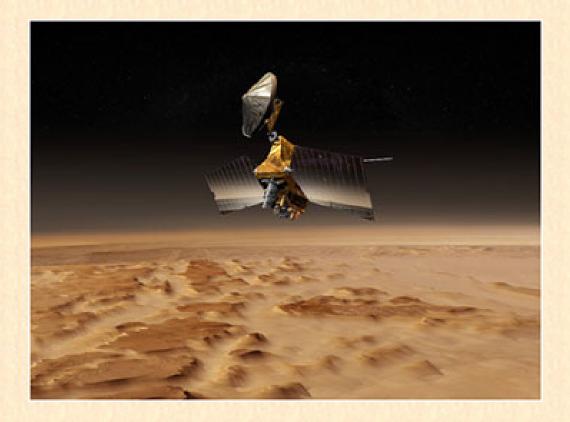


Moonbeams



Tales from the High Frontier

Published by the Moon Society and Writers Cramp Publishing Cover Art by Charles Lesher Cover: Endeavor launched on February 8, 2010 heading towards the ISS. It was the last night launch of the Shuttle program. STS-130 is a 13-day mission that will deliver and assemble the last U.S. module onto the International Space Station. There are four more missions planned all in 2010 then the Shuttles will be retired. Long live the Space Shuttle!



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Editors Note: This edition of Moonbeams, like that of previous editions, has stories that are not strictly moon related, but good enough to share with our readers. Other genre will be given consideration when there are no other submissions.



Paying the Price

By Dorothy Diehl

Pointing to the com button on the cargo transport's console, Skyler Twain brusquely ordered Fordyce Smith, "It's 1800 hours. Turn the radio back on so I can give HQ a status report."

Fordyce braked the rig. His eyes scoured the hilly lunar terrain strewn with boulders and cut by craters. The light-filtering visor over the cab's front window rendered the scene in sepia tones. In reality, the lunarscape was black and white, especially when the mid-day sun blasted it with glaring light. Skyler shifted his weight in the passenger seat and grimaced with pain. Drops of sweat formed on his black face as he cradled his splinted right arm in the shoulder sling. He had broken it in a freak accident unloading his cargo of sheet metal at the construction site. The problem of getting the cargo transport back to the lunar base was more irritating than the injury.

His friend, Fordyce, one of the engineers who programmed and operated the construction robots, had volunteered to drive the transport for him. Ike Stanton had vetoed the idea. He was the foreman at the construction site near the lunar equator where they were building the next section of the tube train across the hemisphere of the Moon that faced the Earth. Fordyce wasn't a certified driver and that would violate the company's safety rules.

"A rookie can drive the rig if there's a certified driver riding in the cab," Skyler had told Ike. "I'll just promote Fordyce to rookie driver. He can get me and the rig back to the lunar base, and then sleep on the way back here in the cab of the next transport headed this way."

"No," Ike had said, "I won't allow it."

"If I wait here for a relief driver, it will eventually put you fortyeight hours behind schedule," Skyler had retorted. "Do you want that big of a dent in your productivity rating?"

"Of course not!" Ike had objected, "but HQ will never approve of Fordyce driving the transport back to base."

"So, we won't tell them about it until he pulls the rig into the loading terminal," Skyler had insisted. "We'll just turn the radio off except for the required check-in times."

Fordyce relished the new experience of driving the big cargo transport at thirty kilometers per hour. It would make a good story the next time he and Skyler went to the base's pub. The ride was bumpy and Skyler was hurting. He groaned loudly as he tried to find a comfortable spot in the passenger seat.

"Do you need another pain pill?" Fordyce is concerned.

"No," said Skyler with effort, "not yet. The one I took should last another two hours. It only hurts when I move." That wasn't true, but Skyler didn't want to distract Fordyce from the chore of driving the big, electrically powered rig cross-country back to the lunar base near Copernicus Crater. They kept sight of the hull of the tube train to their left as Fordyce steered around obstacles on the roadless terrain.

Fordyce turned on the radio, and punched the com button. Skyler reported, "This is CT-48 calling Lunar Transport Systems Dispatch, over." The radio crackled with thunderous static. Skyler stabbed off the com button with his left hand and bellowed, "Damn it! Of all the rotten luck."

"It's just static," remarked Fordyce.

"No, it's not. There's probably an incoming radiation storm from a solar flare," Skyler corrected him. "Check the radiation meter." The meter's display screen showed spikes of energy to the right of the green safety zone. "You've got to take cover immediately," Skyler insisted. "Drive towards the tube train hull. Scrape up against it. They can repair dents and scratches in it more easily than repairing your DNA. Step on it, man!"

