

Day One Eighty Three – by Sebastian Roberts

DAY ONE June 1, 1976 - Tuesday

Did you ever notice how a place looks different when you're working there than it did when you were just visiting? I had visited the Florida Institute of Marine Technology before and had thought it had exhibited all the necessary criteria to be placed on the "Ten biggest dumps" list. Now, as I drove into the parking lot on my first day as an official graduate student, the old navy buildings that had been converted to house the main offices of the school had taken on an historic air. The dumpiness of the place had turned to pure class. It was magic. There were only two buildings to speak of. There was the main building, which was the Administration building, and the one that everyone called the Dungeon.

During World War II, the site had been a naval training base. The Administration building was two stories and three wings of converted navy barracks. It was in this building where all the professors had their offices. It also housed a small library and other niceties pertinent to campus life. The Dungeon was where they kept all the mad scientists. It had been used for a combination of things during the war, including offices, classrooms, and munitions storage.

All the laboratories were in the Dungeon. It was full of racks of aquaria filled with the marine science equivalent of little white mice: Corals, algae, plankton, snails, and one with sea hares being fed algae in a mariculture experiment. I suppose it was full of Chemistry, Geology, and Physics labs too, but since I was a biologist, I hadn't taken much notice.

The campus had a few other structures too. There was a boathouse for storing the small craft. Next to it was a large shed for stowing equipment although, after a quick look around, one would have to assume that the shed was empty. One of the things that had given the place a dumpy look was all the gear stacked up outside the shed in the tall grass. Three layers of traps lined the edge of the shed. Gigs, dredges, and pieces of outboard engines lay on the ground. There were two nets tacked up on the side of the shed drying in the sun.

The Marine Station was situated at the tip of a peninsula that stuck out into a small bay just north of Fort Meyers, Florida. The peninsula was lined with a single row of parking spaces and a sea wall to keep the water in the bay and off of the cars. The station's two research vessels were tied up at the tip of the peninsula. I parked my old Buick near the two ships. One was a one hundred and sixty-eight foot minesweeper that the school had converted for service as their geological research vessel and rechristened the "Trenchent." The other was a hundred and five foot cabin cruiser that had been adapted for use by the biology department.

I sat in the car for a moment and collected my thoughts. You might be wondering why I was here in the first place. So was I. Or maybe I was wondering how I managed to get here. Maybe it was both.

I was not financially secure, for starters. In addition, I was considered old as far as graduate students went. It didn't used to be that way. Many of the great scientists had not commenced graduate studies until they had made their fortunes in other ways. Doctorate degrees were normally awarded to people in their forties. That was then, though, and in 1976 one professor told me that if I didn't get my doctorate by the time I was thirty, I didn't deserve it. Not thinking I could get a degree in the three years I had left, I pled for forgiveness in light of my service to the country.

I had spent the last four years as an officer in the United States Navy assigned to the USS Impervious, a minesweeper that was not much different from the one that was tied up here to the sea wall. I had spent two years as navigator and two as the ship's First Lieutenant, which is a fancy name for the maintenance officer. During that time I had also obtained some other very useful skills.

Back in college I had been certified as a SCUBA diver and rose to the level of Instructor before I graduated. Our team at the University had been one of those selected by General Electric to test out the new re-breather. It turned out that GE had a defense department contract to put together a system for the Underwater Demolition Teams (UDT) to use that didn't produce any bubbles. Those bubbles could tell an enemy that there were divers in the water. GE had put together a system where the bubbles were fed back into the breathable air. In hindsight, it only made sense to use college students as the guinea pigs. We were highly and recently trained. We were in excellent health. We also had a very controlled and closed environment to test the

equipment in. Our swimming pool, which the swim jocks called the natatorium, was huge and deep.

Once I got into the service, I used this experience to get accepted into cross training with the UDT teams. From there, I also managed to get onto a submarine for six months where I was trained in sonar systems and undersea warfare. These were not idle pastimes and both skill sets were very useful on the minesweeper. It was on the *Impervious*, though, that my skipper had me cross train in electronic warfare (EW). EW was an emerging field and all the technology and toys were brand new.

All this training was pretty standard practice for Naval Officers. The theory was that with enough cross training, in the event of a catastrophe, incident, or war, should an officer be killed, there would always be another one who could do the job that had been assigned to the casualty. It was very practical. The practice also assured the Navy that senior officers had a broad background and were capable of dealing well with a wide variety of assignments. The best part for me and thousands of others was that we were pretty capable people when we chose to re-enter the civilian world. We knew how to deal with unusual circumstances and unexpected situations because we had been put there before. I guess my major professor knew this even if the administration was hesitant.

