



**UN**

DEE HENDERSON

# DETECTED



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Dee Henderson, *Undetected*

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## Books by Dee Henderson

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*Danger in the Shadows*  
*The Negotiator*  
*The Guardian*  
*The Truth Seeker*  
*The Protector*  
*The Healer*  
*The Rescuer*  
*True Devotion*  
*True Valor*  
*True Honor*  
*Kidnapped*  
*Before I Wake*  
*The Witness*  
*God's Gift*  
*The Marriage Wish*  
*Full Disclosure*  
*Jennifer: An O'Malley Love Story*  
*Unspoken*  
*Undetected*

The Son radiates God's own glory and expresses the very character of God, and he sustains everything by the mighty power of his command. When he had cleansed us from our sins, he sat down in the place of honor at the right hand of the majestic God in heaven.

Hebrews 1:3

**F**ar below the surface of the Pacific Ocean, the USS *Nevada* glided silently through the waters. The storm 450 feet above the ballistic missile submarine barely disturbed their smooth, quiet ride.

Commander Mark Bishop stood off to the side in the command-and-control center, alert to what was happening but letting his crew do their jobs. The executive officer, his second-in-command, was serving as officer of the deck while the various stations were manned by the third watch. After 79 days at sea, they were at the top of their game, running drills and practice exercises with precision, handling busy nights like this one with a professional focus.

The storm above was hiding a full moon. For the crew of the *Nevada* it didn't matter if the moon or the sun was out—they ran their own 18-hour version of a day aboard the sub with three watches lasting 6 hours—but they tracked the phase of the moon and the topside weather so they would know conditions should they need to make an emergency ascent and surface.

They were eight days away from the end of this patrol.

Handwritten signs counting down the hours were becoming artistic contests between divisions—engineering was holding the top spot in Bishop’s opinion—and the chief of the boat reported crew morale was good. Mark had already made the rounds through the four levels of the *Nevada* on the prior watch, and he tended to concur. Problems were remarkably few for this late in a deterrent patrol.

They had four days of relative calm before they would be moving into the busy waters off the western coast of the United States, where they would be dealing with the surge in surface traffic along the shipping lanes. But that didn’t mean no one else was out here in the ocean with them. Bishop left the command-and-control center and walked forward to the sonar room.

A submarine crew was blind when underwater; the only way to tell what was around them was to listen. The sonar guys were listening tonight with some of the most sophisticated acoustical devices ever created. A dome full of hydrophones stretched across the front of the submarine, and a towed array—a long cable set with more hydrophones—was now deployed and trailing behind them. Sophisticated software took the data, created a three-dimensional picture of all the noise around the boat, then worked to identify the direction and source of the sounds.

Bishop stepped into the narrow room. His sonar chief, Larry Penn, standing behind his seated men, slipped off his headphones and offered a quiet, “The whales are moving east.”

“Got a count?”

“Four, plus two young.”

Penn handed the headphones over, and Bishop listened

for a minute to the haunting whale song. At least one male in the group, Bishop thought, given the sophistication of the melody. Bishop handed back the headphones. “Have you marked this audio for the marine biologist?”

“I’m having it dubbed,” Penn confirmed.

Bishop was sure he had encountered more whales in his years on the job than most marine biologists would in their entire careers. The oceans were more active than most people realized, and whales traveled for thousands of miles just as submariners did.

“Anything more on the faint surface contact?”

“The acoustical signature identifies it as the fishing trawler *Meeker III* out of Perth, Australia.”

“He’s far from home tonight.” The Navy maintained files of acoustical signatures for every military ship and submarine in service around the world, as well as most commercial vessels. Given enough time, they were able to identify nearly every ship they heard above them.

“Got time for a question, Captain?” The sonar technician at the broadband console stack turned to ask.

His rank was that of commander. It would be another two years before he might be promoted to the rank of captain, but Navy tradition designated that the man in command of a boat be addressed as Captain regardless of his rank.

“Give me the question, Sonarman Tulley.”

“Do whales drink water?”

He’d been caught by that question two patrols ago. “No. They extract water from the food they digest. They don’t drink salt water.”

“Good answer, sir,” Tulley replied.

