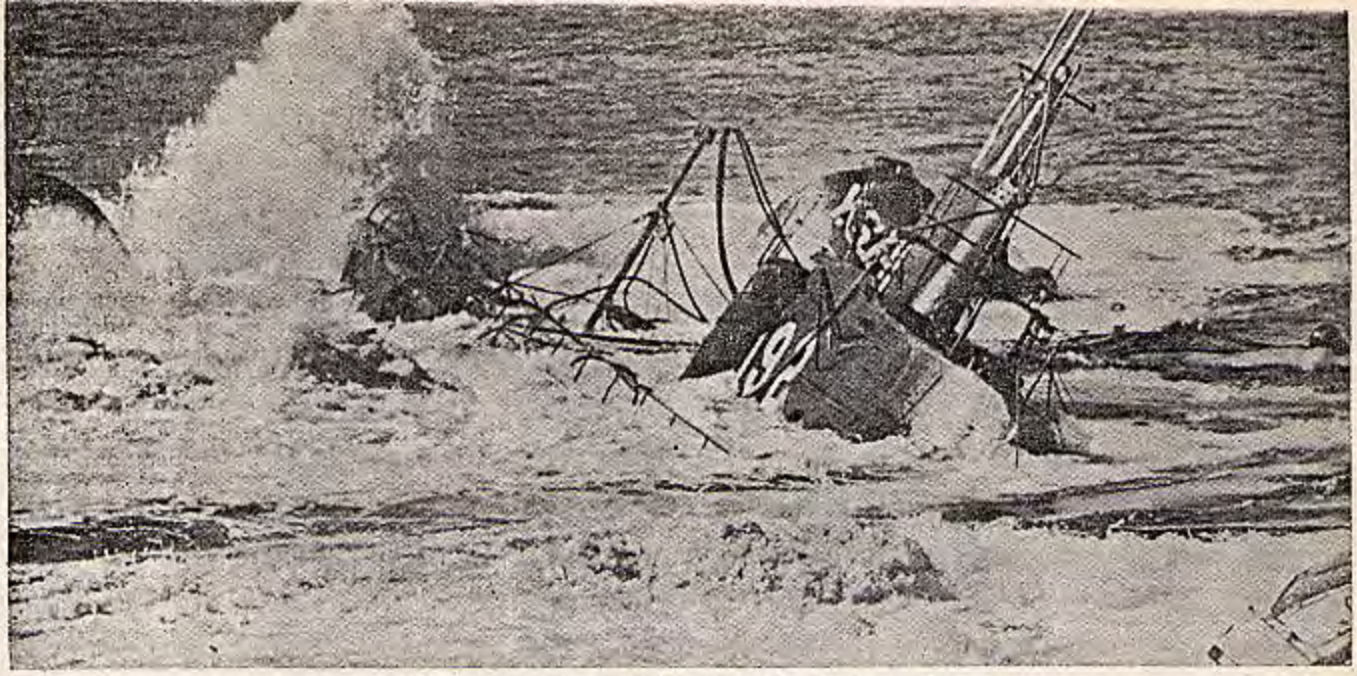


USS Squalus SS 192 being brought to the surface.

They Brought Them Up Alive

by Charles A. Lockwood and Hans Christian Adamson

Even today, when submariners swap yarns about the triumphs, tragedies, and terrors of their trade, the talk often swings to the cataclysmic career of *#192*, meaning that she was the 192nd sub built for or by the U.S. Navy. Through the thread of her life runs an awesome admixture of all three ingredients.

Some think of #192 as the **Squalus**, the submarine that, on 23 May, 1939, sank in 240 feet of water off Portsmouth, New Hampshire, with a loss of 26 men. But 33 aboard her were saved from the deep due to her timely discovery by a sister sub, the **Sculpin**, plus the engineering miracle known as the McCann Rescue Chamber.

Others remember *#192* not as a ghost ship retrieved from the bottom, but under her new name, the **Sailfish**. As such, she sank seven Japanese vessels aggregating 45,000 tons during World War II.

But all recall that, on 4 December, 1943, the **Sailfish**, nee **Squalus**, sank the 20,000-ton Escort Aircraft Carrier **Chuyo**. Among those who drowned, as the **Chuyo** went down, were 20 crewmen of the **Sculpin**. They were en route to prison camps in Japan following the sinking of their submarine. In such coin, by the irony of fate, *#192* repaid her obligations.

The **Squalus** was cradled at the Portsmouth Navy Yard, which actually is in Kittery, Maine. Submarine construction began in this venerable installation in 1915 when the *L-8*, of 456 tons, slid down the ways. The **Squalus** (*SS 192*), of 1450 tons, was launched almost a quarter of a century later. By then Portsmouth was firmly established as a building yard, with 28 subs to its credit. The yard's reputation among submariners for the quality of its work was high.

Early on the morning of 23 May,

The Squalis later sailed as USS Sailfish SS 192.

her skipper, took the Squalus down to sea through the turbulent waters of the Piscataqua River on which the yard is located. A chill northeast wind kicked up whitecaps on the cold New England waters outside the harbor entrance, as the sub left Portsmouth Light and historic Fort Constitution to starboard. Then Whaleback Reef, with its light, passed down the port side; the Isles of Shoals began to take shape up ahead and the rock-bound coast fell away at either hand.

The Squalus was a beautiful sight as the early morning sun threw faint beams upon her through occasional breaks in the clouds. One of the new fleet submarines—which were to distinguish themselves in World War II—her 310-foot length was beautifully streamlined and her dainty forefoot rolled up thick white foam as if it were a welcoming carpet.

Standing on the bridge, Captain Naquin scanned the seas ahead through his binoculars to check on the presence of other vessels. None in sight. The day's mission was to put the sub

supervised all of the installations, he was well known in building yards for his expert ability and was well liked by all hands.

Harold C. Preble was the Progress Man; trouble shooter and a tower of strength in liaison between yard forces and ship's personnel. Having been employed in the yard some 25 years, and having worked on 28 boats, he had an answer and a precedent for everything. Someone once asked him what his job was when John Paul Jones put the Ranger in commission in 1777 off those very shores.

"Just the same as today," came his genial reply. "Trying to teach something to boneheaded sailors!"

