto its starboard flank to shed the wind within the valley of a swell.

Captain Nares waited until the scientist disappeared safely down a hold, then returned his gaze to the Pacific, staring hard at the heaving waters.

Thirty-five hundred fathoms… more than six kilometers of ocean. How deep could these waters run? What strange life forms could they be concealing?

The depths surrounding this strange archipelago had certainly offered a bounty of clues, from cetacean vertebrae and whale ear bones to thousands of shark teeth, more than a hundred of these manganese-encrusted fragments as large as his hand. Moseley had identified these larger specimens as the genus, *Carcharodon*, those teeth exceeding four centimeters belonging to the species Megalodon, a true ancient sea monster.

The spectacular size of the creature’s teeth led to nightly debates in the galley as to whether these sharks might still be alive. The dark lead-gray serrated triangles were fossilized to be sure; only a white specimen would bear proof of the Megalodon’s continued existence. For his part Professor Moseley carefully inspected each haul, hoping to find one ivory treasure among the fragments—so far, to no avail.

“Some of these fossils are not that old, Captain,” the scientist had cooed the night before last, draining his third brandy. “This tells me the creatures might still be around, prowling the deeper fathoms.”

“Exactly how big would these mega-sharks of yours be?”

“Some say thirteen meters, but these fragments tell me different. I’ve held an eighteen centimeter tooth in my hand; its owner had to measure twenty meters from snout to tail.”

“Good God, man! That’s more than half the length of the Challenger. A creature that size . . . we’d need a bigger boat. Has any man ever spotted such a beast?”

“There have been rumors, whalers mostly. Lots of blood in the sea attracts all kinds of sharks.”

“Attracts them? How so?”

“Unknown. Perhaps they can taste the blood. Sharks are not my specialty, but a devil like this Megalodon… I'll confess, captain, each time we retrieve the nets I find myself watching the sea, secretly wishing our cast would lure one of these monsters up from the depths, if only so I could lay eyes on such a magnificent animal, surely nature’s most feared creation of all time.”

Staring at the foam-covered swells, Captain Nares shook his head, trying to imagine a shark that could consume four of his men in one bite, wondering if such a fish could still be alive, inhabiting the unexplored realm harbored by these ungodly depths.

Chapter 1

Aboard the U.S. NAVY DSV-4 support ship: MAXINE D
Philippine Sea
1990

Captain Richard Danielson stood defiantly on the main deck, his ears assaulted by the thirty knot winds swirling southeast across the broiling Pacific. Each gust disturbed the twenty-nine ton beast held aloft above the stern, each sway threatening to tear harness from machinery and cast the “white whale” from its perch.

For the American naval officer, the spray of sea and the incessant rolling steel beneath his feet were a constant reminder that his scheduled twelve day mission was now entering its third week. A commander who commanded best from behind a desk, Danielson was clearly out of his element. Three years ago he had transferred to the U.S. naval base at Guam seeking a non-combat position where he could spend his days pushing papers until his retirement. Guam was exactly what the doctor ordered—a tropical island paradise brimming with pristine

beaches, deep sea sport fishing, and world class golf courses. And the women—exotic islanders and Asian delights. True, the job was flavored with the occasional "readiness at sea" command, but these maritime exercises occupied no more than a few of his days every quarter.

Danielson knew he was in trouble the day the MAXINE D arrived in port. More research ship than naval vessel, the boat was essentially a steel camel designed to transport its charge—a Deep Submergence Vehicle. Unlike his other maritime exercises, his orders were being sent directly from the Defense Department. The DSV's deployment site was prioritized as top-secret, its location—a six hour voyage from Guam in the Philippine Sea. The DoD had made it clear from the onset that while the Guam Naval Base commander was technically in charge of the tender, the eggheads on board would be running things.

The problem was that up until last week, barely anything had been running. First it was the A-frame's winch, then the primary generator, then the DSV's sonar relay. The seemingly endless breakdown of equipment had rendered Danielson a prisoner to a mission he knew little about, and the eggheads on board only served to irritate him more. Compounding the repeated delays was the weather, which had grown uglier by the day. Danielson had puked-up his last solid meal ten days ago; even the most experienced sailor felt perpetually queasy and hung over.

Ironically, it was Mother Nature that decreed an end to the mission. P.A.G.A.S.A., the Philippine Atmospheric, Geophysical and Astronomical Services Administration, was tracking a powerful category 2 typhoon, dubbed Marian. The name was apropos; the storm's predicted path would take it south from the Sea of Japan on a long sweeping arc that traced the Mariana Island chain before channeling it farther east away from land. Packing ninety-two-mile-an-hour winds, the typhoon's eye wall would be upon them in twenty-six hours.

Protocol should have sent the MAXINE D on its way back to Guam, the southernmost island in the chain. At the urging of the scientists on-board, however, the Pentagon had insisted on one last dive on what would be their fourth venture into the Mariana Trench's *Challenger Deep*.

The Mariana Trench was the lowest point on Earth, a seven-mile-deep, 1,550 mile-long, forty mile-wide canyon formed by a volcanic subduction zone. Named after the British research vessel that had dredged its depths more than a century earlier, the *Challenger Deep* was its deepest section.

Why the Navy would want to expend time and money to explore this hellhole was beyond Dick Danielson. At this point his only concern was getting the scheduled seventeen hour dive underway as soon as possible, allowing him as large a window as he could get to recapture the DSV, secure it to the deck, and race back to the naval harbor at Guam before Typhoon Marian turned the surface of the Pacific into a watery version of the Himalayas.

As the outer storm bands played havoc with the teetering *Sea Cliff* and the DSV's pit crew struggled to ready its launch, one man was screwing up Captain's Danielson's plans.

The late afternoon sun is hot, the beach crowded. Jonas Taylor rises off the blanket onto his knees, his lower back sore from lying on his stomach. He stretches, then turns his gaze to the model gorgeous blonde stretched out in the

beach chair next to him, her tan, oiled breasts two swollen grapefruits in the skimpy red bikini.

Jonas beckons his wife to join him for a dip in the ocean.

Maggie waves him off.

Jonas jogs to the shoreline. The Pacific is calm, barely a ripple. He strides in up to his waist, joining a dozen other bathers.

An Asian boy is suddenly standing next to him, no more than ten years old. Piercing almond eyes match an expression of deep concern.

“Don’t go.”

Jonas stares at the boy, then scans the crowd for a potential parent.

Curious. The other bathers are now gone.

He turns back to the beach. Maggie is standing, ready to leave. She is no longer in her bikini. Instead she is wearing a black dress, with matching stockings and shoes. She walks away without so much as a glance.

Bud Harris is there with her, wearing a charcoal-gray suit. Jonas waves at his best friend. Bud waves back, then follows Maggie up the beach.

Jonas turns to the boy.

The boy is gone.

Jonas is alone.

His heart pounds, disrupting the silence. Every breath echoes in his ears.

A deep rumble builds like distant thunder.

The sky remains clear.

A mile out to sea the tidal wave appears, levitating the horizon. It crests slowly, majestically—a mountain of curling dark water rising twenty stories high.

Jonas turns to flee, but his legs refuse to obey.

He looks up at a sheer wall of water that blots out the sky, hanging over him, and with a clap like thunder, it falls.

“Ahhh!”

Jonas Taylor sat up in bed, his flesh and the tangled bed sheets drenched in so much sweat that for a moment the thirty-year-old naval commander wasn't sure if the tidal wave had been a nightmare or real.

The familiar gray cabin walls assured him it was a dream.

And then the room began to spin.

He closed his eyes, but the nausea said no and he reopened them. The suddenness of the vertigo returned him to a similar sensation experienced a decade earlier as he lay semiconscious on a grass football field, the junior tight end’s head ringing and Beaver Stadium rolling sideways in his vision. Penn State’s team physician had shouted his name over the crowd noise. “Don’t move, J.T.! Focus your eyes on one spot until your vision clears!”

His first choice back then had been to focus on the football, still clutched in his hands; the choice now was the porthole, but with the ship swaying he held up his left hand and stared at his wedding ring.

As his pupils locked on, the vertigo passed.

An insistent knock demanded his attention.

“Shut up already and come in.”

Michael Royston entered, the DSV pilot's East Tennessee State University tee-shirt soaked in sweat from a morning workout. "Sorry to wake you, boss. Heller wants you in sick bay for the pre-dive. Jonas, you okay? You look like hell."

"Been there. Three times in the last eight days. Don't have a fourth in me. Not today anyway."

Royston's eyes widened behind his glasses. As the mission's back-up hydronaut, the twenty-seven year old was accustomed to playing Robin to Jonas's Batman. Twice in the last year he had accompanied his mentor to the bottom of the Middle America Trench, but co-piloting a DSV at 20,000 feet and making a solo dive to 36,000 feet suddenly seemed worlds apart—the equivalent of asking a Single-A pitcher to strike out Micky Mantle in game seven of the World Series.

"Jonas, you think I'm ready? I mean, hell yeah, I'm ready. I'm your back-up, right? If you need me to stand in, then sure, let's do it."

It was a bad play. Royston's cockiness was gone, replaced by trepidation. A healthy dose of fear was warranted before any deep sea dive; what concerned Jonas was that his young co-pilot was a better actor than this. Clearly he wanted to be bailed out.

"Let's see what Heller says. Tell him I'll be there in five."

From his porthole, Jonas could see the shadow of the DSV as it rocked back and forth within its harness, forcing its "pit crew" to hold on. Thirty feet long, with a twelve foot forward beam that tapered back to an eight foot propeller shaft, the *Sea Cliff* (DSV-4) and her sister ship, *Turtle* (DSV-3) had been the Navy's workhorses since they were commissioned back in 1968. White with an orange-red dorsal hatch, the sub was designed around a six-feet-in-diameter, four-inch-thick titanium sphere that held its three-man crew. The exterior hull was neutrally buoyant fiberglass, supporting a propulsion unit, ballast and trim system, lights, cameras, steel weights, grappler arms, and a series of collection baskets.

What few people outside the Pentagon knew was that the *Sea Cliff* had recently received an extensive overhaul, the titanium pod and aluminum chassis upgraded to withstand 18,000 pounds per square inch of pressure. Life support capacity was doubled to thirty-two hours, descent weight increased by eight hundred pounds—features necessary when taking an elevator to a bottom floor whose basement exceeded Mount Everest's height. Of course, if something failed on Everest's summit, the pressure didn't implode your skull.

It took a cool customer to pilot a DSV; it took the best the Navy had to offer to guide the upgraded *Sea Cliff* into the *Challenger Deep*, the deepest most unexplored realm on the planet. Only four men had ever ventured into these depths—both in 1960 aboard bathyscaphes. In either case there was no piloting involved, the vessels simply went down and came back up. On one of these dives, the lone viewport had actually cracked, four inches of reinforced glass buckling under 16,000 pounds per square inch of pressure.

In the three decades that followed, no human had returned to dive the Mariana Trench.

Jonas Taylor had been preparing for the *Challenger Deep* for six months. His nerves were rock-steady, his attitude evolving from "cavalier cowboy" to a higher, zen-like state once he'd entered the DSV's titanium sphere—a claustrophobic life

support chamber somehow deemed large enough to accommodate three passengers for upwards of twenty hours.

