

ALL HANDS DOWN

*The True Story of the Soviet Attack
on the USS Scorpion*

Kenneth Sewell
and
Jerome Preisler

Simon & Schuster
NEW YORK LONDON TORONTO SYDNEY

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ALSO BY KENNETH SEWELL

*Red Star Rogue: The Untold Story of a Soviet Submarine's Nuclear
Strike Attempt on the U.S.* (with Clint Richmond)



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For the families left waiting in the storm.

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ALL HANDS DOWN

PROLOGUE: ABYSS

THE ATLANTIC OCEAN, FOUR HUNDRED
MILES SOUTHWEST OF THE AZORES
ARCHIPELAGO, SUMMER 1986

ITS BALLAST TANKS FULL, HEAVY WITH FOUR SETS OF iron descent weights, the deepwater submergence vehicle *Alvin* drops toward the ocean floor. The cramped, chill titanium sphere of its control room is darkened, or mostly so. There is a faint glow from its instrument panels, and a greenish cast to the pale cocoon of light outside the observation ports. Several small lights, used by the crew to take notes or operate cameras and tape recorders, have been turned off. When you are going to look out into the dark, you keep the sphere's interior as dim as possible.

Almost insectile in its contours, *Alvin* floats down and down like a firefly through a moonless, starless nocturnal sky.

On the surface, where the craft commenced its journey, the day is still young. For those aboard the *Alvin* the transition from daylight to total darkness was rapid and dramatic. The submersible began its descent bathed in the pale orange morning sunlight that penetrates the first few meters of the ocean surface. Water absorbs one hundred times more red light than blue, and as *Alvin* slipped below the waves, everything outside would have taken on an increasingly bluish tint.

To the human eye, white objects appear blue underwater, and red objects fade to gray.

About six minutes into the dive, the sun's rays would have ceased to filter through the water altogether, leaving *Alvin* in darkness except for the glow of a thallium/iodide metal vapor light several feet above the main view port.

The T/I emits an intense beam in the green spectrum. That is the wavelength to which the eye is most sensitive, making it very efficient as a driving light. Fifteen feet in front of the submersible the pool of illumination is quite bright. Further ahead it begins to weaken and transitions to a murky twilight.

The pilot's habit is to switch on *Alvin*'s T/I fairly early in his dive. Without it, he would not be able to see anything outside, and he likes to judge his rate of descent by the movement of what is known as marine snow. This suspended detritus is mostly organic and is composed of anything from the fecal matter of aquatic life forms to bits and pieces of dead sea creatures broken down by the relentless motion of the water

and biological forces. The particulate is gradually—almost imperceptibly—traveling downward to the bottom sediment, but for the purposes of measuring relative velocity with the naked eye, it can be regarded as stationary.

Looking out while the driving light is on, the pilot can see marine snow seemingly drifting *upward* in the water column, and experience has taught him how fast that movement should appear when he's descending at the proper rate. If the upward drift of the particles looks very slow, something is wrong with his ballast and he isn't descending at the speed he should be—a steady rate of thirty meters, or slightly over a hundred feet, per minute.

For the pilot, this visual estimate of downward movement provides a comfort factor, and so far everything looks to be working fine. There are no problems.

Like aircraft pilots in flight over surface terrain, those who have sat at the controls of deepwater submersibles use the term “altitude” when referring to their distance above the seabed, which in this case is about 10,300 feet beneath the surface.

Descending at its steady rate of thirty meters, or slightly over a hundred feet, per minute, *Alvin* reaches a depth of 6,000 feet below the surface—or an *altitude* of 4,300 feet, by the reckoning of its pilot and copilot—about an hour into the dive.

This is deep in what marinologists call the abyssal zone, an ocean depth where the sun does not penetrate, and hasn't since the dawn of time. The temperature is near freezing. No gravitational currents stir the water, no storm surges are felt. Here, beyond the influence of tide and weather, it is an everlasting midnight, as still as the furthest reaches of outer space.

