

Roaches Among Us

by [Peter Glassman](#) (June 2023)



On Board an S-Class Submarine: Up the Conning Tower, Stephen

Bone, 1944

LCDR Paul Norman received orders for temporary duty on the nuclear submarine, SSBN Thomas Jefferson. The Jefferson, like other nuclear delivery subs was referred to as a "boomer" to distinguish them from the fast attack subs simply called "nukes". The Jefferson disembarked from Charleston South Carolina Naval shipyard.

Once aboard, Norman's assigned corpsman on the Jefferson approached him in a small stateroom. Corpsman Nichols welcomed him aboard and asked, "Do you have an outline of our duties, Sir?"

"Yes, Nichols, I'm the boat's medical officer, sanitation officer, radiation safety officer, and environmental safety officer."

Next to checking the oxygen and carbon dioxide air content, the most important monitoring health-related mission was to check the radiation levels outside the nuclear reactor in the boomer's aft section. Norman walked slowly with Nichols ahead with the Geiger counter. It began emitting static noise. Nichols smiled, "I just push this button and the Geiger is calibrated automatically."

They went aft to the reactor level of the engine room. The uranium fuel cells were located behind a huge black lead-lined door. Radiation levels fall with the square of the distance from the source. A safety arc had been painted some color on the ceiling, wall, and floor. Norman couldn't tell its color because of the ambient red light, which was switched from incandescent when cruising underwater. Anything red or brown appeared black. "I'm getting used to seeing everything in red background light, Nichols.

"Nichols go take your readings with the Geiger counter and

call them out. I'll record them. I'm staying right here." Norman was definitely not going near the reactor room.

Norman recorded the levels at three separate distances from the reactor room door and was relieved that the faintly detectable Geiger readings were absent at the final marker where he was standing. They were about to leave when Norman saw some black dots moving. "Nichols, look over near the reactor room door. Those black dots—they're moving."

"You can ignore them, Sir. They're roaches. All Navy ships—even boomers—have 'em."

Three of the black roaches were two feet away from Norman. "Get the Geiger counter on those three suckers."

The Geiger counter screamed with activity. "Wow. They're hot, Sir. Shall I squish them?"

"Hell, no, then you'll have to get rid of your radioactive shoes. Let me think on this." He looked at his duty task check list. "Let's check the mess area and kitchen next. If I find one radioactive cockroach there, we return to port."

Nichols laughed. "The reactor room is sealed, Sir. You won't find bugs of any kind in our mess. It's against Navy regulations."

"But engine room roaches are allowed?"

"No one can enter the nuclear reactor area where the bugs nest, Sir. It would be a lethal set-up," Nichols smiled.

"But the roaches survive in there and we do nothing about it." Norman was still aghast.

"Correct, Sir. Let's check the kitchen and mess areas. I'll bring the Geiger just in case, but I can tell you we'll find not one roach, Sir."

Nichols was right. The mess area and especially the food storage and kitchen were pristine and there was no sign of insect life. The Geiger counter remained silent and Norman double checked to make sure Nichols hadn't just turned it off.

That night Norman woke up several times thinking about radioactive cockroaches. The first thing he did after finishing sick call was look up some statistics on "Pests and Pestilence" in the well indexed online military hospital-medical library. He wrote down the needed data and met with Nichols.

"Why do we need these lead containers, Sir?" Nichols had procured several coffee cup size lead boxes per Norman's order. They were used by the Chief Engineer's Mate to sample radioactive waste for sending them back to an AEC office for some kind of routine analysis.

"You'll see, Nichols. Did you get the lead-lined gloves, micro-calipers, and forceps from the sick bay?"

"Yes, Sir."

"Okay. Let's go to the reactor room. We're going to keep the lead boxes in the reactor room isolation closet. Since this is my brainchild you won't have to handle the radioactive bodies."

"Bodies? What bodies, Sir?" Nichols followed him to the engine room deck.