Trying to stump the captain was considered a time-honored

custom on the *Nevada*. Those who succeeded were noted on the captain's board for the day and got a good-natured pat on the back from fellow crewmen. Sometimes even from the captain himself.

At the sonar terminals tonight were two experienced operators along with an ensign on his first patrol. The waterfall displays were filled with small blips in all directions. The ocean was noisy tonight, both above them and below. They were crossing over the moonless mountains—a range of seamount formations deep in the ocean—that were staggering in their size and height, but none of them reached the ocean surface. Numerous volcanic vents below them were releasing magma, creating hot, flowing spirals of ocean water that climbed to the surface like chimneys. Fish congregated to feast on the plankton that bloomed in the mineral-rich water.

*Nevada's* sonar operators were listening for obstacles that the ship could hit—seafloor features not on the navigational maps—as well as surface ships and other submarines. In an emergency ascent to the surface, Bishop would like to reach open waters rather than turn an unlucky fishing vessel into tinder. Other submarines might have hostile intent or might simply run into him by accident. Even a friend was a potential danger to the submerged *Nevada*.

The sonarman monitoring the narrowband console stack leaned forward. “Sir, possible new contact. Bearing 082.” He worked to bring the sound into sharper focus. “Surface contact, two screws.” The software searched for a match to the sound. “Possibly the transport vessel *Merrybell*, sir.”

The sonar chief reported the new contact to the command-and-control center. “Officer of the deck, sonar. New contact. Bearing 082. Surface ship transport vessel *Merrybell*.”

It was a routine night. Bishop felt a sense of contentment. The men were eager to be home, but while on watch they were giving the *Nevada* their A-game. The boat was in good hands. They wouldn't miss whatever could be heard out there. It took an enormous amount of trust in the sonar guys for the rest of the crew to be able to sleep well while underwater. They all knew if the sonar crew made a mistake, a collision risked the safety of the boat and the lives of all aboard.

Bishop had come forward to the sonar room to more than just observe operations. He turned the conversation to his concern for the next few days. "A Russian sub, an Akula II, was hiding at 135 fathoms, 87 miles off Washington State, when the *Alabama* came home from patrol," he said. "The Akula was using the noise of the shipping channel and the current along the continental shelf to stay hidden. We need to assume he's around, and I doubt he's going to tuck himself into the same spot again. I want a good, solid look at the continental shelf before we approach."

"If he's there, we'll find him, sir," Penn assured him.

"I'm counting on it."

They would be able to hear the Akula before it heard them, all things being equal. But Bishop would like to tip the odds even more in his favor. "Any sign of the *Seawolf*?"

"Not yet, sir."

Their job was to hide, and the USS *Nevada* crew took it as a point of honor that no one—friend or foe—had ever located them while on a deterrent patrol. But in this situation it would be prudent to seek out some help to ensure they had a clear route home. The USS *Seawolf* would be in the waters to the east where they were heading, guarding the front door to the Naval Submarine Base Bangor. Cross-sonar with the

*Seawolf*, and the picture about the possible Russian Akula would get a lot clearer.

“As soon as you get a glimmer of a contact that might be the *Seawolf*, we’ll go all-quiet and see if we can’t slip in beside him unnoticed before we say hello.”

Penn grinned. “I like it, sir.”



Commander Mark Bishop headed back to the command-and-control center. If asked what he did for a living, he tended to offer the deliberately low-key reply, “I’m in the Navy,” and leave it at that. He was the commander of the ballistic missile submarine USS *Nevada* gold crew. He was one of 28 men entrusted with half the U.S. deployed nuclear arsenal.

His job was to keep this nuclear submarine operationally safe, its crew of 155 trained and focused during their 90-day submerged patrol, and be prepared to launch a missile carrying a nuclear weapon on valid presidential orders. A civilian conversation about his work couldn’t go very far when nearly everything he did was classified.

They were off hard-alert, the USS *Maine* had taken over for them, but they could be back to that highest readiness level within three to five hours.

There were always two ballistic missile submarines on hard-alert—in their watch area ready to fire—patrolling in the Pacific, another two on hard-alert in the Atlantic, with two more in each ocean ready to come to hard-alert within a few hours. The remaining six boomers in the U.S. fleet of 14 were in port undergoing maintenance and resupply, preparing to return to sea. The number of subs made possible

a rotation home every 90 days while maintaining a constant strategic deterrent for the nation.

