

Second Genesis

The spaceship gleamed brightly, even in the dim light of late evening. It was designed to hold over one hundred twenty people not counting the crew plus food and water for twelve months or half a year as Doorshans reckoned time. Air was less of a problem since a number of live plants were also loaded on in case the anticipated voyage exceeded the five-month estimate. Every type of seed was carefully stored in the cargo hold.

Many of the plants were capable of producing edible fruits and vegetables, though it was unlikely they would be needed for that purpose during the journey. Water reclamation devices would convert liquid waste into irrigation for the plants. Solid waste would be jettisoned, thus reducing the over-all weight of the craft and cargo, if ever so slightly. And, taking pains to be prepared for every contingency, concentrated vitamin supplements sufficient for a year were carefully stocked.

Captain Marthok Dardii looked appraisingly at the exterior of what could be his last command. It was intended to be a colony ship to Tareesh, the nearest habitable world. Doorsha, his home planet, was dying and had been doing so for millennia.

Marthok, tall and stout with short red hair and a well-trimmed mustache, turned away from the ship and addressed the shorter, balding man that approached from his left.

“Still no word from the astronomy detail?” asked the captain.

“No change,” said the shorter man shaking his head. “The meteor damage to the first ship must have caused it to crash possibly killing all hands and passengers. If any survived they must have lost all technology in the incident and had to start over from scratch.”

Marthok released a long breath. The previous colony ship had left thousands of years ago and the ancient astronomers had tracked their progress through every second of the long voyage. A meteor had struck the first ship as it edged into Tareesh's atmosphere. Now, many millennia later, powerful telescopes and other equipment sought evidence of a Doorshan civilization fifty million miles away. After nearly twelve thousand solar cycles no sign of cities or even organized settlements were in evidence. Over fifteen hundred of Doorsha's best and brightest killed by a chunk of space debris.

"It took fifty years to get that first colony ship ready," said Marthok. "I'm surprised we were able to put together this second ship in just twenty five years, Orsohn."

"Technology improves, becomes more sophisticated. After twelve millennia it should be child's play to build a space ship."

"The other ship was at least six times larger," pointed out the Air Force captain.

"You know your ancient history, I see. Well, Captain Dardii, we are operating with limited resources. Building the canals was costly and draining and only delayed the inevitable."

"Too bad, this ship will only hold about a hundred and forty odd people." Marthok rubbed his jaw and added, "Pretty small genetic base for starting a colony."

"Oh, not at all," countered the shorter man. "No two passengers are closer than fourth cousins genetically speaking. As long as the descendants keep track of their lineage and procreate in sufficient numbers the stock should stay healthy and viable. I dare say you could manage with half that number provided sufficient care was taken."

"Will there be any other ships after this one departs?"

“Unlikely. We had to search far and wide to find these volunteers after what happened to the first ship. I, like most others, intend to stay behind to turn off the lights.”

“Doorsha will only support life for another fifty, maybe a hundred years you know. If you can call this ‘living’.”

“I do know. Like most others staying behind I underwent sterilization.”

“What? Why?”

“No point in fathering children on a dead world.” Orsohn looked up into the sky. The stars were now bright and vivid in the thin air. Night came quickly on a world with a thinning atmosphere and precious little moisture. “I don’t want my children, or grandchildren, to die with the planet. Better that they not be born at all. Besides I live on through my son that will be on that ship.” Orsohn put special emphasis on the last statement.

“Why not come with us?”

“I am too old to waste food and water and fuel on.”

Marthok swore blasphemously. “We need brains just as much as muscle, Orsohn, only more so. All the really bright young people are refusing to go. They cite the previous ship disaster as their excuse. I think this new Star Drive engine we installed frightens most of them. By the Ten Gods, we even had to pardon a few criminals to fill the roster for this trip!”

“Space travel is a young man’s game, captain. Besides, the Star Drive has never been tested.”

“We had to scrape for the radioactive isotopes that power it as it was,” admitted the captain. “There are precious few resources left in the world.”

“Which is the reason you are leaving it and I am not. I have too little time left to me to be considered a resource.”

“What will you do then?” demanded Marthok. “Sit around and wait to die?”

“Well, when our resources finally dry up a number of us intend to shut ourselves up in a chamber and make a toast with *kolnack*.”

“You plan to suicide?” Dardii winced at the thought. “I prefer to meet death with a pistol in hand. And not pointed at myself, either.”

“And that is why you are going on the ship. Look at it this way; someday your descendants might come back for a visit and find my mummified remains.”

“There’s a cheery thought,” said Marthok dryly, then he changed the subject. “We launch the sixth of *Doma*.”

“So soon?”

“We have a limited window of opportunity, you know. Tareesh will be out of range if we wait too long. It cycles around the sun in half the time Doorsha does.”

“Please, captain. I do know something about planetary movements. But since you are not long for this world, you must join me at my home for dinner on the fifth...unless you have already made plans...”

“I’ll be there, Orsohn, and I’ll bring that bottle of *garfar* I’ve been saving for a special occasion, but only if you stop calling me ‘captain’.”

“Agreed, but only if you will call me ‘father’.”

The trip had taken five months. At full burn, the voyage would have taken half that time but caution was the watchword of this voyage. There was a chance that Tareesh

would be too dangerous to settle on so fuel would be needed should they have to seek out a different world. Of course no other suitable planet existed within the confines of the solar system; that was what the Star Drive was for.

Tareesh was considered the best candidate for successful colonization with its climate, atmosphere and ecosystem despite the oppressive gravity as compared to Doorsha. Shuttles and probes would be sent down to the surface to take soil-samples, test the air for inimical gasses and collect microscopic organisms for study. If the results proved less than optimistic, the Star Drive would be fired up and the ship would make all speed for the nearest planetary system that Doorshan scientists proclaimed likely to support life. The nearest such system was estimated to be 4.9 Doorshan light years away or in Star Drive terms a three to four week journey.

