
A DEEP ESCAPE

Three hundred feet down, deeper than most divers were equipped to go, the World War II-era submarine *Archerfish* prepared to release two passengers into a dim sea with little more than the breath they held in their lungs. A spate of foul weather and strong currents had complicated some trial runs, but now, early on the first day of October 1959, the sun came up with just a few wispy clouds on the horizon. In calm water, the sub set out from the U.S. Navy base at Key West, heading southwest into the Gulf of Mexico. The mission's unusual aim was to prove that a trapped submariner could reach the distant surface on his own—and live to tell about it. No escape quite like this had ever been made, and not everyone was convinced it was a good idea to try. But one of the passengers, Commander George Bond, a Navy doctor, had argued for attempting to make the escape. As was typical of him, he had also argued that he should be the one to do it.

George Bond was forty-three, though his soft features and jowls made him look older. He was a couple of inches over six feet, barrel-chested and thickly built, with close-cropped salt-and-pepper hair and owl-like dark eyebrows. Bond had joined the Navy just a few years before but he already had a reputation for being a maverick with a fondness for showboating. He preferred not to be photographed without his pipe. Daring, gregarious, kind-hearted, even his detractors found him difficult not to like. He often lapsed into the disarming Appalachian brogue of the clients he had served not so long ago as a country doctor. His resonant baritone, noticeably seasoned somewhere south of the Mason-Dixon line, had the soothing, unhurried

intonation of a storyteller sent from heaven. It was a voice that had served him well as a lay preacher back home in the Blue Ridge Mountains.

Dr. Bond had recently become head of the Medical Research Laboratory at the U.S. Naval Submarine Base at New London, Connecticut. Most American submariners got their specialized schooling at the base, which was named for New London but was actually in neighboring Groton, on the eastern bank of the Thames River. Scientists employed at the base's medical lab concerned themselves with a variety of physiological puzzles such as those related to submarine escape. In the early years of the U.S. submarine service, at the beginning of the twentieth century, there was no procedure, and virtually no hope, for submariners trapped in downed subs, even in relatively shallow water. Safety features in the early boats were primitive at best, and gradual asphyxiation or drowning were often the survivors' macabre options. But after three submarines sank in the 1920s, newer American subs were fitted with the equivalent of emergency exits, known as escape trunks. By the late 1930s a drum-shaped pod called the McCann Rescue Chamber was devised that could be lowered like an elevator from a surface ship and, with the aid of divers, locked on to the sub's escape hatch. But if the chamber couldn't reach a sunken submarine, the sailors inside needed something like an underwater version of a parachute to escape on their own.

Several methods evolved to enable a sailor to bail out of his doomed vessel and get himself to the surface. From the *Archerfish* Bond wanted to test one that had been borrowed a few years earlier from the British called "buoyant-assisted free ascent," or just "buoyant ascent." It was also known less formally as "blow and go." Holding your breath underwater might feel like holding on to life, but not if you're swimming to the surface after inhaling a lungful of highly compressed air. The final breath taken in the escape trunk just before leaving the *Archerfish* would expand from something like five quarts to nearly thirteen gallons en route to the surface, a phenomenon explained by Boyle's law, named for the seventeenth-century Irish physicist Robert Boyle. Assuming temperature remains the same, as pressure increases, volume decreases; as pressure decreases, volume increases. So it is that a lungful of compressed air inhaled at any depth will expand tremendously as a person approaches the surface and the surrounding water pressure gradually drops. A submarine escapee, therefore, had to learn to exhale forcefully and consistently, like an exuberant tuba player, all the way to the surface—a strange sensation that took some getting used to.

The gravest danger during an escape to the surface is from an arterial

gas embolism, or “getting embolized.” If not adequately exhaled, the expanding air will backfire into a pulmonary vein, sending emboli in the form of tiny bubbles to the brain. The consequences could include seizures, slurred speech, loss of vision, loss of muscle coordination, unconsciousness, even instant death. The human lungs aren’t wired to the autonomic nervous system, so even if perilously overinflated they won’t set off any synaptic sirens and zap the brain with pain signals the way other body parts do, like a finger on a hot stove. From three hundred feet down if you didn’t blow and go just right, you could kill yourself as surely as if you stayed on a stranded submarine.