Each ballistic missile submarine was assigned two crews, a gold crew and a blue crew, who would alternate taking the submarine out on patrol. Three days after he arrived back in port, Bishop would hand over the *Nevada* to his counterpart on the blue crew, and the submarine would undergo 25 days of refit—maintenance and resupply—and then the blue crew would take her out to sea to patrol for the next 90 days. Bishop and the gold crew would get the *Nevada* back in four months' time.

His crew considered having to share the *Nevada* with the blue crew to be a painful time-share. The men loved having four months onshore, but they hated to give up *their* boat to others' hands. The grumbling would begin soon after they set foot back on the *Nevada*. If an item could be moved, blue crew left it somewhere gold crew wasn't expecting. The first few days would be spent returning the coffeepot, training materials, onboard movies, wrenches, maintenance logs, *Nevada* photos, and the boat mascot to the proper gold-crew-designated spots. Repairs and maintenance not up to gold-crew standards would get fussed over and typically redone. The rivalry between the two crews over who best handled and cared for the USS *Nevada* was intense. Bishop considered it a healthy attachment to the boat on which they depended for their lives and for their country's safety.

The *Nevada* was 560 feet long, the center third housing 24 Trident II D-5 missiles standing four stories high. Each missile carried eight nuclear warheads. The USS *Nevada* was one of the most lethal weapons ever built and, paradoxically, also one of the safest.

The training never stopped. The drills never stopped. Safety was life, and submariners lived it like no other profession on earth. They knew their boat inside and out and focused intensely on what could go wrong, how to prevent it, and if it couldn't be prevented, how to immediately fix it. There had never been a ballistic-missile submarine lost at sea since this class of submarines began to patrol the oceans over 30 years ago. Bishop considered it a sacred trust to maintain that record.

He was in the second of his three years in command of the USS *Nevada*. After three years, the Navy would congratulate him on a job well done, send him back to shore duty, and in due course promote him to captain. He was in no hurry to get that promotion. This was the sweet spot of his career. The best job in the service was the one he now had. He was taking full enjoyment in every day of this command.

His next job might be to oversee a squadron of six missile subs, or serve at the Pentagon, or teach at the Naval War College. A challenging job would emerge, he knew, but shore duty meant his not being at sea. He was going to miss this job when it came his turn to relinquish command, and that day would inevitably come. But it wouldn't be tonight.

Bishop paused beside the navigation officer and studied their position on the horizontal digital display table. The boat's location and all known contacts were electronically identified and constantly updated. The navigational map for this stretch of the Pacific had been updated just before the patrol began, and this new map had exquisitely detailed topology. The continental shelf and the canyons leading away from it stood in perfect relief. If the *Akula* was out there, the territory he could be hiding in was vast, and the terrain gave

him numerous places to select. There was no need to risk a contact. But where to position the boat for the next few days was the question.

“XO, I have the deck and the conn,” he informed his second-in-command.

“The captain has the deck and the conn,” Lieutenant Commander Kingman confirmed, passing authority back to Bishop.

“Helm, come to heading 040.”

“Come to heading 040, aye, Captain.”

Let the *Seawolf* do the hunting. Bishop’s job was to stay silent and never be seen. He’d follow the whales for a while. They were heading the direction he wanted to end up, and they were traveling with their young. The enormous mammals would stay well clear of any submarine they heard ahead of them. Trailing miles behind the whales and watching their movements would tell him a lot of useful information. He wished to hide. The whales would help him do so.

The world seemed like a quiet place when submerged on patrol, but Bishop was aware it was more illusion than fact. Strategic Command sent out a daily naval update, highlighting ships that might be in their area, passing on general news about military deployments around the world, often mentioning diplomatic missions and trade tensions and political concerns from all points of the globe. The military sat at the crossroads of so many dynamics going on between nations. Some nations were rising in stature, in wealth and influence, while others were declining, whose leaders strained to stay in power by any means necessary rather than fall.

It had been a quiet patrol, but sometimes the quiet wasn’t the whole story. Bishop wondered if North Korea had come

close to blowing something up, if Russia was arguing about natural gas shipments to Europe again, if Japan and China had more fishing boat skirmishes along the chain of islands whose ownership they disputed in the East China Sea. The daily briefings were useful, yet they were never quite enough to satisfy his curiosity about the dynamics of what had *almost* happened.