The first colony ship to approach Tareesh had no Star Drive, so could only hope and pray to the Ten Gods that this new world would prove hospitable. Unfortunately, they never had the chance to find out. A meteor struck the ship and destroyed it. Tareesh had cycled around the sun at least twenty-five thousand times since the meteor incident. It was unknown if any of the lifeboats had escaped to the world below, or if any survivors still existed eking out a meager existence without the aid of modern Doorshan technology.

Captain Marthok Dardii was anxiously watching the visiscreen as the image of Tareesh and its lone satellite, Luneesh, grew larger. All but essential personnel had been ordered to board the lifeboats. The lesson of the first colony ship was ever present in his mind and he wanted to be able to evacuate his people in an eye-blink should something go wrong.

Mass sensors, far more efficient than those of the first ship, were set for maximum sensitivity. If anything larger than a pebble came within a thousand *nors* of the hull, alarms would go off and automatic systems would alter course so as to avoid collision.

“We should have gone directly to Malnorii,” grumbled Lt. Moorson.

“Five light years is a long detour, Karn,” said Marthok.

“Four weeks to another star verses five months to a neighboring planet,” argued Moorson. “Why couldn’t we have used the Star Drive? We would have been to Tareesh in an eye-blink.”

This was an old argument that either participant could have recited by heart but it released tension to have it.

“We could have overshot by millions of miles, maybe all the way to the sun,” explained Captain Dardii for the *nth* time. “Star Drive isn’t accurate to less than sixty million miles, making it good for interstellar travel but insanely dangerous in a planetary system.”

“I know, I know,” sighed the lieutenant. “Seems to me they could have perfected it before sending us out with the damn thing.”

“Time was running out. We were down to years instead of centuries, or even decades. If we do go to Malnorii we will need fuel enough for the interplanetary end of the trip. And if there are no suitable planets there...”

“On to the next target, which is, um, Fenlara.”

“And that will be our last stop, no matter what,” finished Marthok. “Our fuel will likely be exhausted as will our food and water.”

“Well since we are coming up on Tareesh now,” observed Karn. “I guess it would be pointless to debate the strategy that brought us here.”

Marthok looked about at the crew as they studied various monitors and gages, taking notes and pressing buttons. One man, Sub-lieutenant Hos, was particularly busy at his station.

Marthok walked over to look over the young man’s shoulder. What he saw held little meaning for him so he inquired, “Is something wrong, Hos?”

“I am not certain, Captain Dardii,” said the Sub-lieutenant. “We are approaching the radiation belt that rings Tareesh.”

“As expected. Our shielding is more than adequate to protect us from any danger.”

“Yes, sir, but I can’t be certain if it is not affecting our instrumentation.”

“What makes you say that?” asked Lt. Moorson.

“According to my readings, Tareesh is undergoing a magnetic inversion.”

“Captain!” Ensign Barsoom yelled from the helm control. “The Star Drive has activated on its own. We are entering hyperspace!”

“Shut it down,” ordered the captain, “now!”

Barsoom rapidly typed out commands on his console. “The controls won’t respond, sir.”

“Can we still launch the lifeboats?” asked Moorson.

“Too late for that,” said Marthok. “Once the Star Drive initiated, anything leaving the ship would become lost in hyperspace. Without a Star Drive to control re-entry to space normal the life boats would be trapped forever.” The captain had been drilled

mercilessly on all aspects of the Star Drive almost to the exclusion of everything else.

“Tareesh’s magnetic field inversion must have bugged the engine controls.”

“We are now in hyperspace and at speed, sir.”

“What is our heading?”

“Unknown, sir,” said the ensign. “Navigation is bug-, um, malfunctioning, too.”

“Damn,” said the captain under his breath. “Karn, order the people out of the life boats before some idiot panics and gets himself lost in hyperspace. Barsoom, get a team on the controls and navigation. I want them operational ten minutes ago.”

It took considerably longer than the negative time requested to get the ship back under control. Navigation was restored twelve hours into hyperspace, but the Star Drive controls defied all efforts at repair. It was a nervous three weeks before the controls were repaired and the ship was able to enter normal space.

“Where in the seven hells are we?” demanded Marthok as he looked at the visiscreen. The screen displayed constellations completely unfamiliar to the captain and crew.

“Well, we can’t even estimate how far we are from the jump point, and we don’t know in which direction,” answered the astrometrics chief, Whells. “Navigation was off-line when we entered hyperspace so it failed to record the starting position and direction as it was designed to do. We went a lot further in the time we were traveling than we thought possible.”

“How do you figure that?”

“The nearest G0 type sun that we can find with a nine planet system is eighteen light years away. We are too far out to even be sure that that system was our starting point.”

“Can’t we make a reasonable estimate based on time in hyperspace?” asked Marthok. “Speed is constant there, or that is what I was told.”

“Speed is constant there, sir,” supplied Whells. “But time may not be.”

“Explain.”

“We were in hyperspace for 516 hours. Based on that time estimate, we should be four point three Doorshan light years from Tareesh. At that distance we should be able to spot a G0 type star. But the nearest one is eighteen light years away.”

“So hyperspace travel is faster than we thought?”

“No, sir. All our data tells us that that is impossible. What is possible is that time works differently in hyperspace than in normal space. The three weeks we spent in hyperspace may be the equivalent of several months, maybe even years, in normal space.”

Years? Marthok mentally filed the information away for later. “Don’t we have charts on the computer that would allow us to extrapolate our location?”

“We did, but a lot of the data on the computer was corrupted during the magnetic inversion.”