Fordyce hit the accelerator and twisted the steering wheel sharply to the left. High-energy radiation from the solar flare would knock out the transport's electronics. Racing towards the tube train's exterior hull, Fordyce desperately tried to remember the orientation class about solar flares and the safety rules. Screeching up against the titanium hull, he parked the cargo transport. "How do we get inside?" he demanded.

"We don't," said Skyler. "You have to suit up and get underneath the water tank below the cab. It's the only protection you'll have besides some shielding on the port side of the transport crammed next to the tube."

"Let me help you suit up," said Fordyce, reaching for the space suits hanging at the back of the pressurized cab.

"There isn't time," said Skyler. "Get yourself out of here. There's no point in both of us getting sun-fried. Besides, it's my fault. If we'd left the radio on all the time, HQ would have transmitted an early warning about the storm. We could have turned around, and returned to safe shelter at the construction site. Now get going; there's no time to waste."

"I'm not leaving you in the cab," insisted Fordyce.

"There isn't enough room for both of us to get under the water tank," Skyler explained. "I signed up for this kind of risk. You didn't."

"Well, I'm not going to save my skin, and then haul your sunfried body back to the base," Fordyce yelled at him as he pulled the space suit boots over Skyler's feet, and pushed him into a standing position. "How long does it take for a radiation storm to pass?" he asked, stuffing Skyler's left arm into the suit sleeve.

"An hour or longer," said Skyler who was in too much pain to resist being suited up.

"Then you'd better take another pain pill," said Fordyce.

Skyler swallowed the pill. Fordyce got into his suit, fastening extra water canisters inside both helmets. They moved into the air lock. Fordyce turned on their suits' air supply systems and sealed their helmets before depressurizing the air lock. Opening the air lock doors, Fordyce remembered to grab a portable radiation meter, to pull down the light-filtering visors on their helmets and to position a chronometer near the back of the glove on his left hand. He could feel sweat forming under the short curly brown hair on his head, and running down his pale white face. He adjusted the thermal controls before rapidly climbing down the cab's ladder and jumping onto the regolith. He reached up to assist Skyler, who could use only his left hand to hang onto the ladder, as he half-climbed, half-slid down.

"You're right," lied Skyler. "There's plenty of room for both of us under here." He winced and then instructed Fordyce, "Hang the radiation meter on the last rung of the ladder and attach the radiation meter display screen that's wired to it on your left wrist. Turn on your helmet headlight and put up your visor before you slide under the water tank on your right side, with your back to the cab's front wheels. Try to protect your brain and vital organs most of all. I'll sandwich myself next to you. If we're lucky, our suit radios will keep working so that we can talk to each other. However, if you don't hear my voice, don't panic. The radio might go dead, but I won't. However, that pain pill will probably make me pass out."

Fordyce did as he was told. Then Skyler gritted his teeth, and choked back cries of pain as he squirmed and wiggled himself into the cramped space, his suit's backpack up against Fordyce's stomach. His upper legs snuggled up against the cab's back wheels. This emergency space, under the four hundred-liter water tank, was intended for only one person. Skyler's legs below the knees stuck out beyond the cab. He told himself that if they got sun-fired, they could be amputated. He'd be lucky if that was the worst thing that happened to him. At least, his body would provide some additional shielding to Fordyce, scrunched up behind him and squarely under the water tank.

Skyler spoke again, "Hey man, are you ASG?"

"I guess so," replied Fordyce, remembering that ASG--All Systems Go--originally referred to the launch status before any space operation, but now it was a synonym for the Earth-term, O.K. "Did you get yourself crammed all the way in?"

"Yes, I did," lied Skyler again, wondering if anyone would come to rescue Fordyce after the radiation storm had subsided. The construction site was eighty-three kilometers behind them and the lunar base more than two hundred kilometers ahead. "What does the radiation meter read?" he asked anxiously.

Fordyce lifted his left wrist slightly to see the small display screen fastened there. "Oh my God!" he exclaimed, "it's peaking off the right side of the screen. Maybe it's not working right."

"No, that's an accurate reading," said Skyler. "The company demands ultra reliability for radiation meters and then they field test all of them after they come from the manufacturer. I just hope we got under here soon enough." He paused and then added, "That pain pill is fogging up my brain. I think I'm going to pass out. Hang in there, buddy."

Fordyce hated to hear that. Not only was he stuck in this cramped position for lord knows how long, but now he had no one to talk to. The needle on the radiation display screen continued to

waver slightly at the extreme right edge. He tried to recall the radiation sickness lecture given by a nurse during his orientation after arriving at the lunar base. Like his wife, Evita, back in L.A. who was also a registered nurse, this one made the illness sound especially grim. He thought fondly about his wife. They had been married for seven years. During the first three years, they had synchronized their work shifts, and spent all their off-duty time It had been sweet. Then Evita's mother, Annalee Whittaker, had lost her job because of her health. She had lupus and it had worsened. Evita was the only family Annalee had. She had raised her daughter by herself, and worked full-time to support both of them. Because of the high cost of living, she had no savings. Disability insurance and social security no longer existed. was no way Evita was going to leave her mother out on the street. They had invited her to live with them. That had been the end of their love-nest lifestyle. They still had sex often, but they had to schedule it behind closed doors.