From the military history he had studied and the classified briefings he had for this job, Bishop was more aware than most of how close the world often was to war. A boomer didn't patrol the ocean at hard-alert status because the world had turned peaceful. It remained a deterrent against the fact the world was inherently the opposite—unstable and prone to warfare.

And if he had to pick a subject to lose sleep over at night, he would choose North Korea. When nuclear weapons were considered the reason the nation continued to exist, when warheads were stockpiled in dangerous numbers, North Korea remained an immediate threat to South Korea and a serious threat to Japan. Bishop would prefer rational actors when it came to military matters, and he wasn't convinced the new North Korean leader had a rational view of the world around the isolated country. Bishop knew some of the classified captain's-eyes-only tasking orders were launch package codes for North Korean targets.

The world might be quiet tonight, but he didn't make the assumption it was calm. Following the whales for a while sounded like a smart way to stay undetected.



She needed to get out of Boulder, Colorado. Gina Gray peeled an orange and studied the night sky through the win-

dow above the kitchen sink. The conviction had been growing over the course of the last few weeks. She needed to make a major change.

Breaking up with a guy was always difficult, but this hadn't been her choice, and she hadn't seen it coming. It put her in an uncertain mood. And continuing to cross paths with Kevin Taggart at work was too high a price to pay for her peace of mind. It was time to leave.

She'd put off the decision for weeks, for she enjoyed working at NOAA's Marine Geology and Geophysics Division. But her task of mapping the seabed of the world's oceans using satellite data was essentially finished. She'd solved the last technical problem, incorporating the earth's gravity map with the radar data. The algorithms were finished, and now it was just processing time. A set of detailed seabed maps for the Pacific were complete, and they were beautiful in their exquisite detail. They were already in use by the Navy. The rest of the world's five oceans would follow as computer-processing time was available, and her colleague Ashley had that task well in hand.

The maps were a major step forward in knowledge about the oceans. The satellite data significantly improved both accuracy and coverage, so much so that in two years of work she'd managed to render obsolete the accumulated knowledge of decades of previous maps of the ocean floors created by surface ships using side-scan sonar. Her maps were practically works of art. But not many would get to appreciate the full impact of what she'd accomplished. The military was exercising its right to classify the resolution of her maps and would only release a version to the public with a lower level of detail.

She understood the reason the data would be classified. Telling an enemy—or for that matter, even a curious ally—the depths and locations of the underwater trenches and seamount formations along the Pacific Northwest would give them the ability to hide their own submarines more easily, to watch who entered and exited the Strait of Juan de Fuca, headed for the Naval Base Kitsap at Bremerton or the Naval Submarine Base Bangor. Other naval bases around the world would similarly become more vulnerable. Keeping the higher resolution maps classified would give the U.S. an advantage at sea that was worth protecting.

Gina accepted the military decision, even though it complicated matters for her personally. Her résumé wouldn't be able to show the true extent of her work, but those who appreciated what she could do with large data sets would see the notation on the page and know the actual work product was classified. At least this project wasn't being classified at a level where she couldn't even reference the work in her résumé—something that had happened with her sonar work.

But she hadn't taken this project on for the scientific credit it would give her. She'd taken on the seafloor mapping project to keep submariners—Jeff Gray, her brother, chief among them—safer. An accident like the USS *San Francisco*, which had hit an underwater formation, killing a crewman and nearly sinking it, wouldn't happen again. Seamounts everywhere in the world's five oceans would now be clearly marked on the new navigational charts incorporating her seabed data.

Her brother was out on the USS *Seawolf* somewhere in the Pacific tonight and wasn't due back in Bangor for a few weeks. She couldn't use him as an excuse to head to the West Coast,

though that was where she most wished she could be—at Jeff’s place, tucked in safe with the last member of her family.

Her dream of being married by the time she was 30 looked further away than ever before. Her options were fading. As painful as it was to absorb the breakup with Kevin, she couldn’t afford to pull back from dating again if she was going to keep her dream alive. She’d have to shake it off, patch together her self-confidence, and move on. Kevin hadn’t meant to cause her so much turmoil. He’d broken things off as gently as he could, done it with kindness by saying it wasn’t her; it was simply that it wasn’t going to work out for the long term and it would be better to conclude that now and keep their relationship a friendship.