Prior to Bond’s attempted escape from the *Archerfish*, about the deepest experience that he or anyone else had with the blow and go technique came from inside the escape training tank. At New London the tank towered above everything else on the wharf and was the main attraction on base tours. Esther Williams, “Hollywood’s Mermaid,” once came to have a look. For anyone going through submarine school, the tank held the promise and fear of a rite of passage. Eleven stories high, it resembled a silo that might have been transplanted from a farm in the surrounding Connecticut countryside. But it was taller than a silo and instead of a simple dome, it was topped with an octagonal cupola, which gave it the look of a misplaced airport control tower.

Built into the sides of the tank were several airlocks similar to actual submarine escape trunks. A sailor could pass from the airlock into the tank water as if making a real escape, and practice reaching the surface unharmed. The deepest entry point was near the bottom of the tank, at almost 120 feet. Most trainees made their required mock escapes from a lock at fifty feet, but the confluence of physics and physiology is such that a blow and go escape begun at that depth could be every bit as life-threatening as one from the bottom of the tank. During training sessions half a dozen instructors hovered in the tank water, trailing each trainee like pilot fish. A doctor was on duty, too, in case of an accident, and Dr. Bond became a proficient escape artist himself.

Sailors often asked whether it would be possible to blow and go from, say, 240 feet, the depth at which the USS *Squalus* sank during a test dive off the coast of New Hampshire in 1939. The best answer that Dr. Bond or anyone could give was that, yes, in theory, you should be able to safely blow and go in the open sea from a depth of at least three hundred feet or so—but no one had ever done it. Bond decided it was time to put theory to the test.

After receiving the approval of the rear admiral in command of the submarine force, U.S. Atlantic Fleet, Bond planned to stage a series of progressively deeper open-sea escapes, culminating with one from more than three hundred feet. Bond needed a buddy to make the escape with him and chose Cyril Tuckfield, a chief engineman recently reassigned to a submarine out of Key West after working for several years as a training tank instructor at New London. "Tuck," as the good-humored sailor was known, was thirty-eight and a World War II submarine veteran who was also trained as a diver. He had an infectious, face-crinkling grin and was unique among the enlisted men for his aversion to using foul language. Tuck's father once heard him cuss during a sandlot baseball game, gave his boy hell for it, and young Tuck never swore again.

As a former training tank instructor, Tuck understood the peculiar dangers of this deep escape as well as anyone but was delighted to be asked to accompany his friend Dr. Bond. The fact that a medical officer like Bond would put himself on the line was one of the things that endeared him to enlisted men like Tuckfield. Indeed any number of sailors would have gladly volunteered to join Bond for the escape from the *Archerfish*.

Once the two men locked themselves into the escape trunk, with the sub at a depth of just over three hundred feet, they would have at least as much to worry about as someone parachuting from an airplane. Their procedures and timing would be critical. Pressure inside the trunk would approach 150 pounds per square inch, about ten times as great as inside the submarine, where the air is kept close to 14.7 pounds per square inch, the same atmospheric pressure as at sea level. The elevated pressure would enable them to make the transition from the submarine's escape trunk into the sea. That pressure would also expose them to physiological dangers including one commonly known by deep sea divers as "the bends." Ugly aches and pains, paralysis, even death await the diver who ascends too quickly to the surface—but only after having spent enough time at depth for gases to seep into the blood and tissues. To avoid getting "bent," as divers say, Bond and Tuck knew they would have strict time limits at each step of their escape. They would need about five minutes to prepare the trunk and flood it shoulder-high with seawater. Then they'd open an air line inside the trunk and within another minute, as air noisily whooshed in, the pressure inside the remaining air space would match the pressure outside. At that point, according to prior calculations, they would have a maximum of three minutes and fifteen seconds to reach the surface. Any longer than that and they would risk getting bent.