All this went through my mind as the radio in the Buick played "Won't get fooled again" on the cassette player. I sure hoped that wasn't an omen.

I'd been accepted to other graduate programs that were better known and more highly respected than this one, but the Institute had made me a very good offer that went beyond just being accepted as a student. The school was willing to pay for my services.

The Institute, through the university, had hired me to maintain both the minesweeper and the cruiser, as well as to skipper the cruiser. In return for my services I was to receive a tuition waiver, eight dollars an hour when on shore, and twelve dollars an hour when at sea. I also had the task of keeping and coordinating the cruise schedules and making sure that all necessary supplies were on board. It wasn't a great gig, but I told myself, everyone has to make sacrifices if they want to get ahead.

Getting ahead had taken a rather circuitous route, to be sure. For as long as I could remember I'd wanted to be a teacher. I struggled with ideas like what to teach and at what level. My interests eventually turned to coastal ecology while I was in college earning my undergraduate degree, but then I got side tracked. It was early in 1972 and I'd joined the Navy for patriotic reasons. The country seemed to be going to hell and enlisting was my way of saying I still loved America. I never intended to have a career. I just wanted to pay my dues.

As I sat in the car reflecting, I fully accepted the fact that I was now paid up and I wanted to settle down, get my Ph.D., teach, and do research. So here I was at the Institute. I loved this part of the country. It has palm trees, tropical plants, the ocean, and lovely weather almost all year. I guess if I had been born in Florida it, wouldn't impress me the way it did, but being the son of a potato farmer from Butte, Montana, it was like a dream world to me.

I got out of the car and stepped over to the edge of the sea wall. My eyes examined the old minesweeper that had been renamed the Trenchant. Somehow a minesweeper is still a minesweeper even if it doesn't have big white numbers painted on a grey hull. She was the kind of ship that didn't know how to glide through the water. She plowed. I looked towards her waterline checking her for dings and dents. She rose a bit as a swell from a passing boat passed beneath her revealing a truly repulsive sight. There must have been a year's growth of barnacles on her hull. The main reason that it was so repulsive was because I was the one who had the job of cleaning them off.

Looking at the growth, which sailors call 'fouling,' a strange thought occurred to me. Maybe I could do my thesis on this growth. All I'd have to do is find out when she'd been hauled last. I could save the barnacles as I scraped them off, weigh them and relate the weight to the surface area of the hull. From that I could then calculate a growth rate. Or better yet I could just wait until she sank and then I'd know how many barnacles it takes to sink a minesweeper. "No" I thought to myself, "I don't think the staff would like that; especially the geology people."

I turned and headed toward the Administration building. I had a meeting, to go to. As I walked, I thought about my new job and the people here. I had two months to clean these ships up and get them ready for the beginning of the school year next August. There was only a summer staff on campus right now. Half the graduate students and

all the undergrads had gone home for the summer. Because this was such a small institute, however, that was still not a lot of people. All told, there were twenty-three graduate students and about a hundred undergrads. Most of the faculty was away on sabbaticals or other assignments. A few courses were being offered during the summer and I was to start attending one a week from Monday: Introduction to Oceanography or something like that.

Finding my way to the office of Doctor H.G. Roth had been almost an accident. I had been daydreaming and had to collect myself rather hurriedly as I knocked on his door. Doctor Roth was to be my thesis advisor. We had never met before. My interview had been conducted on the telephone because I was still on active duty when I had applied and couldn't get leave.

"Come in." I heard him say. I opened the door and saw a man about fifty-five years old peeking at me through a fishbowl.

"Doctor Roth?" I inquired.

"That is correct. And you must be Pete Levindusky." He smiled through the water.

"Yes sir." I replied.

Doctor Roth was a very pleasant looking man with a full head of grey hair, accented by a few remnants of the previous black color. He had an intelligent face with quick eyes. He smiled very easily as if he were used to doing it a lot. Healthy for his age, he had no signs of middle age spread. When he stood up from behind the aquarium, I noticed that he was also taller than me. As we shook hands I discovered that he had a strong grip. "He must play tennis" I thought.

"It's nice to meet you, Pete." Dr. Roth said.

"Very nice to meet you, sir." We traded pleasantries.

Doctor Harry Roth looked me over. I guess he was wondering if I was up to the job I'd taken on. I'm five feet eleven inches tall with sandy hair and blue eyes. I was very fit and strong, but not the bulky kind of strong. But on the other hand I was hardly what

anyone would call wimpy looking either. As he looked me over, I noticed him cast an eyeball at my ring finger. No wedding band, just my college ring from Minnesota State. I'd been too busy chasing mines and other naval threats to be chasing women. Besides I wasn't too good at getting the women to chase me back.