"There are three sizes to these roaches—small, medium, and large—corresponding to their age. The big ones are the oldest." Norman used the tweezers to separate each group and put them into separate lead boxes. "Now check each one with the Geiger Counter."

The radiation levels on each roach population made the Geiger

crackle like hyperactive Rice Krispies. "Okay Nichols, I need the calipers. You write down the data in the tables I made for each size." Norman deposited a watery mixture of some granular foods from the mess kitchen and put the lead lid on each box with a sheet of paper around it preventing total closure to allow air in, but not let the roaches out. "It looks like we have more young ones than big old ones."

Nichols handed him the clipboard with the roach charting. "May I ask why we are doing this, Sir?"

"You may ask and you just did. I'll tell you a few things. Based on the surface area of each size of roach and their total radioactivity they should all be dead. If you and I had the same radioactive contamination in our bodies based on our surface area we would be hemorrhaging to death from bone marrow wipe-out with cancer and major organ failure close behind."

Nichols had a blank look.

"If these roaches have adapted to lethal radiation, why can't humans? We have 4-weeks left on this cruise and if these animals are still alive, then we've found a living model for testing radiation survival. Nichols, do you realize we could have the tool to enable Americans overcoming a nuclear attack?"

"They're just cockroaches, Sir. They're not like us."

"Have faith, Nichols. I knew there was a reason God sent me here and not to an under fire field hospital in Vietnam."

Norman went back to look at his roach data.

The baby roaches were thriving and the middle-aged and older roaches were also alive and well and making the Geiger counter scream from ionizing radiation. Suddenly, the PA system let

out a summons for Norman to visit the Executive Officer, Commander Parent.

Norman knocked gently on Executive Officer CDR Parent's door and entered.

"Remain standing, LCDR Norman." The Navy spit- and-polish Parent boomed the order as he turned in his small desk chair. "I don't cotton to the use of doctors on submarines. You're here just for a fitness shakedown for the Jefferson. I want everything perfect in your final report. And there can be no discussion about this. Now you can get the hell out of my room." It was exactly then Norman realized he shouldn't tell anyone on board about his radioactive cockroach study initiative, especially CDR Parent.

Norman's one-month cruise on the Jefferson seemed to fly by. He'd written up the radiation exposure and survival study on the roaches as if it were a PhD dissertation. Most importantly this was a military oriented application of his study and would likely reach the President himself. The results showed undeniably that survival to deadly radiation was achievable—at least by cockroaches. Who cared if you were vaporized at ground zero? *Survival was what life was all about.*

The only problem Norman now had was disposal of the radioactive roaches. "Nichols, what are we going to do with the bugs? What's the usual procedure for sending out radioactive waste?"

"I can ship them to the AEC address if the order is co-signed by CDR Parent, Sir."

Damn. He could never request him to do that. If Parent knew about the roach study he'd shoot him and Nichols out from a torpedo tube.

"No, we can't do that. I have to wait until my write-up is acted upon by Washington before we go public." Norman put his hand on his corpsman's shoulder. "Nichols we could be famous if the timing is right on this—or we could both be shot."

Nichols paled, "I won't say a word, Sir."

"We're going to have to sacrifice the roaches. Seal the lead boxes. Take the paper liner from the cover and get rid of the lead roach coffins. As long as they're never found no one will know about this and the radioactive bugs in the sealed containers will never pose a threat to the world as we know it." Norman paused, " And I don't want to know how you do it."

"Yes, Sir." Nichols left as Norman gathered his gear together for leaving the USS Thomas Jefferson forever.

As he saluted the Ensign flag at the sub's stern Norman thought he heard a splash to the port side of the deck.

Nichols came up in his white departure uniform. "I just wanted to say it was interesting serving with you, Sir." He saluted and left the sub walking briskly away from the Charleston dockage.