Throughout this process Bond and Tuck would also have to be alert to the symptoms of breathing nitrogen under pressure. Four-fifths of air is nitrogen, but when inhaled at high pressures the omnipresent gas could instantly put a diver into a giddy haze similar to drunkenness, and that could cause him to make fatal mistakes. Largely because their time at the full depth of 300 feet would be brief, Bond and Tuck were less likely to be dogged by the mental haze of nitrogen or the bends. Getting embolized posed the greatest danger in making this deep escape. Once they began their ascent, sufficient blowing, all the way to the surface, was the only thing that would keep them from getting embolized by tiny, backfiring bubbles from their lungs. In the training tank, to avoid potentially deadly cases of embolisms, instructors would routinely jab a trainee in the gut to make sure he was blowing forcefully enough, and if anyone's ascent ever looked problematic, they would pull the ascending man into one of several air pockets built into the wall of the tank. In the open sea, of course, safety pockets did not exist.

On board the *Archerfish* that morning, neither man ate breakfast. Bond thought it would be wise to keep their stomachs empty, in case of an accident. They drank only black coffee. Bond puffed his ubiquitous pipe and Tuck smoked a cigarette as they mulled over the plan for their impending escape. It would have been like Bond, a consummate raconteur, to recall his memorable introduction to the hazards of making an escape. It had come five years earlier, at the Pearl Harbor submarine base, where Dr. Bond was first assigned soon after completing his Navy schooling for submarine duty and deep-sea diving. At Pearl Harbor Bond spent much of his time around the escape training tank, a replica of the tank at New London that was built a couple of years later and survived the infamous Japanese attack.

There were no guarantees with escape training, as Bond learned one Friday in the fall of 1954 when he met a fellow Navy doctor named Charles Aquadro. Charlie Aquadro, whose very name suggested a love of the life aquatic, was the medical officer with an Underwater Demolition Team, the progenitor of the Navy SEALs. Aquadro was an experienced diver, fourteen years younger than Bond, lean and athletic, raised and educated in Kentucky and Tennessee. He was polite but playful, with a disarmingly gentle demeanor and a ready smile—a boyish Southern gentleman. The two doctors hit it off immediately, at least in part because of their common Southern roots.

Aquadro's UDT group was soon scheduled to make practice escapes

from the bottom of the training tank at 120 feet. Bond watched the UDT drill as Charlie Aquadro took his turn, blowing a steady stream of bubbles, looking good all the way up. Aquadro reached the surface, climbed out of the water, stood up on the deck around the top of the tank, said a few words, seemed to be fine, and then collapsed, unconscious. Aquadro had somehow embolized himself. As Dr. Bond knew from his recent training, the surest remedy for quashing menacing bubbles, the cause of the embolism, is to put the ailing person back under pressure.

The group lugged Aquadro's limp body into the pressure chamber that had been installed for just such emergencies. Bond stayed inside with Aquadro. Those outside sealed the hatch and flooded the chamber with a whoosh of compressed air to raise the pressure to that at 165 feet, a standard treatment protocol. Aquadro regained consciousness, but couldn't see a thing. You could never be sure where a bubble blockage would occur or what effect it would have.

Aquadro's sight gradually returned. As the hours passed, the pressure inside the chamber was eased back to surface level. They were closing in on the surface when Aquadro went into severe convulsions, then stopped breathing. Those working outside the chamber cranked up the pressure again, hoping to quash the bubbles that were clearly short-circuiting Aquadro's brain. Temperature rises when a gas is compressed, so the air inside the little chamber was as hot as a desert summer. Bond sweated it out with Aquadro on the hyperbaric roller coaster for almost forty hours. By Sunday morning, the two men finally staggered out of the chamber, their camaraderie bolstered by the wild ride.

Their paths would cross many times. In October 1959 Lieutenant Commander Aquadro was the submarine squadron medical officer at Key West and among the safety divers assigned to watch as Bond and Tuck attempted their deep escape. Aquadro and the rest of the support crew sailed to the designated escape site, about fifteen miles southwest of Key West, on the USS *Penguin*, a submarine rescue ship equipped with a pressure chamber.

At nine o'clock in the morning, after a three-hour ride, the *Archerfish* settled near the bottom at 322 feet. That put the outboard door of the escape trunk at 302 feet, deep enough to prove the point—if it could be proved. A messenger buoy was released to let the *Penguin* crew know where Bond and Tuck would appear, barring any significant currents or catastrophes. The two men approached the forward torpedo room and the ladder leading up into the escape trunk. Tuck gestured for Bond to go first,

part of a tongue-in-cheek ritual the two friends developed at the New London training tank.