Fordyce had found himself stopping longer and more often at the pub on Sepulveda, just north of the airport. It was a hangout for vacationing lunar workers. He had listened avidly to story after story about life on the new frontier, and he had caught "frontier fever." Almost six months ago the Earth-side personnel agent for Lunar Transport Systems had offered both of them jobs. The agent had said it was company policy to hire both husband and wife if the job applicant was married. The company wanted to avoid the consequences of strained marriages caused by the long separation over such a great distance. Fordyce had wanted so badly for Evita to accept the job offer. He felt certain that she would have, if it hadn't been for her mother. Evita would never abandon her mother by going off to the Moon. She had wanted Fordyce to stay in L.A. and continue working as an engineer on the dike construction

project south of the city. Because of climate change, sea levels had risen high enough to flood the streets. They had discussed the job offer for days, and finally had agreed that only he would sign up for just six months with Lunar Transport Systems.

That was a decision Fordyce never regretted. Not only was the lunar job challenging and satisfying, but it also exhilarated him to be part of the great human destiny of pioneering the Space Frontier. He sent Evita long e-mails every day, even when he was out at the job site. She disliked having him telephone her from the Moon because the almost three-second delay in the radio signal made awkward pauses in the conversation. That irritated her. However, she was more than pleased about the money he earned. His job on the Moon paid three times his salary working on the dike project. With this extra cash when he returned Earth-side, Fordyce intended to persuade Evita to use it for an apartment in the high-class Riverside Gardens Retirement Community for her mother. They would finally be alone together again. He would tell her such exciting stories about life on the Moon that she also would catch "frontier fever." She would share his passion about space.

Even enduring this life-threatening situation from the radiation storm gave Fordyce an adrenaline rush. He had not a single doubt, but that Skyler and he would survive. The minutes crept by on his chronometer. Fordyce found himself remembering the feeling of Evita's soft curvy body when they made love, the soft chuckle of her voice when she laughed at his jokes, the sparkle in her eyes and the grip of her hand in his when they went for walks. He turned those thoughts and feelings over and over in his mind as the minutes stretched into an hour. It had been a long time—over five months—since he had made love to his wife. He had thought about her often at the end of his work shift when he returned to the three-person biospheric apartment that Skyler and he shared with Valencia

Orlando. She was a single woman who was a civil engineer in the metal milling department at the lunar base. Most of the women employed there were married and their husbands were also company employees. Fordyce could not tell if it was Valencia's attractiveness or the fact that she was here and Evita was far away that caught his interest. Valencia's wavy, auburn hair framed her delicate face and hazel eyes. She had the figure of a dancer and always moved gracefully. Even her manner towards everyone was gracious. It took effort, sometimes a great deal of effort, not to flirt with Valencia. The company expected him to behave professionally towards others at all times. He intended to do that because he loved Evita with all his heart. He concentrated his attention on remembering her now as the minutes crawled by into another hour.

His space suit radio was silent. He couldn't hear if Skyler was breathing. Fordyce wondered how long it had been since their space suits' air supply systems had been recharged. He calculated back to the first part of his work shift and realized that if the radiation storm did not subside soon, Skyler and he would run out of breathable air. He forced himself not to panic. The slower he breathed, the longer the air was last.

Nearly three hours passed before the needle on the radiation display screen slowly moved back to the left side, the safety zone. He waited another half hour. Then he nudged Skyler's elbow. There was no reaction. His own body was stiff and trapped between the cab's front wheels and Skyler's space-suited body. Feelings of panic erupted inside of Fordyce. He had to get out of there. He put his left hand on Skyler's shoulder and pushed as hard as he could. He managed to budge Skyler's body far enough out to get his other arm free. Then he shoved with all his might, and pushed Skyler out from under the cab. Fordyce scraped and squirmed out into the brilliant sunlight. Quickly, he put down the visors on both their

helmets, and pulled Skyler into a sitting position against the cab's front wheel. His buddy's helmet fell forward on his chest. Fordyce realized now that Skyler must have been partly exposed to the radiation storm while protecting him. He glanced at the status display for his air supply. It was down to three per cent. He checked Skyler's. It looked like one per cent, but he could not see it well. The space suits' radios were not working properly. There was no way of finding out if Skyler was unconscious or dead, unless Fordyce could get him back into the pressurized cab of the transport. He stumbled to his feet, determined to do all that he possibly could to save Skyler.