"Doctor Bernstein in admissions has told me about the position you've taken and the financial arrangements. Are you fully aware of what's expected of you?"

"Yes sir." I was still being formal. It's hard to break the 'sir' habit after four years and maybe that would turn out to be a good thing. Respect is never lost on people.

"And you don't feel that this will interfere with your studies?"

"No sir" I said knowing full well that I had no idea if it would or not. The response was more hope and attitude than a conclusion.

"Doctor Bernstein also mentioned that you might like to live aboard our biological research ship. Have you decided on that yet?"

"Yes sir. I'd like to live aboard." I didn't want to tell him that I couldn't afford to live anywhere else. Perhaps I should have asked to see it first, but it really didn't matter. The accommodations were not likely to be any worse than on an operational minesweeper. Not that living aboard a naval vessel was uncomfortable. It was just that it was closely packed. The main thing that I would need to get used to would be making my own meals. One huge benefit of being an officer on a ship was that there were other people who made your meals and did your laundry. The other benefit was the monthly stipend I would get from the G.I. bill. It would help, but it was not going to get a out of having a job.

Dr. Roth continued. "Good, then let's get down to what's expected of you as a student. According to my schedule we're going to discuss what you'll be doing your thesis on, correct?"

I almost told him about the barnacles on the hull of the Trenchant but thought I'd better get to know him better before I got obnoxious. He certainly was being formal. Maybe

he was trying to impress me. I decided to impress him back and launched into my thesis proposal.

“Well sir, what I’d really like to do is a study on the schooling of certain coastal fishes. I realize that quite a bit of work has already been done in this field, but almost all of it has been done in what I call a disruptive environment, such as large tanks or pools, not the natural habitat of the fish. What I propose to do is to utilize an automatic aiming mechanism to point a remotely controlled video camera at a school of fish as they swim by. Thus, the schooling activities would be captured in the movies for study later. The device is noiseless, uses ambient light, and adds no appreciable bulk to the bottom that might be disturbing to the fish.”

I could see that he was actually rather interested in the application of new technology and was encouraged. “How does this aiming mechanism work?” He asked.

“It’s something I think I can adapt from some work I was doing for the Navy. It works using a computer and light. I’ve managed to build a prototype of an automatic contrast seeking mechanism. There is a tiny computer attached to a light metering system which scans the water and computes the differences in the light intensity and contrast. The computer has parameters for shape and movement programmed into it. Once the program has decided that the contrast is due to a school of fish, it triggers the camera which records the movements of the school on movie film. You can stake the device to the ocean floor and when you come back a week later you should have movies. I have been sketching out a design which includes a tracking servo so the computer can make the camera follow the school, but I can’t seem to get that to work yet. It’s a cost problem. I can build an underwater housing that withstands pressures to 30 feet or so, from parts I can get at the hardware store, but putting it in motion requires adaptations I can’t afford.”

Dr. Roth was intrigued. “Your project sounds quite interesting, but I’ll have to have a written copy to submit for formal approval.” Almost as an afterthought, he said. “Include theories, what you hope to prove, etcetera. By the way, where are you going to get this camera?”

“I have the camera.” I didn’t tell him that one reason I was not as financially secure as I would like to be is that I have a weakness for buying things like this. I called them toys,

but unlike a set of blocks, adult toys can be very pricey. I went on “I also happen to know a guy, Jason, in the engineering department who’s making one of these computers. We attended the Navy Electronic Warfare school together. In fact, we had talked about the concept back then and when he was discharged, he started working on building it. When I saw his prototype, I just naturally offered to help him test it out.”

“You know it’s against policy for two grad students to work on the same project?” Dr. Roth cautioned.

“This isn’t the same project. He’s making a computer and I’m studying fish. Completely unrelated.” I responded with a slight grin just so he knew that I knew I was close to the edge.

“Well just don’t get caught.” His grin told me he knew the game. He handed me the keys to the cabin cruiser and told me I could put my gear on board whenever I was ready.

I said goodbye to the doctor and headed out the door. I had the distinct impression that he didn’t exactly go along with the policy on joint research and wasn’t going to say anything about it. I really felt great now. Pending a little paperwork, my thesis had been approved. With that out of the way, I decided to do something constructive, like unpack. I’d just barely made it into town in time to get all the paperwork done to get me registered with the school and had been staying in a motel. Finally I could move into my new place.