“Then we are lost in space?” Marthok looked into the screen again. “I want options. Since Doorsha has a G0 type sun. Put astronomy on locating every G0 sun for twenty light years. Work with the data retrieval team. Even partial data is better than

nothing. Maybe between the two teams we can get a fix on where we are. While you're at it, look for any sign of an inhabitable world in our current neighborhood."

"Yes, sir." Whells rushed off as Karn walked over.

"Make it good news or go away," said Marthok.

"I overheard you barking at Whells. I already located three more G0 type suns."

"Becoming a precog?"

"After six months under your command, I know what to expect. I put astronomy on finding G0 suns as soon as we dropped out of hyperspace. K0 type suns, too."

"I should have thought of that one myself. Good thinking. What are the stats of the suns you found so far?"

"The nearest one, a K0, is three light years off from our current location, but lacks any promising planets for colonization. The next one is four point five light years away, and has two possible candidates, though one might be too warm for comfort."

"And the third?"

"Only one likely planet in an orbit similar to Tareesh. It is fifteen light years away."

"A system with two possibilities is better than one, especially when it is closer. Set course and prepare the Star Drive."

"Astronomy would like a chance to map this region before we change location."

"How long do they need?"

"About a day."

"They have half that. Move some people around if you have too to speed them up, but we are running on limited resources and I won't waste a second anywhere. And

get Science Department working on what the hell happened back on Tareesh. I don't want a repeat of that."

"Yes, sir."

"One more thing; I give commands, I do not 'bark'."

Astronomy Dept. took slightly longer than the ordered half-day but Lt. Moorson convinced Captain Dardii that the extra time was vital for a safe hyper-jump pointing out that accurate star-charts would reduce the risk of emerging from hyperspace inside a sun.

"Also, the two planets are far enough apart that, with care, we might be able to make a jump from one planet to the other within the confines of the planetary system," explained the lieutenant.

"What? How do you figure that?"

"The first planet, the warmer one, is about ninety-million miles from its sun and there are no celestial bodies between the planet and us," continued Karn Moorson. "Buross in Quantum Mechanics Dept. says we can fine-tune the jump to be accurate to thirty-million miles with a few minor adjustments on the Star Drive and the sensors."

"How minor?"

"We did them already."

Captain Marthok Dardii debated with himself whether or not to dress down the lieutenant for taking the initiative without consulting him first then decided against it. Initiative was in short supply and should be encouraged, not quashed.

"What about jumping to the other planet?"

“It has an orbit of slightly over a hundred million miles from the sun,” continued Moorson. “Its current orbital location puts it at about a hundred and seventy million miles from the first target, and far enough over from the sun that we won’t come within twenty million miles of it.”

“I thought space normal bodies had no effect on hyperspace,” said Marthok, remembering his training back on Doorsha.

“We are a little concerned about intense gravitation and magnetic fields after what happened near Tareesh. Intense gravity can affect light, so maybe it could affect hyperspace as well.”

“Speaking of Tareesh, does Science dept have any theories about what happened there?”

“Several, sir, but the most likely one is that every so often, say thirty-thousand Doorshan years, a planet will undergo a magnetic shift of its poles. What was a positive charge will become a negative charge and vice versa. It was our bad timing to close in on Tareesh when it was at the apex of that shift. The odds against it happening again as we approach another planet are about as good as the whole crew suddenly sprouting horns and a tail.”

“Good work, Karn,” said the captain. “How soon until we are ready to go?”

“Just give the command, sir.”

“Activate ship-wide,” Marthok ordered the Communications Officer. “All hands prepare for jump to hyperspace.”

The ship emerged from hyperspace a scant five million miles from the target planet. Weary yet hopeful crewmen turned all telescopes and sensors on the planet's surface.

"It's a desert world, sir," explained Lt. Moorson. "Hardly any water worth mentioning. Not even at the poles. Gravity is high, also. Higher than Tareesh."

"Tareesh had about three times the gravity of Doorsha," commented Marthok. "We had to train for years to strengthen our bones and muscles just to survive there. This world is too inimical for us even if it had water. Set course for the second target."

"Might I suggest we do a sensor sweep of the next target before we jump?"

"Can we get any meaningful readings at this distance?"

"Enough to make some educated guesses."

"Do it."

Three hours of telescopic and sensor sweeps showed the planet had to be at least half covered with water and possessing a Doorsha-like gravity well. Plant growth could not be seen through the planet's heavy cloud cover, but sensor data suggested free oxygen in the atmosphere as well as nitrogen and other gasses.

"We will have to get a lot closer for more accurate readings," said Lt. Moorson.

"Looks good enough to risk the jump," said Marthok. "Let's take a closer look. Karn, would you like to do the honors?"

"Yes, sir!" Karn turned to the Communications Officer and said, "Activate ship-wide. All hands prepare for jump to hyperspace."

Re-entry from hyperspace left the ship twenty-nine million miles from the planet, which was about three months travel by standard propulsion. The hyper-jump was an eye

blink in comparison. Precious fuel was expended to bring the ship closer to the prospective world, during which time the science departments scanned and viewed what could become their new home. The perpetual cloud cover prevented direct examination of the planets surface, so probes were launched when the ship achieved an outer orbit.

“This is not good,” said Marthok without preamble. Telemetry from the probes displayed a storm-wracked landscape devoid of any visible vegetation or animal life. Torrential rains pounded the landmasses on every continent driven by hurricane force winds.

“The planet looks like it is in the early stages of its development,” suggested Bradry. The young technician was also an amateur geologist.

“What does that mean?” asked Karn Moorson.

“It means this planet isn’t done cooking, yet,” said Marthok.

“I would estimate that this world won’t be ready for habitation for another hundred million years,” added Bradry. “Give or take twenty million.”

“Karn, I want an inventory of supplies and fuel, an analysis on projected power consumption to our next target and a list of non-essential personnel,” ordered the captain in a low voice as he pulled the younger man off to the side.

