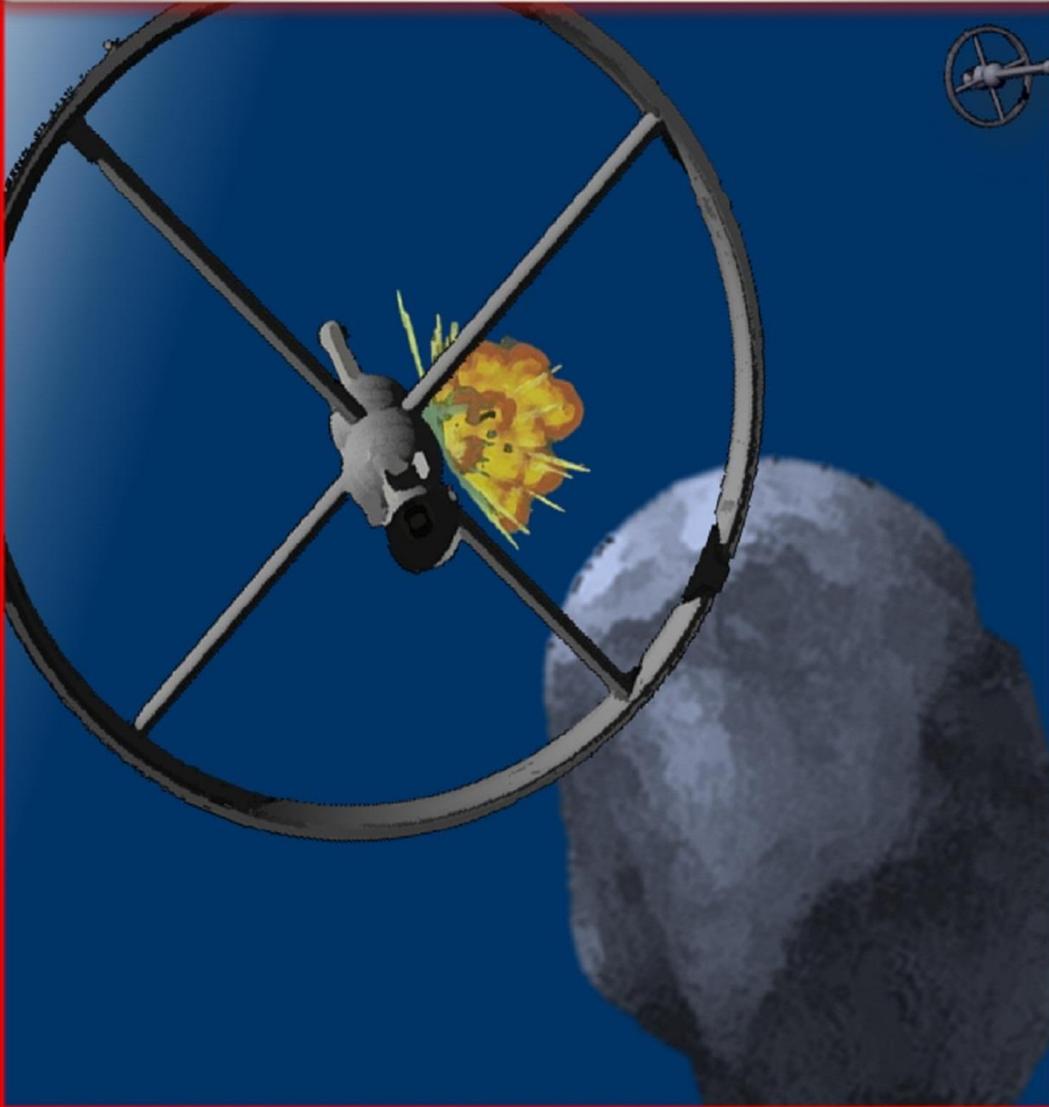


# SHIPS & STONES



*those who will not risk cannot win*

**D.C. McKay**

# **Ships & Stones**

**By**

**D.C. McKay**

**Ships & Stones**

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To my wife, Julie, and to Ryley, Donny, Jordan and Kinley

## Chapter 1

“RIGHT HARD, FULL!”

Adriel Finlay, captain of the Type 3 merchant *Dreamer's Way*, tasted blood in his mouth as he reflexively gave the order from his cabin. He was suspended in midair in a tangle of furniture and other flotsam illuminated by emergency phosphorescent lighting. Flotsam that included the unconscious forms of Chuck Madock, *Dreamer's Way's* first mate, and Molly Weber, one of the ship's semi-permanent passengers and affectionately called “Ma” by all aboard.

Adriel thought groggily that the pincers movement Chuck and Ma had been attempting against him in their nightly historical war game had a good chance of trapping him. The moan of his first mate snapped him back to the present.

“Why hard right?” Adriel turned his head toward the sound of Chuck's weak voice, and immediately threw up. “We're in low grav, idiot,” he silently berated himself, remembering all too well the endolympic hell of his midshipman days when he was onboard the Type 1 merchant *Gila Moore* and would often get queasy just by turning a corner too quickly. The Type 1 ships were infamous as vomit comets, as the high rotation of their habitat rings caused motion sickness in all but the most impervious. “Focus,” he berated himself again. He realized that the side of his head right behind his right ear was throbbing, and that he had no idea how long he'd been out.

His throwing up had caused him to start tumbling backwards, and when he tucked his legs to avoid the sphere of partially-digested food slowly floating away from him, he spun quicker, smacking the back of his head against a chair leg. He groaned as he thought his head

would crack open, but mercifully it didn't and he was able to steady himself by grabbing a shelf that was tacked to the bulkhead.