Because photosynthesis cannot occur here, the region lacks any form of plant life and supports just a few unique species of marine animals. There are giant squid, sixteen-inch-long tubeworms, deep-sea clams that measure a foot across, and other biological wonders adapted to the lightlessness and immense pressure bearing upon them—which may be up to six hundred times greater than the atmospheric pressure on the earth's surface. Exposed to these conditions, a human body would be crushed, the ribcage collapsing around the lungs, blood vessels bursting, the soft organs turning to pulp.

A nuclear submarine reaches its depth limit at between 1,500 and 3,000 feet underwater, depending on its design. When that maximum limit is exceeded, its metal hull yields to the surrounding pressure and implodes.

Alvin, in stark contrast, is at home in the abyss. Its crew compartment's spherical hull allows for the uniform distribution of ocean pressure in what is known as an isostatic manner. In principle, the hull works much like a simple arch. Its curvature resolves the forces working against it into compressive stresses—or stresses that steel and titanium, the high-strength materials used in deep-submersible pressure hulls, are able to resist.

There are some drawbacks to this design. Manufacturing spherical shapes to the demanding tolerances required for deep-diving ocean exploration is expensive. The sphere also lacks the sleek hydrodynamic shape that would allow *Alvin* to move quickly through the water, and its curved interior walls do not easily accommodate the rectangular housings that encase critical instruments needed for the submersible's operation. These surfaces are, moreover, uncomfortable for its occupants—for most people sitting against curved walls results in achy backs and shoulders. But speed isn't

a requirement for *Alvin*, and the relatively short duration of its mission is well within the limits of the crew's endurance.

As the submersible continues going down at its unvarying rate, the crew experiences a smooth, stable trip to the bottom. *Alvin*'s external weight stacks and attached scientific equipment have been distributed to balance the craft's center of gravity, and the result is a perfectly even trim. There is no list. There is no pitch. If you are *Alvin*'s pilot, you're thinking that things are going well. So far.

The creation of the Woods Hole Oceanographic Institution, or WHOI, in Cape Cod, Massachusetts, *Alvin* is small, lightweight, and easy to assemble, disassemble, maintain, and fix. It is therefore easily deployed to remote waters. *Alvin*'s missions range from marine biological or geological surveys to the extraordinary covert mission on which it is now engaged—one that the military intelligence officers topside have kept secret from the civilian research contingent on R/V *Atlantis II*, its mother ship. Mostly French and American scientists, they do not even realize they have traveled over a thousand miles southeast of where they are supposed to be searching for the sunken ocean liner RMS *Titanic*. But any concern about secrecy has been left behind on the surface.

For the pilot, what matters now is the mission and maintaining his focus. Below the surface, he worries less about men than nature, the millions of pounds of seawater relentlessly searching for a single flaw in the hull or piping. And he survives by being consistent and following procedures.

When everything works, it doesn't take the pilot long to complete his checklists and commence the dive. Depending on the mission, the trip to the bottom might take anywhere from thirty minutes to several hours. He tries not to let it run too late into the day.

Typically, he should be finished with his underwater tasks and working his way back up no later than four o'clock in the afternoon. By then, the observers will be stiff, cramped, and perhaps feeling the effects of mild hypothermia. Despite the watch caps, sweaters, sweatshirts, long johns, and wool socks they pile on throughout the descent, it is cold inside *Alvin*. And the deeper it goes, the colder it gets. The titanium walls are uninsulated and wet from condensation, and the observers avoid leaning against them.

But in an odd way everyone is glad to accept the clamminess. Dry air pulls moisture off people's skin, cooling their bodies. Humid air evaporates less moisture and makes people feel warmer. As the moist breath of the crew condenses on the walls and runs down into the compartment's bilge area, it keeps the relative humidity within the sphere up at around 50 percent. This practical exploitation of human biological functions helps mitigate the bone-chilling cold of the abyss.

Alvin's pilot and co-pilot are mindful of their passengers' comfort, but safety remains their primary consideration, which is why they want to be back up before sundown. Upon resurfacing the submersible still has to meet its tender, hook up with the A-frame hoist on her stern, and be lifted aboard. When you are operating in the middle of the ocean a lot can go wrong. Conditions are apt to change quickly, and unexpected factors like stormy weather, equipment failure, or a sick passenger on *Alvin* can create a life-threatening situation. The darkness of night greatly enhances the dangers. It is just a matter of good sense to follow a consistent routine, and part of that means carrying out *Alvin*'s recovery in daylight.