Preble was in the control room making checks with Lieutenant William T. Doyle, exec and also acting diving officer. Smith and Woods were aft in the machinery spaces, probably lending Ensign Joseph H. Patterson, Assistant Engineering Officer, a hand in checking his department. Pat had been one of my favorites when he was a midshipman at the Naval Academy and I a seamanship instructor and Officer in

"Ship rigged for diving, sir," which was relayed to the Captain.

"Send out the diving message and stand by to dive," came the reply.

The sudden raucous two blasts of the diving alarm, followed by "dive, dive" on the loud speakers, precipitated the action that all awaited. Lieutenant Doyle, in the midst of orders and checking off stations, noted that the time was 0840.

The lookouts, binoculars still slung around their necks, came sliding down the ladders and took their places at the bow and stern planes. The closing thump of the conning tower hatch was followed by the call:

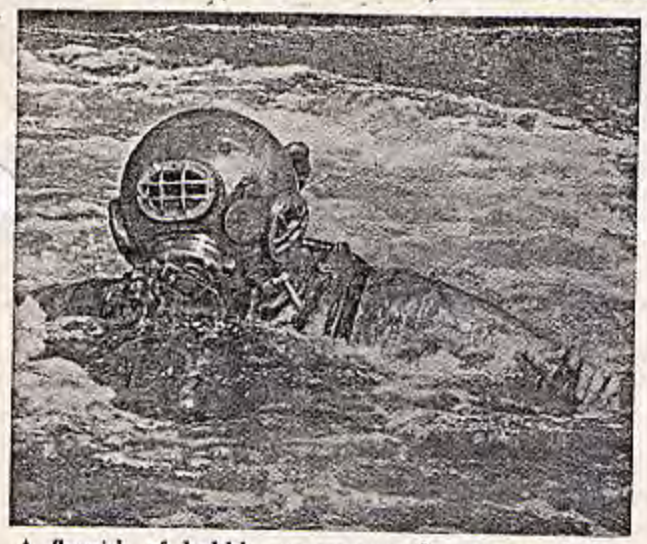
"Hatch secured."

Machinist's Mate Second Class Alfred G. Prien at the hydraulic manifold shoved the main air induction lever to the closed position, saw its green light appear on the Christmas Tree, and reported:

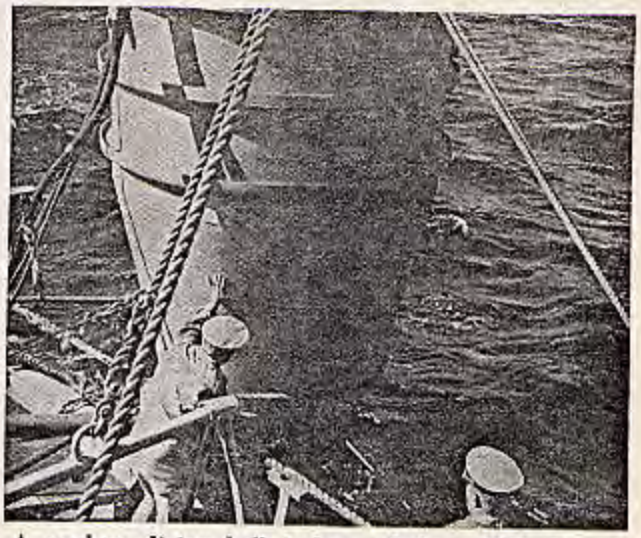
"Green board, sir."

"Bleed air," ordered Doyle. The roar of 600-pound air from the blow manifold signaled execution of his order.

Watching the barometer, Doyle saw



A flourish of bubbles announces the return of this diver as he "blows up" to the surface.



A modern diving bell is lowered from USS Coucal ASR-8 during a simulated rescue operation.

through evolutions as required before her acceptance for service in the fleet. First on the agenda was a quick dive to simulate the conditions to be met at the up-coming builder's trials; namely, 16 knots surface speed on the main engines and, within 60 seconds, submergence to periscope depth.

In addition to the 56 officers and men of the Squalus crew, there were three civilian observers on board: Harold C. Preble, naval architect; Charles M. Woods, electrician, from the Navy Yard; and Don Smith from the Cleveland Diesel Engine Division of General Motors Corporation. About half of the submarines of the new building program were being engined by Cleveland Diesel. Since Smith su-

Charge of the Track Team. A fine student, a great athlete, and a grand person, he had shown exceptional promise. Life must have looked wonderful to him that sparkling May morning, serving aboard a brand new sub at a task he loved.

"Rig for diving!" came the order from Captain Naquin on the bridge.

Soon, from throughout the boat, the Talker in the conning tower began relaying reports to the bridge: "Forward torpedo room rigged for diving," "After battery rigged for diving," and so on.

Lieutenant Doyle took the reports and moved a peg on his check-off board as each station was reported ready. Finally, with all pegs properly located, he called up the hatch:

its needle start to rise. He extended a closed hand toward the air manifold whose operator immediately shut his valve and the roar ceased. This operation is a routine check. It shows, by the rise in pressure within the boat, that all hull openings to the outside are closed.

"Pressure in the boat, green board, sir," reported Doyle to Captain Naquin who had just come down the ladder into the control room. Lieutenant (jg) Robert N. Robertson—lost in World War II aboard the Argonaut—was at the periscope in the conning tower. Lieutenant (jg) John C. Nichols, the torpedo officer, was in charge in the forward room.

Everything seemed to be going per-

(*Continued on page 42*)

Up Alive

from page 19

fectly. With the skipper and Preble intent on the depth gauge and their stop watches, Bill Doyle carried on in routine fashion. He ordered the main ballast vents closed at the proper point. He instructed the planesmen to level her off at the periscope depth—about 62 feet.

As the depth gauge hand passed 50 feet, Naquin and Preble compared stop watches.

"You made it easily," Cap'n," grinned Preble.

Showing several octaves of teeth in a broad smile, Captain Naquin turned to Doyle.

"Good work, Bill," he said. "That was a beauty."

Grins and smiles were wiped out by a cry of terror from Yeoman Charles S. Kuney, the control room Talker:

"Captain! Captain!"

With one hand pressing the headset close to his ear, the other clutching the mike, his face bloodless, Kuney yelled:

"The engine rooms are flooding, sir!"

Then came another frenzied call over the intercom from aft:

"Take her up! The induction is open!"

It seemed too fantastic to be real. No one in the control room crew had ever known such an emergency. For an instant, everyone seemed frozen in his tracks; then orders came thick and fast.