“I wanted to counteract whatever new vector we're on, and my instinct was to go right hard. DW, are you there? Is the ship answering the helm?”

With relief, Adriel heard the ship Artificial Intelligence's slightly nasally female voice that always reminded him of a childhood sweetheart. During a power outage, DW's first responsibility was to establish a communications path from her to the Captain, and he was thankful that whatever had happened had not apparently disrupted DW or the emergency circuitry.

“Yes, Captain, I'm here. I am showing structural damage in Compartment five and...” a slight hesitation as she collected more data from whichever internal sensors were working, “...no measurable atmosphere. Our magnetic shielding seems to be degraded, but I am unable to determine by how much at this time. External comms are currently non-functioning, but I'm rerouting circuitry in an attempt to get them back up. All ship airlocks closed when we took damage and seem to be working correctly. It is unknown at this time whether the ship is answering her helm.” – one of the quirks of ship AIs was seeing themselves separate from the physical ship, something about which Chuck teased DW from time to time. After another short pause, DW added, “My initial conclusion is that we have been hit by a small asteroid, though I do not know how our sensors missed it.”

Chuck grunted as he moved his knee and felt a stabbing pain. “Compartment five? That's the dining area and sick bay. Plus the mag shield? Son of a bitch...” *Dreamer's Way's* mag shield system kept cosmic rays and ionized solar plasma from penetrating the hull. If the mag shields were degraded too much, the entire living space of the ship could be flooded with

radiation. Bad enough that the hull may have been breached – they didn't need to add radiation poisoning to their troubles. Radiation sickness was easily cured with standard treatments from sickbay. Without a functioning sickbay, though, rad sickness could kill a person in days.

Aside from feeling woozy, Adriel only felt badly bruised and sore. Opening a door on the shelf, he pulled out an emergency breathing device for himself and tossed a couple more toward Chuck. Then, using the shelf as a handhold, he pushed toward his cabin's hatch. "We've got to get moving. You alright?"

Adriel heard the wince in Chuck's voice as he said, "Uh...my knee is killing me. It...OW...hurts to even move it."

Adriel wondered about Ma, still silent, but his first responsibility was to his ship. *His ship*...he prayed that by some miracle nobody was in the dining area when the damage occurred.

"OK, you stay put and tend to Ma. I'm going to see if I can figure out what happened."

Adriel made his way to his cabin's emergency sound-powered comms station, the historian in him recalling that its basic design had not changed since being used by 20th century naval forces. His eyes were still adjusting to the low ambient light in his cabin, but all crew members practiced navigating the ship in the dark for just such an emergency. "This is the Captain. We seemed to have suffered some kind of collision. I want damage and casualty reports from all compartments immediately. I'd like all passengers to remain where they are until they receive direction from one of the ship's crew."

With that done, Adriel left his cabin and started heading toward Compartment five, his emergency breathing device, or EBD, on his face. Well...that was the standard drill for hull damage, anyway. Hull damage itself was not so standard. *Dreamer's Way* had been making the cruise between Earth and Mars for ten years with no mishap. In fact, Adriel was pretty sure he'd

never heard of anything colliding with a ship anywhere at any time – to say space was empty was to make the biggest understatement imaginable. Space wasn't just empty, it was...uh...freakin' empty – Adriel made a note to have his head checked out as soon as things calmed down. Particles and pebbles too small to appear on the ship's nav scan broke apart against the hull of the ship with no issue if they happened to hit; anything that was larger was easily avoided with the slightest change of course.

DW updated, "Captain, most compartments report minimal or no damage upon initial inspection, though power has been lost through most of the hab ring. Hull integrity seems to be sound in all reported areas. However, I am starting to get reports of injuries. There is still no report from Compartment five." Dinner had just ended, and for all he knew most of the crew and passengers could be trapped there.

By this time, the fog from Adriel's mind had started to lift. "DW, have Engineering start opening compartment airlocks once that they verify no hull breach in each." DW was good and her quantum processors were programmed with rudimentary intuition and thinking, but it always made sense to have humans verify her on critical issues. Besides, her sensors might be out of whack from the impact. "Re-establish power, and once the lights are on, have all hands muster in..." He paused for a second – the dining area was the only space on the ship large enough to assemble everyone onboard. "...ah...the gym." Not only was it one of the bigger spaces on the ship, it was almost directly across the hab ring from Compartment five, giving it the added bonus of keeping the passengers out of the way while the damage was assessed. "Once comms are up, send out a distress call in case anybody's close." Little chance of that, he knew, as he started out of his cabin.

After about forty feet of coasting from bulkhead to bulkhead down the passageway in low grav, he came to the airlock that marked the boundary with Compartment five. Lights started flickering on as he approached, Adriel noted with satisfaction. “Hopefully it was just the breakers that had tripped,” he thought.

Now that the lights were back on though, Adriel coasted the final few feet frozen in shock. The heads-up display in his EBD indicated that there was a bit of ozone in the air, and the part of his brain not processing what he saw wondered what electrical circuit had fried with the surge in current, and then dismissed that of little immediate import.

The entire bulkhead delineating Compartment five’s boundary had bulged outward a good four or six inches, looking like a soda can top that had bent up under too much pressure. In fact, as the details started flooding his brain, he noticed that the deck had crumpled so that it sloped up to the bulkhead. The hatch in the airlock had not deformed with the bulkhead, but ripples in the metal around the hatch told Adriel that it would never open normally again, trapping those who were in the mess decks area.

He heard the slightest high-pitched whistle and realized that it came from somewhere around the hatch. Though he could not see the microscopic hole, air from his compartment was bleeding through some capillary in the hatch gasket into Compartment five. “We need to get a sealant kit here pronto,” he said out loud to himself. “DW, page an engineer, please.”