“Why the personnel li-...” started the lieutenant, then he caught himself and looked a little pale. “Oh. I see. You think it will come to that?”

“I hope not. Have the probes collect up as much water as they can carry before we retrieve them. We might be able to use it, for its components if not for drinking. Issue out vitamin supplements, too. As of now everybody is on half rations until we make planet-fall. If we last that long.”

“Will do.”

The voyage to the next G0 star was particularly difficult for the captain and crew. On half rations tempers were short and a few fights broke out among the passengers. Two men killed each other in one especially brutal brawl. Marthok ordered their bodies jettisoned immediately. There were no facilities for storing the dead and Doorshans could not even imagine using the bodies for food.

Another passenger, one of the pardoned criminals, forced himself on one of the women. When he was caught the captain held a brief trial with himself as the judge, jury and executioner. Karn Moorson was given the unenviable task of defending the rapist, but with the victim clearly identifying the man his guilt was assured. Once convicted the man was immediately sentenced to death and jettisoned into hyperspace with full ship-wide audio and visual of the proceedings. This was to ensure that everybody knew the penalty for deviant behavior while on ship.

The ship exited hyperspace after two weeks of travel. As luck would have it they appeared in space normal twenty-eight million miles from the target planet.

“We don’t have enough fuel to do a full burn and we’re too low on food for a slow approach,” reported Karn.

“We’ll have to dump anything we don’t need or can afford to spare,” said Captain Dardii. “Karn, take a security team and go through everybody’s quarters and sift through their belongings. Personal keepsakes, anything over three changes of clothing, cosmetics, non-essential books...all out the airlock. Start with my quarters first and put it on ship-wide. Then start in on the furniture in the mess hall and recreation areas. Rip out

cupboards in the mess hall. If there are any empty crates or containers of any kind, dump them.”

“Yes, sir. Sir, how many probes will we need when we get to target planet?”

“Hmm...good point. Either it will sustain us or it won't. We don't have fuel or supplies to go anywhere else. Dump all but one probe then gut and jettison one lifeboat.”

“Sir?”

“Was I unclear? We can stuff more people into each lifeboat now that they will all have less baggage. I suspect we may be lighter on the body count by the time we get there as well.”

“Understood, sir. I'll get right on it now, sir.” Karn raced off to perform what would surely be an unpopular duty.

It was a full day before the lieutenant reported back with his progress; a day filled with outraged calls from the passengers and crew demanding what in the Seven Hells the captain thought he was doing.

“Mission accomplished, sir,” said Karn as he entered the command center. “I loaded up all the personal belongings onto the lifeboat and aimed it at the planet.”

“Why?” inquired Marthok.

“People were more inclined to cooperate if there was a chance that they could recover their things later.”

“It'll be more likely to burn up in the atmosphere without a pilot to guide it, assuming it even makes it that far.”

“It won't. I siphoned the fuel leaving just enough to give it a good sendoff. The lifeboats are useless beyond five hundred thousand miles, anyway. I diplomatically

omitted that information,” shrugged the lieutenant. “I also ripped out all the non-load bearing partitions and walls and jettisoned them, along with some extra cooking utensils.”

There was that initiative again. “What is the estimated effect on our inertia?”

“Less than two percent according to Science Dept. We need to either drop a lot more weight, which I don’t think we can do, or find another way to up our acceleration.”

“I didn’t want to do this but dump the heavy construction equipment.”

“The dozers and lifters? How will we build new homes?”

“With sweat and blood, which is more than we’ll have if we don’t make it to the planet. We’ll still have hand tools.” Captain Marthok Dardii collapsed into a convenient chair and let out a long breath. “Do we have anything on the planet, yet?”

“Yes, sir,” answered Lt. Karn Moorson. “Gravity and atmosphere are very similar to that of Tareesh. Vegetation is sparse, but present. Traces of methane in the atmosphere suggest the likelihood of animal life forms as well. Ambient temperature ranges from sub zero at the poles to fifty-five *daartaks* at the equator. There are three major landmasses. The rest, about two-thirds or so, is covered by water or a reasonable equivalent.”

“Sounds like our best bet, yet.”

“Yes, sir.” Karn thought for a moment then spoke up again. “Sir, do you intend to try using the Star Drive to get us any closer to the planet?”

“Oh, gods, no! The power is all but exhausted on the damn thing and at this range it would be insane to try a jump to the planet. I considered trying to jump off to the side of the target, but we could end up thirty million miles out on the opposite direction.”

Marthok rose and looked absently at a visiscreen. “The Star Drive is just so much junk, now.”

“Then, if I may make a suggestion, why don’t we dump it?”

“Dump it?” The realization hit like a cannonball. “Of course! Damn thing weighs tons and it was designed to be ejected should it become unstable. Karn, make it happen then get a new estimate from the science boys.”

“What about the construction equipment then?”

“Dump it anyway. The more weight we take off the better our chances.”

“Then we won’t need the charging equipment for it, either.”

“Right, but pull the power cells just in case we figure out a way to use them for fuel.”

“How many were involved?”

“Four men and one woman, sir.” Lt. Moorson shifted uncomfortably from foot to foot as he gave his report. “It seems the woman had promised certain...favours...to the four men if they would get her more food.”

Marthok shook his head in disgust. Five passengers broke into the nursery and started eating the fruits and vegetables that were being carefully nurtured there. The lot of them was caught before too much damage could be done, but now, as captain of the ship, Marthok Dardii would have to make an extreme example of the offenders.

“Stuff them into the airlock put it on ship-wide and space them.”

“Sir?”

“Karn, we no longer have the time or resources to be squeamish,” said the captain with some regret. “The food they ate will come out of somebody else’s mouth. To make up for it they forfeit food, water and air for the rest of the voyage. Since we don’t need the dead weight, out they go. The woman, too. That will leave slightly more for the rest.”