"Blow all main ballasts!"

"Blow bow buoyancy!"

"Blow safety!"

"Hard rise!"

"Close water-tight doors!"

"Close ventilation flappers!"

With the boat taking a sharp angle down by the stern, men leaped to execute the orders. Simultaneously, great volumes of water poured into the control room through the ship's ventilation ducts from aft. Oliver Naquin and his men tried desperately to surface the sub and even to keep their footing. High-pressure air roared into the ballast tanks and for a few moments the Squalus hung at a fairly even trim at 70 foot depth. Then, as the after compartments filled and motive power was lost, her stern dropped swiftly to bottom, giving the boat a terrific up angle of 35 to 40 degrees.

All the while, the green lights of the Christmas Tree gleamed, sardonically, above the hydraulic manifold. They announced to all and sundry that the boat was closed and secure!

In disciplined haste, men ran to the after bulkhead and closed the flapper valves in the spouting ventilation ducts. At the same time, Lloyd B. Maness, scrambling, slipping, falling, from the after battery compartment toward the control room door. His duty, as emergency guard at that particular bulkhead door, was to close and dog it on captain's orders and regardless of consequences to luckless men who might be locked out. And the captain's order had been given.

Maness, assisted by Arthur L. Booth, Radioman First Class, and John J. Batick, another electrician, had been taking readings of storage cells in the after battery under the deck of the crew's quarters. The latter lies just aft of the control room and connects with the engine spaces. Suddenly, the ventilation ducts sprouted full streams of water. Over the rumble of water discharging at high pressure, Maness heard the order:

"Close water-tight doors!"

He ran to the door which swung from the control room bulkhead into the crew's quarters. Reading it, he released the latch and turned to close it from the control room side. Due to the up angle on the submarine, the heavy water-tight door was just so much dead weight of metal. Maness was no Hercules, but desperation strengthened his straining muscles.

"I had partly closed the door," Maness recalled, "when several men shouted from behind me. They yelled, 'Keep it open, for God's sake, keep it open!' Orders are orders, but I could not just stand there and see them drown. I let the door swing back to allow five of them to slip through. Last man—and he made it by just an eyebrow—was Bill Isaacs, the ship's cook. Batick never made it out of the battery well where he was working. But Booth was on hand."

There was no one else in sight nor was there time to think of others who to be closed to save the control roo and perhaps the whole ship. He wre tled it shut and dogged it tight.

"I have the utmost sorrow for m shipmates who died," said Maness a terward, "but I would not hesitate do the same thing, if similar circun stances required."

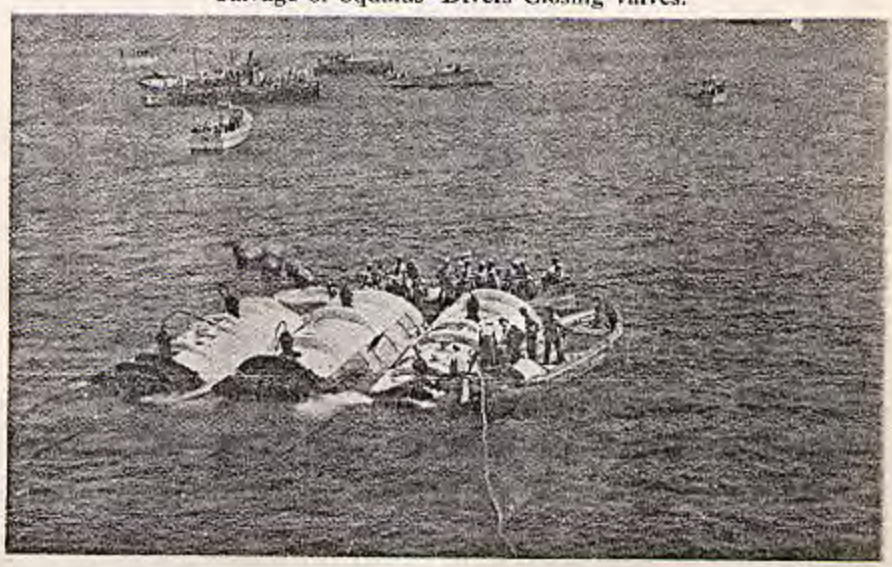
In the forward battery spaces, l cated under the officers' quarters, Chi Electrician's Mate Lawrence J. Gain and Allen C. Bryson, Machinist's Mat Second Class, were about to take ce readings in the battery well. Their a tention was drawn from the task hand when they heard the Talker o the battle telephone in the captain cabin shout:

"The engine rooms are flooding. Th main induction is open!"

Gainor, with years of submarine e perience behind him, was not man to be stampeded by emergencie The dimming of the lights plus th low voltameter reading on the aft bulkhead showed a dangerously hig rate of discharge. This, combined wit the bad angle down by the ster decided Gainor upon action. The wat must have shorted the main motors after battery and that would mean fi and possible explosions. Battery disco nect switches must be thrown at onc These were located at the after end the battery under the deck. To reac them a man had to crawl along stri of planking on top of the cells—a he of a place to be caught if electric fires started.

Without a word and without moment's hesitation, Gainor dive down the open manhole in the batter deck, worked his way aft, and grabbe the handle of the positive disconne switch. The electric arc, when h jerked it open, so blinded him that h could hardly find the second switc

Salvage of Squalus—Divers Closing valves.



thereby may have saved the lives of the control room personnel. Had they been cut off from the escape trunk in the forward torpedo room, they would have had recourse only to a danger-fraught escape from the conning tower with the Lung, under the terrific pressure of 240 feet of water.

The situation in the control room was desperate. It was crowded with men. Many of them shivered in wet clothes. Water sloshed on the slippery, upslanted steel deck. Everyone hung onto something solid. All lighting from the batteries was gone. In the flashes of light from hand torches and battle lanterns, the room looked like one of the less desirable corners of Dante's inferno.

Amazing as it may seem for men facing death in the dark at 40 fathoms, there was no sign of panic. Oliver Naquin, grasping the handles of No. 1 periscope for support, weighed the qualities of his shipmates and did not find a single man wanting.