Right around when it drops below the 4,300-foot altitude mark, *Alvin*'s pilot turns on his Fathometer. A device used to measure the depth and contours of the ocean floor, it transmits regular active sonar pulses, or pings, and receives their echoes off the bottom. The Fathometer's readings should be consistent with the pilot's information about the region's bathymetric and topographic features. He has studied his charts before the dive, and a significant discrepancy could mean *Alvin* is off course, or even that the charts are in error—it happens; the ocean's bottom is still a largely unexplored frontier, so he is making periodic comparisons. On rare instances during typical scientific dives, he will use the pinger mode of his underwater telephone to range to the surface and locate his position in the vertical descent column beneath the mother ship.

Today's dive, however, is anything but typical. There is a need for very precise navigation because of *Alvin*'s unique target, and that means using some elaborate instrumentation.

The system developed for tracking and guiding *Alvin*'s position is called ACNAV, or acoustic navigation. It relies on underwater beacons called transponders that receive and transmit electronic signals at preset frequencies. Each of Woods Hole's transponders has an outer case that looks like two yellow hardhats welded together. Before *Alvin* embarked on its dive, a technician on the mother ship's deck would have dropped between three and four of these weighted radio beacons to set points around the underwater target area on cables that will enable their later retrieval. Submersible navigation has a large number of complicated variables, but the basic idea is that the transponders create an acoustic grid on the ocean floor that can very accurately lead *Alvin*'s pilot to his target, and at the same time allow the mother ship to keep tabs on where underwater the vehicle is headed.

And so, the pilot is watching his Fathometer and checking the transponder readings, and in some cases is making corrections to his position. Out the corner of his eye, he also monitors the compartment's life support systems, bleeding in oxygen and watching CO₂ levels to maintain their proper concentrations in the breathing atmosphere. There are always small things like that to occupy him, but it gets dull after a while, and he generally finds reviewing the dive profile with the observers a welcome distraction. It relieves his monotony and sets them at ease—especially when his passenger is unaccustomed to deepwater submergence.

After all the dives he's done, his words tend to follow a similar pattern from one to the next. Well, he will tell them, we should get to the bottom soon. We'll probably be at this or that distance, and such and such a direction from where we're supposed to go. I'll drive over, and be available, and you can tell me step by step what you want me to do.

On today's mission, the pilot would have received most of his instructions in the pre-dive briefing. The Navy intelligence operative he's chaperoned into the depths has a highly specific objective that is unique even to his experience.

His name is Bob Ballard. He is a self-styled undersea explorer whose public persona hides a double life no less mysterious than his surroundings, or the project he's veiled with the cover story of his search for the *Titanic*.

After a drop of almost two miles and ninety minutes, *Alvin* is finally approaching touchdown on the seafloor. The pilot's boredom with the prolonged descent is gone—this is where things sometimes get tricky, and kind of thrilling for him.

It is critical to see the bottom, and as he approaches within thirty-five feet of the ocean floor he strains to catch a view of the topography. If you haven't visited a particular area before, you need to know whether you have a flat, silty bottom or whether it's going to be rough. There have been dives that brought the submersible to terrible spots. Places like an area near the Galápagos that the scientists wryly named the Garden of Eden, where the rugged volcanic terrain was pockmarked with fields of conical structures known as hydrothermal vents. Some of the chimneys stood thirty feet tall and released shimmering white water—comparable to heat devils in the desert—that read hundreds of degrees centigrade, making them hot enough to melt the PVC plastic on *Alvin*'s temperature probes.

These would become known to researchers as white smokers. The hottest vents, dubbed black smokers, spouted superheated water at such a great velocity that the dissolved minerals they released, precipitating in the cold ocean, roiled exactly like plumes of black smoke rising off an oil fire.