The top-secret mission was as straightforward as it was dangerous; Jonas would pilot the DSV six miles down, hovering just above a silty warm oasis of ocean created by the superheated mineralized water pumping from the abyss's hydrothermal vent fields. Once in position, the two scientists on-board would release a robotic drone which would enter the *Challenger Deep* and sink another five thousand feet to the bottom where it would gather samples of manganese nodules via a remotely-operated vacuum assembly.

Jonas had no idea what was so special about these pineapple-sized chunks of rock, nor did he care. As he told Danielson at their first meeting, "To me, the descent becomes routine the moment we pass beyond the light, right around twelve hundred feet. There's a lot going on in the universe outside that porthole—bioluminescent creatures, mating rituals, schools of jellyfish and things that glitter in the night—but until I get down to the basement, all I'm watching are my control panels. I don't want to know what's out there, I don't want to think about anything other than operating the DSV. Once I slip on my headphones and tune into some classic rock, I'm pretty much on auto-pilot for the next fifteen hours."

The first descent, eight days ago, had changed his tune.

Deep dives into the Hadal zone meant longer missions, the additional "on" time affecting the pilot's mental and physical attributes. Like an airline pilot or radar control operator, stress and fatigue quickly become a dangerous twosome, compromising the mind's ability to reason. Work-rest cycles of both submersible pilots and their surface support crews have to be strictly monitored, with back-up personnel on hand lest mental acuity be affected.

Diving the *Challenger Deep* was like nothing Jonas had ever experienced. The water pressure was tremendous, causing an unnerving rattle in the titanium sphere. Worse was the hydrothermal plume. Temperatures below this raging river were tropical, above the layer near-freezing, and the temperature differential created unpredictable water currents that threatened to flip the submersible into oblivion. It was like hovering above Niagara Falls while balancing on a tightrope.

Sixteen hours after the first dive had begun, the DSV surfaced. Jonas had been so exhausted that he had to be carried out of the sub.

Two more dives had followed in less than a week. Over fifty hours spent in a six-foot titanium sphere with two scientists, and now they wanted him to do it again.

Every man has a limit. Jonas knew he had surpassed his after the last dive when he could no longer tell if he was piloting the *Sea Cliff* or dreaming that he was piloting the *Sea Cliff*.

Dr. Frank Heller may have been a first generation medical man, but he was third generation Navy, his grandfather having served in World War II aboard an aircraft carrier, his father and two uncles assigned to the battleship USS MISSOURI during the Korean war. Younger brother Dennis was an Assistant Chief Engineer aboard a Los Angeles Class attack sub, their older sister a former diving officer.

Heller knew that Chief Warrant Officer Carolyn Heller-Johnston would never have certified the pilot seated on his exam table as dive-ready. But then, his big

sister didn't have to deal with a pencil-pusher like Dick Danielson or the other desk jockeys back at the Pentagon.

Taylor's last dive had yielded the type of manganese nodule the team of scientists had apparently been hoping for. Now they were demanding that Taylor make another descent before the brunt of Typhoon Marian arrived by noon tomorrow. Rough weather, a subterranean current, even a school of fish could cause their bounty to drift to another location, making it impossible for a returning mission to locate the same patch of volcanic rock.

Danielson essentially gave Heller little choice. As long as Jonas Taylor appeared reasonably coherent, he would be cleared for one more dive.

The forty-four-year-old physician with the graying crewcut removed the blood pressure cuff from Jonas Taylor's left bicep. "One-thirty-seven over eighty. Slightly elevated, nothing to write home about."

"I'm normally one-ten over sixty."

"You're anticipating this morning's dive. Arms out to the side, eyes closed. Now touch your nose with your right index finger."

"Whoa!" The vertigo washed over him, causing Jonas to lose his balance. He reopened his eyes, struggling to stop the room from spinning.

"Vertigo?"

"No thanks, I have enough."

"It'll pass."

"As reassuring as that is, Frank, I'm pretty sure my brain is milk toast."

Captain Danielson entered. "How's our boy?"

"Grumpy. I'm prescribing Antivert for his vertigo and a shot of B-12 to alleviate the fatigue, otherwise he's good to go."

"Wait, what?"

"Excellent. Commander, I'm sure the good doctor will have you feeling ship-shape in no time."

"The good doctor must have fallen off the wagon. My brain's in a fog, my dexterity's off-kilter, and I'm working on three hours sleep."

"Navy SEALs do it all the time. Man up, Taylor. Get some caffeine in you, a few calisthenics. You'll be right as rain."

"Right as rain? I'm not driving Aunt Bea in the squad car to deliver apple pies to Mayberry's church picnic, Dick. This is the Mariana Trench! I need to think clearly down there. And don't get any ideas about Royston. He's nowhere near ready."

"The Navy obviously disagrees or he wouldn't be your back-up."

"Regulations demanded a back-up. Royston was the only pilot available who had dived beyond 15,000 feet."

"Technically, he's qualified."

"Technically, Frank here is a doctor, but I wouldn't recommend him performing surgery on a brain tumor or lancing a boil on your ass, which in your case is probably the same thing."

Danielson's face turned red. "Dr. Heller, have you certified Commander Taylor fit to dive?"

Frank avoided Jonas's eyes. "Yes, sir."

“Commander Taylor, I am ordering you to pilot the DSV at oh-nine-hundred hours. If you fail to do so you will be subject to a court marshall and Mr. Royston shall take your place. Is that clear?”

Jonas stood. For a long moment he and Danielson stared at one another, then the DSV pilot unbuckled his pants and ceremoniously dropped his boxer shorts, exposing his bare buttocks. “You can plant your B-12 shot right there.”

Forty minutes later, Jonas Taylor was in the DSV Sea Cliff going through his pre-dive checklist—his life about to change forever.

Illustration:
Ships in Guam

Chapter 2

Guam Naval Base

Located in the Region of the western Pacific known as Micronesia, the Marianas Island chain is an arc-shaped archipelago consisting of fifteen volcanic mountains. The islands were birthed millions of years ago when lava was released along the Philippine Sea floor as a result of the western edge of the Pacific Plate subducting beneath the Mariana Plate. This region, the most volcanically active convergent plate boundary on Earth, forms the deepest point on the planet—the Mariana Trench. Water trapped in the fault line, heated by the subduction process, is the source of the hydrothermal activity that proliferates throughout this seven-mile-deep, 1,550-mile-long crevasse.

The largest and southernmost island in the Mariana chain is Guam. Home to the Chamorro, a seafaring people whose heritage dates back over four thousand years, Guam’s identity underwent a drastic change when it became part of the United States following the Spanish-American War. Guam’s location between Hawaii and the Asian mainland rendered the island a strategic location for a U.S. military base, and it is now home to five installations, including the main naval base on Orote Peninsula on the central west coast and Andersen Air Force Base on the northeastern tip.

Command Master Chief Steven Lebowitz’s gaze shifted from the dark gray skies to the black Cadillac SUV now approaching the main gate. Rear Admiral Kevin Quercio’s unannounced visits were more social call than inspection, his V.I.P.s always political allies or elite members of the military industrial complex. At the end of the day (or days) everyone had a good time, entertaining themselves on a taxpayer-funded holiday.

With Danielson gone and a typhoon on the way, the last thing Lebowitz needed to deal with was the renowned partying admiral and his inebriated guests.

Lebowitz saluted Quercio as the imposing man climbed out of the SUV.

“Admiral, welcome back to Guam.”

“Chief, good to see you. You remember Senator Michaels?”

The Republican from Alaska nodded.

"And these two gentlemen… well, let's just call 'em Mr. Black and Mr. Blue to make life easier."

Lebowitz recognized the two executive officers from Brown and Root and BP Oil. "Gentlemen. My apologies. Admiral, Captain Danielson is away on a mission, and we're busy preparing for Typhoon Marian. However, if you need me to arrange accommodations off the base—"

"Already handled, Lebowitz, we'll be staying at the Radisson. But I promised our guests a helicopter tour of the island. Where's Mac?"

Lebowitz's heart skipped a beat. "Sir, Commander Mackreides is securing his airships in their hangars. Perhaps I can arrange for Commander Rosario to escort your party."

Admiral Quercio placed a hand on Lebowitz's shoulder, leading him away from his guests. "Let's dispense with the horseshit, son. Go find Mac and tell him to meet us at the helipad in exactly ten minutes, or it's your ass and his."

Commander James "Mac" Mackreides' hawkish eyes moved from the pair of jacks in his right hand to the D-cupped breasts barely contained beneath the brunette's olive-green tee-shirt. "You're bluffing again, Rudd. I can always tell when you're bluffing because your nipples get hard."

Natalie Rudd blew him a kiss. "The bet's a hundred, Mac. Like your hookers say, are you in or out?"

"They're not hookers, Rudd, they're military escorts." Mac glanced down at the dental assistant's remaining chips. "Tell you what. I'll see your hundred and raise you two hundred."

"Asshole. You know I haven't got two hundred, I only have sixty."

Warrant Officer Vicky Baker rolled her eyes. "Here we go again. What's it going to be this time, Mac? Shots at Geronimo's or a drive down to Facpi Point?"

"Quiet, Baker, we're negotiating. Actually, Rudd, if you lose, I was thinking about a weekend's stay at Pago Bay. Just you, me, and the twins."

"Vic, lend me the buck-forty so I can call this gorilla's bluff."

"Let me see your cards."

Rudd passed her friend the hand.

"Call," said Vicky, adding her own chips to the pile.

"If you're so sure, Baker, why not raise me?"

"And give you a chance to raise the pot again and draw me into your childish games? Not a chance."

"Think about it, Baker. You, me, and Rudd, alone in a bungalow."

"Sounds like fun, Mac, but what will you do?"

The enlisted men whistled cat calls.

"Okay, Rudd, I call. Show me your pair… and your cards, too."

The brunette turned over her hand. "Full house, tens over threes."

Mac ground his teeth, snapping the wooden match in his mouth. "Take it."

Rudd high-fived her friend. "Pleasure doing business with you, James."

"Aw, poor guy," Vicky pouted, "He looks like he's gonna have a Mac Attack."

Mac was about to reply when he saw a jeep skid to a halt in front of the open hanger doors.

“If it isn’t our second-in-command. What’s wrong, number two? Danielson drown at sea trying to retrieve his golf balls?”

“This is serious, Mac. Rear Admiral Quercio just arrived, along with a GOP Senator and two civilian hard-ons. He wants you and your chopper ready to go in ten.”

“No way, Stevie. First, my crew just finished tucking the birds in their nests. Second and more important, Quercio stiffed my girls the last two times out. I’m not taking him to the lagoon until he settles his tab.”

“Mac, please—”

“Forget it. Get Baker and Rudd here to entertain them.”

“Like that’s ever gonna happen,” Natalie said, cashing out her chips.

“Mac, he’ll have both of our asses in the brig.”

Vicky smirked, “Is that why they call him a Rear Admiral?”

Lebowitz ignored the joke. “Mac, you owe me. I covered for you twice last month with Danielson.”

“My girls have families they support, Stevie, they expect to get paid. No tickee no shirtee.”

“Okay, I didn’t want to bring this up, but if you don’t handle this for me, I’ll tell Danielson about Ashley Kushnel.”

Natalie Rudd’s eyes widened. “The dolphin lady with the tattoos? Man, Danielson fell head over heels for that chick. Remember her, Vicky?”

“How could I forget, he kept asking me for advice. That boy was whipped. He wined her, dined her; he even picked out a ring. Two days after he popped the question she put in for a transfer.”

“All Mac’s doing,” Lebowitz said.