It *was* her. This was the third serious relationship to end in essentially the same way. And she was at a loss for the reasons and what to do about it. She didn’t understand what had gone wrong, so she didn’t know what to fix. She was adaptable, willing to change, willing to make adjustments. She just needed a guy to like her enough to stick with her while they figured out how to make a relationship work for the long term.

She wanted to get married. She was 29, reasonably pretty, she had a good smile, her weight was under control, she could converse on most subjects with some knowledge, she went to church, she was nice to people, and the fact she wasn’t married when she wanted to be just didn’t make sense. It was the kind of failure that fit into the bucket of things she simply couldn’t understand.

“Just one guy, God. Surely somewhere there is one guy for me,” she mentioned quietly as she gathered up the orange peels and dropped them into the trash. She even kept a fairly

neat house. She wasn't the best cook in the world, but she was decent enough with a cookbook.

Her speech could lock up on rare occasions, but it had happened only twice in the last two years with Kevin, and it was more an embarrassment for her than a concern. The doctors compared the phenomena she experienced to a stutterer who had difficulty getting the words out. She couldn't believe that was the problem. The speech freeze would clear itself on its own in a minute or two. She mentally pushed away the concern. If she wanted to find reasons for Kevin's decision, she could talk herself in circles. He hadn't given her one.

Jeff would help her out. It's what big brothers did. She could ask him to introduce her to Navy guys he liked. Surely on a base where more than ten thousand people worked, there would be a few eligible, nice, single guys whom Jeff thought might like her. She wouldn't mind being a military wife.

She had worked on sonar projects in the past—her idea for cross-sonar now kept Jeff materially safer than he had been before. If she married a military man, there would always be ocean work she could do for the Navy, regardless of where they were based. If she got lucky enough to marry a submariner, she already knew she liked the Bangor area, in the northwest part of Washington State. The other home port for submarines stateside was at Kings Bay, Georgia. While she hadn't visited it, Jeff had thought it a nice enough place for the year he had been stationed there.

Gina finished the orange.

She had a couple of new sonar ideas worth exploring. A phone call would put in motion the security clearances necessary to let her pursue them. She could be on the West Coast tomorrow, tucked into a lab at Bangor, have some time to

herself to work. She could stay at Jeff's place. It would give her physical distance from Kevin. It would keep her occupied until Jeff got back from his sea patrol.

If she retreated to Chicago, her other option, she ran the risk of giving up on her dream of marriage. She had held on to the family house there as her home base. She loved the science projects she could tap into at the university she had attended for so many years, and she felt at home at the church she had attended since her teens. But the five years working in Chicago were marked by two relationships that had not worked out, and she didn't know who else in her circle of acquaintances there would think to ask her out on a date if they hadn't done so in prior years. With the move to Boulder she'd had two years dating Kevin and a chance for what she dreamed of to come true. She'd just have to try again.

Go west, she decided. Work on her sonar ideas. Ask for Jeff's help. It was at least a plan. Better than staying in Boulder and trying to find polite things to say when those encounters with Kevin brought back the sadness of a dream that was dying.

Have Jeff introduce her to Navy guys he liked, keep an open mind. She would make a concerted effort not to dismiss any guy who showed an interest, regardless of how unlikely she thought he might be from their initial introduction. She wasn't dreaming about a perfect match anymore. A good guy would be fine. Someone willing to commit to building a good marriage. She just had to figure out where he was, put herself in his path, say hello, and hope for the best.



Bishop thanked the petty officer who brought him more coffee, put his fork through a stack of pancakes, and reviewed

the drill plan for the next watch. Fresh eggs, milk, and fruit ran out three weeks into a patrol, and the sub didn't resurface for more supplies unless there was a major equipment failure aboard and provisions could be picked up as an incidental extra. Bishop chose to stick with pancakes and bacon, occasionally cinnamon rolls, rather than adapt to powdered milk and an egg substitute.