Then, right before his eyes, the surface of the bulkhead started glimmering like it was speckled with the tiniest diamonds, and then lightest shading of white began to splotch it. Tentatively, he brushed his fingertips along the bulkhead, and they came away wet and painfully cold. Almost immediately after his fingers left the bulkhead, new frost formed in his fingers’ tracks. *Good Lord...*

“DW, tell Chuck to take Ma to the gym. I need a full muster NOW.”

## Chapter 2

Adriel stepped out of the foc'sle lock and into nothing, followed closely by Engineman Susan Kamath. It appeared that major damage to *Dreamer's Way* was limited to the area around Compartment five, but there was no way to determine the extent of the damage short of cutting through the bulkhead with a torch. Few of the remote sensors in the area survived the collision, but it seemed certain that the hull had been breached and they couldn't just burn through the bulkhead to Compartment five without jeopardizing the adjacent compartments. It was clear that somebody had to determine how injured the ship was before damage control efforts could commence, and with the crew shorthanded and tending to the passengers, Adriel grabbed Susan for a spacewalk. Besides, he had to see the damage with his own eyes.

Previously, Chuck had met them to help them with their suits. His leg was splinted, but since Main Control was the very center of the ship, the only microgravity was caused by the ship's thrust. Even at the maximum thrust provided by the engine, the gravity in Main Control was only about six percent of Earth's, which enough for him to orient himself and float with the occasional bound off the deck with his good leg. Still in some pain though, he reported, "Thirty-eight people are missing out of a total compliment of ninety souls, including seven of the eighteen of ship's crew. Over twenty have injuries serious enough to require medical aid – more than we can currently provide, that is – including Ma. She's still unconscious." Until sick bay was recovered in the damaged compartment, only rudimentary first aid could be given.

No one within Compartment five had returned any answer to the taps made with wrenches from outside the compartment. Given the heavy frost that had formed on those bulkheads, Adriel had not expected them to.

DW reported that comms were still out, though *Dreamer's Way* was receiving incoming traffic. The vast distances between the planets, within even the inner System, meant that most communications were one-way data. Voice communications between ships were impractical unless they happened to be close to each other, usually when nearing orbit of a planet with high traffic like Earth or Mars. A ship typically broadcast its position, distance from the Sun and degrees clockwise from Earth's position on January 1, 2000, regularly to the closest and visible of three relay stations – one located in Earth's L5 orbit at Armstrong Station, one at Ballona Station orbiting Mars, and one at the refining station at Ganymede orbiting Jupiter. These in turn synched their databases hourly and broadcast all known ship positions every five minutes, primarily for industries heavily dependent on the cargoes onboard the ships.

“No doubt our turning up missing will be noticed before too long,” Adriel told Chuck through his walk-suit mike.

Adriel saw Chuck on his suit's heads-up display nod in agreement. “The *Unroo Star* is about three days away from us inbound to Earth. Hopefully we'll have our situation under control by then, but I think we should consider a personnel transfer. They'll be closer to Earth than we'll be to Mars, plus they're a faster ship.”

Adriel sighed softly, mentally tallying the amount of Helium-3, or HeThree as it was commonly called, necessary to bring the ship to a full stop in space. On interplanetary trips, ships would constantly accelerate using their fusion engines and then begin deceleration at the half-way point of the trip. At deceleration time, they would flip their stern so that the ship was pointed backwards compared to its course, and use the engines to brake gently to a stop for orbit insertion or for tug coupling when docking at a base. Optimizing fuel burn – HeThree was getting more and more expensive with each run, Adriel grouched – was the name of the game, as

it was the single largest shipboard expense. Stopping the ship in mid-transit would increase the time of the trip, and almost double the amount of HeThree used on the voyage.

Though extravehicular walks were pretty safe, Adriel had never been comfortable flying through space without a spacecraft around him. The distant Sun provided a dim, steady light to help them see what they were doing. They turned around to face the ship, seeing only the foc'sle airlock and the dark gray, red, and green docking rings used to mate a ship to a station or another ship. From their perspective, they flew “up” from the airlock to the “top” of the ship. Adriel wondered if humans would ever spend so much time in space to evolve past the need to have an “up” and “down”, no matter how artificially imposed.

Flying about twenty feet to rise above the nob of the foc'sle, Adriel fell in love with his ship all over again, enjoying the view and her lines. From his perspective the ship looked like a dim, sharp picture of a *Dreamer's Way* but with no frame to train the eye. Stretching out to the distance was the axis of the ship, cut as a hexagon like a pencil. It was impossible for his eye to judge how far away the hab ring was, with its four connector spokes attached to the main bearing that allowed it to spin and therefore to provide gravity, but his brain told him it was about seven hundred feet from where he was floating now above the foc'sle. He motioned for Susan to spread out and start moving aft with him, when a bright yellow nozzle caught his eye.

“DW, confirm that you are not firing maneuvering jets.” A byproduct of the HeThree fusion that powered the ship was plain helium, which was stored as a pressurized gas to help the ship maneuver. When he had reflexively ordered “Right hard full” upon regaining consciousness, the port maneuvering jet had released tons of pressurized helium, pushing the nose of the ship to starboard. There were four maneuvering jets, one each for up, down, left, right, and if one fired when either he or Susan were floating over it, they'd be lost for good.

Their meager suit jets would never be able to overcome the tons of helium sweeping them out away from the ship.

“Confirmed, Captain. I will engage neither the maneuvering jets nor the ring jets while you and Engineman Karmath are outside.” In a similar manner, hab ring rotation speed was controlled by two helium jets on its outward hull.

“Roger. Thanks. Susan, head for Main Control and check out the main bearing. We’ve got to figure out why the hab ring stopped and if we can get it going again. I’ll head straight for Compartment five.”