GRACE

There she was. She was the first thing you saw when exiting the administration building: A hundred and five feet of grace and beauty. I guess the original owner had felt the same way because that’s what he had named her “Grace.” This was the biological research ship that I was to captain. I really liked the part of the deal that included the live-aboard privileges. I could be on the geological ship. That one, the Trenchant, had a crew of three. I had this one all to myself unless, of course, we were at sea. Then I would need a crewman. Right then I decided that it was a bum deal for

me to have to haul both ships when there were three crewmen aboard the Trenchant. Still, I told myself, it was good work and I would rather have this than be a checker at the Walmart.

The Grace was tied up to the quay just aft of the Trenchant, near where I'd parked my car. I decided to have a look around before I got my gear. There was no one around, so I just stepped aboard. I hailed first as per protocol. "Ahoy on the Grace!" No one answered. I figured going aboard without a specific invitation would be alright since I was going to be calling her home in about twenty more minutes. I climbed right to the bridge. You can tell more about a ship by looking at the bridge than by looking at any other single space, so it was a good place to start. The bridge had a beautiful layout. From the hardware here I could tell that she had twin engines, twin screws and a bow thruster for maneuvering in close. The brightwork was very highly polished. Someone was taking care of her. I did a quick inspection and everything was properly secured. No, I corrected myself, not just properly, but exactly. I guess my attention to detail was due to the habits I had developed as the First Lieutenant. I notice the small things. The cabinet doors were not just closed: The locking pins for the latches were in place. Locking pins are the small pins that keep a cabinet door from flying open when the vessel rocks from side to side. The map case drawers were also secured. There were no loose pencils or sunglasses on the map deck. Someone was taking pretty good care of the place.

Next I inventoried the electronics. There was a public address system and an intercom, a few navigational aids, a large and fully equipped chart table, a sonar device for soundings, a very fine radio communications group, and right in the middle of it all was a beautiful mahogany wheel. To one side, was one piece of gear that I couldn't place. It looked like a television screen. The panel below it carried a few adjustment dials and switches but none were labeled. On a whim, I flipped it on, but it didn't do anything. I told myself that it couldn't be a radar unit because that was over by the radio set on the other side of the console.

Once again, I noted that the place was spotlessly clean. Off in one corner near the aft bulkhead of the bridge was a ladder with a hatch at the top. I was soon up it and standing on the flying bridge. That ladder was the only way up unless scaling the outside of the cabin counted. The flying bridge was open and rather sparsely equipped with a chrome wheel, throttles, and a compass. As below, it was all highly polished and

spotless. I headed down to continue exploring. Back on the bridge deck, I saw that there was a door in the aft bulkhead that lead out to an open deck which was also the roof of the main structure, one deck below. I could tell that this deck had been pressed into service as a party deck, observation deck, or sun deck depending on the cruise. The Weber grill was still secured to the back wall of the bridge and folding deck chairs were stored in a locker on the other side of the door from the grill.

The first level below the bridge was the main deck house. The structure rose out of the middle two thirds of the main deck of the ship. The bridge sat atop the forward third of the main structure.

Forward of the main deck house was an area generally referred to as the bow. Aft was a rather expansive work area known as the work deck. The aft deck, or work deck, was the staging area for dragging nets and doing other over the side work. Off the port side was a small skiff on davits. The starboard side was equipped with a few extra davits, booms, and winches that were used for over the side work such as launching and retrieving dredges, taking water samples, and the like. Next to the door to the main deckhouse was an outdoor shower.

Inside the main structure was the remnant of what once had been a large salon for throwing expensive parties. It had been converted to a large laboratory. Aft, was a section for dry stowage of collection gear. The forward area had been turned into the lab. There were tables with deep sinks, closets with chemicals, shelves full of books, and what seemed like a thousand empty jars. There were also two very expensive microscopes, one compound and one dissecting. As with the bridge, the microscopes were secure. They were bolted to the work table but they also had quick release pins so they could be moved and cleaned.

The ladder leading below was aft in the storage area, just inside the aft bulkhead of the lab. Sliding down the handrails, I found that I had come below in another smaller storage area just forward of the bulkhead to the engine room. Entering the engine room through the soundproofed and sealed door, I saw two large diesels side by side. Finally I'd found someplace that wasn't clean. As a matter of fact, it looked as though no one had touched the place in a very long time. These diesels looked as though they'd need more than a little work. I retreated, closed and secured the door, and wandered forward. I was now on the deck just below the main deck. I checked the overhead for

any signs of water damage. If I had found any, it would mean that the main deck would need to be sealed.

Forward of the storage area, I found a fully equipped galley, including a dining table, this space didn't particularly interest me at the time. I passed through it and found another small laboratory and storage room. The lockers in this area were packed with jars containing preserved fish specimens. The storage area had quite a bit of SCUBA gear and a low capacity compressor, also in what appeared to be in a poorly maintained condition. At least whoever had laid out the space assignments had the sense to put the compressor well forward of the diesels. Diesel exhaust pulled into the compressor intake would foul the air in the SCUBA tanks and could be very dangerous.