“I understand, sir,” said the lieutenant with a sigh. “It gets harder every day, doesn’t it?”

“What does?”

“Deciding who lives or dies, making decisions that affect the future of our race.”

“It does. Someday that task may fall to you. I just hope I am setting a good example for you to follow.”

Over the next month, Karn oversaw numerous plans to increase fuel efficiency. The power cells harvested from the construction equipment were jerry-rigged into ships power reducing the drain on the engines for life support. The lieutenant also evacuated several rooms and cut power to them, doubling up the occupants in the remaining chambers and conserving heat. Lighting was lowered all ship-wide, and shut off altogether in rarely used areas, forcing the crew to rely on hand held lights when working in the darkened places.

Rations were cut to a third, causing a lot of grumbling among the passengers and crew but the memory of five people getting jettisoned kept things from getting violent. Karn posted extra guards on the seed stores lest somebody try for another little snack.

The captain and lieutenant held daily, if the term could be applied in space, meetings with the science departments looking for a way to either stretch the fuel or accelerate the ship. During one such meeting, Buross ventured one daring plan.

“We are within two days burn of this planet here,” Buross indicated a dot on the chart that depicted the local planetary system.

“It’s in the opposite direction of where we plan to go,” pointed out Whells.

“Precisely,” nodded the man. “We come in at three-quarter burn at the equator, let the gravity grab us enough to pull us around with its rotation, then kick it into high burn after it pulls us around into the right direction. The slingshot effect should double our speed, shooting us to our target in half the time. We can cut engines and coast the rest of the way. Fuel will only be used for maneuvering and deceleration when we hit planet-fall.”

“Risky,” observed Karn. “If we are off by even a fraction of a degree, we could miss by millions of miles.”

“At this point it is likely our best bet,” stated the captain. “Buross, work with Barsoom and Whells and get the calculations as fine tuned as possible.” Marthok turned to Moorson, “Karn, on the nine remaining lifeboats we will evenly distribute the seeds, food, water and personnel. I want even distribution of men and women on each ship. If even one boat makes it we have a shot at keeping the race alive. Everything else gets stuffed into cargo crates and dropped by parasail when the ship gets low enough.”

“No telling where it could end up,” observed Karn.

“No choice. We pulled all the power cells from the cargo lifts. And keep the weapons in the armory until we are ready to make planet-fall. I don’t want to risk a mutiny so close to the end of this joyride.”

Captain Dardii’s caution proved justified. With only two weeks left until planet fall a group of six men tried to break into the armory. Four of them were killed in the battle as was one of the guards. The captain questioned the survivors and found that the men wanted to take a lifeboat and make a dive for the planet with a few women they intended to abduct. Dardii had the two men, along with the five bodies, immediately jettisoned.

“Idiots would have died a long slow death trying to reach a planet well out of range for the lifeboat,” muttered Marthok loud enough for Moorson to hear. “We did the gene pool a favor by removing them from it.”

“Think we got rid of the last of the malcontents?” asked Moorson after taking a drink from his cup.

“I don’t know whether I should hope so or not,” grunted Marthok. His cup was empty but he made no move to get up and refill it. All but one drinking cup for each person on board had been jettisoned. When people were spaced the dishes and flatware were spaced with them. “We need people to make the new colony work but every person we space leaves that much more food, water and air for the rest.”

“Well, we could stop spacing them for being criminals and just space them for being the kind of people who commit crimes,” jested the lieutenant. “That would cut down on the surplus personnel real quick.”

“If only we had a machine to help us identify them,” said Marthok with a wry smile. “Something that would show if they were lying or not when we questioned them.”

“Well, in the meanwhile we’ll just have to catch them in the act, sir.” Karn stood up from the table and refilled his cup of *biddaa*. All but two bottles of *garfar* had also been jettisoned long ago. The alcoholic beverage was being saved for a toast after planet fall. “Refill your *biddaa*?”

“No. I’ve used my ration for the day,” said Marthok with some regret.

“Seven more rations just became available, you know,” said Karn wryly.

“I am going to pretend you didn’t just say that.”

“I have some good news and some bad news, sir.”

“Just for variety give us the good news first, Whells,” said Captain Dardii wearily.

“We will be arriving at the planet two days sooner than we had calculated.”

“Great! How did that happen?” asked Karn.

“The slingshot effect worked better than we had expected boosting our velocity higher than anticipated. Which brings us to the bad news...”

“We’re going too fast for the remaining fuel to slow us down before we make planet fall,” finished Marthok. “I half expected something like that to happen.”

“You surprise me, sir.”

“I studied physics at university, Whells. How do we overcome Davert’s Rule?”

Karn looked over at his captain. “What is Davert’s Rule?”

“‘An object in motion will remain in motion until acted upon by an external agency’,” supplied Buross. “But that isn’t the problem here, begging you pardon, sir. It’s

the mass/inertia to thrust ratio. The ship has X amount of mass at Y amount of velocity which has to be countered with Z amount of reverse thrust to make safe planet fall. We don't have enough Z to counter the X and Y."

"How much can we cut the Y with our Z?" asked Moorson.

"I would estimate a sixty percent speed reduction if we do a full reverse burn with our remaining fuel, Lt. Moorson," said Whells.

"Can we eject the lifeboats at that speed and still make safe planet fall?" Marthok asked Karn.

Karn was the best pilot on board but this was outside of his usual experience. In fact it was outside of everybody's experience. "It'll be tricky, sir. Hit the atmosphere dead on and friction will vaporize the boat like a meteor. Fly in at too shallow an angle and the boat could skim the atmosphere like a stone skipping on water sending it back out into space with a one way ticket. Counting myself, there are only three pilots on board that I think would have even an infinitesimal chance of making it down in one piece."