“Aye, Aye. I’ll give the cargo containers a look over on my way there as well.” Stacked around the pencil axis were thirty foot high hexagonal cargo containers secured to the hull. Capable of carrying tons of cargo, they could be climate controlled when necessary. As was typical on a voyage from Earth to Mars, the twenty five cargo containers were mostly filled with food. Mars grew its own food, of course, but still needed to augment its supply from Earth regularly.

“Good idea, but the main bearing is the priority, so don’t spend too much time with the cargo. We can always check them when we’re on our way back inside.”

Nancy Clegg, the ship’s Chief Engineer and Load Master, chimed in. “We’re showing no damage to the cargo, though some sensors are out. I think the cargo can wait until after you check out the main bearing.”

Susan acknowledged, and she and Adriel started toward their own destinations. Adriel envied Susan a bit – she was able to stay close to the hull on her way to the main bearing. Adriel vectored up and out on his way to the hab ring, towering over four hundred feet above and around the axis.

Ring size varied. Bigger rings allowed more passengers and slower rotation to maintain gravity. Smaller rings were cheaper to build and lighter, allowing either less fuel burned between stations, or faster speeds, or both. Overhead expenses were smaller for the lower ship types and they could turn over cargo quicker than a bigger ship, but their 3-revolutions-per-minute hab rings made for light-headed passengers. Passengers tended to go for 2.6-rev Type 3 or the luxury 2-rev Type 4 ships when they could, and passengers tended to be more profitable than cargo. Adriel's ship was a basic Type 3 ship with a single ring. Some of the bigger and newer ships had dual rings for more passenger space.

Adriel ruminated on his bottom line while he floated up the length of the ship toward the hab ring and Compartment five. On his suit's heads-up display, he tracked the hundreds of feet in open space he traveled while the thin ribbon of the hab ring grew in size. He also could track Susan's progress. He wasn't surprised that she was going faster than him; she had the axis to guide her, plus she was a bit of a daredevil. He knew that she was enjoying herself and no doubt had her suit jets on full.

He looked down and saw the faint lights of her suit fly up and over the cargo containers, up higher still over the forward HeThree tank, and then back down toward the axis and Main Control. He heard her whistle into her suit mike. "I haven't even made it to the ring, and I can tell you that we're definitely looking at yard time for repairs. The main bearing is pinched – it must have deformed from the force of whatever hit the ring. There's no way that the ring will be able to rotate. The bearing's going to have to be replaced. We're damn lucky the seal there wasn't breached."

Chuck didn't seem surprised. "Well, we should probably thank our lucky stars that we're here to talk about it. Once we can transmit, I'll forward our status to the insurance company. Maybe we can get stuff pre-positioned to expedite repairs."

Susan announced, "I'm going to head out to the ring." Adriel directed her to approach from the far side of him. Adriel had almost reached the hab ring at Compartment five, but had not seen any damage from his vantage point. He started to fly along the outward hull, increasing the intensity of his suit lamps to help him see better.

"GOOD GOD! Captain, over here!" Adriel could see Susan's suit lamps reflecting off the side of the hull indicating where she was. She sounded beyond panicked. As Adriel jetted over, he saw why. There were three bodies hovering as miniature satellites for the ship about head-height above the surface of the hab ring. Susan's headlamps were directed at three foot hole punched in through the hull. From it, an arm and a shoulder were sticking out, attached to a body wearing ship's coveralls that blocked the hole. Adriel was thankful that they couldn't see the head from where they were.

He heard Susan's rapid breathing and moved closer to her to try to calm her. "Chuck, do you see this?" Adriel's view was being displayed on Main Control's vidscreen. From the shrieks and yells coming over his suit mike, he got his answer. "This looks like the entrance wound. How it didn't just destroy the ship, I don't know." Even a rock the size of a bowling ball would hit a ship with the kinetic energy of a small bomb. DW had informed them earlier that, as there was no ship that had hit debris in deep space before, it would be difficult to calculate the odds of *Dreamer's Way* being hit, much less surviving the hit.

Holding Susan's hand to drag her away from the grisly scene, he drifted under the ring and looked for an exit point. He then decided that Susan should go down to check out the cargo

containers, as she was clearly rattled by what she saw above. Once she was on her way, he jetted down and away from the surface of the ring to give him a greater perspective, and then whistled in astonishment. “Guys, check out the shape of the ring – it’s bent at least three feet. That’s why the main bearing deformed. The sleeve must have bent with the impact. That’ll be more even more yard work.” Adriel wondered if the insurance company would just total his ship. And what he would do if they did.

Adriel couldn’t worry about that now. “Ah, now I see the exit wounds. Whatever hit us shredded on impact and left a bunch of smaller holes about fifteen feet down and inboard of the first hole. The biggest one is about seven feet wide, but there are dozens of smaller ones as well.” Mercifully, there were no bodies to be seen here, and Adriel studiously avoided looking deeper into the largest hole. “DW, how does the ship handle now?”

“Captain, we will have to halt the tumble of the ship before any maneuvering can occur. I believe we have the Helium stores to do so, but I will have to start as soon as you are both in if we are to come to all stop in time for personnel transfer. I believe that we are still on course for Ballona, but I will have to collect more navigation data to be sure.” Adriel was thankful for that, at least.

“Roger, DW – start halting tumble and rotation as soon as you can. Your other priority is to get our comms up so we can coordinate with *Unroo Star*. They’re going to need to come to all stop also.” Adriel sent out a silent apology out toward his fellow captain. He or she would come to *Dreamer’s Way’s* aid, of course, but they’d also be less than happy about the extra HeThree burned.