After rapidly stretching his arms and legs several times, he climbed up the ladder to the cab's air lock. The electronic controls did not respond; he had to repair them immediately. Where was the emergency tool kit? Fordyce forced his mind to focus on where to look. Searching frantically, he found it back under the transport's cargo bed. He retrieved it, and remembered to fix the emergency radio beacon on the cab's hood first. He activated it. Then he scrambled up the ladder to repair the air lock controls and electronics of the transport's drive system. He avoided checking the status of his air supply. He had to reactivate the controls first of all. It was hard handling the tools with gloved hands. The lunar dust, with its static electricity, clung to everything. Several minutes later, all the controls were back on stand-by.

Jumping down from the ladder to the regolith, he slung Skyler over his shoulder and hauled himself back up to the air lock. He was thankful for lunar gravity and for the company's rules requiring regular fitness training in a rotating room at the lunar base that generated artificial Earth gravity. Heaving himself and Skyler up and into the air lock required considerable exertion. He felt exhausted, and remembered Skyler's words to him when he had

returned to the lunar base from his first work shift at the far away construction site. "Those who are fat, lazy and gutless will never open a new frontier."

Fordyce picked up the tool kit and closed the air lock doors. Then he noticed the turned-on warning lights for the air supply systems in their space suits. The systems were about to shut down. He repressurized the air lock and whistled softly; that had been a close call. Fordyce unsealed their helmets and tipped them back. With great relief, he noticed that Skyler was breathing slow, very shallow breaths. Fordyce carried Skyler's body into the cab, and laid him on the bunk behind the seats. Then, he repaired the cab's radio. Unexpectedly, it chimed softly.

A firm, male voice spoke, "This is HQ calling CT-48, over."

Fordyce punched the call button, and in a raspy voice almost yelled, "This is CT-48. Am I ever glad to hear your voice, over." Realizing how dry his mouth was, and how thirsty he felt, he grabbed a water bottle and swigged a long drink. Then he described their situation to the dispatcher who put on a medic. She assured him that HQ would send a rocket flyer to pick them up as soon as possible. The paramedics were in the process of evacuating a team of five geologists who had been stranded away from their space bus in Copernicus Crater during the radiation storm. She told Fordyce what first aid he should give to Skyler. He followed her instructions.

Afterwards, he slid into the driver's seat, switched on the transport's electric engine and started driving towards the lunar base. The emergency radio beacon was still transmitting their location. He contacted the dispatcher again to let him know that they were underway. An hour later, a rocket flyer circled over the transport and landed nearby. The paramedics picked them up and left a new driver to bring in the transport.

The next day, Fordyce was pleased when Valencia Orlando came into his hospital room.

"Why the glum face?" he asked her.

"The five geologists stranded in the storm have died from radiation sickness," she said softly. She wiped away tears. There were over a hundred people living in the lunar base. Each one depended on the others for survival. That made them all family.

"What about Skyler?" Fordyce asked anxiously.

She sniffed, blew her nose and wiped her face with a tissue. She inhaled deeply a few times, and then told him, "The doctors aren't sure he'll recover. He's still in intensive care. They had to amputate his legs below the knees."

"Oh, no," objected Fordyce, "not amputation. He'll hate that. He won't be able to drive cargo transports anymore."

"It's better than being dead," Valencia reminded him. "Besides, modern prostheses are amazing. I bet he'll get his job back eventually."

"Oh God," said Fordyce, "I hope he makes it. I owe him my life." Valencia knows how Skyler had taken the vulnerable position under the transport's cab.

"As soon as he's stabilized, the company will evacuate both of you back to Earth," she informed him.

"Me? Back to Earth? Why?" he demanded. "Didn't the doctor say I'm recovering?"

"It's company policy," she replied. "Any time an employee has as harrowing an experience as you've had, they will give you a paid thirty-day, Earth-side vacation. You should phone your wife and tell her you're coming home. She already knows what happened. The company's personnel officer phoned her yesterday. Can I contact the com officer for you?" she asked, reaching for the phone.

"No," said Fordyce, laying his hand on top of hers on the videophone handset. "I need to wait until she's off duty at the hospital. She doesn't like it if I call her at work. I'll do it later."

"Very well," said Valencia, withdrawing her hand. She liked Fordyce but he had baggage and her number one rule since college was never get involved with married men. "I have to go now. I'll check on you later." She left the room strangely sad.

Fordyce watched her go feeling like crap. He was married and shouldn't be hitting on her. but he couldn't help himself. Something about her stirred his emotions. It was a long time before sleep overtook his thoughts.