More common sights are jagged rocks, ledges, and outcrops. While hardly as spectacular as the black or white smokers, they can present serious hazards unless the pilot is alert and cautious. And then there is *Alvin*'s present target—no natural wonder, but something man-made, full of cables, pipes, and projecting sheets of metal that can reach out to snare the small craft and prevent it from returning to the surface.

To know what he's lowering into, the pilot must stop and scan the bottom before going down any farther.

From his stool behind his forward viewport—there are two others, portside and starboard—he inspects the undersea landscape. He has the two rotating vertical lift propellers pointing up on either side of the submersible, and is ready to use them to kill his downward velocity should any dangerous environmental features come into sight. One problem for him is that his depth perception is somewhat reduced—it has been described as about a two-and-a-half-dimensional field of view.

To compensate for the visual distortion, *Alvin*'s crews have fastened a circular sample basket to the nose of the submersible. The basket is four feet in diameter, and when the pilot wants to determine the height or width of something up ahead, he does a bit of mental manipulation, comparing it to the dimensions of the basket out front. It is an imperfect technique to say the least, but anyone who drives a submersible develops a knack for improvisation.

What the pilot finds below him now is mostly sediment. It is a geologically ancient area, with a thick carpet of material that has settled over the bottom during countless centuries to create a soft, regular terrain.

The conditions are as good as the pilot could hope for, and he prepares to release the descent weights in sequence. They are 208 pounds each and are attached to *Alvin*'s outer hull with magnetically operated latch mechanisms. The first is dropped to slow the vehicle's dive and allow for any last-minute maneuvering before touchdown. The second weight is dropped closer to the bottom to stop the descent, and give the pilot a chance to trim ballast should that become necessary.

One at a time, he drops his weights. Slowly, gently, *Alvin* continues toward the

seabed, its lift props rotated downward to keep it at a hover.

Disturbed by the vehicle's propellers, the bottom sediment stirs up into the water and mixes with the marine snow in a churning cloud. But as *Alvin's* horizontal thrusters propel the vehicle toward its predetermined coordinates, its driving light lances through the spectral haze to disclose pieces of metallic debris below—one, another, and then several more. Many are quite small, but some would be too large to carry aboard the submersible. Strewn about the ocean floor, they form a widespread, silt-covered trail. *Alvin* skims along over the debris trail on a southeasterly course. Now the contours of the bottom change, the horseshoe-shaped bulge of an eroded slope appearing up ahead. The submersible approaches the rise, crosses over its curved outer face, and then begins gliding above the sediment-filled caldera of a primeval, long-dead volcano.

The pilot and co-pilot, meanwhile, have turned on bright incandescent floodlights mounted high atop *Alvin's* forebody, overriding the green glow of the more energy-efficient T/Is. The driving light rendered everything it struck in shades of gray to the vision; *Alvin's* incandescents let the observers see what is outside in striking color.

The submersible's operators have also activated their exterior camera and video equipment to capture the images for subsequent analysis. Angled slightly down to illuminate the work area, two 35mm still cameras above the forward viewport snap away in the intense glow of strobes. At the same time, a low-light-level standard-scan television camera—again, oriented onto the work area—sends images to an interior monitor that are simultaneously viewed in real time and captured on videotape.

Inside *Alvin's* crew compartment, a mood that is an odd mixture of anticipation and solemnity spreads through the exploratory team. The excitement of their imminent discovery is restrained by a sort of grim reverence, and perhaps a quiet, somber awareness of their own mortality.

Submariners have an old maxim that goes something like, "There are no atheists below a thousand feet." At greater than ten times that depth, *Alvin* is coming up on a potent reminder of why they say it.

The far slope of the crater below has disintegrated, perhaps having gradually crumbled away over the ages, or toppled in a sudden underwater avalanche when the sediment buildup atop it became unstable. There is no way for *Alvin's* passengers to know, and at the moment their attention is otherwise occupied.

On the inside of the near slope, a ruined hull has come into view. It is broken in two, the segments resting in separate trenches and coated with silt and sludge—accumulations that haven't stirred in nearly twenty years, when the cloud of bottom matter billowed upward as the vessel impacted the slope, then went falling back to the bottom, coating the new objects with a light dusting.