“What did you do to her, Mac?”

“Nothing like that. I simply offered her my professional opinion of her would-be fiancé.”

“Professional opinion? You’re a chopper pilot.”

“True, but first and foremost I consider myself a life coach.”

“Lebo, how did Sir Galahad here manage to get her to listen? As far as I knew, she never even knew he existed.”

Lebowitz grinned. “He sent Kushnel an order on Danielson’s stationary, ordering her to report to the base counselor for her annual psychiatric evaluation.”

“And she fell for it?”

“Who did the evaluation?”

“Dr. James Mackreides.”

Mac shrugged. “The shrink was away at a three day seminar. His assistant let me use the office.”

“Mac even forged a diploma. He and Kushnel spent four hours together, plus the following weekend in Honolulu.”

Mackreides winked. “I’d tell you what we talked about but that would violate our doctor-patient confidentiality.”

The H-3 *Sea King* was a twin engine, all-weather multi-purpose helicopter used by the Navy to detect, classify, track and destroy enemy submarines. Phased out in the 1990s by the SH-60F *Sea Hawk*, the four 73-foot, six-ton airships relegated

to Guam were maintained by the mechanics under the command of pilot James Mackreides.

The *Sea King* followed the southwest coastline of Guam, battered by thirty-five-mile-an-hour winds. Mac headed for the village of Merizo, located on the southern peninsula by Cocos Lagoon. Admiral Quercio rode up front, his guests strapped in back in the cargo area.

"Mac, those two lovely young ladies you introduced me to last time… what were their names?"

"Their Chamorro names are too difficult to pronounce. I just call them Ginger and Mary Ann."

"Nice. Once we get my guests settled, you'll arrange a rendezvous."

"Ginger's father lost his leg last year to diabetes, Mary Ann has a kid. They expect to be paid for their services."

"So pay them." The admiral squeezed Mac's shoulder. "I know you take a nice cut from every transaction, son. Consider my on-the-house excursions a necessary business expense."

Mac ground his teeth, then offered Admiral Quercio a Cheshire cat grin. "We've actually added something new for our V.I.P. customers. It's sort of our own version of the mile-high club. I've got two inflatable mattresses in back. I fly us out over the lagoon—the privacy makes the girls less inhibited—plus the sound of the rotors blocks out their screams."

"A flying bordello, huh? What about the wind?"

"Ginger and Mary Ann prefer a bumpy ride."

The admiral grinned. "Let's do it."

Chapter 3

Aboard the TALLMAN
26 miles north-northeast of the Challenger Deep

Propelled by dual 653-horsepower engines, the 275-foot research vessel TALLMAN continued its erratic southwestern course. Privately owned by Agricola Industries, the ship and its crew were routinely leased out by the Canadian company to the oil industry for completing pre- and post-dredge surveys, pipeline inspections, and wreck imaging prior to salvage operations. While these jobs helped pay the bills, what the ship's owner preferred were the more challenging academically-oriented assignments—like the one they were now close to completing.

An international science expedition had brought the TALLMAN to its present location in the Philippine Sea, hiring Paul Agricola, the CEO's son, to gather data on NW Rota-1, a deep submarine volcano. Since its discovery three years ago, the

erupting volcano had added another eighty feet to its already imposing cone, which now towered twelve stories off the bottom of the world's deepest trench.

Surveying the deepest sea floor in the world required a sophisticated sonar array. Fastened to the TALLMAN's keel like a twelve foot remora was a gondola-shaped device that housed a Multi Beam Echo Sounder (MBES), its dual frequency deepwater sonar pings designed for mapping the abyss. The bigger challenge was penetrating the hydrothermal plume which played havoc with the sonar signal six miles down. The solution was the *Sea Bat*, a winged, remotely-operated vehicle. Tethered to the MBES, the *Sea Bat* dropped below the plume like an underwater kite, using on-board sonar to relay signals back to the mother ship, identifying every object within acoustic range.

For three months the TALLMAN had circled the area above the undersea volcano, gathering water samples while imaging a thriving ecosystem feeding off the heated bottom. Clouds of shrimp and crab would flee each eruption, then return to feast on the fast-growing bacteria, begetting a unique food chain that enticed massive schools of giant albino cuttlefish and the occasional giant squid.

Having completed its mission, the crew of the TALLMAN were recalling the *Sea Bat* when a large object suddenly appeared in the sonar array's field of vision. There was no doubt the blip was a biologic. The question: what was it?

Sonar painted the picture of a very large animal, with a length exceeding fifty feet and a girth that would place its weight between fifteen and twenty-five tons. That ruled out even the most giant squid, and the sheer depth of the blip—26,332 feet—eliminated a sperm whale or any other mammal from the list.

The consensus among the three oceanographers on-board was that it was most likely a very large whale shark.

The lead scientist disagreed. And he intended to prove it.

Paul Agricola was not a capitalist like his father, Peter, or his sister, Sabrina, but like his other family members, the thirty-two-year-old biologist rarely allowed an opportunity to slip through his fingers. Delaying the ship's departure, he ordered the captain to circle while he conducted a few experiments with the TALLMAN's sonar, using the *Sea Bat* as bait.

Actively pinging the ROV's sonar at 24 kHz had no effect on the mysterious creature, however the lower 12 kHz sound waves sent the monster charging up from the depths—a behavior not observed among whale sharks. To Paul, the biologic was clearly a carnivore and not a krill feeder, and yet, as aggressive as it was, it refused to ascend beyond the hydrothermally-warmed bottom layer of the hadalpelagic zone.

"It's definitely not a whale shark, but it is a shark. Sensitivity to the array's bio-electric fields suggests a biologic possessing an ampullae of Lorenzini… I think we're looking at a member of the genus *Carcharodon*."

"Based on what evidence?" challenged ichthyologist Eric Stamp, a man who rarely opposed his younger colleague.

"Size, for one. Its girth exceeds any whale shark sighting I can think of."

"Ah, yes, but an increase in size can be an adaptive response to the frigid waters of the abyss. Don't forget Bergmann's Rule: larger body size is consistent with colder water creatures—an adaptation that keeps proportionately less of a fish's body close to the outside environment, reducing its loss of internal heat."

“Agreed, Professor Stamp, but your argument is weakened by the fact that our mystery monster refuses to leave the warmer depths of the Mariana Trench.”

“Making it a bottom feeder, a trait not found among *Carcharodon*.”

“It’s a deep water feeder, yes, but not necessarily a bottom feeder, and neither bottom feeders nor whale sharks attack ROVs. Anyway, I suspect the shark can leave the warm layer if it desires.”

“Okay, genius, tell us how you know that.” Lucas Heitman was the TALLMAN’s captain and Paul’s fraternity brother, a New Jersey native who never missed an opportunity to deflate his friend’s ego.

“It’s simple deduction, based on the science of a shark’s body mass, something you know nothing about. Take *Carcharodon carcharias*, the Great White shark. Nature endowed big sharks with an anatomy that can handle the cold—their lateral lines contain a web-like structure of veins and arteries. As the shark swims, its moving muscles generate heat in the venous blood, which warms the cooler arterial blood like an internal bellows. It’s known as gigantothermy. Our shark must be similarly equipped, which means it can easily generate the heat needed to reach the surface waters, but it doesn’t. Why? Because it’s been conditioned to remain in its tropical habitat.”

“Conditioned by what?”

“The last Ice Age. Stay with me on this, Lucas, I’ll try to explain it so that even a fifth grader can understand it. We know glaciation from the last Ice Age affected the flow of warm water currents, shunting off food chains in the three temperate oceans. But these deep water trenches sit on volcanic hot spots. As we’ve seen from the Rota-1 volcano, warmth equals bacteria and bacteria anchors food chains. If these sharks inhabited surface waters that contained a Hadal Zone, they had a survival option to go deep into the hydrothermal layer beneath the plume. The rest of their kind couldn’t handle the extreme cold and perished.”

“The rest of their kind? Paul, you sound like you know what this creature is.”

“I do. Based on its size, its ferocity, and the fact that it hunts alone, I’d say with ninety-seven percent certainty that we’ve been tracking *Carcharodon megalodon*.”

“A Megalodon?” Professor Stamp scoffed.

The two visiting oceanographers seemed intrigued. “Megs hunted whales, Paul. From the tens of thousands of fossilized teeth we’ve found near land, it seems obvious the Megs preferred the shallows.”

“Maybe man finds most Megalodon teeth in the shallows because that’s where it’s easier for us to find them. However, we also find Megalodon teeth in the depths. In fact, the H.M.S. CHALLENGER found them in these same depths, in these very waters. No, gentlemen, this is definitely a Megalodon, and I intend to prove it.”

Captain Heitman’s skin tingled. “How, Paul? How are you going to prove it?”

Paul flashed his father’s smile. “Lucas, old pal, you and I are going to coax it up.”

Illustration:
Sea Cliff

Chapter 4

Aboard the DSV-4: Sea Cliff

The 58,000 pound behemoth sinks slowly away from its detached harnesses and out of the dive team's view, trailing streams of air bubbles. The fiberglass hull, fashioned over the four-inch-thick titanium crew sphere, is essentially a chassis, designed to secure the silver-zinc batteries that power the electrical and life-support systems, as well as the two hydraulic units that drive its propeller. Mounted outside the hull are television and still cameras, external lights, short-range sonars, two 7-function hydraulically operated manipulator arms, a collection basket that can hold up to 250 pounds, and a "super-sucker" device for collecting samples.

Ballast tanks, set in pairs forward and midship, prevent the submersible from plunging to the bottom like an anchor. Should the vehicle pitch in the currents, the pilot will employ the sub's Battelle trim system—sintered tungsten carbide balls in a hydraulic fluid, moved along stainless steel coils at either end of the sub.

Steel plates are fastened along the bottom of the craft. When it is time to ascend, the pilot will jettison the six tons of ballast, the change in buoyancy launching the DSV to the surface.

Limited to an hour's forward velocity of 2.5 knots, restricted to controlled descents and ascents, the Sea Cliff is essentially a deep-diving mechanical turtle, its three passengers sealed within its watertight titanium shell.

Of the three teams of scientists assigned to the mission, Jonas enjoyed the company of Richard Prestis and Mike Shaffer the most. Unlike the other stuffed-shirt professors, these two middle-aged geologists had a boyish comic side to them, especially at chow time when Prestis would often attempt to steal his friend's food, causing Shaffer to retaliate with a "titty twister."

The interior of the titanium capsule was far too small for goofing around—the equivalent of placing three grown men inside an empty Jacuzzi encased by a five foot curved ceiling of equipment. The three 4.3 inch portholes did little to relieve the sensation of claustrophobia lurking a wandering thought away, forcing both scientists to balance their cognitive responsibilities with their intake of Valium.

Jonas had no such luxury, and could ill-afford a lapse in concentration, especially today.

In a sense, piloting a DSV was similar to the dangers of driving a truck solo cross country; fatigue was the result of the hypnotic effect of long journeys on monotonous interstate roads. Operating an eighteen wheeler at night was ten times more dangerous than during daylight hours. The mind wandered, impairing decision making and slowing the driver's reaction time.

Of course, a truck driver could always pull over at a rest stop to stretch his legs, even grab a few hours of sleep. In the DSV it was always night, at least after the first thousand feet.

Three dives in eight days…

Fifty-one hours of piloting in just under 190 hours.