“After you, Courageous Leader,” Tuck said.

“Thank you, Brave Follower,” Bond replied.

Each wore only shorts, a diving mask, and a Mae West—an inflatable life vest nicknamed by astute airmen who noticed that it gave them a silhouette similar to that of the buxom screen legend. Bond stashed his pipe, tobacco pouch, and a letter from his wife in a pocket of his Mae West. He and Tuck passed through the open hatch in the floor of the escape trunk, as if crawling up into an attic the size of a broom closet. They sealed the hatch behind them. Tuck then opened the valve that allowed seawater to pour in.

At sixty-eight degrees Fahrenheit, the water felt chilly as it rose around them, a palpable reminder that this escape would be for real. In the controlled environment of the training tank, the water was kept at a balmy ninety-two degrees. For several minutes the water noisily spilled in until it reached their chins. Then Bond shut the vent leading to the torpedo room. Tuck opened a valve and high-pressure air whooshed in, warming the remaining air pocket around their heads. The pressure rose fast, as planned. Bond was not surprised to feel pain in his eardrums and instinctively cleared his ears, as divers do, to spare his eardrums from sharp pain and possibly rupture as the pressure around his body rose. To clear your ears, you clamp your nose shut, close your mouth, keep the back of your throat open, and try to exhale with something like the force of a suppressed sneeze. The objective is to create internal pressure on the eardrum to match the mounting external pressure. Once the pressure is equalized, there’s no net effect on the eardrum, no painful push from either side. After half a minute, Tuck turned off the air and the trunk fell silent. Now they were breathing under pressure equal to the water pressure outside, about 150 pounds per square inch. From that moment, the clock was ticking. To test for signs of a nitrogen-induced mental haze, Bond quizzed himself on his telephone number, his middle name, and the names of his kids—*Gail, George Junior, Judy, David*. Tuck seemed to be doing fine, too.

With the pressure equalized between the flooded compartment and the seawater outside, there was no longer any great resistance on the trunk’s escape hatch. They inflated their Mae Wests and Bond pushed open the escape hatch, which was about waist high in the side of the trunk. The Courageous Leader took a last breath from the remaining air pocket. His Brave Follower did the same. Each man’s lungful of air was

now a time bomb, a massive gas embolism waiting to happen. As soon as they passed through the hatch into the darkened sea outside, they began to exhale vigorously.

Tuck grabbed hold of Bond's life vest belt so that they would stay together. In their inflated Mae Wests, they ascended briskly, like helium balloons set free on a breezy day. A valve on the Mae West allowed the expanding air to whistle out so the life jacket wouldn't explode on the way up. Like their lungs, their life jackets started out with ten times as much air as they would be able to hold on the surface. Bond raised his left arm, like Superman in flight, to help steer them in a straight line to the surface. They were rising at about six feet per second, in a great hail of bubbles.

Bond could feel his Mae West ballooning as the water pressure decreased. He worked his legs and arms slightly, checking for signs of the bends as he and Tuck made their swift ascent. They blew forcefully and steadily. The trick was to exhale enough to avoid embolizing themselves as Charlie Aquadro had done, but not so much that they ran out of breath before surfacing. They were used to the strange sensation of continuous blowing and from three hundred feet down, more than twice the depth of the training tank, that sensation was stranger still. Bond felt as though their ascent was taking an awfully long time, but he figured that was just because he had never risen through three hundred feet of water. Fortunately the current was light. At 180 feet the water turned noticeably warmer as they passed through a thermocline. Visibility improved and Bond could make out the underside of the waiting *Penguin*.

With about a hundred feet of water still between them and the surface, Tuck sensed that he had nothing left to blow. He had been exhaling like mad for more than half a minute. Experience had taught Tuck not to panic, and within another few feet the air in his lungs swelled anew and he kept on blowing. The final thirty feet or so, which should take less than ten seconds to cover, could be the most dangerous of the entire run. In those last thirty feet the volume of air remaining in the lungs would double.