He wanted two more fire drills focused on the command-and-control center before this patrol was finished. They were complex drills, and he didn't want to run them too close to reaching the continental shelf or when they were sailing under a shipping channel. He penciled in the drills for 6 and 18 hours out, added a note for the drill coordinator that he wanted to also have the sonar room face an equipment failure during the first of the fire drills.

Back on base they would run the fire drills at the Trident Training Facility with real flames, heat, and suffocating smoke. But at sea they would simply use waving red flags. The alarm would sound, the rush of the fire crew from all locations in the boat would jam ladders, fire suits would be donned, equipment would be hauled in, and tight places to work in would get even tighter as others in the crew raced to get the boat to the surface to vent the invisible smoke.

As the fire took out communications and navigation controls, the crew would find conditions rapidly deteriorating. With actions they needed to take no longer available by turning a knob or setting a switch on a panel, they would have to revert to coordinating manual overrides with crewmen elsewhere in the boat to conduct operations—all while the drill was running against the clock. Men would be sweating and adrenaline would be running high before it was over. In

the after-action assessment, Bishop and the drill coordinator would declare the submarine lost or saved based on the speed and sequence of the crew's actions.

The drills were intense for a reason. Bishop worried as much about fire as he did flooding. A fire became very hot, very fast, inside the confined circular construction of a submarine, the heat and smoke forced into a swirling, expanding inferno that would make it impossible to breathe in a matter of minutes. Fire was one of the nightmare scenarios, and when it hit the control room, the switch you needed to save your life could be on the panel that had just lit up in flames. Submarines were basically computer hardware, electrical equipment, audio equipment, power plants, missiles, rocket fuel, batteries—with a few people fit in around them. Unlike a pipe, where age and corrosion could be inspected and repaired, not much that was a fire hazard on a sub was visible before it failed.

The phone on the wall to his left buzzed. Bishop reached over to answer it.

“Captain, sonar. New contact, sound signature USS *Seawolf*.”

“Very well.”

He headed up to the command-and-control center. They were four days out from Bangor. The tempo of this day and the next three was destined to get progressively faster, even without the drills.

The officer of the deck gave him a summary of the current situation on the boat, and the chief engineer added details to the nuclear-plant update. Bishop paused by the navigation table to check the chart overview. “The captain has the deck,” he announced.

“The captain has the deck,” the weapons chief confirmed, passing back authority.

“Sonar, control. Where’s the *Seawolf*?”

“Control, sonar. *Seawolf* is bearing 076 degrees, range 41 miles, depth 520 feet.”

“Sonar, report all other contacts.”

“Eight surface ships, all distant. A tanker and four cargo ships to the north, three fishing vessels to the west.”

Bishop wanted to pass near the *Seawolf*—under the command of his friend Jeff Gray—coming in on her port side and below her. But he didn’t want to sail directly toward her. They would both be trailing towed sonar arrays that water currents would be pushing around, and if the Russian or some other sub was out there, they would need maneuvering room.

“Conn, come to heading 095 degrees, make your depth 825 feet.”

“Come to heading 095 degrees, depth 825 feet, aye, Captain,” the conn officer confirmed. He then handed the same order on to the helmsman and planesman.

“Passing 280 to the right, sir,” the helmsman called out, marking the turn. “Passing 045 . . . steady on course 095, sir.”

The planesman called out the increasing depths, “650 feet . . . 750 feet . . . leveling out at 825 feet, sir.”

Bishop looked over at his executive officer. “XO, give me all-quiet on the boat. I’d like the *Seawolf* to appreciate just how difficult we are to hear coming.”

Kingman smiled his appreciation. “All-quiet, aye, Captain.” He reached for the intercom and set it to 1MC to broadcast throughout the boat. “*Nevada*, this is the XO. Rig for all-quiet. We’re going to snuggle with the *Seawolf*. Let’s remind them who’s the better boat.”

Discretionary sources of noise like the trash compactor would be shut off, routine maintenance which might cause a pipe to be struck or a tool to be dropped would be postponed, men not needed on station would slip into their bunks to minimize movement, and all casual conversations would cease. The already quiet boat would turn into a silent ghost in the water.

Bishop walked forward to the sonar room.

Sonar Chief Larry Penn said quietly, “Our noise profile is dropping, Captain.”