Gazing out the forward viewport above Mike Shaffer's shoulder, Jonas watched the blue void deepen to violet as the *Sea Cliff* slipped below eight hundred feet, sinking beyond the shallows of the mesopelagic region. Four hundred feet later, the depths officially extinguished the last gray curtain of sunlight, casting them into the mid-region's velvety darkness.

The journey had officially begun.

Approaching the first quarter mile… one of twenty-four that leads down to the warm layer. Five hours down, three to five hours collecting samples, then another four back to the surface, maybe less if I push it. The sea will be even rougher by tomorrow morning with that damn typhoon right on our ass. The highlight of the day will be watching Danielson bent over the rail.

Shifting his weight within the tight confines, careful not to kick the dozing Dr. Prestis, Jonas looked down at the viewport between his feet—a grapefruit-size window revealing only blackness.

As he watched, the dark void suddenly came alive with thousands of twinkling lights.

The *Sea Cliff* had transported them into another universe—a mid-water region known as the bathypelagic zone, home to the largest ecosystem on the planet. Encompassing upwards of ten million species, the life forms inhabiting this "twilight zone" had adapted to an eternity of living in darkness by evolving large, bulbous eyes that could pick up slivers of light… and by creating their own light.

Bioluminescence in living organisms was generated through a chemical reaction, in this case a light-producing luciferin and its catalyst, called a luciferase. Fueled by the release of Adenosine Triphosphate (ATP), the luciferase caused the luciferin to oxidize, creating a bioluminescent light. Jonas was familiar with these light-emitting photophore organs, having dissected a Vampire Squid in the Navy's lab.

The deeper they descended, the more curious the fish became. Hatchet fish bashed their fanged jowls against the thick glass in alternating swarms, attempting to reach the twinkling lights of the control panels. For several minutes an anglerfish escorted the starboard viewport, its illuminated rod fin casting an eerie yet enticing reflection back at the hitchhiker, who was unknowingly snapping at itself.

Finding himself becoming mesmerized, Jonas looked away, focusing his attention on his gauges. The sea temperature had dropped to a bone-chilling 51-degrees Fahrenheit, the water pressure increasing beyond 1,935 psi.

Closing his eyes so as not to cheat, he attempted to calculate their depth, a mental exercise designed to keep his mind sharp. *Water pressure increases at a rate of 14.7 pounds per square inch for every 33-feet of depth. Dividing 1,935 pounds per square inch by…*

The sudden sensation of vertigo nearly tossed him from his cushioned bench. Quickly reopening his eyes, he glanced around the sphere.

Richard Prestis was still snoozing on his left, curled under a blanket in a forced fetal position.

Michael Shaffer was staring at him on his right, the geologist's eyes as wide as the Hatchet fish's, his white-knuckled hand clutching a frayed paperback book. "Tell me you're okay."

“I’m okay. Right as rain.”

“Good. Then maybe you ought to strap in. Your harness?”

“Harness? Yeah. Good idea.” Retrieving the two straps, he attempted to insert one end into the other, only his hands were trembling far too much to accomplish the task.

Shaffer waited patiently, while on the inside his pulse raced. The scientist glanced up at the depth gauge as its orange LED numbers flickered past 7,100 feet. *Barely a quarter of the way down and he’s already losing it. Better lighten the mood… ease his mind, at least what’s left of it.*

“Hey, Jonas, did I ever tell you about the best toast of the night contest? It was won by a fine Irish lad, John O’Reilly, who hoisted his beer and said, *Here’s to spending the rest of me life… between the sumptuous legs of me big breasted wife!* When John returned home that night, drunk as a skunk, his wife demanded to know what the prize was for. *Mary*, he said, *I won the prize for the best toast of the night. Here’s to spending the rest of me life, sitting in church beside me beautiful wife.*

“Well, the next day Mary ran into one of John’s drinking buddies. Staring at her massive boobs, the man said, *So Mary, did ye hear John won the prize the other night at the pub with a toast about you? Aye, he told me*, Mary said, *and I was a bit surprised myself. You know, he’s only been there twice in the last four years. Once he fell asleep, and the last time I had to pull him by the ears just to make him come.*”

Jonas smiled. “It’s a long ride. I hope you saved your *A* material for the *Devil’s Purgatory*.”

“Now there’s something I’ve been meaning to ask you. Who came up with that name for this stretch of trench?”

“I’m told it originated from one of the scientists aboard the H.M.S. Challenger. According to his journal entry, it was in this area that they netted some of the biggest fossilized shark teeth of the entire voyage, including a few that dated back less than ten thousand years.”

“How big were the teeth?”

“Six to seven inches, the edges all serrated. Like a steak knife.”

“What kind of—”

“Megalodon. A prehistoric relative of the Great White shark. If you figure an inch of tooth equals ten feet of shark… well, you get the idea.”

“That’s a big-ass shark.”

“Here’s the real scary part: if the teeth were less than ten thousand years old, then that meant some of these sharks had survived the last Ice Age by going deep to inhabit the warm layer heated by the volcanic vents. Lots of heat along the bottom. The hot zone. As in hell.”

“As in devil, I get it. But the term purgatory makes it sound as if the sharks had been stuck down there.”

Jonas points to the temperature gauge, the ocean now registering an icy 42-degrees. “Seventy degree temperatures along the bottom, separated from sun and shallows by six miles of cold. If you lived in an oasis with plenty of food, would you risk crossing the desert to reach another oasis you had no clue even existed?”

Shaffer smiled. “Only if it was Vegas. I’m a bit of a shark myself. Card shark. Plus I love stalking the ladies. *Grrowl.*”

Aboard the TALLMAN
17 miles north-northeast of Guam

Lucas Heitman unfurled the bathymetric map across the florescent table top. "We're here, about fifteen miles northeast of Guam. Your monster's about a half mile ahead of us, cruising in 33,000 feet of water at a steady five knots. We're pinging at 16 kHz, which is low enough to maintain a read but high enough not to piss it off—at this range."

"What if I want to tag him?"

"Tag him?"

"Him. Her. It. All I know is that it was sheer luck detecting this shark. I don't want to risk losing it because of some damn typhoon. Therefore we need to tag it."

"Okay, it's time for a reality check: these fifteen-foot seas from that damn typhoon? By tonight they'll become small mountains. If we don't head south soon we'll be caught in its eye, and that's the last thing we want, trust me. Next reality check: your monster won't abandon the warmth beneath the hydrothermal plume. That's a major problem, Paul. The plume is like a raging river of minerals. It will tear the transmitter dart's assembly from any launch platform you send down there, eliminating any possibility of tagging your shark."

"Okay, Lucas, so maybe it won't abandon the warm layer for good, but I bet we could lure it up for a quick shot. Rig the *Sea Bat-II* with the transmitter gun and the remains of the tuna we netted yesterday morning. We bring the Meg up with *Sea Bat-I*, then lure it in real close to *Sea Bat-II* and blam—right in the mouth!"

The intensity in Paul's eyes bordered on manic.

Lucas stared at his friend. "Shoot it in the mouth? Dude, what are we doing? We're messing with a shark that's the size of the TALLMAN's beam. What happens if we lure it away from its habitat and it surfaces? What's to stop it from following the ROV straight up into the shallows?"

"Can you imagine those headlines? It'd be bigger than the *Alvin* discovering the TITANIC."

"Paul, be serious."

"I'm being serious. And if you had any idea how difficult it's been to convince my father to keep this little venture of ours going, then you'd be serious about this too. Decent paying jobs outside of inspecting oil pipelines are few and far between, and most of them are going to the more established boats. We need something big like this to put TALLMAN on the map."

"All I'm asking is that you think this through. You bring this monster up from the depths, pal, and you own it."

"Don't tease me."

"I'm talking about liabilities, Paul."

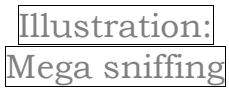
"First we tag it, then we figure out the next step. Fair enough?"

"Fine. You have until six tonight to play tag, then we're heading south."

"Make it eight."

"Paul, ever see the movie, *The Perfect Storm?*"

“Okay, okay, six o’clock. Just have both *Sea Bats* rigged and ready to launch within the hour.”



Chapter 5

Mariana Trench

The Mariana Trench represents the subduction zone where the massive Pacific Plate descends under the leading edge of the Eurasian Plate. For billions of years, hydrothermal vent fields have been delivering super-heated 700-degree Fahrenheit water into this 1,550-mile-long, forty-mile-wide gorge. Laden with minerals, the volcanic discharge from these “black smokers” has coalesced about a mile off the bottom, forming a ceiling of soot which effectively insulates and seals off the frigid waters of the abyss. More than sixty feet thick, this hydrothermal plume is further stabilized by the steep walls of a submarine canyon, creating a temperate zone in an unexplored realm located at the bottom of the western Pacific Ocean.

Prior to 1977, scientists were convinced life could not exist in the depths without sunlight. Once they actually investigated their claims aboard the *Alvin* submersible, they were shocked to find a vast food chain, all originating from tube worms—eight-to-ten-foot-long invertebrates that seemed to be feeding off the hydrothermal vents. In fact, the *Riftia pachyptila* actually existed on the bacteria living inside their own bright red nutritional organs. In a symbiotic relationship, the tube worms’ bacteria were feeding off the toxic chemicals spewed into the sea by the hydrothermal vents—a process that became known as chemosynthesis.

In the depths of the Mariana Trench, giant albino crabs and shrimp fed off the tube worms; small fish fed off the crabs and shrimp, and larger fish fed off the smaller fish. Feeding off the larger fish were an exotic array of sea creatures, both modern and prehistoric, that had existed in this isolated temperate zone for hundreds of millions of years. While there were no whales or sea elephants in the Mariana Trench, there were still plenty of prey, all stemming from this ecosystem that flourished in the absence of light.

At the top of this food chain was *Carcharodon megalodon*.

For nearly 30 million years, these monstrous sharks had dominated every ocean, feeding on the high-fat, high-energy yielding content of whales. Everything had changed two million years ago with the arrival of the last Ice Age. Within the span of a hundred thousand years, all but a few of Mother Nature’s apex predators had succumbed to extinction. Some of the creatures inhabited the deeper mid-water regions—an adaptation to being hunted by surface-dwelling Orca. Intelligent mammals, killer whales hunted in packs, targeting lone adults and Megalodon nurseries. Megalodons that survived beyond the Ice Age did so in an isolated temperate zone located in the deepest canyon on the planet.

The albino shark moved slowly through the pitch-dark canyon. At forty-eight feet and twenty-seven tons, the juvenile Megalodon was already equal to her adult male counterparts—all of whom continued to avoid a confrontation with the female, at least until her first fertility cycle.

Warm water streamed into her slack-jawed mouth, held open in a cruel, jagged smile. Just visible above the lower gum line were the twenty-two razor-sharp teeth she used for gripping prey. The upper jaw held twenty-four—far larger, wider weapons designed by nature to puncture bone, sinew and blubber. Behind these front rows of teeth were four or five additional rows, folded back into the gum line like a conveyor belt. Composed of calcified cartilage, these serrated teeth—three to six inches long—were set within a ten-foot jaw that, instead of being fused to the skull, hung loosely beneath the brain case. This adaptation enabled the upper jaw to actually push forward and hyperextend in a gargantuan bite, wide enough to engulf a mini-van from the back end all the way up to the front windshield.