Norman's new assignment was to begin his formal basic anesthesiology training at Chelsea Naval Hospital located at Boston's border at the base of the Tobin Bridge. His specialty training in anesthesia for obstetrics, pediatrics, open-heart anesthesia and other things would be at the Harvard Hospitals in Boston itself. He began to believe in God again even though the decision came from the Department of the Navy. Most of the patients at Chelsea Naval Hospital were Vietnam returnees. He thanked God at the end of each day for not sending him there to become one of the wounded warriors he was now taking care of. The rest of the patients who came to surgery and anesthesia were dependents and military retirees.

The anesthesiology office was adjacent to the operating room suite. After 6-months of his Chelsea Navy residency, he finished discharging the last patient from the recovery room on a Friday afternoon. He had the watch coverage and walked into the anesthesia office expecting to find the staff anesthesiologist who was his mentor and back-up for the night. To his amazement the entire anesthesia staff was there.

"I thought you guys would be mobilizing off to the Officer's Club for Happy Hour." They were all dressed in their dress blues and were staring at him. Captain Lowell, Chief of the anesthesia department, stood with a letter in his hand and a smile on his face saying nothing. Norman broke the silence. "What? Why are you all so quiet?"

Captain Lowell waved the envelope, "In all my years in the Navy, I never received a letter from an Admiral so high up in the Navy Bureau of Medicine and Surgery. You have a letter marked personal and confidential from Vice Admiral Brown."

God! Admiral Brown was the head physician in the Navy. Norman was still in his scrubs and tore off his disposable mask and OR hat. He opened the letter and read one of the two documents from Admiral Brown. His pulse was racing.

Captain Lowell had his hands on the waist of his fresh uniform. "You can't keep it to yourself. We're all waiting Paul."

Norman cleared his throat prefacing the reading by informing the group of his research on the USS (SSBN) Thomas Jefferson and his radioactive cockroach research protocol. They looked at him like he was a nutcase until he read the letter aloud which began:

"We at the Bureau read with interest your study documenting survival of a small population of radiation-exposed roaches

aboard the nuclear missile submarine Thomas Jefferson. Several experts in the field also laud your effort and making the most of your medical training in this military oriented preliminary research.”

Captain Lowell reached for the letter and continued reading and validating that Norman was not fabricating the words. He finished Admiral Brown’s comments with:

“In keeping with Navy protocol your treatise was sent to the Commandant of the Nuclear Submarine Fleet for evaluation. His word is definitive and no further action will be taken at this time. Your paper will be kept by the Department of the Navy for future reference.”

The anesthesia staff looked puzzled and stared at Norman.

Norman related his short career as a flight surgeon and subsequent orders to submarine medical officer training. “I got the same response to my flight surgery study on the incidence of spondylolisthesis at Pensacola Navy pilot school.”

After the laughter stopped, Captain Lowell waved the second document from the nuclear sub commandant in the air. “The best is yet to come. Here is Admiral Hyman Rickover’s assessment to our scientific colleague’s efforts under the sea.” More laughter even before Captain Lowell read it.

Lowell cleared his throat but began laughing again. He looked at Norman. “I apologize Paul but this is a typical Rickover response.” He read the letter. It contained only two sentences.

After reading LCDR Paul Norman’s submission, I offer only one summary statement. Categorically, there are no cockroaches aboard any nuclear submarine in the United States Fleet.

Captain Lowell handed the documents to Norman amidst the belly laughs in the room. The staff left patting him on the back with various "good try" oriented comments and went to the Officer's Club. Norman was glad he had the duty and couldn't go with them. He could just imagine the continued entertainment the letter from Admiral Brown was going to make to all the Happy Hour participants.

Norman's staff back-up, Steve Snyder, smiled. "Forget it. Admiral Rickover is a pain but he loves the Navy. You can bet someone somewhere in the US Government is going to act on your findings."

Five more months went by and Norman was really getting the feeling of his anesthesiology specialty. He had just finished giving general anesthesia for a Naval Officer who had suffered a kidney stone too big to remove without surgery. Dr. Lowell tapped Norman on the shoulder as Norman was writing post-operative orders in the recovery room.