For a second, he considered spending the rest of the trip accompanying his ship on the outside rather than face the future inside, then sighed. “Susan, start heading in. There’s nothing

more to do out here. Chuck, assuming the galley and sick bay are total losses, figure out our current store situation and what provisions we may need from *Unroo Star*. We'll also need a crew working to patch the hull before we can cut through the bulkheads. Send them out as soon as DW is done maneuvering."

### Chapter 3

She was, essentially, an electronic void in space. Her owner had personally developed a unique coating of adhering plastic metamaterial that would scatter most forms of radar frequencies when charged with electricity, and had personally applied it to his ship over the past several months. The modification was a secret that he would not entrust to even his small, loyal crew.

She was equipped with several modifications, accrued excruciatingly slowly over the past five years. All ships glowed in the infrared against the coldness of space, with electronics, mechanical energy, and fusion and body heat a constant by-product of roaming the planets. However, she channeled all waste heat out with her fusion engine exhaust, which was impossible to hide anyway. Along with the usual single-frequency nav radar, she used a frequency-hopped photon suite utilizing light frequencies of O- and B-class stars. Her ship AI had been improved with home-grown aps and upgrades, such as the ability to modify her mag shield force lines – giving her the ability to, say, vector her engine output slightly for more maneuverability.

Her small crew of twelve had several unique and valuable skills, adding to her capabilities.

She was an anomaly.

There was no need to arm a ship in space. From the earliest days of space exploration, agreements like the Outer Space Treaty prohibited weapons. In truth, aside from a few bits of sabre-rattling in the first century of space travel, America's prolonged dominance of Earth's economy and technology meant that there was no country capable of seriously challenging it, negating the desire for a space arms race. Later, as private space enterprise overtook government ventures, there was even less reason to arm a ship.

Businesses operated in space to make money and besides, there were more cost effective ways both open and nefarious to compete in the market. Weapons meant more building and maintenance expense, more weight, more personnel, and more fuel – all negatively impacting the bottom line. Everyone benefited from peaceful trade. It seemed barbarous to some, and ludicrous to the rest, to arm a space ship.

She was an anomaly, like the first man-made fire in a cave.

She was loved by her captain, though it was tinged with bittersweet. He regretted the need that caused her to be built. That the lack of opportunity was a fact of life, or at least an illusion of fact. He intended to change that.

Sitting quietly in his opulent cabin eating a real steak, a luxury in space, with potatoes and vegetables, he forecast endless permutations of chains of events from this point in time in his head, seeing the ripple of future change wash over people, places and events, remaking outcomes, making new things happen. He wished time would accelerate, so he could see which chain of events occurred and which ones fell abandoned by the wayside. In his minds' eye he was an event herder, constantly guiding everything to the ultimate goal.

His ship's AI interrupted his thoughts. "Captain," she said in a melodious voice, "we are receiving a distress signal from *Dreamer's Way*. She is reporting structural damage and personnel casualties from an impact with an unknown object. At our current course and speed, it would take us approximately 30 hours to decelerate to intercept. The only other ship in the area is the *Unroo Star*, a Type 2 merchant bound for Earth." On one of the bulkheads, she simultaneously displayed both ships' characteristics, current course, estimated deceleration rate, predicted point of intercept, and known manifests.

He smiled ruefully. This was an interesting, unexpected turn of events. His imagination saw whole forests of possible event paths fall by the wayside in an instant, and new ones taking their place.

“Thanks, G, and could you please have the first mate join me.”

## Chapter 4

Adriel and Chuck were in Main Control. Nancy Clegg floated in from an opening from ring spoke, fresh from her rounds inspecting repairs. It had been over two days since the impact, and the ship was completing its deceleration maneuver to rendezvous with *Unroo Star*. Annoyingly, comms were down again. There was a short somewhere on the main bus line that ran through Compartment five, and DW was working with CHENG's personnel to isolate and reroute power for a more stable solution.

*Wang Jin, brother, UN bureaucrat. Wang Bo, brother, owner of a vid display manufacturing venture. Meeting with the Oligarch...*

Nancy had a sour look on her face, and given that they'd been operating in low gravity since taking the damage, one that was likely not due to space sickness. "Comms should be up shortly. We've had a helluva time tracking down all the busted lines, not just for comms, but for a whole host of systems and subsystems. It looks like the shock wave from the impact didn't just affect the vicinity of Compartment five, but traveled completely around the ring via electrical conduits. Almost every ship system has taken some minor damage. It'll likely be days before we've got everything squared away."

Adriel sensed that there was another shoe to drop, and prodded Nancy to continue. She sighed, absently brushing aside her bangs as she did so. "Our real problem is that even with the hull patched, we're still vulnerable to radiation in compartments three through seven. Our rock destroyed nine of the sixteen mag shield conduit lines and of course obliterated the local Z shielding at the points of impact."

Compartment five...Adriel had gone back outside to supervise the external hull patching, and the interior damage control teams had cut through by the time he and the hull patching crew

had returned from their spacewalk. Chuck met him outside the airlock to the compartment, face white and splotchy, breath with a slight aroma of vomit. “Brace yourself – it’s bad,” was all he’d said in warning, in what must rank as one of the greatest understatements ever. When Adriel floated through the hole cut through the airlock, he drifted into a realm of bizarre twisted metal shapes that could not be part of his ship.

*Mary Weber, older sister of “Ma”, lifestyle consultant. Vacationing aboard Dreamer’s Way....*

It was only because he knew the layout of *Dreamer’s Way* like he knew his own body that he was able to orient himself. Once he did, his mind was able to filter the obvious from the macabre. The shock wave from rock had exploded the atmosphere, and the resulting blast bent metal and pulverized flesh. Adriel forced himself to coast the one hundred or so feet of the entire compartment, dodging covered bodies and body parts of crew and passengers, and seeing for himself that the galley, dining area and sick bay, indeed the entire compartment, was a total loss.