"We can only fit ten bodies on a boat, plus supplies. Fifteen if we pack it and still leave the pilot unhindered," considered Marthok aloud. "That makes forty-five people with a halfway decent chance of surviving planet fall. The rest will need a miracle to make it down." Marthok shook his head wearily. It was time to decide who lives and who dies once more. "All right, here's how we are going to do this..."

During the next sleep-cycle, handpicked security teams redistributed the seeds, some plants and food supplies into three of the lifeboats. Weapons and ammunition went into the lifeboat intended for Karn and Marthok. Personnel were assigned to lifeboats

based on three criteria: knowledge and skills, physical ability and psychological history. Karn as the best pilot had the lifeboat with the most essential personnel, while Ensign Mikroy, the least qualified pilot, was to ferry the least qualified passengers. Marthok hated having to do that to the ensign; he was fond of her and thought she had promise. But pilots were at a premium and the survival of the race came first.

The pilots had three days to practice the drop on the simulation machine. Captain Marthok Dardii was now glad that he hadn't jettisoned the simulator with other heavy equipment. Lt. Karn Moorson supervised the pilots while on duty and practiced on the machine during his off hours. Marthok took on Karn's normal duties so as to insure minimal distraction from the pilot training.

The pilots were also put back on full rations for the remainder of the voyage. Marthok had no interest in trusting the lives of the passengers and crew to pilots who were too weak or addled from malnutrition to operate a lifeboat at peak efficiency. As such, they had to be segregated from the rest of the passengers and crew to prevent a possible riot over their preferential treatment.

The night before the attempt to make planet-fall Marthok ordered a banquet in the main hall. All the food that could not be fit into the lifeboats was prepared and served to the entire crew and the passengers. The crowd took it as a celebration but Marthok saw it as the last meal of a condemned man; most of the people present would likely die during planet-fall.

Scans and telescopic data of the planet were collected right up to the last hour before the lifeboats were to be loaded and launched. The planet was Tareesh-like in almost every way. There was less vegetation in evidence but the atmosphere, abundant

water and animal life were, at a distance, close enough to Tareesh's eco-system to be very encouraging. Unfortunately, the ship was going too fast to launch the probe so they were denied information on what the chemical balance of the soil might be.

When the ship reached optimal safe distance the lifeboats were launched one at a time at three minute intervals. The first boat came in at too shallow a dive and bounced off the atmosphere as Karn Moorson had predicted could happen. The next two, perhaps taking the misfortune of the first lifeboat into account, tried for a steeper trajectory. At first they seemed to handle the stresses of the descent well enough until the hulls began to glow first red, then white, then seemed to disintegrate before the horrified eyes of the pilots to follow.

The fourth lifeboat launched and came in at a smooth trajectory that was neither too shallow nor too deep, followed by the fifth. Both boats looked to have their descent under complete control until the fourth spun about from turbulence. The pilot fought to regain control only to sheer sideways and collide with the fifth boat, destroying both instantly.

"Dammit!" yelled Marthok as he watched through the visiscreen on the command lifeboat. Hitting the communications link he ordered the remaining lifeboats to launch at five minute intervals so as to avoid another collision.

Karn Moorson, in the sealed off pilot's section, received the order and reset his panel. He, too, had observed the disastrous launchings.

"Out! Now!" Marthok yelled at the passengers as he gathered up his pack. "Grab the food, water and seeds. Forget everything else."

Two lifeboats made it to the planet's surface relatively intact. One hit the ocean about five hundred paces from the shore while the other, piloted by Karn, had a rough landing on the land. Marthok was the first out of his seat barking orders before the craft had even come to a full stop.

“Move it, move it! We don't know how much damage this thing took when we landed,” yelled the captain. “It could catch fire at any moment so get going.”

Contrary to his own advice Marthok turned and rushed to the cockpit to check on Karn Moorson. He found the lieutenant slumped in his seat with an open wound on his forehead. The captain checked for a pulse and was pleased to find one, then unstrapped the unconscious man and dragged him out of the lifeboat.

Outside, Marthok could see the other craft as it slowly sank. The passengers were trying to swim for shore, but the long privation of reduced rations had sapped much of their strength. Doorsha was a planet of relatively low gravity, and very little water. The high gravity, while bad enough, was less a problem than the Doorshan's unfamiliarity with swimming. Marthok Dardii could only watch helplessly as more than half of the swimmers foundered and sank below the waves. Only four women and two men made it to the shoreline.

A sudden explosion from behind threw Marthok off his feet. The lifeboat had indeed caught fire and ignited the fuel causing an explosion and destroying the one craft as the other sank out of sight below the waves. Standing and brushing himself off the captain first checked Karn, then quickly took a headcount. There were numerous minor injuries caused by the flying shrapnel of the exploding lifeboat and one fatality; Whells.

Whells had taken a piece of metal through his chest; he was dead before he hit the ground.

“Well, that’s how it breaks down, sir,” said Barsoom. Like most of the crew the ensign was trained in two specialties. On ship he was a helmsman, on planet he was an agriculturalist. “The soil is pretty much identical to Doorsha’s except for the nitrate levels. That also explains the sparse vegetation, I think.”

“Wouldn’t the local flora be adapted to the lower nitrate levels?” asked Karn Moorson.

“I would have thought so but it may be that the levels were much higher at one point, then something, maybe a natural disaster of some sort, bled off the nitrates. It is also possible that this was once an overgrown area. The flora may have grown out of control, leached the nitrates from the soil and then died off.”

“How does nature keep the balance?” asked Karn.

“Animal waste and decaying corpses, mostly.”

“Now that you mention it, I haven’t seen so much as a hoof print, assuming whatever indigenous critters there are on this planet even have hooves, since we got here yet sensor scans found lots of evidence of animal life,” said Marthok. “After two days, not so much as a bird or a lizard.”