As *Alvin's* floodlight and camera-strobe flash on large segments of the sunken vessel, it maneuvers closer, moves the length of the ship on one side, then makes a second pass along the other.

From an open hatch in the forward section of the hull, a mooring line extends outward into the cold, motionless abyss. No man or group of men inside the vessel could have dislodged the hatch door. They would not have had a chance. The submarine went down too rapidly, and the pressure of the seawater outside would have been too overpowering for the hatch door to have been opened by anything but the

massive pressure wave of compressed seawater that rushed through its interior compartments in a devastating, unstoppable surge.

The hull of the boat lies in two sections. Her bow faces north-northwest, and her aft section is at an eastward orientation. Lying on its side is the sail, a structure that houses a submarine's masts, periscope, and dive planes. It has separated from the hull, torn away by the force of its impact.

As *Alvin* travels aft, Ballard and company are met with a sight that is by equal measures awful and remarkable, laying out the sheer violence of the boat's destruction. Her main engine room has been pushed into the adjacent machinery compartment, their bulkheads ruptured. A collision of machinery from these sections ejected the propeller and its shaft, more evidence of the horrendous momentum that caused the vessel to collapse on itself like a spyglass.

Pointed at the wreck now, *Alvin*'s photographic and video equipment keeps working. But however useful it can be, Ballard knows this trip down is just a prelude, a trial run of sorts, mapping the submarine's grave for a far more ambitious return in the near future—one in which he intends to employ Woods Hole's newest technological marvel, the remotely operated vehicle Jason Jr., for the first time. Though it is still in its final stages of development, and untested in deepwater conditions, he is hoping the self-propelled robotic camera will be able to enter the boat and transmit never-before-seen images from within its torpedo room...images that may represent a history-making investigative breakthrough.

The nuclear attack submarine USS *Scorpion* (SSN-589) was among the pride of the Navy's fleet before it sank with all ninety-nine hands aboard in early spring of 1968. How that occurred remained an unsolved mystery for the United States Navy, and for the surviving families of the sailors who died with their sub. The time had come for the Navy to determine what had happened, to find conclusive answers.

Whether the government would ultimately keep its promise to reveal those answers is an altogether different story.

1. GORSHKOV'S GUN

“The flag of the Soviet Navy now proudly flies over the oceans of the world. Sooner or later, the U.S. will have to understand that it no longer has mastery of the seas.”

—Admiral of the Soviet Fleet Sergei Gorshkov, quoted in *Time magazine*,
February 23, 1968

I

CAPTAIN LLOYD BUCHER'S LEADING INTELLIGENCE men, Lieutenants Carl “Skip” Schumacher and Steve Harris, had identified the vessel from NATO military publications brought aboard ship before their deployment. An SO-1 variant of Soviet origin, it was designed for antisubmarine warfare. The Russians built these ships at their Zelenodolsk shipyard on the Crimean coast, and had exported several to the North Koreans and other Communist bloc nations.

It was the second vessel of its type that had shown itself to the USS *Pueblo* in the past thirty-six hours.

Late on January 21, 1968, Bucher had been informed of the first sighting over the sound-powered phone in his cabin, then rushed up to the flying bridge and brought his binoculars up to his eyes. Peering through the twilight, he'd spotted the dark form of the ship off to the starboard side of *Pueblo*'s bow, and estimated that it was just under six miles away. Schumacher had reported its distance at about eight miles when it appeared over the horizon, which meant it had gained over two miles on the Americans in a matter of moments.

Exhaling puffs of vapor into the frigid winter air, Bucher had stood in the gusts pleating the waters of the Tsushima Strait and done some hurried mental calculations. His best guess had been that the SO-1 was moving toward his vessel at approximately 25 knots. A good clip. With *Pueblo* pretty much at a stop, Bucher had figured it wouldn't be too long before the Soviet-made ship reached their position.