Having no way to preserve the dead, nor to identify the pieces and bodies badly burnt from the cooked atmosphere, Adriel ordered the sealing of the compartment. They could do no more for anyone who had been in the compartment at impact. Fortunately, death was instantaneous for all.

*Janice Bohanon, plant biogeneticist. Returning from a Lunar agriculture conference to her home on Mars...*

Adriel snapped back to the present, listening to Nancy confirming much of the secondary damage DW had initially reported. She finished with, “Our biggest danger now is if a sudden solar storm hits us square. The ship may not be able to protect us from that.”

DW anticipated Adriel's next question, "Captain, we may be able to vary the magnetic flux to deflect most of a coronal mass ejection if necessary. It may temporarily leave us vulnerable to general cosmic radiation if we do so, though."

"Damned if we do, damned if we don't...let's hope the Sun decides to behave itself over the next few weeks." Not with their luck, Adriel thought. Of course, the eleven-year Sunspot cycle was at a max. "Very well. Chuck, how are our passengers and crew holding up?"

*Audrey O'Brien, wife, Engineman, ship's AI programmer/maintainer. Ramon Ramirez, husband, Third Mate, load and ballast master...*

"As good as can be expected, I guess." Chuck spread his hands in a hopeless gesture. "Things are going to be raw for a while, I'm sure. I think the entire ship is sleepwalking through the days in shock. This morning's memorial service was good and all, but...we'd been underway for almost a week so everyone knew everyone, and it's just going to be hard for a while. I know I'm not sleeping well and I know I'm not the only one."

Adriel had read about the loneliness of command, but thought it an anachronism of another time. Crews of starships spent months and years together, and there was no way he could see a ship ever functioning well with a Captain in an ivory tower. However, the impact had invoked formal Captain responsibilities that one never saw invoked unless one was watching a movie production, and as a result the relationship between Captain and crew automatically grew more formal and for Adriel, more distant. One of these responsibilities was the funeral service.

Adriel had been a ship captain for over ten years, and had not had a single death on his ship until two days ago. He asked DW for funeral service examples and settled on the Anglican seafaring service, as it appealed to the maritime historian in him. He gave the service in the

gym, hoping to give his shipmates some measure of closure or at least a place to commiserate, but Chuck was right...it was too soon, too raw to be much more than words. However, with the injured to be transported to the *Unroo Star*, Adriel felt it important to conduct the service before that transfer occurred.

*Emma Martinez, heuristic designer. Returning from Earth and bound for Ganymede...*

“Count me as one of the sleepless,” thought Adriel, who figured that he’d aged decades in the past two days. He’d awoken in cold sweats from nightmares at least a handful of times; him killing his ship and all the people onboard the recurring theme. Intellectually, he knew that there was no one to blame for the freak accident. That certainly didn’t help him feel better, or any less responsible.

“Captain, I believe our comms have been repaired. Would you like to contact *Unroo Star*? I estimate a latency of about two seconds for voice traffic. She is just on the edge of our radar range.” Every bulkhead and ceiling was covered with a thin glastic film that could turn part or all of it into a video screen, configurable to the users’ taste. On Main Control’s bulkhead, DW displayed the short range nav scan, a medium-range view that updated every few minutes with *Unroo Star*’s reported position, plus a zoom-out showing that they were almost half-way to Mars, plus estimated time, HeThree burn, and new course to Mars once the transfer was complete.

“Yes, DW, establish a call with her and let me know when the connection is made.” Adriel could attest to the ineffectiveness of the memorial service. In addition to his nightmares, he just could not stop thinking about the passengers lost and friends gone. Their faces would flash past his mind’s eye on an endless loop of reproach. Not normally prone to much emotion, he often became weepy whenever not actively engaged with solving the myriad of problems his

ship now faced. As a result, he kept busy until he dropped into his rack and instantly fell into nightmares again. To his crew, he was on top of things, inspirationally leading from the front, being the shoulder others cried upon. He felt like a fraud. "On whose shoulder do I cry?" he thought. He'd never been so alone.

Chuck, knee immobilized but not in pain like he was two days ago, asked Nancy, "How long do you figure the personnel transfer will take? We've got a bunch of folks with broken bones and two passengers who must remain immobilized. It's going to be a challenge to get everyone into suits, particularly since most of the passengers have never made an EV walk before." Adriel was thankful that Ma had regained consciousness and had otherwise not been injured. Though she was suffering from a severe concussion and complained of dizziness that the meds available couldn't quite cure, she insisted on staying with *Dreamer's Way*. She said her sister would have wanted her to.

*Wendell Yadav, husband, waiter. Cecilia Perez-Yadav, wife, polymer engineer. Jamie Yadav, daughter. Arthur Yadav, son. Emigrating to Mars...*

Nancy rubbed her eyes – Adriel was not the only one suffering from sleep deprivation – and nodded, "Once we have voice comms with them, I'm hoping to work out the details and dock with them. I figure it'll take just as long to do that as it would to get everyone dressed out, chaperoning passengers on their first extravehicular walk. I recommend –"

"CHENG, I'm sorry to interrupt. Captain, I cannot raise the *Unroo Star* on any voice channels. Additionally, she has not updated her position in several minutes -" All three officers glanced at the viewer and, sure enough, saw that ship's last position plot had turned yellow, indicating that it was a stale. " – and her current position via radar is closer to us from what I estimate her position should be based on her plotted deceleration."