Naquin found no trouble in establishing voice contact with Lieutenant Nichols in the forward torpedo room. The latter reported that all was well and all hands forward were safe. But communication with the after compartments was dead and so, undoubtedly, were the 26 men who had been caught there. This conclusion was largely prompted by the ship's cook, William Isaacs, last man out from aft. He explained that he had just come up into the galley from the cubicle of a storeroom beneath it when he heard what sounded like air escaping.

"I stuck my head out of the galley to take a look-see. Water was everywhere. I ran aft to the door of the engine room. The door was closed but not dogged down. I looked through the eyeport in the door. I saw a solid sheet of water pouring down from the main engine induction duct. There was no one in sight in the engine room. Only seconds had passed, and yet I stood in water, knee-high and rising. I reached the control room door just as Lloyd Maness was about to slam it shut."

That seemed to answer the question with respect to the situation aft. Another answer—as to what had caused the deluge—came with a crash when the hydraulic relief value popped open. Oil and water poured into the control room until the manifolds were closed. Naquin and Doyle, after a brief conference, decided that the fatal flooding had been caused when the main induction valve's hydraulic system did not close the 31-inch duct as the sub made her dive.

The Squalus, as though weary of the struggle, settled slowly down to bottom. She came to rest on an even keel with an 11 degree up angle. Naquin tanks. But, with the after compartments flooded, that would be futile. It would only waste the diminishing supply of high-pressure air—air that might become a vital need for breathing later on.

He turned to Gunner's Mate First Class Eugene D. Cravens and ordered:

"Fire a red smoke rocket."

To the Talker he said: "Tell Mr. Nichols to release the forward marker buoy and keep its phone manned."

On this tenuous hope of establishing communication hung the sole chance for rescue before air, oxygen, and soda lime were exhausted for the 33 men still alive in forward torpedo and control rooms.

Triton SSRN 586

Rear Admiral Cyrus C. "Cy" Cole's last sea duty had been Commander Submarine Force, U.S. Fleet. In 1939 he was commandant of the Portsmouth Navy Yard. On this fateful May morning, the admiral entered his office in the stately old Administration Building promptly at 0900. He did not know it then, but this day, and more to come, was to be one in which his special awareness—of procedures, possibilities, and hazards attendant upon every phase of submarine operations—would be needed.

Admiral Cole, who had a son, young "Cy," in a West Coast submarine, had no sooner seated himself at his desk than Captain William F. Amsden, entered. As Captain of the Yard, he came to discuss matters of current importance. At the conclusion of their conference, Captain Amsden said:

"Squalus made her diving signal at 0840, Admiral; said she would be down for an hour. She's operating south of the Isles of Shoals."

"Thank you, Amsden," replied Cole. "Tell Curley [his aide] to let me know when she surfaces."

Shortly thereafter, Lieutenant Commander Warren D. Wilkin, commanding officer of the Sculpin, came in to request permission to proceed on duty assigned. Sculpin, which had completed her trials and outfitting for sea, was proceeding on a shakedown cruise to South American ports via Panama. She was scheduled to shove off at 1130.

"Good luck to you and to your ship, Wilkin," said the Admiral, shaking hands. He added, smiling, "And don't forget to bring her up the same number of times you take her down."

"Thank you, sir," replied Wilkin, with a broad grin. "I won't have any trouble remembering that, Admiral."

Squalus to report surfacing, but no such report came in. Lieutenant Commander Curley directed the yard radio station to call her. When she was almost an hour overdue, the Admiral could no longer conceal his anxiety. Curley reported that the radio station was unable to raise the Squalus.

Had her radio transmitter been disabled?

The Coast Guard, when contacted, reported that no submarine was in sight from their station on the Isles of Shoals.

Admiral Cole, his face grave, jammed his cap on his head, crossed the common to the sea wall abreast the Sculpin, and called for the captain. Wilkin hurried across the gangway. The admiral voiced his apprehensions. He director Wilkin to get under way at once, and to keep a bright lookout for the Squalus while passing through her diving area.

"Aye, aye, sir," acknowledged the Captain. He saluted, turned toward his boat, and hailed the officer-of-the-deck with:

"Stand by to get under way. Single up all lines."

Back in his office, Admiral Cole called for the heads of all departments and ordered the yard tug Pena-

tain R. S. Edwards, commanding the Submarine Base, New London. He was a submariner from the days of the C-boats and destined to be Chief of Staff and strong right arm for Fleet Admiral King in World War II. Instantly, Edwards promised to put the old reliable rescue vessel **Falcon** on the alert. Admiral Cole cold not have enlisted the aid of a smarter or more able man than Edwards.

As Admiral Cole made his New London call, department heads gathered in his office. He was fortunate in having in his command naval constructors such as Commander McKee and Lieutenant Commanders Floyd Tusler and Armand Morgan. All were thoroughly experienced in submarine and Rescue Chamber design and construction. In an emergency, they would be towers of strength. Captain Greenlee, the Industrial Manager, while new at the submarine game, had a vital interest in the safety of the **Squalus**, for Ensign Patterson was his son-in-law. Captain Amsden, not a submariner, was a hard-bitten tin-can sailor and expert ship handler.

"Gentlemen," said the Admiral, "the **Squalus** is more than an hour overdue on her surfacing dispatch. She dove about five miles south of the Isles of Shoals Light. If she's had an accident there, we are in bad trouble. The depth is 200 or more feet. The **Sculpin** is looking for her, trying to contact her by sonar. So far, no success.

"Your job now is to see that everything in your departments pertaining to rescue or salvage is ready for immediate use. I will contact you at once when further action is necessary."

With the forward marker buoy released and a smoke rocket fired, there was nothing left for Naquin and his 32 surviving shipmates to do but to try to keep warm and conserve oxygen, air, and soda lime. And to pray that someone would sight their buoy and get them to surface before time ran out as it had for the lads in the **S-4**. As a last resort, they could escape with the Lung. But they would be groggy after a long wait in bad air. Dangerous, too, was the terrific cold of 35 degree water,

Tullibee SSN 597

plus the 107 pounds pressure per square inch which they would have to withstand. Chances for survival in that direction were slim.

In his calm, unhurried way, Naquin made his dispositions for what might be a long wait. He divided the survivors into two groups—15 in the torpedo room with Nichols, 18 in the control room with Naquin and Edwards.

He spoke briefly to his own group.

"Well, men, as you know, we are on bottom with everything flooded aft and the high induction open. We can't possibly surface by our own efforts.