Fifty-three seconds after Bond let go of the *Archerfish*, he and Tuck broke the surface. They gratefully gulped the fresh sea level atmosphere at 14.7 pounds per square inch. Of course as Charlie Aquadro's accident at Pearl Harbor demonstrated, Bond and Tuck were not necessarily all right. They might still be struck by an embolism or possibly a case of the bends, which could take hours to manifest itself. Doctors watched carefully as

the two escape artists were plucked from still blue water and raised on a diving platform to the *Penguin* deck. Still dripping wet, Bond produced his pipe, smiled, and lit up as photographers snapped his picture.

George Bond and Cyril Tuckfield received widespread praise for their daring escape. They were awarded the Legion of Merit, and their feat was noted in *Time* magazine, *The New York Times*, and their hometown newspapers. Bond had a lengthy first-person account published in *True*, a reasonably respectable men's magazine. He was also a guest on NBC's *Today* show and on *Conquest*, a new Sunday evening science program on CBS.

This was not the first time that the press had taken notice of Bond. A year before the submarine escape, in November 1958, Bond had made himself the lead subject in a series of tests to analyze possible causes of Navy pilot deaths from carrier-based jets that crashed in the sea. Using the blow and go method to escape from a sinking aircraft gave these jet escape trials something in common with submarine escapes. Dressed in full pilot gear, Bond strapped himself into a jet cockpit that had been affixed to the afterdeck of a submarine. With the sub headed down at sink rates of up to ten feet per second, Bond extricated himself, took a last breath, and swam for the surface, blowing all the way. A lengthy story in the New London newspaper, the kind of publicity that irked some of Bond's Navy colleagues, was headlined: "Cmdr. Bond Escapes from 'Aircraft' Underwater to Come Up with Answers." Bond was already in his early forties and until now he had not looked like the obvious man to come up with answers like these.

Prior to joining the Navy, Bond had developed no special interest in either ships or the world underwater. He never acted like someone eager to sign up for any kind of military service, even when so many young men of his generation were marching off to fight in the Second World War. Dr. Bond was more poet than soldier, and for a time it appeared he might be more poet than doctor. The son of a well-to-do lumberman, George Foote Bond was born on November 14, 1915, in Willoughby, Ohio. He spent much of his privileged childhood in DeLand, Florida, in his family's magnificent home filled with Stickley furniture near the offices of the Bond Lumber Company. George was not quite ten years old when his father died late in the summer of 1925, but the family could still afford a nanny, summer camps, and private schools. As a teenager at Mercersburg Academy in Pennsylvania, Bond worked on the school's monthly literary magazine and became known as the class poet. He took up pipe smoking as a

teen and developed what would become a lifelong fondness for bourbon. His nickname would not have shocked his Navy bosses. His schoolmates called him “Rebel.”

After graduating from Mercersburg in 1933, a few years into the Great Depression, Bond enrolled at the University of Florida. His course list revealed his divided interest between letters and sciences, though he generally did better in classes like Old English and Imaginative Writing than in General Chemistry and Histology. His literary side won out, at least initially. Bond earned his bachelor of arts degree in early 1939 and went straight into a University of Florida graduate program for a master’s degree. He studied English and for his thesis wrote about the Appalachian dialect spoken around Bat Cave, a hamlet in the Blue Ridge Mountains about ten miles from the family’s summer home at Chestnut Gap, near Hendersonville in western North Carolina. Bond had gotten to know the speck of a town—named for a nearby cavern that was a seasonal home to migrating bats—when he went to summer camps in the area after his father died.

In those formative years George, his older sister, and brother had continued to live with their mother, Louise Foote Bond, a stern, college-educated woman, as the family moved between DeLand and the more modest home at Chestnut Gap. Bond loved the rocky and wooded backroads around Bat Cave and neighboring hamlets like Chimney Rock and Bear Wallow. He spent many lazy days hiking, horseback riding, and fishing with his two best friends, Lonnie Hill and Homer Lafayette “Fate” Heydock. Both were products of far less privilege and formal education, but that made no difference to Bond. Fate himself served as one of Bond’s fifteen master’s thesis subjects and helped Bond gather documentary material. Bond made notes on distinctive words, pronunciations, and such Appalachian pearls as “I’ll take no back-sass offen you” and “My popskull mash went blinky on me.”