A feeling of confusion overwhelmed Adriel. What in space....? Ships weren't required to transmit their position, and sometimes it was to their advantage not to, like when loitering and mining over a particularly valuable asteroid. However, he couldn't think of a plausible scenario where a ship expecting to rendezvous with another ship wouldn't be broadcasting their location. "Maybe they are having comms problems, too?" Stranger things had happened, Adriel thought. Still...his Spidey senses were tingling. "DW, please display a visual of *Unroo Star*."

The medium-range view was replaced by blackness with a few pin-pricks of lights that were stars. In the middle was a slightly bigger blotch of light, but with no details. Chuck asked DW to increase magnification twenty-five times. They were rewarded with a view that, in some respects, was as incongruous as walking into Compartment five post-impact.

The ambient light from the Sun barely illuminated the view, making them all wonder if their eyes were deceiving them. There were three pieces of ship where only one should be. The main axis had snapped precisely at the main bearing, leaving both pieces of the axis tumbling in opposite directions. The hab ring continued its spin as if nothing had happened. As they watched, the stern rotated completely around and, with engine still burning, sliced the hab ring in two. They saw bright flashes of explosions as the air from breached compartments was exposed to the ionized exhaust. The engine continued their burn a few moments longer before winking out, and the stern slowly fell away from remains of their rescue.

"Good...LORD!" "Holy Shit!" "What the..." All said in unison. Adriel said a quick prayer for his own strength and sanity, and another for everyone onboard the wreck of the *Unroo Star*.

In what he was sure was a shaky voice, Adriel commanded, "First Mate, we're going to need all hands to make it through this crisis. Ask for volunteers from our passengers and

deputize them as temporary crew. Standard pay will apply.” Adriel was sure he was taking action that a Captain hadn’t had to take in hundreds of years. “Assign them as their skills warrant. If anyone has unique skills that you require that we don’t otherwise have, deputize them whether they volunteer or not. CHENG, I want ship’s crew in two working parties – one to continue repairs on *Dreamer’s Way*, the other for a rescue and salvage detail for *Unroo Star*. DW, get us as close as you can safely get to the largest part of their hab ring. Send a message to Ballona Station with all data we have so far on *Unroo Star*’s situation, with the promise of updates as soon as we get them. And give me the PA channel – I need to address everyone onboard.”

## Chapter 5

By the time *Dreamer's Way* limped into Ballona Station ten days later, it was the center of a newborn spiral galaxy of news, gossip, and general buzz. Most crew and passengers had been contacted for interviews and even book deals, though few had cooperated as of yet. Adriel had to admit that the money publishers were offering for his story was tempting, but he felt much less a hero than a bystander who happened to be at the wrong place at the wrong time, plus he didn't want to seem like a ghoul feasting on the tragedy of others. Maybe when the nightmares subsided...

One arm of the *Dreamer's Way* news galaxy was a basic chronicling of events. Taking the official press releases from the ship, blog and status posting of everyone onboard, and ship broadcast info, the first story to coalesce was the events up to and immediately after *Dreamer's Way's* impact. Then a reconstruction of what was known from *Unroo Star's* transmitted data and personnel posts and recordings up to her accident. Then the heroic efforts of *Dreamer's Way*, crippled though she was, to search and rescue. The harrowing spacewalk between the ships. The ad hoc, ineffective attempts to restore power to *Unroo Star's* hab ring hulks. The realization that there were no survivors – most of the air locks did not shut with the sudden catastrophic loss of power. Then the rush to reach Ballona Station before an angry Sun tried to fry them with streams of protons.

Of course, with each story came links to bios and human interest stories on anyone mentioned. Adriel had little time to ingest everything said and written, but was somewhat mortified that his personal life had become public knowledge. Now everyone knew his mediocre standing as a midshipman at Moore Lines Academy; that his classmates teased him as “Adriel Falldown” because he was so prone to motion sickness; that he'd spent his childhood onboard

various Moore Line freighters that employed his parents; that *Dreamer's Way* was one of the relatively few independent ships but that he'd had to take a significant loan to buy her; that he was a practicing Christian; that he'd had few dates in the past decade and had never been married; that he seemed friendly but that he had few very close friends. Mortification became outrage when he realized that almost all these friends, real or social, had been badgered for more juicy details on "Captain Adriel Finlay".

Once the timeline of events had been exhausted, the media focused on the privations of the trip. With no galley or sick bay, how did they manage? How did the passengers feel about being absorbed into the crew? Did they get used to low gravity, or were passengers incapacitated? Naturally, a good bit of Monday-morning-quarterbacking was conducted on every decision Adriel made – at first laudatory and then, as that angle dried up, more critical.

From the start, a separate arm of news speculation fell into the "What the heck is going on here?" category. After decades of deep space travel with no major accidents, how did two accidents like this occur in the span of three days? This was the great mystery where Occam's Razor said that they were just two freak accidents. There were tons of small, unaccounted asteroids between Earth and Mars, though there was no satisfactory answer as to why the ship's nav scan did not detect it. A variation of that theme was that the Solar System itself must have passed through a galactic asteroid field consisting of some exotic materials impervious to radar. No other conjecture made much sense, though this did not put the public at ease, nor did it halt other wacko theories from getting their own air time.

Then there were the secondary effects from the two mishaps, and the resulting commentary that followed. Adriel, and indeed his whole crew, was relieved that insurance would cover all ship repairs. However, their insurance rates immediately went through the roof,

and indeed every shipper's insurance rate went up measurably. On Earth, wholesalers and distributors immediately increased their price on imports in anticipation of higher shipping costs – everywhere else, every point of sale down to the smallest restaurant or mom and pop boutique had to increase their prices, or likely would have to soon.