“It might be concentrated on the other two landmasses we spotted from space,” suggested Buross. “Still, there could be some animal life elsewhere on this continent. If the vegetation were destroyed by, say, a fire, then all the animals would be driven off. This close to the ocean it would be easy to see how a flood could wash away all signs of

past growth. Without new vegetation to lure the herbivores back nothing else would come back, either.”

“Then we will have to find it as well as edible plants and fresh water.” Marthok turned to Karn. “Feel up to walking, yet?”

“Absolutely. Especially if we are looking for the other two lifeboats.”

“Good. Everybody, we’re moving out.”

Several weeks of walking and searching failed to reveal any sign of the other lifeboats. The twenty men and women that had started the trek were reduced to seventeen. One man, crazed from near starvation, attacked Captain Dardii earning him a bullet from Karn Moorson. Another failed to use caution before eating some wild berries. The mild toxicity of the fruit might not have caused more than an upset stomach on a healthy adult but men and women, weakened from months of lean rations, proved far too susceptible to the relatively weak poison.

A woman who had allowed herself to fall back too far from the group fell prey to a cat-like predator. Marthok and Karn expended several rounds of precious ammunition bringing the carnivore down. While a small detail buried the unfortunate victim, Buross and Karn skinned and gutted the beast then spit it over an open flame.

The flesh of the beast was strange to the Doorshan refugees as they were accustomed to artificially created meat grown from yeast like cultures. The vast majority of animal life was long extinct on Doorsha. It was unknown whether their bodies would be able to properly digest and process the alien meat as all the testing equipment was

destroyed with the lifeboat. Marthok determined that it would either sustain them or not so there was no point being too careful.

“This is our last stop on our cosmic journey,” pointed out the captain. “If the local flora and fauna can’t keep us alive we’ll be dead long before we can plant and harvest any crops from our seeds.”

“We should save some of the bones from the beast,” suggested Karn.

“For what?”

“Clubs, bone-knives. We could also try to figure out how to tan the hide and harvest the gut.”

“Good point. Our clothes and weapons won’t last forever, and we don’t even have the beginnings of a metal working culture on this world. Karn, you are in charge of resources from now on. Nothing gets used or discarded without your approval.”

“Okay, chief,” saluted Moorson.

Marthok turned to Karn with a raised eyebrow. “Chief?”

“I figure that we are a tribe, now. As our leader that makes you the chief.”

“Hmph. ‘Chief Marthok Dardii of the Doorsha tribe.’ I like it. That makes you sub-chief, then. First in line for the throne.”

The group came to a valley that was hemmed in by mountains on three sides. Two small rivers flowed in at one end from opposite directions and merged together to form a larger stream. There were some trees and wild growth covering the valley floor. A few large beasts wandered aimlessly about grazing on the wild grass. No predators were in evidence though some could be hiding in the underbrush.

“How are we set for ammunition,” asked Chief Marthok.

“Barsoom and Buross have twenty pistol rounds each and I have thirteen rifle rounds and two grenades,” replied Sub-Chief Karn. “You?”

“Eleven rifle, fifteen pistol and three grenades.” Marthok looked over the members of the tribe. “We’re too weak from the trek and lean rations to try to use the bone clubs you fashioned. I doubt that would work anyways. We don’t have the time to make spears. We’ll have to use up some ammunition and bring one of those grazers down.”

“Some of those trees might have fruit or nuts. After we get the meat we’ll see what else we can scare up.”

The animal took three rifle rounds to bring down. The rest, startled by the gunshots, stampeded in all directions. One bull trampled Marthok in its panic. Karn was the first by his side.

“It’s...all up to you...now...Chief Moorson,” gasped out the dying chief. “The survival...of the race...is in your...very good hands.”

“Yes, sir,” said the new chief. “Dardii tribe will continue on.”

Marthok nodded then sighed as the breath left his body for the last time.

True to his word, Karn Moorson led the newly christened Dardii tribe and made great strides to insure the survival of the Doorshan race. The valley was cultivated and beasts were domesticated over the years that followed. The hearty Doorshan seeds quickly adapted to the relative warmth and humidity of the new world giving birth to lush growths that rapidly spread over the entire continent.

The tribe suffered great gains and terrible losses. Children born to the tribe initially suffered an appalling mortality rate owing to the high gravity of the planet as compared to Doorsha. Only the strongest of infants made it to adulthood. The offspring of those children proved as hearty as their parents and the mortality rate dropped and the tribe grew.

Eventually the ammunition was used up forcing the tribe to rely on what they could fashion from stone and wood and bone. Lacking paper or the means to make any, the tribe was unable to hand down their history beyond oral traditions. Over the decades, then the centuries, the planet of their birth was forgotten.

Slowly, the population grew and spread out. Language and customs evolved and changed. Lacking any real competition the march of technological advancement was slow. It was many thousands of years before the people re-invented gunpowder and an effective means to use it. Eventually a feudal society developed. Multiple princedoms quarreled and went to war among themselves for power, prestige or property.

It was during the beginning of one such quarrel that the descendants of the first spaceship from Doorsha, now called Mars, found their way to the world of the second ship. The people that had survived and flourished on Tareesh, now known as Terra, had forgotten their Martian heritage even as the people of the second colony had. The Terrans named the planet of the second colony 'Freya' and were amazed at the inexplicable similarities between themselves and the people of Hos-Hostigos, the princedom of the closed valley. None suspected the common heritage that they shared.

* * *

“A spacecraft, you say?” repeated Captain Plumber of the spaceship *City of Mallorysport*.

“Well, it seems a bit small for a spaceship,” replied Lieutenant Voxx. “My guess is that it’s a lifeboat of some kind.”