Bond was inspired by the simple rustic ways of the mountain people and their independence. As a kid he once lived with Ben and Dooge Conner for the better part of a month at their ramshackle place on Bear Branch, a little tributary near the head of the Broad River. Ben Conner was quiet and removed, but Dooge, his wife, was wiry, snaggle-toothed, jubilant, and gregarious. It was Dooge—pronounced DOO-jee—who early on had said something like: “George, why don’t you go to school, make a medical doctor, and come back here? We’ve never had nary one, and we need one bad.”

After Bond finished the English thesis and got his master’s he went

to work as a laborer during the construction of the scenic Blue Ridge Parkway, no doubt pondering his future plans. By then he had married Marjorie Barrino, whom he had met in the summer of 1935 while she was on a church camping trip up around Bat Cave. She was a brunette with a cheerful face, two years older than Bond, and in his six-foot-plus company appeared more petite than she was. "Margit," as Bond took to calling her, was from nearby Marshville and a family of more ordinary means than the Bonds. In an act of social unorthodoxy, George and Marjorie eloped during the summer of 1938 while in New York City.

Bond decided he should go down the professional trail that Dooge had urged him to follow. He knew firsthand that there was a real need for a doctor in the mountains. As a boy he had seen two people die for lack of prompt medical attention. With his sights set on medical school, Bond enrolled at the University of North Carolina at Chapel Hill in early 1940 and spent the next fifteen months shoring up his science background—and got a good ribbing from fellow students for riding a horse to campus.

In the fall of 1942, nine months after the Japanese attack on Pearl Harbor, Bond started medical school at McGill University in Montreal. Marjorie and their firstborn child soon followed. Bond applied for a reserve commission in the Army's Medical Administration Corps and was assigned to Ready Reserve, subject to active-duty call on fifteen days' notice. That was as close to the wartime action as he got. At McGill he initially made average grades but by his fourth year had moved to the upper fifth of his class, ranked eighteenth out of ninety-eight. Bond found that he liked practicing medicine more than pondering it in class, and always seemed to have a penchant for grand plans. At one point during surgical training he complained about a lack of practical experience and brashly prepared an outline for overhauling the entire system of medical education "from grammar school up."

In 1945, Bond graduated from McGill and embarked on a year-long internship back in North Carolina, at Charlotte Memorial Hospital. Well-paid city jobs beckoned but money was never a great motivator for Bond. He cared little for fine furnishings or the kind of lavishly appointed houseboat his father once owned. He and Marjorie, along with their three young children, moved into a log cabin in Bat Cave and Dr. Bond, then thirty-one years old, went to work. Making house calls came with the territory, although Bond, ever the philologist, preferred to call his service "family practice in the home." He drove a surplus Willys jeep, bouncing and weaving over rocky roads that led to the homes of some five

thousand souls squirreled away over five hundred square miles of Hickory Nut Gorge. During twenty-hour workdays Bond might easily cover two hundred miles.

As Bond would say, he often found himself trying to bring modern medicine into eighteenth-century settings. Not everyone welcomed his remedies. On one memorable occasion up at Reedy Patch, Granny Hill (no relation to Bond's pal Lonnie Hill) saw this young doctor fixing to stick her kin with a needle to inject penicillin and tetanus antitoxin and she aimed the barrel of a 12-gauge shotgun at him. Bond carried a .38 in his medical bag and brandished it while seeking to ease the old woman's fears. She put down the gun and Bond gave the injections.

Bond learned to perform delicate procedures in remote shanties, swatting houseflies by the light of kerosene lanterns. Hardly a baby was born in Hickory Nut Gorge that Bond did not deliver. Unorthodox methods were an essential part of his practice, in part because the nearest hospital was some twenty miles away. Sometimes, when fatigue and despair came knocking, Bond believed it didn't hurt to invoke the power of prayer. His patients invariably urged him to do so. Although religion had not been central to Bond's upbringing, he became an active Episcopalian and a great student of the Bible, much as he relished studying Chaucer and Shakespeare in school. In Bat Cave Bond served as a lay preacher at the Church of the Transfiguration, a little stone-walled sanctuary a stone's throw from the rocky Broad River. On many Sundays he would fill the little chapel with his sonorous baritone.