"Paul, please come into the office before your next case. There are two gentlemen to see you. I'll be with you and when I raise my index finger, it means I will do the talking. You are to say nothing." He left Norman totally befuddled.

As Norman and Lowell entered the anesthesia office two men quickly stood up. One was wearing a dark blue pinstripe suit and the other was in a Military Police Army Officer's uniform.

"This is LCDR Paul Norman." Dr. Lowell introduced him by his rank. This meant something formal was up.

The suit extended his hand. "I'm Jason Caldwell from the Atomic Energy Commission and this is Captain Claggatt, Army Military Police."

Norman shook their hands and alarms were going off in his brain. He looked at Lowell who had his index finger raised.

Lowell nodded to Caldwell, "Let's all sit down and you gentlemen can state your business."

Caldwell cleared his throat and sipped some bitter Navy coffee Lowell had given him. He grimaced and Lowell smiled as Caldwell spoke. "I represent the AEC office of nuclear waste disposal—the military branch. Let me state unequivocally that nuclear waste must be contained in a well-defined way to prevent public exposure to ionizing radiation."

"Why should I know this?" Norman asked and looked at the MP Captain who looked weatherbeaten and battle scarred. Lowell held up his index finger. Norman shut up.

"Good question, Commander Norman. You once served on the SSBN Thomas Jefferson did you not?"

"I did." Norman kept an eye on Lowell's index finger.

"As its medical officer you were also the radiation safety officer. Can you tell me what the procedure is to dispose of nuclear fuel waste as you remember it?" He folded his arms and furrowed his brow.

Norman leaned forward in his chair with his response, "It was the duty of the senior engineer officer to identify and package any and all nuclear waste in lead containers and ship them off to the AEC." He could feel his bowel gas gurgling.

"Correct. It is not your job to do this." He leaned forward closer to Norman. "It has come to my office's attention that you conducted an unauthorized research experiment using radiation-contaminated cockroaches during your cruise. I offer you this question and how you answer it depends on whether you go jail for contaminating an environment with the radioactive roaches. At the very least you could get a Dishonorable

Military Discharge plus a Court Marshal proceeding.”

Norman’s colon complained but the released flatulence was silent. Lowell had his index finger raised. Norman said nothing.

“Mr. Caldwell, Dr. Norman would like to show you a letter from the Department of the Navy’s Bureau of Medicine and Surgery regarding this matter. It will be our definitive answer to your accusation and, I must say, to your imaginative waste of the Navy’s and government’s time.”

Norman stood up feeling the sweat trickle under his arms and went to his locker where he retrieved Admiral Brown’s letter. He handed the envelope to Lowell who still had his index finger signal to remain silent.

Lowell glared at Caldwell. “I will read to you, and have a copy made for you, from a letter from the commandant of the nuclear submarine fleet in this matter. I want you to picture Admiral Hyman Rickover speaking the words he wrote.” Lowell straightened the letter and took a breath.

“Wait a minute Captain Lowell. We’re here to speak to LCDR Norman not you.” He produced a scary grimace.

Lowell was cool and not perturbed. “The correct chain of command in matters that threaten personnel directly reporting to me is for me to answer to such accusations, which threaten my department. I will read this only once.” Lowell cleared his throat and read the definitive sentence.

Categorically, there are no cockroaches aboard any nuclear submarine in the United States Fleet.

Caldwell turned beet red and stood up. “Let me see that

letter. This is ridiculous. I have my sources about this.”

Lowell stepped back. “You may look at it but do not touch it. I’ll give you your copy. You may go back to Washington and talk to Admiral Rickover about this. This meeting is over. Dr. Norman you have a patient waiting in the OR. These men are leaving.”

Norman couldn’t describe how he felt. It was more than a weight lifted from his shoulders. Captain Lowell had saved his derriere. Or was it Admiral Rickover who had really covered for him? No, it must have been God.

Adapted from a chapter in US NAVAL HOSPITAL, Dr. Peter Glassman’s book of Navy Service during the Vietnam War.

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