When he awoke, Fordyce felt better. He remembered Valencia telling him he would be going back to Earth for vacation. The idea of spending the last month of his employment with Lunar Transport Systems back on Earth did not appeal to him, until he realized he could use the time to persuade Evita to come to the Moon. He knew for sure that if he could just get her off the planet Earth, the excitement of being in space would thrill her as much as it did him. He would pay any price to rent the best place for her mother to live in the L.A. area so that Evita would come with him to the Moon. He picked up the videophone and dialed.

"Hello," Evita said in her soothing voice. She left the phone's video mode switched off. Probably, she had not put on her make-up yet. She never used the video mode unless she deemed herself presentable.

"This is Fordyce," he replied quickly.

The three-second delay between Earth and moon was noticeable. "Hello?" she said again. "Oh, it's you, Fordyce. How are you feeling?"

"Now that I hear your voice," Fordyce spoke enthusiastically, "I

feel great, and soon I'll be there in person. Baby, I've missed you. I can hardly wait to wrap my arms around you."

"Are you coming home for good? No matter how much money they pay you, you've been gone way too long."

He could wait no longer to propose his plan. "That's the point," he assured her. "We have plenty of money now to pay for an apartment for your mother in the Riverside Gardens Retirement Community. We can be together, just the two of us." He refrained from adding "here on the Moon." He would work up to that after they had enjoyed a second honeymoon.

The delay this time was more than three seconds. "You're coming back to stay, aren't you?" she asked. "...Because this long-distance marriage isn't working."

Now it was his turn to pause. "That almost sounds like an ultimatum..."

"Maybe it is," she affirmed. "If we're going to be married, then you have to come home and stay."

There was defiance in her voice that he had never before heard. Then, it dawned on him. He could not make her feel about space the way he felt. He also realized there could be another reason why she had turned off the phone's video mode. Perhaps something had happened during his absence. Maybe she and her mother weren't alone. "Evita," he spoke slowly but emphatically, "have you found someone else?"

The lag seamed to go on forever, then she answered, "What do you expect. You're not here and I need someone. You refuse to come back and be with me." The silence stretched out uncomfortably long. Finally, Evita said in a plaintive voice, "Dr. Habberstein has been very kind to me and mother while you've been gone. I work with him at the hospital. He's single, and has a lovely three-bedroom home in Beverly Hills. His mother is also all

alone, and lives there with him."

Suddenly, he didn't want to return to Earth at all. His desire to be with Evita evaporated and his thoughts turned to Valencia. In that moment, his entire life made a U-turn.

Evita spoke again, "Fordyce, are you still there? I didn't intend for this to be a 'Dear John' phone call. I'm sorry."

He felt strangely elated, like she had lifted a heavy weight from his shoulders. "No, that's all right. It's better to clear the air between us. I'm not leaving the Space Frontier, not ever. And, if you won't consider coming here, then... then... it's better we go our separate ways."

She can sense a change in him. He's happy. "Is that what you want?" she asked.

"Yes, Evita," he assured her, "that's what we both want. It's... it's time we say goodbye."

"Very well," she agreed, "Goodbye."

Fordyce doesn't hear the sadness in her voice or see the tears she wiped away. His life is moving on.

He hung up and turned on the electronic window on the wall of his room. He selected a live view of the sky from the lunar surface. One third of the way above the lunar horizon in the black sky floated the small, lovely, blue, white and brown Earth in last quarter phase. He recognized western Asia, the Middle East, Africa, Europe and the surrounding oceans. The view reminded him of his grandmother telling him stories about her great-grandmother. Two hundred years ago, she had set sail from Amsterdam when she was only a teenager. Alone with no family or friends with her, she decided that she must leave home if she wanted a chance of a better life in the New World. It must have been hard for her to say goodbye. She felt she would never see her parents or her brothers and sisters again. How homesick she must have been on that long

voyage. How frightened she must have been coming to a strange new land. But she also must have felt a thrill of adventure and the promise of a bright future for those bold enough to reach out and grab it. This was the human price of building a civilization on a new frontier. Now, he too, was paying the same price.

Fordyce kept looking at the Earth, his home world. There were blues and browns splattered with green on its surface and white clouds streaked above everything. The planet's rotation towards the east across the terminator into darkness was almost imperceptible. It was a magnificent sight. You had to be in space to see this.

He keyed in Valencia's number and she answered immediately. "Hi Fordyce."

It was shaping up to be a great day.

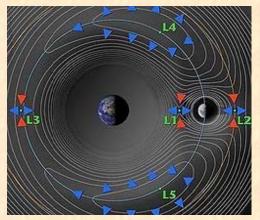
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Dorothy is a retired planetarium teacher living in a small town in the Willamette Valley of Western Oregon. After almost forty years of happy marriage, she is now a widowed grandmother with a wonderful family, most of whom live nearby. Besides keeping up with

family and friends, she still maintains her home complete with a large yard and vegetable garden.