The section of the ship just forward of the storage room consisted of a centerline passageway leading between rows of bunk rooms or staterooms or whatever you want to call them. Actually they were very small spaces equipped with two bunks and a desk each. They were all the same except for one. The last room to starboard had only one bunk. It was a little smaller because the outer wall was compressed by the curvature of the hull as it came to a point just ahead. Right across the passageway from this room was the head, complete with shower stall. This room one was mine, I decided.

The forward end of the passage ended at a round, water tight, door which led into the anchor chain locker. The chain and line ran out the hawseholes in the overhead at the top of the locker. Once in the chain locker I noted an overhead hatch which would lead to the open foredeck. Immediately beneath that, in the deck of the chain locker, was another water tight hatch. It was secured with a standard dogging wheel, but it was locked. I'd never seen this before. There was a keypad lock which released a steel bar when activated. I'd never seen a cypher lock on a private vessel. When locked, the bar extended into the arc of the wheel making it impossible to turn. This was against all naval tradition. Zulu doors and hatches, or the ones designed to be watertight, were supposed to be secured, but were never supposed to be locked. I told myself that I'd have to find out what was down there. It would have to wait, though, because I didn't have the combination.

I was inspecting the condition of the anchor chain when my not overly sensitive nose detected a faint odor. On second sniff, it wasn't an odor at all, it was definitely an aroma. There was coffee and fried fish in the air. Instantly I decided that the galley

would be a good place to begin looking for the origin of this aroma and headed back aft. At the same time, I concluded that my first impression of being alone on the Grace must also have been in error. I'm not sure why, but right then I also decided that this would be a good time to practice being sneaky. I moved slowly, walking quietly, holding my breath, and all that sneaky stuff. I reached the door to the galley and poked my head in, sneakily of course.

All my sneaking was to no avail for as soon as I saw who was doing the cooking, I let out all that breath I'd saved up. It came out as a cross between a kind of a low groan and a breathy whistle. In the galley was none other than Miss Goodbody herself. She stood before the stove scraping something with a spatula. If you've never noticed before, the act of scraping things produces a very fine wiggle in certain parts of the female anatomy. I thought to myself, "Whoever she is, she sure knows how to scrape!"

My unintended and somewhat still animalistic noise got her attention. She turned, smiled, and gave me a big hello. She looked as good from the front as she had from behind. She was about five foot eight inches tall. Her shoulder length hair was deep black. Her eyes were black as coals, but shiny like obsidian. She had a very shapely body and the top buttons on her blouse seemed a little more stressed in their job than did the ones over her flat stomach. I guess you could call her healthy.

"Hi. Who're you?" I asked after regaining some composure.

She gave me a fake scowl and said "I should be asking you that. I've lived around here for quite a while now and I've never seen you before, therefore you must be the intruder."

"Got me there. I'm Pete Levindusky, call me Pete."

"And who is Pete Levindusky?" She countered, turning back to her work, which turned out to be stirring some hash browns to go with the fish.

"Oh, I'm one of Dr. Roth's new graduate students. I'll be living onboard here for the next couple of years, unless I win the Irish Sweepstakes, that is. I'll be the maintenance man and crew of the Grace. Now, who are you?"

"I'm Sarah Roth, daughter of the dear Doctor. Sometimes I come over here for lunch."

"Great" I thought to myself. "The first good looking girl I meet is the boss's daughter."

As is that weren't enough, she turned back to look at me and added "You see, this is daddy's boat."

My eyebrows must have jumped an inch because she laughed and said "I know daddy doesn't seem like the millionaire type and he's not. My uncle was. He left daddy the boat and a great deal of money but like I said, daddy's not the type, so he rents the boat to the school for a dollar a year and pays most of the research assistantships awarded here. I guess you got hired to do the things around here that I can't handle."

Her reference to the Grace as a boat, instead of a ship, grated at me, but I convinced myself to let that dog lie. Instead, I thought to myself that I could deal with the situation she described, and asked "So what do you do here?"

"I keep the Grace clean but I'm not a mechanic."

It seemed that it was a good time to find out why I had to maintain both the ships, so I asked "What about those three guys on the Trenchant? What do they do?" She looked a little uncertain about my question. Everyone knows what crewmen do. So I added "Why is the hull so fouled?"

"Oh" she said "They can only do what the union says they can or they'll get fined or something. One is a navigator, another is an electrician and the third is a seaman. He's not union. If we hired all union members to work out here, it would take seven people to keep everything going. In my opinion we're overstaffed at four. Say, do you need to be shown around? I'll be happy to give you a tour."