The boat’s sonar was powerful enough to pick up the sound of snapping shrimp when they were in Dabob Bay, and in the ocean they used that same power to listen for changes aboard their own boat. It wasn’t uncommon for sonar to report a valve problem in the torpedo room moments before Weps called forward to report the same issue. Noise was a diagnostic tool in a sub designed for quiet.

With the *Seawolf* and the *Nevada* coming together on similar tracks, the distance between them closed quickly. When the two vessels had come to within 15 nautical miles, Bishop said quietly, “Let them know we are here.”

Penn typed in a command at the right console and turned on cross-sonar.

On the *Seawolf* a sonar technician likely hit his knee on the terminal rack and said a few words he would be glad his mother could not hear. He was, however, quick to report the new contact to his command-and-control center, for the *Seawolf*’s forward speed dropped abruptly.

“Link us,” Bishop directed.

Penn entered the command.

Bishop saw the cross-sonar link establish and watched as

the radar screen display mapped out parts of the ocean the *Seawolf* had passed through recently, giving them a first look at the waters around the Strait of Juan de Fuca. All looked calm over the last 24 hours.

Cross-sonar was a set of elegantly simple ideas that, when put together, allowed two subs to share sonar data with each other while not being overheard. Their conversation couldn't be distinguished from the ocean noise because it was based on and built into the ocean noise.

“Start the cross-sonar search.”

“Start the cross-sonar search, aye, Captain.” Penn entered the command.

The sonar dome and the towed sonar array on the *Nevada* paired up with the sonar dome and towed sonar array on the *Seawolf*. The effective range expanded as four hydrophone sets listened in concert to the ocean. Contacts began to appear at distances substantially greater than either sub could hear on its own. Most were surface ships.

“New contact, bearing 276 degrees, looks deep,” the spectrum sonarman in the far left seat said, excitement in his voice. He typed fast, running the search to match the sound and pin down the exact name. “Identified as Akula, class II, K-335. It's the *Cheetah*, sir.”

“Go get him, Jeff,” Bishop murmured to himself.

The *Seawolf* had seen the Akula too. Cross-sonar dropped. The screen showed the *Seawolf*'s abrupt acceleration in speed on a direct vector for an intercept. The *Seawolf* was a fast-attack submarine designed for combat with just such an opposing submarine. The *Cheetah*'s captain was about to have a very bad day.

Bishop breathed easier. The obstacle he'd worried about

for the return home was now a known quantity—and the *Seawolf's* focus. Jeff would be on the Russian sub until he was driven well out to sea.

“Bring up the data replay.”

Bishop watched cross-sonar paint in the Akula again. It was out at the edge of the range of what even cross-sonar could find. The Akula had never heard either the *Nevada* or the *Seawolf*, of that Bishop was certain. All the Russian captain would know was that he had a U.S. fast-attack submarine coming into firing position in his baffles. No shots would be exchanged, as both sides during peacetime used these skirmishes as interesting training exercises, but the Russian captain would still be smarting. He would have been slowly and carefully maneuvering for days to work his way into that trench off the continental shelf as a place to hide.

Allies and enemies alike were trying to figure out what the U.S. was doing that had increased the sonar range to such a degree. The assumption would be that new, more sensitive hardware had been deployed. Bishop thought cross-sonar might survive a decade unmatched before someone decoded what they were doing. Cross-sonar was just software and some very elegant reasoning. Espionage was the real threat. Someone on the U.S. side giving away the secret, someone stealing it by hacking into a server or physically making a copy of the algorithms were the more likely ways it would become known by other nations.

Bishop had been stunned when he got his first detailed, classified briefing on how cross-sonar functioned. It gave them a priceless advantage at sea and seemed so obvious once he saw the individual pieces and how they fit together. But it had taken a 20-year-old college student working on a Ph.D. sonar

thesis—her brother in the submarine force having sparked her interest—to come up with the ideas and put them together into a powerful and operationally useful combination.

Bishop walked back to the command-and-control center. He'd take full advantage of the tactical advantage cross-sonar gave him, and be very grateful the U.S. had the capability before anyone else. "Conn, bring us to heading 010. Make our depth 400 feet." He would turn the boat north of the shipping channel into water that would have less surface-noise clutter.

As the order was acknowledged and implemented, Bishop picked up the intercom and switched it to 1MC. "*Nevada*, this is the captain. We just nudged an *Akula* away from the coast, and the *Seawolf* is giving chase. We're turning toward home. Secure from all-quiet."