“What kind of condition is it in?”

“Surprisingly good. I haven’t sent a party to check it out yet but scans show a hull breach on the starboard side. From the size of it I would estimate it could hold about ten to twelve people.”

Plumber scratched his jaw as he considered what to do. “Think it might be an old Space Viking relic? They got around quite a bit for about fifty-odd years two thousand years ago...”

“Hull configuration is all wrong, sir. I request permission to take a party down and investigate.”

“Well make it quick,” waved the captain dismissively. “We have to get to Yggdrasil and we’re falling behind schedule.”

Lt. Voxx took three men with him in a shuttle down to the asteroids surface. The Abbott drive smoothly dropped the craft down mere paces from the ancient lifeboat.

“Look at these markings on the hull,” said Voxx as he approached the craft. Over three thousand years in space and we still can’t make a comfortable vac-suit, thought the lieutenant absently as he tried to scratch an itch through the thick space suit. “I saw something like this in an old historical vid.”

“I’ll take some pictures of it,” offered Sgt. Twopersons. “Maybe we can find something in the library to compare it to.”

“Good idea, sergeant.”

“I think this is an emergency release,” called Cpl. Romanov. “Whatever powered this thing is long depleted.”

“Can you pry it open?” asked the lieutenant.

“Dugan, bring the sonic torch from the shuttle,” called out the corporal. Ten minutes later the hatch was off and the four men were in.

“What is this stuff?” asked the sergeant.

“Books, clothes, something that looks like perfume bottles,” offered Voxx.

“Got a photo album here, sir.”

The men gathered around Dugan and carefully turned the brittle pages. The photos depicted a family in various scenes and combinations. Several of the pictures clearly showed a landscape of red sand in the background.

“This look familiar to anybody?” asked Voxx.

“Nope.”

“Can’t say I’ve seen it before.”

“Kind of looks like Mars.”

“Mars?” Voxx looked closer at a picture, then at the writing on a book cover.

“Good God!” shouted Voxx. The feedback from the vac-suit radios made the other three men wince. “These books are written in Martian. Back in the first or second century AE a team of scientist found the last remnants of the old Martian people and their books or something.”

“People?”

“Well, mummified remains, actually. But the writing in the books was exactly like this.”

“What is it doing here in the Freyan system?” asked Pvt. Dugan.

“It means they were here!”

“Maybe they still are,” offered Twopersons.

“Still here?” Voxx looked blankly at Twopersons.

“The Freyans, lieutenant.”

“The Freyans, lieutenant?”

“It is a possibility, sir,” answered Vox. “All the tests show that the lifeboat and its contents are at least fifty-thousand years old.”

“Then the Freyans should be well ahead of us technologically,” argued the captain. “If they had hyperdrive fifty thousand years ago they would be so far ahead of us now we would look like apes to them.”

“Actually, the presence of the lifeboat suggests that they ran into difficulty.”

“How so?”

Normally the captain was not so obtuse, thought Voxx. “The boat was loaded with non-essential personal belongings. That would suggest they were trying to lighten the load on their ship. Fuel conservation.”

“Well, if they shot a lifeboat out to save fuel they might have been just passing through...”

“If you were jettisoning stuff to save power, sir, what is the first thing you would do?”

Plumber took a breath and let it out slowly. “Find a hospitable planet to set down on then send out an emergency signal.”

“Only their ship might have crashed or they had to abandon it and restart civilization almost from scratch.” Voxx could barely contain his excitement. “This is a remarkable find.”

“And we can’t tell anybody about it,” said the captain.

“What? Why not?”

“The New Federation is in a fragile state right now,” Captain Plumber explained patiently. “The memory of the Empire is still strong on many planets. After centuries of barbarism and interplanetary war we’re only now getting back to peaceful coexistence. Interstate war destroyed the Old Federation and stagnation and ennui brought down the Empire. We are a long way from being one big happy family. Baldur is already making rumblings about seceding from the Federation. They maintain that Mars colonized Terra and that the original Terrans we supplanted were the Neanderthals. If we bring back proof that the Freyans are direct descendants they will argue that they were right and all Niffilheim will break loose.”

“They probably *are* right,” stated the confused lieutenant. “That would explain how Cro-Magnon man seemed to appear out of nowhere in the fossil record. But how can that cause trouble?”

“They’ll secede first of all claiming that the Freyans are the true Martians and make Ghu only knows what kind of crazy demands and proclamations,” said Plumber in a strained voice. “There is a huge movement there to Terraform, or Martioform if you will, Mars to make it habitable again. Next a huge movement or maybe a new religion

will sprout up, maybe even a holy war of some kind. That would be the first domino. Thor will be right on their tail and the whole New Federation could fall apart again.”

“I see.” Voxx broke protocol and collapsed into a seat. Plumber ignored the lapse. “What do we do with the lifeboat then? Destroy it?”

“Niffenheim, no! That kind of knee-jerk reaction always causes more problems than it fixes. By now your party has told every single person on the ship about the lifeboat and its contents. And some of the crew is part Freyan. No, we stick it in the cargo hold and haul it back to Odin. They’ll go over it with a fine tooth comb, declare it a fake then shove it into storage somewhere until the day comes when the truth can be safely told.”

“Will people believe that?”

“History is replete with scientific hoaxes especially where Martians are concerned,” said the captain with a dismissive gesture. “There were those phony Martian cave writings on Terra for example, or the so-called ‘Fuzzy Spaceship’ on Zarathustra.”

“Well, there goes my place in history,” sighed Voxx.

“Don’t worry; I’ll see to it that you will get full credit for the discovery even if not in our lifetimes.”

“I appreciate that, sir. I can’t help but think we really are descendants of a Martian colony on Terra.”

“Oh, I think we are, too. That would explain why Freyans successfully interbred with Terrans.”