He hadn't been particularly concerned, though. At the time *Pueblo* had been drifting off Myang Do, north of the deepwater port of Wonsan, where it was suspected that the USSR had established a submarine base less than two hundred miles south of the Soviet Pacific Fleet's home port at Vladivostok, which was icebound for lengthy

stretches of the year. The U.S. National Security Agency had wanted to monitor Russian naval traffic around these coastal cities and dispatched a pair of Auxiliary General Environmental Research/Signals Intelligence, or AGER SIGINT, vessels to the area. This was *Pueblo*'s maiden voyage; her sister ship, the USS *Banner*, had preceded her on operations months before.

In the ten days since *Pueblo* had left Sasebo, Japan, on January 11, 1968, her photographic intelligence people had made no visual observations of greater interest than Russian commercial freighters. But it was an entirely different story for the NSA communications technicians in her spook shack, formally designated the Special Operations Department (SOD) hut. On January 19, the communications technicians' monitoring equipment had snatched over thirty radar signals out of the air as *Pueblo* hovered off the craggy shoreline of Songjin, in North Korea's Hamyong Province on the Sea of Japan. They were particularly intrigued by a waveform emission identified with the Soviets' new Cross Slot long-range radar, a system meant to guide antiaircraft missiles to their targets. Because the Cross Slot transmitters were aimed skyward, and *Pueblo* was a small vessel with relatively low electronic intelligence (ELINT) masts, the communications technicians in the spook shack couldn't get a directional fix on their location without edging closer to shore—perhaps into waters North Korea claimed were within its territorial boundaries.

Meanwhile, Captain Bucher was hardly surprised by the presence of the SO-1 subchaser on January 21, taking it as evidence that the Soviets were conducting antisubmarine warfare exercises in the area—and confirmation that they did indeed have sub berths at Myang Do and Wonsan. In his eyes, the ship presented no threat. *Pueblo* was a quarter-century-old World War II military freighter that had been ostensibly refitted as an environmental research vessel. Yes, that was a transparent charade. Her two ELINT masts with their thicket of antennas clearly marked her as a spy ship. But in the complicated ballet of global espionage certain moves were tolerated on both sides of the Iron Curtain—they had to be, or a shooting war would be a foregone conclusion. *Pueblo* was in international waters. She had only two .50 caliber machine guns for weapons. Bucher hadn't expected trouble.

There atop the bridge in the dimness, he had done some additional silent reckoning. A skipper he'd served under back in his submariner days had taught him more than one seaman's rule of thumb, and Bucher had remembered them well. If his assessment was correct, the SO-1 would pass no closer to his ship than 1,500 yards—or slightly under a mile—if it stayed its course.

His field glasses held steady, Captain Bucher had kept watching the ship's approach. Beside him, Lieutenant Schumacher was looking through a pair of mounted 22-inch "Big Eyes" binocs. By now they had been joined on the bridge by Lieutenant Harris and Photographer's Mate First Class Lawrence Mack.

After a short while the SO-1 passed in the gloom like a racing shadow. Bucher had been right on all fronts. The ship's radar masts hadn't been rotating. There was no sign of anyone topside—not so much as a scattering of sailors on watch. Mack clicked away on his cameras, and his developed prints would later confirm its decks had been clear.

When the ship was gone, Bucher went below to the spook shack and sounded out the communications techs. He wanted to know whether their equipment had discerned

any clue that the SO-1 had electronically probed them, or sent out radio bursts that might mean she'd notified others of *Pueblo*'s presence.

The techs reported no such intercepts. The SO-1 didn't seem to have noticed *Pueblo*. Or if it did, it hadn't identified her as an American vessel.

That had been the extent of the first encounter with a subchaser. The second occurred on January 23, under a cold, cheerless midday sun. Though Bucher hadn't started out feeling apprehensive, some incidents that had occurred between the two SO-1 sightings had put certain members of the crew on edge.