Crewmen began discussing the sequence of events of the watch, in good spirits and laughing occasionally. Bishop pulled the notepad from his left shirt pocket, scanned the original plan for this day. Engineering wanted to run a test on the batteries, he'd penciled in a fire drill, and a second watch meeting with his senior chiefs would review the repair and maintenance situation on the boat in preparation for homecoming. A missile drill prompted by a flash EAM—Emergency Action Message—was scheduled during third watch to pull together the entire crew on their primary time-critical mission. A rather routine day had started with an unexpectedly nice opening move, compliments of the *Akula*.

Bishop put the list back into his pocket. "XO, would you like the deck?"

"Yes, sir."

The executive officer checked with every chief in the control room, conferred with the weapons officer the longest,

studied the navigational chart, scanned every status board, then looked to Bishop. “I am ready to relieve you, sir,” Kingman stated.

The XO was going to be ready to command a boat as his next duty station if Bishop had anything to do with it. Hours in control mattered. And toward the end of this watch, the boat was going to get hit with a fire drill, a good experience for his second-in-command.

“I am ready to be relieved,” Bishop said.

“I relieve you, sir.”

Bishop picked up the intercom. “This is the captain. The XO has the deck.”

Bishop stepped back from the captain’s chair as the ship log was updated to show the change in command. Rather than leave the command-and-control center, he settled in next to the weapons officer and out of habit checked the pressure status in every missile tube. Bishop would offer quiet counsel, suggestions, watch for trouble, step in if needed—he had his XO’s back. He doubted it would be needed. Kingman was learning fast. As his experience in the job grew, the list of events he’d already handled successfully was getting longer.

When the XO’s first order of business was to contact sonar, ask for an update, then contact the chief engineer, Bishop relaxed even more and changed his plan. “Officer of the deck, a visual confirmation of the weapons board status seems prudent.”

The boat was a lot more than what could be seen from this room. It was also conversations with those who had their hands on the parts that made up the whole. Over-reliance on what was visible from here could leave a captain vulnerable to a stuck gauge or a misreading indicator light.

His XO took the suggestion immediately. “I concur. Petty Officer Hill, please join the commander for a visual inspection of the missile firing system.”

Petty Officer Hill, who had managed to avoid one-on-one time with Bishop so far during the patrol, paled as he stood. “Yes, sir.”

Bishop only smiled, sympathizing with the young man’s obvious nerves but not giving much allowance for them—or for the fact that the petty officer would turn 22 a few days after this patrol ended. This crew was young, but well trained. The pop quiz was going to last until they returned. Once Hill got a few answers right, his confidence would find its footing.



Bishop headed with Hill down one level, his plan to stop first at the missile control center, where two security officers armed with Beretta M9s would be standing guard, then go down another two levels and aft to the missile bay where they could read the gauges monitoring the condition of each of the 24 Trident missiles.

It was practically impossible for a nuclear weapon to misfire. The solid rocket fuel in the launch missile, however, was a combustible type A substance, and it was unforgiving if mishandled or if its environment suddenly changed in temperature or pressure. A three-stage rocket deciding it was time to spin up and fire was the kind of short circuit in the system that would make life very unpleasant for the crew when the missile hatch was closed.

“Petty Officer Hill, why is armed security stationed at the missile control center during a deterrent patrol?”

“Directive 781, sir.”

“Do you believe the shoot-to-kill order is necessary?”

“SecNav believes it is necessary. And I believe him.”

“What is the firing depth for a Trident II D-5 missile?”

A short pause, then, “I don’t know the exact depth, sir. I do know it’s a shallow launch.”

“What pressure is required in the missile tube before the outer hatch may be safely opened?”

“Equalized pressure to the ocean, sir. The fiberglass inner dome cover would otherwise crack, and water would damage the missile.”

“Does seawater ever touch a missile during launch?”

“No, sir.”

“Why not?”

“The missile rises to the surface surrounded by the pressured nitrogen gas used to launch the D-5 out of the tube.”

“You’re learning, Petty Officer Hill. Good answers.” Bishop nodded to the security officer and stepped into the missile control center to speak with the weapons duty officer for this watch.