There were the usual bromidic opinions about the evils of big business jacking up prices to line their pockets, but suddenly the esoteric subject of spaceship construction came under the tabloids' scrutiny. Were shipping companies scrimping on safety features and crew training? Was space travel even safe anymore? Had it ever been, or had the lack of accidents until recently been just luck? With over a hundred people dead, answers needed to be found.

News outlets were still chasing down various rabbit holes by the time *Dreamer's Way* made port, which in itself spawned a host of stories. It seemed as if it weren't for *Dreamer's Way*, there'd be no news to report at all.

As was their long-standing tradition, he was dining with his best friend Kirk Sentinel the first evening after docking. They were both studiously ignoring the stares and whispers of the other diners of Soy Sucks, the best restaurant on Ballona Station that specialized in imported prime beef meals. He whistled through his teeth when looking at the prices on the menu, thinking that maybe there was something to the story of evil businesses lining their pockets. Kirk smiled knowingly from across the table and joked, "Dinner should be on you, since you're the reason prices have gotten so high."

Adriel smiled and felt unrealized tension leave his body. As if they just magically appeared that instant, he noticed the soft music and peaceful tropic scenery playing in the background, the rich aromas coming from other tables around them, the casual professional ease of the establishment's staff. "Well, I thought it was because of evil big businesses such as

SenShip that we're paying through the nose. Besides, I'd have thought you'd be thankful to treat me since I just dumped a ton of work on your yards."

Kirk, owner of Sentinel Shipyards, acted like he was in physical pain at the thought, but in reality it was his turn to buy dinner. A long standing agreement dictated that they take turns buying dinner, otherwise they'd waste half the meal arguing over who was treating whom. "You know I always appreciate business, though I'd rather you didn't have to go through your hell for me to get it." Kirk paused long enough to sip from an imported American beer. "We're starting work on *Dreamer's Way* in three days. I'd hoped to clear space sooner, but both docks are occupied. We rushed through an engine upkeep a week early just to accommodate your sorry ass, and are already fabricating your hab ring modules."

Adriel nodded in both acknowledgement and thanks, sipping a local Martian cider grown from the only hydroponic orchard on the planet. He knew Kirk had moved heaven and earth to help out his best friend. "I probably couldn't get in earlier anyway. I had to contract a mortician working party collect the remains from inside the ship. They assure me that they'll take care of identification, notification of next of kin, and the like. I was more than happy to pay them the extremely high rates they charged me – my crew certainly didn't want the job, and any problems with recovery are now their problem, not mine."

Kirk wrinkled his nose as if he were doing the job himself. "I don't blame you." Their conversation paused as the human waiter brought their meal. Most higher-end restaurants still used human service to add ambiance to the dining experience. Both men had ordered a steak meal, welcome relief from the spiced-up protein paste spacers normally ate.

He continued after they had bowed their heads for a moment to give thanks. "I can only authorize repairs that insurance allows, though in your case that's an extensive list.

Compartments four through six will be cut out and replaced entirely” – Adriel made a note to clear out his cabin when he got back to his ship – “as well as the entire main bearing. You’ll get automatic upgrades to the galley, sick bay, as well as some new amenities to the crew and passenger staterooms. Notably, the Questor gaming suites that hit the market a few months ago.”

Adriel blinked involuntarily. The full-immersion Rapid Eye Movement Memory, or REMM, gaming technology invoked echoes of the holodecks of yore, and were expensive enough that most gamers did not own one yet. One of the hottest franchises on Earth were Questor Centers where people paid top dollar for thirty minutes of absorption in any one of dozens of role playing games. Only the newest luxury ships offered Questor – as far as Adriel knew, no indie ships had them. A competitive advantage for sure, and he’d likely be able to charge premium rates for those staterooms – he’d have to pay for the licensing fees for the games.

“Uh, Kirk – that doesn’t seem like a standard upgrade...”

“Well...Questor’s looking to expand their market into the outer worlds, so they cut me a deal on installs for a ship that I thought was a good candidate. *Dreamer’s Way*, with her extensive replacements, would have been a good candidate anyway.”

Adriel wasn’t going to look a gift horse in the mouth. Besides, this was a perfect segue into what Adriel really wanted to talk about, but not in the Soy Sucks. “I can’t wait to see the designs back in your office.”

Kirk, based on a lifetime of knowledge of his friend, got the hint. “So when is your board of inquiry?” Adriel felt the tension clench in his shoulder blades again. Any time a shipboard mishap occurred, a board of inquiry was required to determine the culpability, if any, of the Captain. Adriel was confident he’d be cleared regarding the impact itself, but not so sure

how his actions after the impact would be judged. If he were found negligent, he'd be facing certain bankruptcy through civil litigation.

“A month from today. It's going to take them that long to review the data.”

Kirk sensed the shift in mood of his good friend, and changed the subject to the more innocuous topics of recent friends and family gossip. They didn't talk about the ship or the voyage for the rest of the sumptuous meal, for which Kirk gave an extra-large tip.

They got up, and as Adriel stretched slightly to help the meal settle, the tenor of the murmur of conversation in the restaurant changed. Adriel saw various patrons suddenly manipulate their personal pads, and then saw one of the waiters move quickly to change the background music. After a few touches from his console, every bulkhead displayed an anchorwoman whose demeanor was equal parts neutrality, excitement, and horror. “...just getting reports in now from our sources on Earth...the gas tanker *Gany 55*, carrying HeThree from Jupiter to Earth, has not reported in over five hours and is feared lost. Thankfully, it was an autohauler with no crew, but it carried over one hundred thousand tons of fuel...” Conversation around them stopped as Adriel felt all eyes dart between him and the bulkheads as the woman continued her report.

“Let's get out of here,” they both said in unison.

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