Shortly after noon on January 22, *Pueblo* was somewhere in the vicinity of Wonsan when a couple of trawlers came bearing toward it from straight ahead to the south. As they drew near, Bucher again found himself on the flying bridge with Mack, Schumacher, and a fourth man, Chief Warrant Officer Gene Lacy. It was Lacy who had alerted Bucher and, watching the vessels through the Big Eyes, agreed with the captain that they were Soviet-designed fishing boats with Korean ideograms on their bows. Bucher had noticed that they were uniform in their gray paint jobs and rigging, which was unusual for the motley North Korean fishing fleet. This made him privately wonder if they "might not be exactly what they appeared."

Soon the trawlers had pulled within several hundred yards of *Pueblo* and begun to circle her. The crowd of Korean fishermen on their decks gesticulated at the Americans, speaking excitedly to one another. Some had cameras and were taking pictures of the Yankee sailors as Mack repeatedly aimed his own telephoto lens at them. Captain Bucher noticed that many of his own hands had spilled onto the open weather decks for a look at the fishermen; he ordered those who weren't on watch duty to get back down below. *Pueblo* had more than double the crew of a hydrographic research vessel, and he'd intended to maintain the flimsy pretense that it was nothing more threatening than that. He also hadn't wanted some foolish verbal exchange between the crews to push the Koreans into a hostile act. The trawlers appeared unarmed, but he didn't want anyone aboard them getting upset enough to ram his ship.

Although nothing of that sort happened, there would be one or two more wrinkles to the incident before it was over. After the trawlers circled *Pueblo* once, they sailed off at a moderate speed, pulled near each other almost three miles to the northeast, and hove to. Then they reversed direction and again approached the *Pueblo*, coming within twenty-five yards as they steered another full circle around her, the fishermen on their decks still intently scrutinizing the Americans. Bucher had been apprehensive enough about a coordinated ramming of his ship that he'd ordered the engine room to stand ready to quit the scene at flank bell. But again the North Koreans did nothing more antagonistic than gawk. When the trawlers pulled away to the north for the second time, they kept going and did not reappear.

For the rest of that day, and on throughout the night, the communications techs broke radio silence and attempted to send a situation report with information about the run-in to a special National Security Agency/Naval Security Group receiving station in Kamiseya, Japan. Simple fishermen or not, it was clear the North Korean sailors would inform authorities about the American vessel with its odd-looking masts. If they hadn't already done that using ship-to-shore radio, they doubtless would talk when they returned to harbor.

But *Pueblo*'s communications techs were unable to get out their message. For

some undetermined reason, their KW-7 Orestes cryptographic Teletype machine's transmissions did not seem to be reaching Kamiseya. Even attempts to patch them through via a major U.S. naval communications facility in Yokosuka failed. The spooks' thwarted, night-long attempts to establish a comlink left everyone in the SOD hut frazzled and exhausted.

That same night, with *Pueblo* idling off Wonsan, Quartermaster First Class Charles Law took note of several disquieting sights while on deck watch. At around nine o'clock he spotted the running lights of an estimated thirty to forty fishing boats leaving Wonsan harbor. Ninety minutes later, he saw another vessel coming from Wonsan—a merchantman. As it passed about a mile and a half away, Law studied it through his binoculars and discerned a Russian-made radar mast rising from its deck. As the night wore on, the spooks and other crewmen aboard *Pueblo* continued logging suspicious contacts—radar intercepts, aerial illumination flares, glimmering lights in the darkness. Chief Lacy grew nervous that the ship was under close scrutiny.

By all accounts, the morning of January 23 was uneventful.

After leaving his cabin sometime after seven o'clock, Bucher ordered *Pueblo* into a position closer to Wonsan, where her masts would be better able to sweep for radar and communications issuing from port. Everything onboard was routine. Breakfast was served. The watch changed. Laundry spun in the washing machine, and regular inspection and maintenance was done in the ship's interior spaces. Around nine-thirty, the communications technicians finally made contact with Kamiseya and transmitted their situation report (sitrep) of the night before, along with an update stating that the local interest in their ship seemed to have faded. There had been no further sign of Korean vessels. Captain Bucher would always insist his ship held steady in international waters, and perhaps he was correct—but the vagaries of wind and drift in a part of the sea dotted with islands and ragged peninsular juts would have made the territorial line *Pueblo* was straddling hair-thin, giving the militantly isolationist Koreans abundant leeway to dispute Bucher's claim.