"We have to wait till someone contacts us, sends a diver down to close the main induction valve, hooks up air hoses to the compart salvage lines, and blows us to the surface. It shouldn't be too long a wait. **Sculpin** is passing through this area about noon.

"Meanwhile, keep quiet. Breathe lightly. No talking. Save your flashlights."

He passed similar instructions on to Nichols by intercom and added:

"I want you to be ready to outline the entire situation the instant we have telephone contact. Say the main induction is open and all compartments aft are probably flooded. No communication with them. I suggest that divers close the main induction and hook up salvage air hoses so that the ship can be blown to the surface. Give our heading and depth."

In the torpedo room, the lads were so calm and unexcited that not everyone was convinced the emergency was real. Nichols actually had to tell two Filipino mess attendants, huddled together in a top bunk, to "pipe down." They were whispering in their native Tagalog, with occasional giggles. One was telling the other it was all a drill. He had seen one like this in a West Coast submarine. There they had stayed down all night while the ships up topside practiced sending down the Rescue Chamber.

Nichols felt real surge of pride in the cool reaction of his whole unit as he explained that this was not a drill. He was also thankful that no one was injured when the **Squalus** took that breath-taking up angle. He had been ready to load a drill torpedo at the time. Only quick work saved some of his boys from being crushed by 2000 pounds of steel on a rampage.

Naquin's next consideration was to arrange an adequate supply of air and keep it purified. Soda lime was spread thinly on any available flat surfaces and stirred occasionally to keep it working. Oxygen was released when the air seemed to be getting thin. Whenever the oxygen content in the air decreases appreciably, men tend to breathe more rapidly and to pant with the slightest exertion.

The galley and its provision storage underneath the mess room deck were flooded. There was a few odd cans of food, condiments, and crackers in the officers' pantry in forward battery. Otherwise, the only provender available was canned emergency rations.

they might be rescued, Naquin did no overlook the Rescue Chamber metho Since the completion of this new devic in 1931, rescue vessels similar to th **Falcon** had been stationed at all sub marine bases. Each was equipped wit a Rescue Chamber and drills were hel at regular intervals. In these exercise men were actually taken out of a sub marine lying on bottom and brought t the surface. The forward and afte torpedo room escape hatches of th **Squalus** were equipped with seat around the combing on which th Chamber could position itself.

Actually, this approach would requir much less time and fewer diver than closing the open duct, unwaterin the boat with salvage air, and blowin it to the surface. Only one diver had t descend and shackle the wire down haul cable onto the pad-eye on the to of the escape trunk hatch. After that the Rescue Chamber would haul itsel down its cable by means of an air driven motor and winch. These wer fed air from the rescue vessel. If use on the Squalus, this would be the firs time the Rescue Chamber was em ployed when the stakes were life an death. Many things could go wrong Heavy weather might make any divin impossible.

Ethan Allen SSBN 608

Thoughts of their shipmates and bud dies in the spaces aft of the contro room and probably dead must hav been depressing to the men. Naqui himself did not think about it or permi discussion of the evident tragedy aft Nothing could be done for the poo devils back there, so why let th survivors demoralize themselves b dwelling on it?

Maness, the man who managed t close the after door in the control room later said:

"No one was excited and everyon was living in hopes that we would b found.'

And so time dragged on, punctuate only by the occasional firing of a re or yellow smoke rocket. The suppl was small. They could not afford to fir too many, too rapidly.

On the bridge of the **Sculpin**, abov the new shiny white hull number 19 painted on the sides of her connin tower superstructure, Captain Wilki and his bridge watch kept their eye peeled as they swept the sea—ahead to starboard, and to port—for any sig of the **Squalus**. The lookouts in the railed-in platforms on the periscop shears had their binoculars constantl to their eyes. The missing boat was a

exact duplicate of the Sculpin and bore the hull number 192.

The hour was well past noon. So far the search had been fruitless. Sonar men who manned the Sculpin's listening gear had heard nothing from her.

The professional quiet that reigns on a man-o-war's bridge seemed charged with the intensity of the watchers. It shattered like glass when the port lookout shouted:

"Red smoke rocket, sir, just off the port bow—about a mile ahead!"

As all eyes swung to the bearing indicated, Wilkin ordered flank speed. Soon a sharp-eyed lookout sang out:

"Marker buoy dead ahead about 500 yards."

Thresher SSN 593

In a few moments everyone saw it bobbing up and down in the choppy sea. It was unmistakably one of the orange-colored, can-shaped marker buoys carried by submarines.

As the Sculpin drew closer, Wilkin slowed, stopped and finally backed his engines to bring the sub dead in the water abreast the marker. Engines were then stopped and the anchor eased down to bottom. Now the lettering on the brass plate atop the buoy could be read: "Submarine Sunk Here. Telephone Inside."

Men with lines and a grapnel were on the bow and Wilkin ran down to supervise the retrieving of the buoy and to be on hand to use the telephone housed inside it.

From the releasing of the marker buoy and the first rocket, Nichols had manned the telephone receiver. A short while after the sixth rocket had been sent up, he, and other men in the ship, hearth the throb of propellers. Faint at first, it steadily grew until there could be no mistake. Never in their lives would the Squalus men hear more beautiful music.

Nichols, ear pressed to the marker buoy 'phone receiver, presently heard sounds as though the buoy were being grappled and hauled on deck.

Then came a voice. It was Lieutenant Warren Wilkin, skipper of the Sculpin.

Nichols reported as instructed by Captain Naquin. Concurrently, he had the skipper called to come to the torpedo room. Alas, Naquin arrived in time only to exchange "hellos" with Wilkin and then the line went dead!

It was a heartbreaking thing to have happen. Would their bad luck never take an upward turn? Still, at least they had been found. Now that must help the Sculpin definitely fix their position.

At Naquin's orders hammers and mauls were broken out. Men, both in the torpedo room and conning tower, radio call in Morse code. In relays, this hammering went on for some time, just to make sure the Sculpin had them cut in. Then silence fell again.

How long, oh Lord, how long before rescue operations would begin?

At 1240, after a seemingly interminable period of suspense-laden waiting, Admiral Cole received a signal from the Sculpin. Captain Wilkin reported his contact with the Squalus. He repeated Naquin's message, as received by way of Nichols. He gave the boat's position in 240 feet of water and reported that telephone contact had been broken. Closing with words: "Am anchored over Squalus' position," Wilkin stood by for further orders.