"That won't be necessary." I said. "I've been snooping a bit already. I didn't see any tools though. I suppose you could show me where they're kept."

"Sure, right after lunch, okay? We'll have to be quick about it. I have some work to do in my office. Sorry. If I had known you were here, I would have made enough for two." She added apologetically.

“Really?” I said. “What are you studying?”

“Nothing at the moment. I’m on the faculty. I was just hired last month and need to get my syllabus prepared for my first class.” She explained.

“Oh!” I excused myself and went back to the car to get my gear. Working here might not be so bad after all. Sarah was an intellectual. Apparently, while I was doing my time in the Navy, Sarah had flown through graduate school and had earned her doctorate in near record time.

I casually thought to myself that maybe the “intelligence gap” had been my problem with women. Most of the girls in Butte knew everything there was to know about potatoes, but not much about anything else. I’m not saying that all women are dumb, but I have an IQ of one-thirty-seven hence most women, and most men too, impress me as being a little slow. Okay, that’s not fair. That was the way I felt when I was in high school. Since I matured a little, thanks to my Uncle Sam, I realize that these folks were certainly well equipped intellectually. The only difference was that for some reason, I had been exceptionally blessed. I’m not bragging but everyone has their good points. I’m not rich, strong, or sexy, just intelligent.

‘Shucks’ I thought. “Sarah would probably turn out to be smarter than me given the speed at which she had earned her degree. She didn’t look like she was any older than about twenty-five. The thought gave me brief pause on its own, and then sort of frightened me when I realized I would probably need to take her class.

I tossed my belongings into my stateroom and returned to the galley, just as Sarah was cleaning up after her lunch. She was doing that scraping trick again, this time in front of the sink as she washed up.

“Ready when you are” I stated.

She dried her hands off and said “Follow me” as she ducked into the passageway leading aft. We got into the engine room and she dug a key out of her pocket and opened up a locker. “Here they are. Everything you’ve always wanted in tools and more.” She wasn’t kidding. There must have been a fortune in specialized tools in there. The locker not only held all the tools needed for the diesels, but also had a

section dedicated to the specialized tools needed to keep scientific equipment in working order. I wondered if I was tasked with that as well or if I was just to work on the ship. I told myself I would find out in due time and let it slide.

Sarah was direct. "I hope you know what you're doing. These engines have been sitting here idle for about two months now."

"Oh, no." I groaned. "Are you telling me that no one has bothered to turn them over once a week to keep things loose?"

She shook her head. "I've been away on a research trip to the Red Sea and there just wasn't anyone else who could take the responsibility."

I told her I'd start work on them first thing in the morning but that today I wanted to inspect the hull. As she left the engine room, she mentioned the compressor and said that if I could get it running and checked out before she got back from her class, she'd get a tank on and go with me on the inspection tour. After seeing her off, I got right to work. First I inspected the hull from the inside. There were no leaks and the bilge pump was in good shape. Then I tackled the compressor. Actually it was in pretty good shape other than for the cosmetics. The main problem was a blown gasket on the compressor head. Once that was replaced, and I had changed the oil, I cranked it up and tweaked it till she ran like a top.

After a quick but thorough check of the air purity in the outlet hose, I was ready to fill some tanks. Once I'd found two that had current inspection stickers on them and seemed in good shape otherwise, I began filling them with the compressed air. I was in the process of lugging two full ones up on deck, when both Sarah and Dr. Roth came aboard.

"Hello, Pete" the doctor called.

"Good afternoon, Sir. I nodded to Sarah and greeted her as well. "Sarah."

The doctor smiled "Look Pete, you can save the 'sir' for when we're in public. I don't really believe in that stiff protocol."

“Whatever you say, Dr. Roth.” It was the best I could do at the time.

“Please, call me Harry.” He insisted.

“Okay, what brings you here, Harry?”

“I just wanted to see how you were getting along. Finding everything you need and all that sort of thing?” Harry asked.

“Well.” Sarah interjected. “Apparently he knows what he’s doing. He’s got two full tanks here and that means that he must have the compressor working again.”

“Excellent!” Dr. Roth was already a happy man. “Have you looked over the rest of the ship?”

I thought to myself that unlike Sarah, at least he knew the difference between a boat and a ship. “Yes, I have and I’ve found that most everything is in pretty good shape thanks to Sarah. I think I can get the engines running with eight hours of hard labor. All the joints are good, the hinges are all good: Doors, hatches, and even the cabinets and lockers. They need grease, but there is no corrosion. I’ve not inspected all the tumblers in the locks yet, but they all do seem to work. I took a quick look at the wiring and there are no stress fractures in the coatings. The bilge has a bit of oil and a little sludge, but I can pump that out pretty easily. I’ll need to get a wet-vac for the sludge, though...” Dr. Roth held up his hands.