She also keeps up with the latest space and astronomy news. Dorothy is a long-time member of the Oregon L-5 Society, which is a chapter of the National Space Society. She joined its predecessor organization, the L-5 Society, in 1979 and wrote articles for their magazine. She thinks that the chances now of



becoming a space tourist are about zero but she is still enthusiastic. The next best way for her to visit space is by writing science fiction. Dorothy hopes you have enjoyed her story.



Apollo 13 - 40th Anniversary Essay Contest

Manned Space Exploration is Worth the Risk!

Apollo 13 was the one Moon Landing Mission that, on the surface, failed. The crew launched April 11, 1970. Two days later, en route to the Moon, there was an explosion in the unmanned Service Module. "Houston, we have a problem." The Moon Landing was now out of the question.

Worse, at first it looked as if there was no way to get the crew back home safely, and that this was a tragedy in the making, something that they could only watch happen, helpless to do anything about it.

But through determination, resourcefulness, ingenuity, and a stubborn refusal of NASA personnel to accept this fate, in a 5 day drama played out on television screens worldwide, we found a way to give the crew "a slim chance." They splashed down safely on April 17, 1970.

Around the world, there was not a dry eye! If ever there was a defining tribute to the human "never say die" spirit, this was it.

Apollo 13's 40th Anniversary is April 11-17th, 2010

While this mission did not involve a successful landing, it was an iconic example of courage and ingenuity in the face of almost certain disaster and tragedy.

We cannot speak for nationals of other countries, but it is a sad truth that many Americans have lost the frontier spirit and have become risk-averse. This was evident in public reaction to the Challenger and Columbia mishaps. The only disaster in either event was this minority segment of public opinion. None of us would be here if our ancestors had not willingly taken risks.

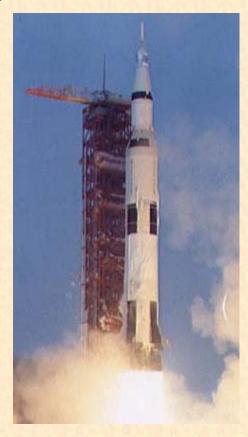
Contest is Open to Everyone

1st Prize: 3 year renewal, or 3 year new Moon Society membership - a \$105 value

2nd Prize: 1 year renewal or 1 year new Moon Society membership - a \$35 value

3rd Prize: The Lunar Reclamation Society hardcopy subscription to Moon Miners' Manifesto* - a \$12 value *Conditions: 3rd prize is available only to those who are not members of the Moon Society. If the 3rd contest winner, as picked by our panel of judges is a member, he or she must assign this subscription as a gift to a non-member or to a Library of his/her choosing.

In addition, all three prizewinning entries will be published in Moon Miners' Manifesto and available for download on the Moon Society website.



Last but not least, a special edition of Moonbeams magazine will contain the top ten finalists. It will be a spectacular eBook filled with Apollo 13 pictures and author bios/photos.

Contest Requirements and Conditions:

- 1,000 word limit
- **Submission form: electronic only** (.doc .docx word document, .rtf plain text document, .html web page document, .pdf file -- note: if your mail program allows, you may also copy the unformatted text of your entry into the body of the email message.) Double-spacing is not necessary.
- Submission address: secretary@moonsociety.org
- Submission deadline: April 1, 2010
- Include a "code name": please pick a code name and put that name with no other contact information in your entry. Put your name and full contact information in the accompanying email. The Secretary will compile a list matching code names to real names, which will not be distributed to anyone. This ensures judge neutrality in the event that a judge might recognize the name of an entrant and be influenced favorably or unfavorably by that. Given the code names on entries picked by the judges, the Secretary will notify the winners, the Moon Society webmanster and MMM editor by email.

Awards announced on April 17, 2010

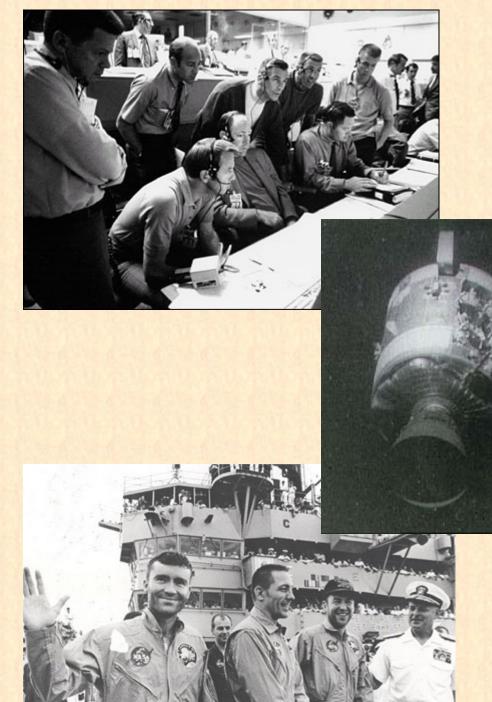
This is the 40th anniversary of the safe touchdown of the A13 crew. Notice will be on our website, as well as emailed to the individual entrants.