In the early months of 1947, an outbreak of influenza swept the gorge along with heavy winter snows. Those exhausting days and nights prompted Dr. Bond to expedite his plan to get a hospital built in Bat Cave. With a certain amount of cajoling and even tacit collusion, Bond raised money and rallied the community. Volunteers like his old friends Fate and Lonnie—who were much handier with hammers and nails than he—donated their time to transform the abandoned Bat Cave schoolhouse into the twelve-bed Valley Clinic and Hospital. They built the new hospital at a fraction of the normal cost and Bond believed the year-long effort could serve as a model for improving medical care throughout rural America. Young Dr. Bond and the Valley Clinic were even celebrated in an American Medical Association film and written up in *Reader's Digest*, among other publications. Bond's status as beloved country doctor was secured. Everyone knew him as "Doctor George."

When the Korean War started Bond got a telegram informing him

that he was eligible for recall to the Army. But it wasn't until after the armistice in 1953 that Bond finally had to pull up his mountain roots to relieve a paratroop doctor. Soon after arriving at Fort Sam Houston in San Antonio, Bond found that he and several hundred others would be redirected either to the Air Force or the Navy, where more doctors were needed. Bond chose the submarine service for no particular reason other than his understanding that the hazard pay would be the same as it would have been with the paratroopers. Bond's next stop, as part of his undersea medical training, was the Navy Yard on the Anacostia River in Washington, D.C., the home of the Navy's school for deep-sea divers. This unplanned immersion into diving began his professional conversion.

After dive school Bond spent six months at the New London base studying submarines and related medical issues. By the summer of 1954 he had moved with his young family to Pearl Harbor to serve as a submarine squadron medical officer. The post included shifts at the escape training tank, and Bond's touch-and-go ride in the pressure chamber to revive Charlie Aquadro was not his only such act.

George Bond was by then a father of four and he relished having a much more manageable schedule than was possible during his eight years as a country doctor. He was about ready to leave his Navy post, as scheduled, in the spring of 1955 when Navy officials ordered him to Hollywood, supposedly to act as an adviser for a training film on submarine escape. Bond was sitting in a little waiting room at the NBC studios when suddenly, as cameras rolled, he became the latest unsuspecting guest of honor on *This Is Your Life*, the popular TV show. Dr. Bond was lauded for his exploits as a country doctor, and as the program ended host Ralph Edwards handed Bond the keys to a new Mercury station wagon that had been converted into an ambulance for the Valley Clinic. The television program served as a fitting epilogue to Bond's life as a rural physician.

While Bond was in the Navy, another doctor had taken his place at the Valley Clinic. The two planned to go into a partnership upon Bond's return, but Bond soon found that he disapproved of how his replacement was running the practice—sending out bills, for example. Such a formal demand surely came as a shock to the mountain people. Bond had always waited until his clients could rustle up the dollars—or he would gladly take payment in the form of a ham shank or a basket of vegetables. But there were more serious concerns weighing on Bond, too. His childhood friend Fate Heydock had recently died of leukemia. Lonnie Hill, who was among the surprise guests flown in to give testimonials about Dr. Bond on

This Is Your Life, had been depressed over Fate's passing, as Bond knew. Bond figured he could lift his old friend's spirits once back in Bat Cave, but by the time Bond got home Lonnie had hanged himself from a dogwood tree near the house he had built with his own hands.

The passing of his childhood friends and the schism with the other doctor may have provided a catalyst, but Bond's professional passion had already shifted like the tide. Within six months Bond volunteered to return to duty and soon got orders to report to the Medical Research Laboratory at the U.S. Naval Submarine Base in New London. In March 1957, he took over as the assistant officer-in-charge of the lab and moved into his office in a brick building on the upper base. More than working with submarines, it was diving—the “diving game,” as Bond would sometimes call it, with folksy flair—that had captured his lively imagination. Soon after taking his new lab post he began plotting the sunken jet escapes and the unprecedented three-hundred-foot blow and go from the *Archerfish*. These acts were testaments to his love of the game, and mere prologue to Bond's grandest plan yet, a plan buoyed by his vision of a future in which man would live in the sea.