The female glided effortlessly through the tropical void, her massive torpedo-shaped body undulating in slow snake-like movements. As her flank muscles contracted, the Megalodon's caudal fin and aft portion pulled in a powerful rhythmic motion, propelling the shark forward. The immense half-moon shaped tail provided maximum thrust with minimal drag, while the fin's caudal notch, located in the upper lobe, further streamlined the water flow.

Stabilizing the Megalodon's forward thrust were her broad pectoral fins, which provided lift and balance like the wings of a passenger airliner. Her dorsal fin rose atop her back like a six-foot sail, acting as a rudder. A smaller pair of pelvic fins, a second dorsal, and a tiny anal fin rounded out the complement, everything synchronized and perfected over 400 million years of evolution.

The female inhaled her environment through two grapefruit-size directional nostrils, her brain processing an elixir of chemicals and excretions as traceable as smoke in a kitchen.

Ahead, moving through the canyon as one, were thousands of giant cuttlefish. The female had been tracking the school for weeks.

There had been no urgency to feed. Feeding required hunting, and hunting expended energy.

This morning, however, the female had been forced to expend energy, chasing after the annoying creature whose presence had driven her senses haywire.

Now she had to feed.

Although there was no visible light in the trench, the Meg could still see, thanks to eyes equipped with a reflective layer behind the retina that offered wisps of nocturnal vision. Normally black, the Megalodon of the Mariana Trench had developed blue-gray eyes, a common trait found among albinos. The loss of the species' lead-gray dorsal pigment had occurred over eons—an adaptation to an existence quarantined in perpetual darkness.

The juvenile female continued on her southwesterly course, navigating around skyscraper-tall black smokers on a swiftly moving current that allowed her to expend little effort. Hunger was a fuel gauge that increased with any energy expenditure. With her core temperature approximating that of her environment, the huntress could go weeks without feeding—provided she remained in the balmy depths in a non-predatory state.

The *Sea Bat's* sonic acoustics had disrupted the female's sensory organs, forcing her to attack. A dozen successive rushes had sent the shark up through the hydrothermal ceiling, the sudden shock of 33-degree water chasing her back before she could kill the source of the disturbance.

Now the Meg followed a scent trail—excretions from a biologic, casting a signature equaling that of three Blue whales.

With a flick of her massive caudal fin, the hungry female accelerated through the darkness, closing fast on her quarry.

In the ocean's pecking order it is size that matters. The cuttlefish of the Mariana Trench had adapted to their environment by growing large—eighteen to twenty feet from their finned heads to the tips of their eight sucker-covered arms and two feeding tentacles. Three hearts were required to pump their blue-green blood to these ten extremities while fueling a camouflage technique that allowed the squid to alter its skin color. Brilliant neon lights could lure prey or stun an enemy.

Intelligent creatures, the cuttlefish had learned to travel in schools, their perceived size scaring off potential enemies. Upwards of ten thousand cephalopods move as one through the canyon, the school undulating like a quarter-mile-long sea serpent.

The cuttlefish tactic is clever, but it cannot fool the Megalodon's senses. Located along the top and underside of the female's snout are sensitive receptor cells collectively known as the ampullae of Lorenzini. These deep jelly-filled pores connect to the shark's brain by a vast tributary of cranial nerves, allowing it to detect the faint voltage gradients and bio-electric fields produced by the cuttlefish as their skin moves through the water. So sensitive are the ampullae of Lorenzini that the Megalodon can distinguish each cuttlefish from the moving pack of thousands by each individual's trio of beating hearts.

The female stalked its quarry, moving parallel to the swarm.

Sensing the predator, the cuttlefish increased their speed while simultaneously illuminating their hides in phosphorescent greens and blues. The color pattern was a method of communication among the school as well as a warning to stay away.

The Megalodon's spine arched, forcing her pectoral fins to curl downward. Flushed in full attack mode, the juvenile killer was about to swoop in upon the moving mass of squid when she detected another presence lurking close by—a challenger.

At thirty-three feet in length, the pliosaur is nearly as long as the Megalodon; at thirty-six thousand pounds it is nowhere near the shark's girth. The creature's head, nearly a third its length, sports a crocodilian jaw overloaded with ten-inch dagger sharp teeth. Its skull sits atop a thick neck and stocky trunk, tapering back to a short tail. Snakelike movements are powered by four oversized flippers that propel its streamlined body through the water.

A survivor of the Middle Cretaceous, *Kronosaurus* began its existence as a reptile. For more than 50 million years its ancestors dominated the seas—until 65 million years ago when an asteroid struck the Earth. The celestial impact filled the planet's atmosphere with debris which blocked out the sun, causing an Ice Age.

Reptiles are cold blooded animals, their body temperatures dependent on the warmth generated by their environment. As the oceans rapidly cooled, the

plesiosaur order quickly died off, unable to generate enough body heat to survive. Inhabiting the seas off Australia, *Kronosaurus* were the only species of plesiosaur in proximity to one of the few warm spots on the planet that remained unaffected by the glaciation period.

Much as an alligator spends its days basking in the sun, members of the *Kronosaurus* species took to diving down to the hydrothermally heated depths of the Mariana Trench in order to survive. Over thousands of generations, this particular pliosaur group adapted to these extended dives by developing gills—an evolutionary feature that allowed them to permanently inhabit the warm abyss. Their presence in the submarine canyon was the bait that would ultimately lure Megalodon to share their temperate oasis.

The male *Kronosaurus* glided silently through a vent field that spewed pockets of clear near-boiling water, the brackish sulfuric backwash causing acres of tube worms to dance. If Megalodon were the lions of this deepwater Serengeti then the *Kronosaurus* was its leopard. Though wary of the presence of a superior hunter, it too had to feed.

Pumping its powerful fore-fins, the pliosaur banked sharply around a black smoker, placing it on a direct intercept course with the river of cephalopods racing through the canyon like a six-story-high train more than three football fields long.

Detecting the charging *Kronosaurus*, the cuttlefish engaged their photochromic skin, igniting green and blue neon sparks of light in both directions in a flashing fast-changing pattern that appeared like the denticles of a massive sea snake.

The intimidated *Kronosaurus* veered away, its survival instincts momentarily overriding the need to feed.

And then, without warning, the formation suddenly burst—ten thousand phosphorescent bodies flushing red as they dispersed in a cascading explosion of brilliant blinding color—

—the stampede ignited by 54,000 pounds of rampaging shark. The Megalodon bulldozed its way through the center of the herd, the female's hyperextended jaws clamping down upon a mouthful of squirming cephalopod, its serrated teeth shredding tentacles into ribbons as its senses searched the chaos for the *Kronosaurus*.

The startled challenger darted away, twisting and turning, scorching its belly in the super-heated outflow of a vent as it was swept away in a frenzy of fleeing squid.

The Megalodon swallowed a succulent thousand-pound bite of cuttlefish even as the squid circled back, their skin flashing in rapid sequences as they twisted and looped and converged as one. The reforming mass of glowing bodies raced north through the submarine canyon like a slithering green-blue serpent.

The Meg circled the scraps twice, its senses searching the area for its challenger. The female detected the *Kronosaurus* several hundred yards away, darting along the sea floor, following the reorganizing school of cuttlefish.

Her appetite stimulated, the shark altered its course, homing in on its fleeing prey.

Illustration:

Chapter 6

Challenger Deep

Jonas's eyes darted from the depth gauge to the viewport, the last five hours of fatigue disappearing in the adrenaline rush accompanying the extreme depths.

31,500 feet…

31,775 feet…

Debris rattled across the *Sea Cliff's* outer hull like hail on a tin roof. He eased up on the foot pedals, adjusting the submersible's rate of descent.

31,850 feet.

An object bloomed into view in the small reinforced porthole by his stockinged feet, the DSV's lights illuminating a swirling river of brown water. Jonas hovered the submersible fifty feet above the hydrothermal plume, fighting to adjust the trim against the rippling surge of the raging current.

"Wake up, gentlemen, we've arrived at the gates of hell."

Michael Shaffer shook Dr. Prestis awake. "You need to get a new tagline, Jonas. How about, *Hey, Toto, I've got a feeling we're not in Kansas anymore.*"

Richard Prestis rubbed the sleep from his eyes. "That's not new, every lame movie uses that line. How about, *Of all the deep water trenches in the world, she swam into mine.*"

"Can you imagine looking out the viewport and seeing a mermaid?" Shaffer said, readying the ROV for deployment.

"I prefer my mermaids with a D-cup or better," Prestis joked. "Any mermaids surviving down here would be flat-chested from all the pressure… powering up the *Flying Squirrel.*"

Jonas smiled. "I meant to ask you two—whose idea was it to name the ROV the *Flying Squirrel?*"

"Dr. Shaffer gets the credit on that one."

"What can I say, I'm an old Rocky and Bullwinkle fan."

Jonas struggled to control the DSV's pitch and yaw as the *Sea Cliff* tossed above rolling wakes of cold water hitting warm. "Maybe we should call Danielson and Heller, Boris and Natasha."

Prestis grabbed for a handle bar, closing his eyes against the turbulence. "Which one's Boris and which one's Natasha?"

Shaffer ignored him, reciting a quick prayer.

"Heller should be Natasha," Jonas responded, "he has nicer legs. Mike, you okay?"

The submersible's bow and tail teetered as if on a slow-moving see-saw. "Let's just finish this damn mission and get the hell out of Dodge. Deploying *Flying Squirrel.*"

Roughly the size of a go-cart, the rectangular, canary-yellow ROV decoupled from the DSV's sled, its twin propellers rapidly moving it away from the submersible, while its docking berth fed out piano wire from the motorized spool.

"Engines—check. Lights—check. Infrared—check. Night vision—check. Forward camera—check. Rear camera—check. Grappler—check. Richard, try the vacuum."

"Vacuum's working. Go. Send your *Flying Squirrel* into Jonas's hell hole and bring back some juicy nuts."

Shaffer mumbled, "I'll settle for a dozen manganese nodules filled with Helium-3." Using a joystick, the scientist maneuvered the ROV into a steep descent, aiming for a dark spot on the hydrothermal plume now appearing on his monitor. "Tears in his eyes as he lines up this last shot. A Cinderella story, outta nowhere… a former greens keeper, now about to become the Masters champion."

Jonas and Prestis looked at one another, grinning at their colleague's dead-on imitation of Carl Spackler from *Caddyshack*. Together, all three yelled out, "It's in the hole! It's in the hole!" as the ROV punched through the warm layer of swirling soot, its reinforced chassis buffeted by the volcanic debris.

For several minutes Shaffer's monitor remained a field of static—then, the remote sub exited the hydrothermal ceiling and entered a placid sea.

"We're through. Switching to night vision."

The monitor changed from black to an olive-green tint, revealing dark brown billowing clouds. Schaffer worked the joystick, veering the mini-sub away from the volcanic haze, diving the craft toward the bottom.

"Shit. Michael, pull up!"

"Jonas, I'm clear."

"Just do it! There's something big on sonar, heading for the ROV."

Shaffer yanked back on the joystick, sending the tethered sub retreating back toward the hydrothermal plume.

Richard's heart raced. "Jonas, what is it? How big?"

"You don't want to know."

Jonas powered off the *Sea Cliff's* underwater lights, allowing them to see through the occasional swath of clear water into the swirling flotsam of minerals below.

Reverberations—like bare feet slapping on wet concrete—built to a crescendo, and then the darkness suddenly ignited into a dazzling green and blue current of phosphorescent strobe lights, the lifeforms streaking two thousand feet below the hydrothermal ceiling, racing through the trench like an offspring of St. Elmo's Fire.