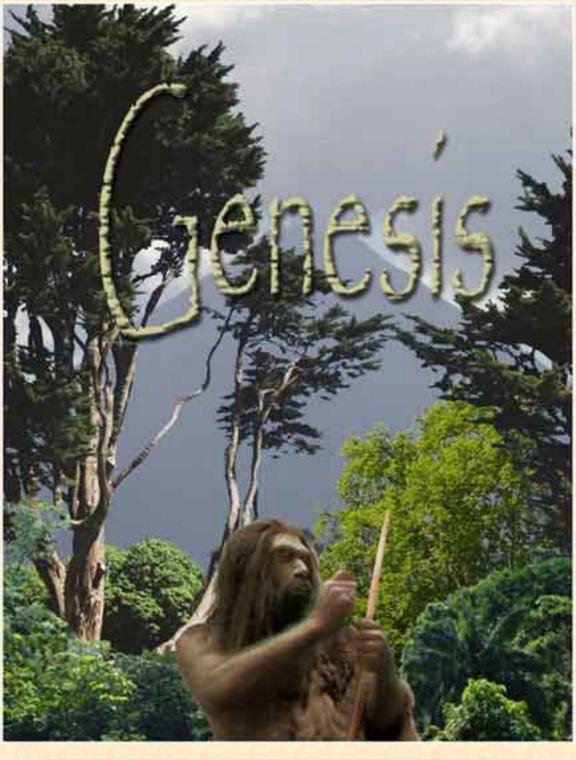
Please spread the word to anyone whom you think might be interested.

Address any questions about the Contest or its details to:

president@moonssociety.org







By Charles Lee Lesher

Fear of things invisible is the natural seed of that which everyone in himself calleth religion. Thomas Hobbes (1588-1679)

The volcano had been shaking for months, gentle warnings of the violence to come. Many of the birds and animals had long since abandoned the forests that blanket the mountain, instinct overcoming habit as the very ground beneath them trembled. The wandering bands of hominids are no exception, the last leaving just days before the eruption.

For countless centuries, these tribes have prospered in the shadow of the volcano, hunting and gathering from nature's abundance. They call themselves the People and are equipped with nature's latest experiment, a big brain. Well proportioned and powerful, their dark skin glistens as they stride confidently through the hardwood forest away from the awakening giant.

From the open spaces between the forest trees, they can see the flank of the mountain many miles away, its summit hidden behind a dense mass of dark clouds. The air hangs heavy on the tribe, damp and filled with the promise of a thunderstorm. The men carry fire-hardened spears and heavy clubs while the women tote rough hide bundles filled with tribal possessions and food. Coarse cut leather clothing hangs loose from their waists and shoulders, worked by the women using teeth and tools until supple. Thick calluses cover the soles of their feet. Not a single adornment graces the tribe.

Ur is neither the largest nor the strongest among them, but at twenty years of age, he has established himself as one of the best stone workers in the tribe, able to find beautiful blades within the depths of a rock. He is also quite fluent in their rich spoken language. His skill at telling the ancient stories draws the People to his evening fire.

He is without a mate. A water demon had taken her the season before. She had been heavy with child and slow that day. Ur had watched helplessly as the beast dragged her into deep water. The dark stain spreading across the surface of the normally placid river was a sure sign she had surrendered her spirit, that he would see her no more.

Omon, the tribe's leading hunter and brother of Ur, had thought it wrong to leave the forests of their birth, that the Great Spirit would spend His anger with a few storm clouds and all would return to normal, that leaving would only make Him take notice of the tribe.

Ur felt different. To escape the attention of the Great Spirit, some of the most powerful stories could only be whispered deep underground in total darkness. They told of times when the Great Spirit had destroyed the forests and everything in them. They tell of fire spirits so powerful the rocks themselves burned, of smells that sucked the life spirit out of the People. These were not tales uttered openly, and would not be spoken of now.

By strength of personality, Ur convinces the People to move north towards the tribe's winter hunting grounds. There, the Great Spirit provides caves that give shelter from the freezing rain and deep snow of the dead time. Perhaps they will protect the People from His anger as well.