Around twelve noon, Bucher and Lacy were at a table in the crowded wardroom, the two men having an easy chat as they dug into generous lunchtime portions of meatloaf, potatoes, and vegetables. Suddenly Quartermaster Law called from the bridge. A vessel had been spotted coming toward *Pueblo* from about eight miles to the south.

Undisturbed, Captain Bucher asked Law to notify him if the ship came within five miles of them, then got ready to start on a second helping of lunch. Possibly his tempered attitude was due to the relative innocuousness of the earlier encounters with the North Koreans. The *Banner's* captain had mentioned being harassed by similar ships without any escalation of hostilities, and Bucher may have assumed this was more of the same.

If Bucher, in hindsight, ever reassessed his cool reaction to the news in view of the intercepts, flares, and shadowy vessels gliding from Wonsan the night before, he would keep such thoughts to himself. But nothing he could have done based on a more immediate level of concern would have changed what next transpired.

He had barely gotten a chance to lift his fork and knife to his seconds when Law called down again. The ship was at five miles and closing—it had crossed a lot of water in very little time. Law's best guess was that it was doing a rapid 40 knots.

Pushing up off his chair, Bucher abandoned Lacy and his newly refilled plate to head topside. From the pilothouse, he could see the vessel speeding straightaway toward *Pueblo*, its bow plowing up a V-shaped wave of foam. He figured he'd better get a closer look.

Out in the bitter cold of the flying bridge, Bucher took the Big Eyes and swung it toward the oncoming ship. She appeared to be a light cruiser flying a North Korean banner—a subchaser. He couldn't tell whether it was the same one that had glided past the other evening or yet another vessel of that class. But for the moment it hardly made a difference.

Bucher ordered Quartermaster Law to summon Schumacher, Harris, and Mack to the bridge. He also wanted the oceanographers up on deck in their nonregulation cold weather garb. They would make a show of lowering seawater receptacles over the side with winches—a sampling technique known as a Nansen cast. *Pueblo* was supposed to be a research vessel, and how better to preserve that appearance than by putting a team of scientists on exhibit?

As Bucher's orders were implemented, the vessel kept hauling toward *Pueblo* at something close to its maximum speed. His NATO identification guide in his hands, Harris slipped behind the Big Eyes and confirmed the skipper's on-the-spot determination. It was, in fact, an SO-1, he said. Then he rattled off its standard personnel complement and armaments: a crew of twenty-two, including three officers. Dual automatic cannon. Heavy machine guns. Depth charges. Other configurations were possible.

Bucher studied it through his binocs. The subchaser was at maybe a thousand yards and closing, its deck filled with uniformed hands, the operators of its dual-barreled 57mm autocannon training their weapon on the U.S. ship. They were at full battle stations.

Braced for the worst, Bucher relieved Chief Law of his watch duties and put Lacy, an experienced commissioned officer, in charge of the deck. He notified the engine room to stand by to pour on the steam. The binoculars pressed to his eyes, he continued to hope the Koreans' aggressive posture still would prove nothing more than a show.

But the SO-1 was circling *Pueblo* now, and getting nearer as it spun up a white ring of foam around her. Bucher saw a signal flag requesting his ship's nationality appear on its yardarm and had his signalman hoist an American flag in response. He ordered Schumacher to send out a message to Kamiseya that *Pueblo* was being challenged by a North Korean vessel, emphasizing that the communiqué be given midlevel priority. Before leaving Japan, he'd been given instructions not to provoke a conflict with the Koreans. He didn't want the situation escalating into an international incident, not before he was convinced it represented more than intimidation and bluster.

The evidence would rapidly pile up on him. He was rattling off further orders to the crew when Lacy shouted out that he saw three high-speed torpedo boats darting toward *Pueblo* in loose formation. Then the SO-1 raised another signal: *Heave to or I will fire*. The message left Bucher perplexed. "Heave to" was nautical language for bringing a vessel to a stop. And *Pueblo* wasn't going anywhere. What did the subchaser want?