Forty seconds passed before the silent darkness returned.

Richard Prestis wiped beads of sweat from his temples. "That was unbelievable. Almost alien."

"I think I crapped an alien." Dr. Shaffer's heart was pounding so hard that it affected his breathing, each deep inhalation bordering on hyperventilation. Hands quivering, he popped a Valium. "Richard, I think I need you to take over."

"Do you need another Valium?"

"I need air."

"Slow deep breaths, nice and easy. Jonas, can you adjust the blowers?"

"Done."

“Mike, tell us a joke. How about the…”

“Shh.” Jonas stared hard at the ROV’s sonar. “Richard, keep the Squirrel steady.”

“What’s wrong?” Both scientists looked up, their faces pale and sweaty.

“Sonar’s picked up a straggler. Only this one’s different. It moves like a predator.”

The three men huddled over the sonar screen as an orange blip moved lazily through the depths, cutting slow figure-eights below the ROV.

Jonas whispered, “It knows the robot’s there.”

“How?”

“Steel prop. It gives off electrical discharges. Better cut the robot’s power.”

Prestis and Shaffer exchanged eye contact, unsure.

“Do it. The tether will hold it in place.”

Prestis powered the ROV off.

The Megalodon circled the wounded intruder, her back arched and ridged as she prepared to launch an attack from below, when suddenly the prey disappeared. Traces of its presence remained—static sparks of electricity borne of seawater and debris striking steel—but to the female, the wounded prey appeared either dead or diseased.

The Meg’s posture eased.

For several minutes she continued to circle. Then, with a succession of powerful whip-like flicks of her tail, the female resumed the hunt, gradually closing the distance on the multitude of cuttlefish as they trekked north by northeast through the heated waters of the submarine canyon.

Aboard the TALLMAN
miles north-northeast of Guam

“Paul, you’d better look at this. According to Sea Bat-I, your monster has just changed course.”

Paul Agricola pushed one of the other scientists aside to join Captain Heitman at the ROV’s sonar screen, his head and stomach in knots from the twenty foot seas. “I see several blips. Which damn blip is it?”

“The smaller one, here. This larger mass must be a school of fish. When the fish changed course, your shark changed course. Look, it just passed below us.”

“Bring us about before we lose them.”

“Helm, come about quickly to course zero-one-five. Watch your bow, keep it facing the waves! Increase speed to ten knots.”

“Aye, sir.”

Paul tapped the plastic light table with his index finger, his eyes studying the charts. “How much longer until *Sea Bat-II* can launch?”

The captain grabbed the phone by his station and dialed the extension to the utility room. “Doug, how much longer on SB-2?”

“Twenty minutes. Call me again and it’ll be thirty minutes.”

Paul grabbed the phone. “Doug, I need to know the maximum depth we can fire the transmitter dart?”

“As long as the *Sea Bat’s* above the hydrothermal plume she’ll fire. As far as firing straight or penetrating the Meg’s hide? Hell if I know. My advice is to let your fish get real close, then say a prayer.”

Paul slammed the receiver down on its cradle. “Twenty minutes, captain. Call me the moment we launch, I’ll be in the head puking up my guts.”

Lucas watched his friend exit the pilothouse. *Land lover. Just like his old man…*

Challenger Deep

There are rules on the African Serengeti, a pecking order to the hunt. When the lioness stalks zebra, it is her field of play. After she partakes of the spoils, the wild dogs and hyenas can move in to feed.

There is a similar order in the ocean. In surface waters, the sea lion kill is orchestrated by Orca; the buffet of a dead cetacean by the Great White shark.

In the Mariana Trench, it is *Carcharodon megalodon* that commands the feast. It begins with the stalking of the prey, a ritual designed to warn off other predators. Body language moves from the submissive to an aggressive posture—the Meg’s spine arching, its pectoral fins pointing downward. A Megalodon may also mark its kill zone by urinating while circling its intended meal.

To cross this boundary is to challenge the predatory pecking order.

The male *Kronosaurus* needed to feed. The encounter with the Megalodon had caught the pliosaur by surprise, and the escape expended what little energy reserves that were left.

Swimming like a barracuda, parallel with the school of cuttlefish, the eighteen-ton Kronosaurus suddenly turned upon the swarm, succeeding in separating several dozen squid from the hastily reorganizing pack. A lone cuttlefish was targeted and the hunt began.

The cuttlefish was quick, but brain patterns long forged from a pack mentality created its undoing. Instead of distancing itself from the hunter, the squid sought only to rejoin its fleeing siblings, taking the most direct route.

Soaring in from behind a towering black smoker, the *Kronosaurus* cut off the creature’s retreat. In one treacherous bite, it snatched the squid’s head within its jaws, igniting a furious response of tentacles which lashed out, suckers tearing at the unseen enemy’s hide. But the cephalopod’s life force was bleeding out and it quickly went limp in the pliosaur’s mouth.

The *Kronosaurus* managed two bites before its senses were alerted to the presence of a larger predator.

By attacking the Meg’s intended prey, the *Kronosaurus* had clearly challenged the Megalodon. Forsaking the school of cuttlefish, the young queen changed course to intercept the pliosaur—the need to conserve energy holding no sway over thirty million years of instinct. Circling three hundred feet above the sea floor, the Meg waited patiently for her enemy to flee.

Still clenching the dead cuttlefish in its crocodilian jaws, the *Kronosaurus* swam off, serpentining through undulating fields of giant tube worms in an attempt to lose the huntress.

Owning the higher ground, the Megalodon accelerated in a steep descent, the angle of attack compensating as she closed the gap, making escape impossible. The bullrush ended in a violent cloudburst of silt as the forty-eight foot prehistoric Great White crushed the *Kronosaurus* against the sea floor, the resounding *thud* popping loose two of the female's upper teeth which disappeared beneath a fog of sand, severed tube worms and blood.

The blood originated from the *Kronosaurus*. The creature's internal organs had burst upon impact, the splattered remains ejected out of the dead animal's esophagus behind the vertebrae-splintering force generated by twenty-seven tons of shark moving at eighteen knots.

Stunned by the concussion-inducing blow, the juvenile queen could not locate the crushed remains of its prey. Shaking her gargantuan head, the female slowly circled away from the cloud of silt, attempting to reboot her stunned senses.

Slowly recovering, the first disturbance the Meg detected was a familiar high decibel sound that exacerbated the injury and inflamed her sensory array. Attempting to lose the annoying sensation, the female swam in a figure-eight holding pattern, while bloodied remains danced along the sea floor. The irritating *blip… blip… blip* continued to taunt her, driving the Meg into a frenzy.

Abandoning the kill, Carcharodon megalodon rose to intercept.

Illustration:
Carcharodon megalodon rose to intercept

Chapter 7

Aboard the TALLMAN

The pilothouse had become an orchestra of organized chaos.

Paul Agricola was the conductor, the mission's maestro calling out direction in response to a rapidly changing concerto playing out six miles beneath his feet.

The "percussion" driving the barely controlled mayhem was the steady cadence of pings from *Sea Bat-II's* sonar station, deployed at 28,400 feet.

Paul's "string section" was provided by the incessant squealing of *Sea Bat-I's* winch, operated by a quartet of crewman on the main deck.

In the "pit," Captain Heitman shifted the brass thrusters, veering the TALLMAN from port to starboard, shortening the length of *Sea Bat-I's* cable whenever the monster drew too close to the ROV.

Paul's objective was to use *Sea Bat-I* to lure the Megalodon above the hydrothermal plume to a shallower depth where the *Sea Bat-II* and the transmitter dart awaited. The first of several problems with this deepwater game of cat and mouse was that *Sea Bat-I's* sonar could only engage the Meg when the ROV dropped below the hydrothermal plume at 32,075 feet. Until then, Paul was running blind. The real challenge would arise once the towed device entered the deep and went active—the audible pings would immediately send the Megalodon

into attack mode. The only way to avoid losing the mouse would be for the deck crew to engage the winch and rapidly haul *Sea Bat-I* back up through the plume into the frigid waters which began around 31,930 feet. Once the Meg chased *Sea Bat-I* above the plume, the hope was that it would home in on the pinging *Sea Bat-II*, the second ROV loaded with the transmitter dart.

The major hurdle here was that *Sea Bat-II* only had enough cable to reach a maximum depth of 28,400 feet—a good half mile above the hydrothermal plume. So far, the Meg refused to ascend that far from its tropical habitat. Further complicating the situation was that the predator was adapting with every bull rush. No longer reacting solely to *Sea Bat-I's* sonar pings, the creature was now homing in on the ROV's electrical signature, making it increasingly difficult for Paul to evade the monster when it entered the cold zone, a task he likened to reeling in a sailfish that was being chased by an Orca.

"Paul, the deck crew says it's ready to try again. *Sea Bat-I* is holding steady at 30,320 feet. Sonar is off."

"Let's try something different this time. Release the line, make *Sea Bat-I's* depth 32,700 feet."

Doug Dvorak, the ship's engineer, lowered his walkie-talkie. "That's seven hundred feet deeper than the plume. I don't advise that."

"I wasn't asking. Captain Heitman, the moment *Sea Bat-I* enters the *Challenger Deep*, I want you to increase our speed just enough to maintain a safe distance. Keep the ROV out of the Meg's reach without forcing us to engage the winch."

"You want to get it used to chasing the lure before you lead it out of the warm layer."

"Exactly."

"It could backfire, Paul. A longer chase expends energy. It could lose interest."

"Or it could eat the damn ROV," Doug spat, under his breath.

"It's already tiring. If we don't hit it with the dart soon, it'll stop leaving the warm layer altogether."

"Sir, *Sea Bat-I* has entered the plume. Sixty feet to *Challenger Deep*... thirty feet."

"Standing by to activate SB-I sonar."

Paul wiped sweat from his forehead. "Maybe you should wait on the sonar… let the ROV reach its new depth first."

"No, it's too risky. The creature's already homing in on the *Sea Bat's* vibrations, I can't chance running blind."

"SB-I has entered the warm layer."

"Activate sonar on SB-I."

"SB-I sonar is active. Target acquired. Range 520 feet. Speed… seven knots… ten knots."

"Helm, increase speed to fifteen knots."

"Range is four hundred feet… four-twenty… five hundred. Target speed holding at twelve knots."

"Helm, decrease speed to ten knots."

"Skipper, I'm picking up a surface ship on radar. Two miles to the south; we're heading right for her."

The captain glanced at his radar. "Probably a fishing trawler."

“They’re hailing us, Skipper. It’s a Naval ship. The USS MAXINE D.”

Paul swore under his breath. “Sonar, where’s the Meg?”

“Two hundred and thirty feet from the ROV and closing.”

“Skipper, the Navy says we’re entering a restricted area. We’ve been ordered to change course.”

“Paul, target has closed to seventy-five feet, speed—thirteen knots.”

“Helm, match speed. Doug, restart the winch.”

Dvorak yelled into his walkie-talkie. “Restart the winch. Bring her up!”

“Range to Naval vessel one-point-three nautical miles.”

“Paul?”

“I’m thinking, Luis!”

“Nothing to think about. We need to change course.”

“*Sea Bat-I* has entered the plume.”

“Quickly, shutdown SB-I sonar. Go active on SB-II.”

“Switching to *Sea Bat-II* sonar. Sea Bat-I has entered the cold zone.”