The Admiral's worst fears had been realized. And yet, not all hope was lost. Being a top-notch sailor, he had been on the lookout for potential trouble and had planned accordingly. Word was flashed to Washington, to Boston Navy Yard, and to Submarine Base, New London. In the Navy Department, when the Chief of Naval Operations was notified, I was summoned by Admiral William D. Leahy, then CNO. I was attached to his office as Submarine Materiel officer. He directed me to take action. Luck was with me. I succeeded in getting Momsen, Officer in Charge of the Diving School at Washington Navy Yard. With a master diver, Chief Metalsmith James H. McDonald, and two diving specialists, Lieutenants O. D. Yarborough and A. R. Behnke of the Medical Corps, Momsen took off in an amphibian plane early that afternoon. They reached Admiral Cole's office at about 2000 that night. Commander Allan McCann planed out of Washington later in the day with Lieutenant Thomas L. Willoman (M.C.) and a dozen Navy divers. Fog forced them down at Newport. Driving at racing speeds in cars accompanied by police escorts, McCann and his party reached Portsmouth about midnight.

In New London, the Falcon, now commanded by Lieutenant George A. Sharp, was having an upkeep period. Nevertheless, 1 hour and 20 minutes after she got the order, the Falcon, with the Rescue Chamber on board, was under way. Lieutenant Charles W. Shilling, Medical Corps authority on the bends and other divers' maladies, from the Submarine Escape Training Tank, was aboard. Captain Edwards, in the old destroyer Semmes—target ship for submarine torpedo practices—followed and passed the Falcon shortly. He radioed ahead requesting the Cape Cod Canal authorities to keep the channel clear for emergency passage of his two ships.

veteran of the S-51 and S-4 disasters, headed for the Isles of Shoals. Coast Guard vessels and aircraft rushed to the scene. The new 10,000-ton cruiser Brooklyn raced from New York Navy Yard, driven at her full speed of 32 knots by her 100,000-horsepower engines, with thousands of feet of spare high-pressure diving hose.

As 23 May slipped into the past, the small hours of a new day dragged on at snail's pace aboard the Squalus. Due to extreme cold, all hands were chattering and shivering. Every possible coat, blanket, curtain, and foul weather garment had been pressed into service. The temperature in the sub was in the low thirties. To men in drenched clothing, that could easily mean pneumonia.

chlorine gas were noted in the forward battery, so that compartment was tightly closed off. Also, the fresh water became tainted.

During the interminably long afternoon and night which followed her discovery, the Squalus kept touch with the Sculpin by messages tapped out in Morse code. The Sculpin's acknowledgments and messages were sent by oscillator. One of these latter asked how conditions were in the sunken submarine. Naquin's reply was:

"Conditions satisfactory but cold."

Toward morning, the freezing men were cheered by news that the Falcon would arrive at 0430. But, best of all, was an oscillator message from Captain Sharp of the Falcon saying:

"Fire no more smoke rocks. I am mooring over you."

While getting his ship into position, Captain Sharp sent the divers to the Sculpin to familiarize themselves with the layout of the ship. He then dropped anchors and made a four-point mooring over the Squalus. All was nearly ready to start operations when Admiral Cole, Captain Edwards, McCann, and Momsen came aboard at 0730. The sea was rough, but Atlantic weather could get much worse—and on very short notice. Admiral Cole was determined not to try to raise the submarine by unwatering her flooded compartments. That might take too much time, and time was short.

In Admiral Cole's mind, there was no question as to how the rescue of the men trapped 40 fathoms down should be accomplished. The McCann Rescue Chamber was his answer. As Commander, Submarine Force, he had observed its training operation and knew of its capabilities.

Captain Edwards, with Commanders McCann and Momsen, followed the Admiral as he picked his way through the piles of air hose, life lines and massive manila mooring hawsers. To the uninitiated, the Falcon's deck might have looked like a shambles, but everything was in its place. There was just too much gear and too many people for the tiny rescue vessel to stow properly. Another notable joined the party, Lieutenant Julian K. Morrison, an expert diver as well as training officer at the Escape Tank in New London. He was to work as Momsen's assistant, the latter having been designated as Diving Officer.

As the morning advanced, the luck of the Squalus seemed to take a turn for the better. The wind died down, the rain ceased, and the sun shone brightly. Only the ever-present swells remained to plague the diving crew. Some additional time was required to over the submarine and the diving stage rigged. But, about 1015, Martin C. Sibitzky, boatswain's mate, was ready to go down. The Falcon's boom hoisted him and his 200 pounds of suit, weighted shoes, and lead ballast over the side on the diving platform. Gripping the grapnel line which the Penacook had hooked—she hoped—to the Squalus, the diver vanished into the depths. Three minutes later, he thumped down onto the forward deck of the submarine.

The men inside her will never forget the sound of those leaded diver's boots clumping along the top of their steel-walled prison.

By sheer good luck, the Penacook's grapnel had snagged the deck less than 10 feet from the top of the escape hatch. It took Sibitzky only a few minutes to report the situation by phone and clear the severed telephone line out of the way. Then the Rescue Chamber's down-haul cable, which runs from a winch in the lower compartment down through its bottom opening, was lowered to him. He carefully shackled it into the pad-eye on top the escape trunk hatch. All was ready for the rescue.

Hammering from inside the Squalus told the diver of the elation which existed there. However, Sibitzky had no time for exchanging hands-under-the-sea felicitations. Swiftly, the line tenders hauled him up to the first decompression stage at 90 feet. His entire trip had required the amazingly short time of 25 minutes.

All hands were delighted with this auspicious start. By now, the 18,000-pound Rescue Chamber had been lowered into the sea and floated alongside the Falcon. She was held in position by an up-haul or retriever cable that ran, by way of a boom, from a winch aboard the Falcon to the top of the Chamber, where it was solidly attached. This cable was a bit of insurance should anything go wrong with the down-haul cable. The Falcon's deck

Lafayette SSBN 616

and upper works were crowded with men watching intently. Small boats and planes, full of sight-seers and press personnel, circled the ship. Admiral Cole had handled the press situation very well. This time there were no battles of recrimination. Dozens of reporters and photographers were berthed aboard the nearby cruiser Brooklyn.