“Way too much information! I’m not sure I know half of what you’re talking about but it appears that you do and so let’s leave it this way. If you find something wrong, tell me about that. Leave the rest to the written files.”

I guess I had dropped into First Lieutenant mode and was behaving like I was briefing the Captain. I nodded and simply added. “Sarah and I were just going to inspect the hull. Would you like to join us?”

“No thanks. I’ve got to get back to the office. You two go ahead and let me know what you find out, good or bad. Okay? The condition of the hull is in a different category than all that other stuff.”

“Sure. Have a nice day, Harry.” I turned to Sarah. “That’s your gear over there. I hope one of those masks fits. Did you bring a swimsuit or have you chickened out on me?”

“No, no. I’ve got one and I’ll be ready to go in just a minute.” She was clearly amused by the thoroughness of my report and even more so by how it had been received.

We started checking out our gear looking for any defects that I might have missed before. I had my own gear, so except for the tank, I was certain my equipment had been properly maintained. I asked her to check over her mask strap, regulator, purge, and inflator valves, as well as the dump on the buoyancy compensator before we got geared up. She may have been comfortable with it as it was, but as a maintenance freak and SCUBA Instructor, diving with a new partner, I was not. What she didn’t know, or at least I don’t think she knew, was that I was using the gear check to check on her reaction to it and her familiarity with it. Everything seemed to be in order: The gear and her competence.

I was arranging the gear on the deck in preparation for getting suited up, when she said “Pete, what do you think of my father?”

I looked up to answer her and was momentarily speechless. Sarah was removing her blouse. She was very healthy indeed, and had a remarkable tan to go with it.

“Well” I said as she started her slacks on a journey down some very nice legs. “Just on first impressions, I really like the man. He seems very considerate and easy going. “Why?” I looked at Sarah some more. She really knew how to wear a bikini. It was quite yellow. I thought to myself that she would be easy to keep track of under water.

“Something has been bothering him lately and he won’t tell me what it is. I was thinking that maybe you could find out. You know, since you are going to be working closely with him. You might catch something I haven’t.”

I thought this was an odd request to make of a person she had just met. I got all cautious. Just because she was both smart and cute, it didn’t mean I could trust her. I learned that lesson the hard way a long time ago. “Maybe I can and maybe I can’t, but I’ll keep it in mind. I must inform you though that I don’t generally go around meddling in other people’s affairs, especially those of my boss.”

“We’ll talk about it later.” She said with an understanding, and all too serious, nod. “Ready to go?”

“Ready.”

We finished getting our gear on. I grabbed a slate for notes and tossed her an underwater camera in case we needed to document anything. We tipped over the side and splashed into the warm water of the harbor. The visibility was surprisingly good. We could see about thirty feet, before everything became lost in a green haze. Of course we only really needed to see about four feet since we were just inspecting the hull. Swimming on our backs to inspect the hull, we worked our way forward inspecting the seals around the through-the-hull fittings and looking for any damaged areas. Other items that needed examination included the shafts, rudders, and sonar sensors. All of these needed to be clean and functional. The saltwater intake needed to be clear of barnacles and debris or it would clog up. Without cooling water, the diesels would overheat and I would have a real problem.

I was also taking a barnacle inventory and making an estimate on how long it would take me to haul her. On my slate I wrote depth of cover and how complete it was. If it was a solid mass, I would need different tools than if the encrustations were spotty.

I looked at Sarah through the milky green haze beneath the ship. She was lovely. She was also distracting me from my work. She had a beautiful face to begin with. She was blessed with just enough attractiveness to not be frightfully intimidating and just enough to be captivating. Not too much here, not too little there. She had a nice flat, stomach, a perfectly rounded rear and the femininely muscular legs of a good swimmer. So here I was with the girl who had it all, looks, brains, and probably money. If her dear uncle had left her father a half million in the Grace, what might he have left her? The question of why she had asked me, a person whom she had met only hours ago, to poke into her father’s private life could have only one answer. She was mistrustful of the established faces around here. In addition, she must have recognized my two good points; intelligence and honesty. She wanted me on her side before I got hooked up with someone else.

These thoughts may sound horribly out of place to anyone who is not a diver. The truth is, however, that when underwater and unable to talk for forty-five minutes or so, the

brain has a lot of time to just wander through a wide variety of things. Some are speculative and some can be breakthroughs in understanding a previously insoluble problem. For years I had used my time underwater as an aid to meditation. Finally, I decided that she was cute, but I didn't really want to get involved in anything with a soap opera tint to it. I decided that she could figure out her father for herself.