“Paul, I’m changing course. Heading west on course two-seven-zero.”

“Sir, target has entered cold zone—range to SB-I… thirty feet.”

“Helm, increase speed to—”

“I got it!” The captain throttled-up the TALLMAN’s engines, the rumble of the revving propellers overmatched by the fury of the Pacific Ocean. The TALLMAN swayed within the onslaught of forty-foot swells.

“Doug—”

“Winch is retrieving SB-I. Approaching 29,000 feet.”

“Paul, target is homing in on *Sea Bat-II*. Range—2,200 feet and closing.”

“Captain, reduce your speed, I think we’ve got her! SB-II team, prepare to tag target.”

Agitated by the incessant pings, her muscles flushed hot with blood, the Megalodon rose again through the hydrothermal layer, ignoring her body’s own survival instincts, determined to catch her prey. She closed her mouth to restrict the flow of sulfurous debris from entering her gills and within seconds passed through the plume, once more entering a cold alien world.

At first, the sudden exposure to the near-freezing temperatures invigorated her and she continued to rise, ascending a thousand feet in less than a minute. But the cold was unrelenting, sapping the heat from her overworked muscles, causing the Meg’s blood vessels to constrict.

Her caudal fin slowed. Her breathing became erratic.

Thirty feet from her prey, a half a mile above the churning hydrothermal layer, the twenty-seven ton predator’s swim muscles seized.

Slowly, majestically, one of the planet’s last remaining apex predators sank head-first into the darkness, the annoying reverberations in the Megalodon’s brain fading to a dull, distant echo.

Aboard the *Sea Cliff*

The Valium had kicked in quickly, soothing Michael Shaffer's rattled nerves like a warm blanket. Sleepy-eyed, he watched Richard Prestis maneuver the ROV to the sea floor, guided by its built-in sonar and the laptop's night-vision monitor.

"Michael, I'm two hundred feet from the bottom. How do I access the coordinates from the last dive?"

"Hit F-7."

A red blip appeared on the laptop's navigation screen. "Got it."

"Right click on it with your mouse and the auto-pilot will engage—"

"—guiding the *Squirrel* right to our sack of nuts." Prestis right clicked the mouse.

Nothing happened.

"Something's wrong. The coordinates are up but the autopilot won't engage."

Shaffer closed his eyes to think. "Check your sonar, make sure it's running active."

"Jonas, are you listening? Switch from passive to active. Jonas?"

The *Sea Cliff* drifted to starboard—then continued rolling, pitching Prestis into Shaffer's lap.

"Taylor, wake up!"

Strapped in at his control station, Jonas awoke as if shocked. As his eyes snapped open, his legs pumped the foot pedals to trim the ballast tanks.

The teetering submersible rolled to port, finding equilibrium.

"Sorry. I can't keep my eyes open."

"Then take another dose of caffeine pills before you flip us."

"I can't, my heart's doing somersaults already."

"At least switch the ROV's sonar to active."

"Sorry Richard, we're not going active. Not with a large predator in the area."

"What you saw could have been anything. A ghost."

"You don't need to ping for black smokers, the guidance system has a temperature setting that will steer the unit clear of any vents exceeding 225 degrees. Just use the joystick and fly the *Squirrel* to the collection site."

"I need the sonar active in order to use the auto-pilot to map the bottom. Now turn it on."

Mike Shaffer looked at him, eyes bloodshot. "Please."

Jonas hesitated but finally flipped the toggle switch on the control board to *active*.

A low decibel *PING* could be heard in the distance, the audible reverberations registering in his overwrought nerves.

Challenger Deep

Unable to propel herself forward to drive water into her mouth and gills to breathe, the Megalodon sank head-first through the abyss, her muscles drained and unresponsive from overexposure to the frigid temperatures. For three thousand feet she spiralled downward, her mouth agape, the sudden influx of seawater still not enough to revive her.

Reaching the plume she plunged into the river of soot, swallowing water laden with sulfur and minerals. The combination of toxins unleashed a spasmodic regurgitation reflex that shocked her system, forcing her gills to flutter.

Reentering the warmth of the *Challenger Deep*, she sank another two thousand feet before the heat reached her bloodstream, stimulating her half-frozen fins to move.

Pectoral fins unfurled, catching the sea.

The female descended in a steadily widening spiral, her muscles slowly thawing.

Sensing the current, the Megalodon merged with it, leveling out a thousand feet above the sea floor, allowing the river of warm water to carry her through the canyon.

Aboard the MAXINE D

Dick Danielson entered the radio room, his complexion jaundiced, his head pounding from the unrelenting seas. He took a headset from the radio operator and positioned it over his ears, his empty stomach curled in knots.

"Danielson. This better be important, Mr. Lebowitz."

"Sir, we had… an incident. I'm not sure quite how to explain it."

"Damn it, Lebowitz, just tell me what happened!"

"It involves Rear Admiral Quercio and Commander Mackreides."

Danielson closed his eyes. "Go on."

"Mac… he took the admiral and his party down to Marizo aboard one of the Sea Kings."

"In the middle of a typhoon?"

"The admiral was insistent. Anyway, a service was being rendered aboard the chopper at five hundred feet between the admiral and two local girls. Apparently there was a disagreement over monies owed for services rendered. The admiral refused to rectify the matter, so the women tossed the admiral's clothing out the cargo door."

"Oh, sweet Jesus."

"It gets worse. Mac landed the chopper at Andersen Air Force Base . . . in the middle of a ceremony honoring the governor. The admiral… well, he was buck naked at the time, sir."

"Oh my God."

"Unfortunately, one of the local television crews reporting weather conditions at the airfield got a few choice shots before MPs cleared the area. It's a shit-storm, sir. Admiral Gordon is flying in personally to oversee the investigation as soon as the weather clears."

"Where's Mackreides?"

"He's being held at Andersen for questioning. Fortunately, the bad weather has kept the media away."

"Listen carefully, Lebowitz. I want you to go through Mackreides' personal belongings. Remove anything that might implicate any officer and stow it in my office."

"Sir, isn't that considered tampering with evidence?"

“That’s why I’m having you confiscate everything, so no one tampers with it! Danielson out.”

Aboard the *Sea Cliff*

His eyelids were heavy, his brain zapping in and out of consciousness. The voices of the two scientists became dull rhythmic chants, the swaying submersible a hammock.

Jonas laid his head back, slipping into yet another two-to-three minute catnap—each a torturous tease of rest rendering him edgier, his body demanding REM sleep.

Without warning, a rogue undersea wave of turbid water broadsided the *Sea Cliff* without warning, levitating it fifty feet as it rolled the submersible onto its port side.

Jonas snapped awake, his limbs pumping furiously at the controls even as the two scientists collided in a heap atop the sonar monitor. Sparks greeted the sudden darkness, until the back-up batteries powered on and the sub again found its equilibrium.

“Damn it, Jonas, stay awake!”

“Tell it to my brain, Richard.”

Dr. Shaffer examined the damaged sonar monitor. “Looks like the *Flying Squirrel’s* flying blind. Now what?”

Dr. Prestis checked his controls, zooming in on the sea floor using the ROV’s forward camera. “We’ve loaded seventy-two pounds of manganese nodules. I say we finish with this patch and call it a day.”

His colleague looked worried. “Washington wants samples from at least three patches.”

“What am I supposed to do, Michael? Without sonar, we could smash the ROV head-first into a black smoker. No, I’m vacuuming up everything I can see, then we’re retrieving the *Squirrel*… assuming our pilot can stay awake.”

“Jonas!” Shaffer shook him.

Jonas opened his eyes, the geologist’s face blurry. “Where’s Maggie?”

“Who?”

“My wife. I left her on the beach with Bud, just before the wave hit.”

Shaffer glanced at Prestis, shaking his head. “He’s cuckoo for Cocoa Puffs. Maybe we ought to bring the *Squirrel* back now.”

Jonas leaned out of his seat, supported by his harness, so that his face was inches from the bottom viewport. The *Sea Cliff’s* exterior lights were focused on the hydrothermal plume, illuminating the swirling layer of soot like a full moon obscured behind clouds. Every so often a break in the murky water appeared, allowing the beacon to illuminate the inky depths of the *Devil’s Purgatory*.

Jonas followed the ray of light through the parting plume cloud, his eyes detecting movement. There was something circling in the warm layer a hundred and thirty feet below the *Sea Cliff*—and it appeared to be glowing.

Challenger Deep

As it had hours earlier, the current had swept the Megalodon through the trench, guiding it to its prey.

These reverberations were different from the school of cuttlefish, but the light that flickered down from the hydrothermal plume glowed just as brightly, confusing the juvenile predator. Locking onto the Sea Cliff's churning propeller, the predator abandoned the current and rose, circling just below the plume, her senses gauging the strange creature hovering above the warm layer.

The female hesitated. She needed to feed, but the last foray into the cold had nearly killed her.

The cloud of soot thickened, cloaking the light.

Instinct took over—the creature was escaping.

The Megalodon rose to attack.

Chapter 8

Aboard the *Sea Cliff*

Jonas Rubbed his eyes, unable to fathom the circling creature—if it was a creature—if he was even awake. He slapped himself across his face, then watched in fascination as the glow rose higher.

His heart pounded as the white haze morphed into a triangular head, and, impossibly large, the widening jaws as big as the door of his garage.

It was a Great White, ghostly pale and twice the size of the *Sea Cliff*!

Megalodon…

Adrenaline surged through Jonas's body like a jolt of electric caffeine, igniting every neuron in a flight or fight response dating back to prehistoric man. Lunging for the red EMERGENCY handle, he nearly tore the device from its socket as the Meg's head continued to rise above the plume, its nocturnal eyes nearly blinded by the *Sea Cliff*'s light.

Teeth, tongue and gill slits suddenly filled the viewport, the monster's gullet consuming the brilliant white beacon of the sub's exterior light—the momentary crunch of fiberglass rendered even more terrifying by the accompanying darkness.

Then they were rising, soaring away from the nightmarish jaws, as the 58,000 pound submersible jettisoned twelve percent of its weight. A dozen five-hundred-pound steel plates rained down on the Megalodon's snout, glancing off the stunned shark's pectoral fins before disappearing through the hot mineral clouds below.

Jonas tumbled sideways out of his harness amid voices cursing and alarms beeping and body parts colliding. A vise of purple haze clouded his vision and popped his eardrums.

Must have bit through the back-up battery… took out the pressurization system… that wobble in your ears is the titanium sphere… we're losing internal pressure… drain every air tank… overcompensate the chamber with pressurized air before we implode!

Fumbling in the darkness, Jonas stood, his hands groping along the curved ceiling, orienting himself. A whimpering body tumbled across his feet as he located the valve. His thoughts were scattered.

Is this another nightmare or is it real?

He wrenched open the valve and cold air tinged with water blasted into the cabin.

Jonas screamed at death, but the implosion never arrived.

Just condensation… not seawater.

The darkness groaned, splattering him with warm droplets of slime. Someone was hemorrhaging; someone else was calling out his name, cursing his existence.

Aboard the TALLMAN

Paul Agricola cursed as the blip fell away from the sonar screen. "What the hell just happened? We were so close, then it retreated."

"Sir, I've got another object on sonar, rising fast."

"It's back! Doug, go active on *Sea Bat-I*. Luis–"

"Sir, it's not the Meg."

Heads turned.

"What do you mean it's not the Meg? Is it another creature? How big is it?"