McCann, Momsen, and their assistants were everywhere, checking everything. They showed no sign of the excitement which must have filled their real baptism of the Rescue Chamber into which they had put so much of their thought and labor—and in the perfection of which they had risked their lives.

Halibut SSN 587

John Mihalowski, a torpedoman, was to go down in charge of the Chamber. This was fitting, for he had participated in its earliest tests at Key West and Great Salt Pond. His assistant, Walter E. Harman, a gunner's mate, was also an experienced deep-sea diver. [Harman undoubtedly owed his life to the fact that he was on leave from the S-51 when she was rammed by the City of Rome.]

As soon as Sibitzky was hoisted aboard the Falcon, the Rescue Chamber was ordered manned. Amid last-minute instructions and good wishes from all and sundry, the two operators climbed aboard and closed the hatch.

With McCann as officer in charge and directing the operation by phone, the Rescue Chamber was trimmed and ballasted so as to retain slight positive buoyancy. The air-driven winch started to reel in on the down-haul cable and the descent began.

Thus, at 1140, on 24 May, began the first, history-making trip of this ingenious life-saving device.

The trip down was without incident. The equipment operated perfectly and the Rescue Chamber was brought to rest on the seat around the submarine's escape trunk hatch. Ballast tanks were then flooded to give the Chamber negative buoyancy and hold its gasketed bottom ring tightly to the hatch seat. The lower compartment was then blown dry and the hatch into it opened. Then, as an extra precaution, Mihalowski climbed down into it and attached toggle bars around the rim of the Chamber to pad-eyes on the submarine's hatch seat. This insured the strength and firmness of the connection to offset the pressure of possible currents or the inclination of the submarine.

There was a considerable residue of water in the bottom compartment. When Mihalowski opened the Squalus' top hatch leading down into the escape trunk, a shower of water descented into the submarine. Lieutenant Nichols, taking no chances of further mishap, slammed shut the lower hatch of the escape trunk. Mihalowski yelled down the hatch, but, getting no answer, climbed down into the truck and rapped on the lower hatch. That brought results, and soon he was passing coffee and soda lime down to the submariners.

No time was wasted in swapping experiences. Seven men, selected because they were in poorest condition, climbed up into the Chamber. As the only civilian, Preble went first. Lieutenant Nichols, acting under orders, brought up the rear. His task was to acquaint the rescuers with conditions aboard the boat. The hatch was secured, toggle bars released, lower compartment flooded and the pear-shaped bell was on its way. Mihalowski paid out the down-haul cable slowly to retard the speed of the rise.

Observers who saw the first men emerge from the Chamber after it surfaced were filled with mixed emotions: joy at seeing the men alive, plus pride and elation at the complete success of this first "business" trip of the McCann Rescue Chamber. Allan McCann literally walked on air. His favorite child had come of age. Momsen, remembering the anxious hours he had put into its development, ran Allan a close second.

Willing hands helped the wet, bedraggled Squalus men aboard the Falcon. Chilled to the bone after 28 hours of cold and dampness, they were hurried off to hot drinks, food, decompression, rubbing, medication—whatever they required. Later, they and other survivors were taken ashore aboard the Coast Guard cutter Harriet Lane.

Nichols brought with him a list of 33 known survivors. Naquin's report ended with: "Names omitted from this list probably in flooded compartments, and there is little hope of finding them alive."

The list of 26 missing, presumed drowned, was transmitted to the press headquarters in Admiral Cole's office building. It made ominous reading for many anxious hearts ashore and afloat, including the bride of Ensign Patterson.

The second trip, with Chief Machinist's Mate William Badders and Harman at the controls, lowered away at 1442. It carried a cargo of hot soup to the men below and was back at 1619 with nine passengers. The third trip, with Badders and Mihalowski as crew, started down at 1630. Two hours later they were back without mishap with nine survivors.

The fourth and final trip started down that night, at about 1930. The operators of the Rescue Chamber were Mihalowski and Chief Metalsmith McDonald. The trip down was routine. Quickly the six remaining men, followed by Doyle and Naquin, climbed up into the Chamber.

The submarine's hatch was closed, toggles cast off, ballast tanks blown, down-haul cable. Smiles and relief showed on every face. Then about 150 feet from the surface, the Chamber came to a squealing stop. The down-haul cable had evidently jammed on the winch. Backing and filling with the motor produced no results. The Chamber could move neither up nor down. The winch being in the lower compartment, there was no way of getting down to clear the jammed cable, because that compartment is open to the sea, except when seated on a submarine. So, there were ten men, eight of them in poor condition, jammed like sardines in a frigid cell halfway to the surface and survival.

Admiral Cole had run over to the nearby Brooklyn for a few hours' rest, the first he had taken since the Squalus sank. When the Rescue Chamber stuck, he was, of course, notified. In a matter of minutes, he was back on the Falcon.

"It was bad business," said the Admiral, later. "We had to get that down-haul wire free or cut it. With that done, the Chamber must be kept in a state of negative buoyancy lest it come to surface with a rush and possibly sink the Falcon—and the Chamber also.

"If the up-haul cable attached to the top of the Chamber parted due to the weight of the 10-ton apparatus, the Chamber would drop to bottom. This might sever the air hoses and that would mean the end.

"The men inside," he continued, "didn't let on that they knew how serious the situation was. They carried on a telephone conversation with us most of the time. They told us just how they wanted their beefsteak cooked. They laughed and joked with us."

McCann was in no doubt as to what should be done. Taking the phone he ordered,

"Flood your main ballast."

"Flooded," reported McDonald.

"Now," said McCann, "we will lower you to bottom and send a diver to disconnect the down-haul cable from the submarine. Then we'll hoist you to surface with the up-haul cable. Just take things easy."

"Aye, aye, sir," came the steady voice of the master diver.

The up-haul, sometimes called retriever, wire was then slacked slowly until the Chamber rested in the mud.

Chief Torpedoman Walter H. Squire was hastily dressed to go down to the Squalus and disconnect the down-haul cable from the top of the submarine's hatch.

"Unshackle it if you can; otherwise cut it," said McCann, handing him a pair of heavy cutters.

On arrival at the hatch, Squire gingiess from breathing high-pressure air (oxygen-helium mixtures were not used until later in the operation) were numbling his senses, but he remembered about the clippers in his belt, and, after a struggle, cut the cable.