Nearing the bow, I inspected the ports for the bow thruster. The style installed on the Grace was the new model. Old style thrusters were like an outboard motor. The shaft, like an outboard, came down through the hull and could rotate to direct the propeller in one direction or another. Unfortunately, that shaft was also the first thing to strike the bottom in shallow water. The new style was built like a horizontal hole through the lowest curve of the prow which had a fixed propeller inside. The propeller could be reversed allowing it to push either to port or to starboard.

As we came to the bow, I noticed something that I hadn't seen from the dock. The bow was fitted with an observation bubble. Seeing the bubble drove all other thoughts from my mind. That must be where the watertight hatch in the chain locker leads. The bubble was smooth and not quite round. It was more elongated, almost elliptical. Made of mostly clear, reinforced Plexiglas, it looked pretty thick. Growing on it was a film of green microalgae that turned it almost opaque and made it hard to see inside. I could just barely make out a television camera and a seat. It looked like there was room for just one person. Along the side of the bubble was a long narrow metal hatch that looked similar to the doors that covered torpedo tubes on submarines.

We finished the tour by swimming back aft to the ladder. Sarah took photos of the items I pointed to along the way and I made my notes on the slate. By the time we were at the ladder, I had decided she was a pretty comfortable diver and I shouldn't have any worries about diving with her in the future. I also made a mental note that being comfortable is not always the same as being competent. She had only passed the first level on my buddy chart. This is a normal process that every instructor goes through with every new dive buddy. It ought to be second nature for all divers, but some were not as diligent as others.

Once we were back on the surface, it was Sarah who brought it up. "I was a little nervous about you at first, but it seems like you are pretty comfortable in the water. Maybe sometime we should go on a fun dive."

It was then that I realized that she didn't know I was UDT and a NAUI Instructor. She had been checking out my skills just exactly as I had been doing with hers. So, I just nodded and changed the subject asking her what the purpose of the hatch in the chain locker was and if it led to the bubble. She confirmed that it did, so I continued asking about the elongated hatch in the side of the bubble. I could not see behind it due to the algae fouling the Plexiglas, but I could tell there was a mass of some kind behind it.

She explained it all. "Oh that. It's just the place where the mechanical arm extends from its cradle. It works just like the ones on the lunar landers. My father had it installed as a convenience. It can be operated with a joystick from the bubble. When it's working, it can be operated from the bridge if you want to, but it's broken now."

So that's what the TV screen on the bridge was. It was a remote monitoring station for the closed circuit TV in the bubble.

I looked at my pressure gage and then at hers. We had plenty of air, so I suggested. "Say Sarah, as long as we're here, let's look over the hull of the Trenchant, okay?"

She agreed and scanned the Trenchant. Jack, the electrician was there. He had been watching us from the rail of the ship. Sarah explained to him what we wanted to do and he assured us that he'd notify everyone that we would be below. As we went back down, I heard the loudspeaker, "There are divers below. There are divers below. Secure all over-the-side gear. Secure the engine room." He repeated it twice.

We swam to the Trenchant and gave her the once over. The barnacles weren't nearly as bad as they'd looked from the surface. They were concentrated at the water line, giving the appearance of very thick growth, but once we got down about a foot, the coverage became less dense. I could even see the hull in most places. I re-evaluated it as only eight months growth instead of a full year.

There was one thing that was pretty unusual though. Along the hull, just off to each side of the keel were some large freight hooks. It took me a minute to place them but it eventually came to me. Those were the same type of hooks that the Navy helos had for lifting cargo. Navy cargo hooks were wired so that the pilot could hover over the deck of a ship, place the cargo on deck, then release the lift straps with the flip of a switch. I wondered what the hell they were doing on the hull of a geological survey ship. I also

noticed that they must have been used regularly as they were free of any encrustations. I decided to file that matter for later thought, and continued my inspection of the ship. I did get Sarah to snap a couple pictures though.

All in all, I guess she was in good enough shape. She did need to be hauled though – and soon. Twenty minutes later, back on the surface, Sarah and I notified Jack that we were through and thanked him. Then, even though the sun was starting to get low on the horizon, we went on a little pleasure dive along the quay. Sarah took the lead and I fell in trail as we swam along looking at the growths on the concrete. This was all as it should be as she was the more experienced diver in these waters. As I became aware of the wiggle that was being produced by the action of swimming I realized that I was really going to like it here – and hate it here. Watching Sarah's wiggle was a good deal more than just tolerable, but I had resolved not forty minutes ago to keep a personal distance from her. Well, at least until this thing with her father was sorted out.