"Half the size, only it's not a biologic, it's a submersible. I can hear the engines. It's at 28,550 feet and rising very fast."

Paul Agricola glanced at his friend, Lucas Heitman. The TALLMAN's skipper looked pale. "That's why the Navy's here. They're diving the *Challenger Deep*."

"Doug, retrieve the *Sea Bats*. I think it's time we headed south to flee the storm."

Aboard the *Sea Cliff*

Eight thousand feet, and they were running out of air.

Jonas couldn't see the sphere spinning but he felt the effects of the vertigo in his gut. He collapsed to his knees and retched, then gasped, unable to catch his breath. The sphere became his skull, the compressed weight crushing his brain, squeezing his lungs. As he gasped for air in a fetal position, a bottle rolled against him.

Too solid to be a bottle of water and attached to a piece of rubber… rubber mask? … pony bottle!

Strapping the gift of life to his face, Jonas popped the release and breathed.

Aboard the MAXINE D

In the swaying fury of the storm, Captain Dick Danielson entered the command center, his mind gripped by the developing consequences of his actions. “What happened down there? Why the emergency ascent?”

“Sir, we don’t know. Commander Taylor hasn’t responded, but they’re coming up very fast… too fast, sir.”

“Alert Dr. Heller and make sure he has the recompression chamber ready. What’s the sub’s surface ETA?”

“Ten minutes.”

“Get a dive team standing by on deck.”

Petty Officer Second Class Gustave Maren hooked his harness to the aft rail and held on as the twenty foot swells tossed the MAXINE D like an amusement park ride. It had been six weeks since Maren’s secret rendezvous with Benedict Singer, five weeks since the billionaire’s money arrived by wire into his Swiss bank account. The ten thousand was only an advance of course, the real money would come when he delivered the rock.

Not rock. Manganese nodule.

Gustave Maren had little interest in rocks or manganese or anything to do with the ocean, but he took great pride in the fact that his fourteen-year-old son was an expert on all these things. First in his class and an I.Q. that could not be traced to any genetic branch on the Maren family tree.

Gus was doing this for Michael.

Thoughts of money danced in Gustave’s head. Yes, he was doing this for Michael, but the truth was that his son was already receiving offers to attend Ivy League schools. A scholarship meant Gus could save on his only child’s tuition, using the profits from this minor theft to pay off the mortgage, perhaps even buy a new car.

The divers in the wild sea beckoned. The sub was rising. A belch of bubbles and foam and there it was, swaying on the surface like a drunken whale, the divers fighting with Typhoon Marian to capture it.

Harnesses in place, the A frame kicked back, hoisting the *Sea Cliff* out of the Pacific just as the swirling gray storm clouds opened-up and the drenching began. Danielson appeared on deck, a fool playing to his men, his face ashen. The *Sea Cliff*’s pilot, Taylor, was well-liked. This accident—or whatever they were witnessing—had been foreseen by everyone.

The captured sub swayed in the grayness of an angry dusk, the ship’s converging deck lights revealing the rain… and one other item.

Trailing the dripping *Sea Cliff* was a cable, taut with a weight still submerged.

Danielson pounded on Gustave’s rain gear with his open palm. “Once the *Sea Cliff* is secure, I want your crew to retrieve that ROV! See to it, sailor.”

“Aye, sir.”

Gustave waited for the fiberglass hull to touch down, then he traced the ROV’s cable to its docking station situated in the bow of the *Sea Cliff*’s sled. Using his

flashlight, he located the exterior controls and attempted to reverse the winch, but the power was out.

"Wismer, Beck! We'll need a portable generator and some cables." Maren looked up as the sub's hatch was opened. Seconds later, a body was pulled from the submersible—a white-haired scientist. Dr. Prestis was followed by a corpse, pale except for the dead man's head wound splattered dark with blood.

The third man out was Taylor. He was rushed with the first man to the infirmary below decks—leaving Gustave and his crew alone to tend to the ROV.

Jonas opened his eyes to a bright light that shifted from pupil to pupil, accompanied by waves of needle-like pain in his joints and the condescending voice of Frank Heller.

"Shaffer's dead. Prestis suffered what appears to be a major stroke about ten minutes ago. Before it hit he told me you lost it down there, that your actions endangered the mission and the crew. He said you put the sub into an emergency ascent which blew out the pressurization system."

Jonas shook his head, the pain becoming unbearable. "Shark attacked us. Big as a house, ghostly white. Bit the sled."

"A shark? That's your excuse? There are no sharks in the trench, Taylor. You imagined it." He signaled to the two orderlies. "Get him inside the recompression unit."

The rectangular-shaped ROV rose from the sea, weighed down by the collection basket. Gus Maren watched as his crew secured the tethered mini-sub, dragging it up on deck.

"Danielson wants the catch basket hauled below decks to the lab. Beck, you and Wismer get the dolly, O'Brien alert the eggheads. I'll wait here in case the captain decides to make another cameo."

Maren waited for his crew to leave before turning his attention to the catch basket. The lid was sealed, the rocks having been collected and stored inside the porous steel bin by way of the interior vacuum assembly.

Lying on the swaying deck, Maren disconnected the vacuum and reached his hand up through the suction tube until his entire arm was inside the hose. He felt a nodule, the hard wet surface covered in slime. As a teen he had used a similar technique to steal sodas out of a vending machine, his crime spree ending when his arm had gotten caught.

He momentarily panicked as the deck shifted and the weight of the basket pinned his wrist inside the housing; mercifully the ship rolled again and he was able to yank the pineapple-size rock free.

He shoved it into his jacket as he crew returned.

"A shark?"

Frank Heller nodded at Danielson from behind his desk, his face red with anger. "He swears it was all white and as big as a house."

"Could this shark have damaged the sub?"

"Wake up, Danielson, there was no shark. Taylor obviously imagined the whole thing. It's called aberrations of the deep. Prestis said Jonas lost it down there." Heller unlocked a desk drawer, removed a bottle of whisky and motioned to his friend.

"No. And you shouldn't either."

“Don’t pull rank on me now. We should have never allowed him to dive, he wasn’t fit for duty. The two scientists… they were friends. Prestis won’t make it through the night. What do I tell Shaffer’s wife and kids?”

“What about Taylor? How’d he manage to survive?”

“Seems he found a pony bottle before the air ran out.”

“So he caused the accident, but managed to cheat death.”

“I certified him fit for command.”

“You also were an eyewitness to Prestis’s account of what happened down there. What did you call it? Aberrations of the deep? Taylor was trained to handle these things and he failed.”

“We should have sent the back-up pilot.”

“Taylor wouldn’t allow it, he said Royston wasn’t ready. That was his fault, not ours.” Danielson poured himself a shot and drained the liquid neat. “Frank, there will be an investigation. Taylor’s finished as a submersible pilot. He’s Navy, but he’s a flash-in-the-pan, destined for civilian life. You and me—we’re career servicemen, we’ve put in our time. You want to lose everything because some rock star choked under pressure?”

“There’s blood on all our hands, captain.” Heller took a swig of whiskey, then resealed the bottle. “Prestis said he lost it down there. I’ll testify to that. I’ll also state that Taylor said he felt more qualified to handle the dive than his back-up. Will that do it for you?”

“That, and one last detail. Recommend Taylor undergo a three month psychiatric evaluation following his discharge.”

“What for?”

“Credibility. Years from now, when he decides to write a book slamming the Navy, I want to make sure the world knows that Jonas Taylor was deemed a nutcase by the medical establishment.”

The MAXINE D was underway, her bow rising and falling as it met the onslaught of twenty-five foot waves, the boat racing Typhoon Marian back to Guam.

Alone on deck, Captain Danielson made his way to the *Sea Cliff*, using his flashlight to inspect the damage before the ship’s engineers could get a look back at the naval base.

The seas caused the submersible to teeter, its weight balanced awkwardly on its chassis. Danielson shone his light on the damaged sled, inspecting the back-up batteries and the air tanks.

A fourteen inch section of the reinforced fiberglass housing had been peeled back, leaving a gaping hole.

What the hell could have done that?

He knelt by the assembly, his light revealing a triangular white shape lodged in the tank—an object that clearly didn't belong there. Danielson gripped and twisted it free, sharp serrated edges tearing the flesh of his right palm.

Sweet Jesus…

For a long moment he stared at the object, his bleeding hand cleansed by the rain. Concealing the six inch weapon under his jacket, he walked toward the stern rail.

The ship's twin propellers churned the dark waters into a trail of foam. Glancing around to make sure no one was watching, Danielson tossed the white Megalodon tooth into the Pacific Ocean, returning it to its rightful owner.

Epilogue

Naval Medical Center
San Diego, California
Two months later…

"The hearing was a joke. My JAG officer essentially told me my career was over, that the best deal I could make was to accept the dishonorable discharge and complete a three month psychiatric evaluation. I actually felt relieved this morning when I got the note that you finally wanted to see me. Guess I was lucky the hospital was in San Diego. At least my wife can visit."

"And does she?"

"Does she what?"

"Visit you. It's been a month. Has she been back since the men in the white suits brought you in?"

"She's been busy. She just started working weekends at a local television station."

"Which leaves Monday through Friday."

"What are you implying?" Lying on the leather sofa, Jonas Taylor sat up and gazed at the psychiatrist. The man had his bare feet propped up on the oak desk, the drab white wall at his back harboring framed diplomas and a few naval photos.

"Implying? Nothing. In fact, it's common for spouses of dishonorably discharged officers to distance themselves at first. Same thing happens with drunk drivers who kill innocent bystanders. Forgiveness takes time."

"Now that I think about it, Maggie seemed more upset about me losing my commission than killing those two scientists."

"Women… Actually though, I was talking about you. I've been watching you since you got here. You're angry. You feel used. Abandoned by the Navy, your brothers-in-arms. You also feel guilty about what happened on the dive. You're a moral guy. We need to work on that."

"What's that supposed to mean?"

"For starters, Bo Peep, if you can't deal with death then don't herd sheep and for Jesus freakin' Christ's sake don't join the military. No sane person dives the Mariana Trench; those two eggheads knew the risks just as every soldier knows the risk when he enlists. Two guys died on your watch. Deal with it. I've been in combat and I've killed other human beings. It's a sucky, clouds-of-doom feeling, and even though it's true, the whole *doing it for God and country* business still doesn't heal the wound."

"What does?"

“Instead of moping around, try doing something nice for a stranger. Help others who are less fortunate than you. You’re staying in a hospital, how about visiting some sick people? There’s an entire ward of kids with cancer here—teach ‘em how to play poker. God will judge you when He’s ready; use the time you have left to give Him as many positives on your resume as you can. At the same time, stop being such an all-American hero patsy. You should have told Danielson and his piss boy, Heller, to take that last dive order and shove it up their asses.”

“Dude, you don’t sound like any shrink I’ve ever met.”

James Mackreides grinned. “That’s because I’m more of a life coach.”

“Hey coach, how come you’re not in any of the family photos on your desk?”

“We’ll discuss that in the EVAC chopper.”

“EVAC chopper?”

“The one on the roof. We’re taking it to tonight’s 49ers-Cowboys game.”

“You have tickets?”

“Hell, no. I figured we’d worry about that after we stole the chopper.”

“Makes sense.”

For the first time in as long as he could remember, Jonas Taylor smiled. Then he followed his new friend and fellow inmate out the door to steal a helicopter.

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