The next step was to attempt to hoist the Rescue Chamber to the surface by means of the up-haul or retriever cable. But divers saw that the wire was fraying, due probably to the heavy strain put upon it when the Chamber operators were trying to clear the jammed winch. The operation was stopped immediately lest the cable part entirely. The Chamber again bumped down into the mud. The effect on the spirits of the 10 prisoners can easily be imagined.

succession to shackle a new cable to the Chamber, but they became entangled in the air and electric lines and were brought up almost unconscious.

The situation was now desperate. Risking more divers' lives on a job on which two excellent men had failed appeared to be useless. But the Chamber had been down about four hours. Some more productive action must be taken.

McCann and Momsen felt that they must risk the buoyance method assisted by gentle manual hand-over-hand hauling on the damaged cable. This mean lessening the weight of the Chamber and increasing its buoyancy by blowing water out of its ballast tanks. A tricky operation. If too much weight was blown, the Chamber could rise with the speed of a rocket. Admiral Cole and Captain Edwards agreed.

The proposed procedure was outlined to McDonald and Mihalowski. With prayers in their hearts, the rescue group went into action. Half a dozen men took a strain on the cable: The Chamber did not move.

"Blow main ballast for 30 seconds," McCann ordered.

Still no movement. They dared not heave too strongly for fear of parting that last remaining strand. More water had to be blown out of the ballast tank in order to lighten the Chamber.

"Blow 15 seconds more."

At last, after one more blow, the cable came slowly over the rail as the men exerted a gentle but steady pull. When the damaged part of the cable was got aboard, things moved faster. The jubilant seamen fairly ran away with the wire. With a ripple and a sloshing of water, the top of the Chamber broke into the light of the floodlamps that were suspended from the Falcon. A rousing cheer went up. It was echoed aboard the Brooklyn and other ships anchored nearby.

"I don't think I ever in my life saw a more pleasant sight than that bell when it broke water," said Admiral Cole. To which scores of weary, sleepless, anxious men could add a hearty "Amen."

Skate SSN 587

With a new cable, the Rescue Chamber went down to the after torpedo room hatch that same afternoon. When the veteran operators—Badders and Mihalowski—got the hatch open, no hail greeted them from below, only a rush of foul entrapped air and then water. The after compartments of the a soul had survived.

Twenty-six died, it was true, but 33 were saved—saved by a wonderful apparatus. The Submarine Service may well be proud of the fact that the Chamber was invented and developed by submarine men and submarine naval constructors. Heartening, too, were the effective results from the first do-or-die tests of submarine distress rockets and the phone-equipped emergency buoy. Both had served their purposes brilliantly even if the phone connection had been cut short by the parting of the cable. After all, Nichols delivered his all-important message.

The thrilling success of the Squalus rescue operation was hailed throughout the nation and the world. The heroic feats of the divers and the operators who had risked their lives to save others were likewise applauded. Well-deserved promotions and decorations were awarded. Badders, Mihalowski, and McDonald received the Congressional Medal of Honor.

Salvage operations by the use of pontoons, under the direction of Lieutenant Commander Floyd A. Tusler, began immediately. At the end of 113 days from the date of her sinking, the Squalus was berthed at the Portsmouth Navy Yard, a scarred and rusty tomb of the 26 men whose bodies were still within her.

The Court of Inquiry place the blame for the disaster on "a mechanical failure in the operating gear of the engine induction valve." Also, it found that "no offenses have been committed and no serious blame has been incurred."

"Lieutenant Naquin," the Court stated, "displayed outstanding leadership during the sinking of the U.S.S. Squalus and rescue of her survivors."

The submarine was placed out of commission. Her officers and crew scattered to various bases, ships, and boats. After complete overhaul and repairs, the Squalus was recommissioned in May, 1940, with a new skipper, a new crew, and a new name: the Sailfish. Evidently, the Navy Department felt that changing her name would help people forget the tragic past. However, her new crew frequently referred to their boat as the Squailfish.

To Oliver Naquin, now Rear Admiral (Ret.), it is a matter of keen regret that he did not receive command of his beloved submarine when recommissioned. Perhaps the powers-that-be felt that he needed a change of scene and a chance to forget. However, in leaving submarines, Naquin did not enter a field of service lacking in excitement. On 7 December, 1941, he was engineer officer of the battleship After repeated torpedo hits from enemy planes, his ship settled on the bottom in the shallow waters of Pearl Harbor.

With many of her sisters, including the Sculpin, the Sailfish fought World War II in the Pacific. Her record was excellent. She sank seven enemy ships. They included such high-priority, difficult, and dangerous targets as an aircraft ferry and the escort carrier Chuyo. If there had been a ghost aboard the Sailfish it seemed amply exercised by the valor of her officers and men in sinking 45,000 tons of Japanese shipping. And yet—did some sort of malignant and malicious spirit survive aboard the boat? The Fates that made her send the Chuyo to the bottom would point in that direction.

On 19 November, 1943, the Sculpin—which had spotted and stood by the Squalus off Portsmouth—was on patrol in the Caroline Islands. As the flagship of a four-boat wolf pack covering the Tarawa invasion, the Sculpin carried Captain John Cromwell, the pack commander. She sighted and attacked a fast convoy, was counter-attacked and mortally damaged by depth charges. In desperation, her skipper, Commander Fred Connaway, surfaced and pitted his lone 3-inch gun against the many heavier guns of a Japanese destroyer. It was a forlorn hope, and Connaway, with most of the men on topside, was swept away. With the ship hulled and sinking, Lieutenant George E. Brown, senior surviving officer, ordered Abandon Ship.

Captain Cromwell said, "Sorry, Brown, I can't go with you; I know too much to be taken prisoner." John Cromwell voluntarily went down with the ship.

Seawolf SSN 575

Forty-one prisoners from the Sculpin were taken to Truk, where they boarded two aircraft carriers for transportation to Japan. As Destiny directed, 21 of these men were put aboard the Chuyo. Only one of them survived the sinking of that vessel two weeks later, on 4 December, by torpedoes from the Sailfish.

This ends the saga of SS 192. In submarine history, she stands out vividly against a compelling background of tragedy and triumph that is, uniquely, her own. No wonder, then, that submariners, when they swap yarns about their trade, dwell on her strange career. Some recall her as the Squalus. Some knew her as the Sailfish. But all remember her.