The eruption begins mid-morning of the fourth day. Ur, close to the front, hears someone call loudly from the long line stretched out behind him. Turning, gazing through the gaps in the dense foliage, he watches with growing fear. The Great Spirit is emerging from his lair! The apparition rises above them, tearing at the sky in a mighty swoosh upward. A few seconds later, His voice washes over the

People with the loudest sound they had ever heard, throwing them to the ground, shaking their world like a feeding hyena.

The great hardwood forest shivers and moans around them. Sharp cracks punctuate the fearful cries of the People as the weakest among the mightily oak trees succumbs to the violent quaking. To the tribe, it seems to go on forever and when it finally lets up, they behold a new sound, a deep throbbing rumble that does not go away. Crying and wailing seeps through this primal sound, fear gaining momentum with each passing second.

His arms flailing wildly, Omon rushes forward along the stunned column towards Ur, exclaiming loudly that they should have stayed, that they made the Great Spirit very angry by leaving. That Ur was wrong.

Rejecting this vehemently, Ur argues that the People must now hurry even faster. To stay will mean surrendering their spirit. Omon will not see reason and turns to confront the frightened faces of the People. With a single blow from his club, Ur crushes his brother's skull, his body collapsing in a heap at the feet of his mate. She falls on the twitching carcass screaming her indignation, tears streaming down her face. Several of Omon's followers add their voices to hers, and the sounds coming from the rest of the tribe rises sharply. Many had liked Omon but the events of this day confuse them. It is outside their experience.

At that moment, the ground beneath them once again heaves, pitching them violently to and fro with utter abandon. In the forest around them, the din of shattering trees and falling limbs is deafening. The world disintegrates around them, coming apart at the seams. Fear overwhelms the People.

As the ground stops moving, Ur jumps to his feet proclaiming loudly that the Great Spirit is speaking to them, commanding them to flee. Why else would he destroy their home? Ur pushes his

tribesmen forward, away from the towering apparition rising ever higher above Spirit Mountain, leading his people away from the dying paradise. A few stay with the body of Omon, his woman, two young children, and an old hunter, never seen again.

Luckily, the pyroclastic flow is away from them, as is the high altitude prevailing winds. The People have no inkling of the devastation wrought on the other side of the mountain where hundreds of square miles of dense hardwood forests disappear in one horrible event. Hot gases wipe out entire tribes. Falling rocks and dense ash claim even more.

Fighting back shear panic, Ur prods the tribe to greater and greater speed, encouraging them to pick up and carry the smaller children. Many of the elders cannot keep up. The Great Spirit defeats the Sun Spirit plunging the land into foreboding darkness. Just as foretold, burning rocks, some as big as a man's fist, begin to fall around them. Screams of the hurt and dying are barely heard above the steady rumble of the erupting volcano. The tribe is now running in blind panic through the premature twilight. Many fall and curl into the fetal position, whimpering pitifully. The People leave almost half their number behind on that fateful day, the weakest of mind and body, those least able to survive.

Long after the bombardment stops, the Great Spirit continues to shower them with a dusting of ash, not enough to kill but enough to frighten. It soon blankets the land and the People like a perverted snowstorm and the late afternoon temperature dips, sending a chill through the tribe. Those who have hoods pull them up to shelter their faces from the ash. They cast fearful glances back towards the almost invisible mountain. From dark depths, the Great Spirit glitters like hot coals and his voice is distant thunder that never stops.

Far into the night, Ur leads his tribe away from the Great Spirit,

able to see just well enough to avoid trees and bushes, always keeping the flickering red glow to his back. More than once, he stops and waits for stragglers to catch up, groping through the darkness and the falling ash. Some simply disappear in the confusion. Once separated from the tribe, they have little chance of survival. Long after midnight, he finds a dense blackberry thicket. Squirming under the ash heavy brambles, the tribe huddles together for a few hours sleep.

Just before dawn, the ground shakes violently once again, jerking everyone awake. Within minutes, Ur has them on the move. Mid morning, he comes upon a female weeping over the body of a child. Ash covers the woman masking her features beyond all hope of recognition. Tears have grooved the encrusted ash below each eye and her hair is a solid mass plastered to her head. Almost in passing, Ur grabs the woman and pulls her roughly to her feet, telling her loudly she must come or surrender her spirit. Without understanding his words, the woman gives one final sorrowful glance to the mound of flesh that had been her son, slings a small leather pouch over her head, and falls in with the People. Her head bowed, she never looks back.

A few hours later, the bone weary travelers ford a shallow ash-choked stream and set out across a vast plain, each step taking them further away from the land of their birth. Hunters know of this great ocean of grass but no one has ever dared venture far out upon it, always keeping Spirit Mountain well in sight. Behind them, through the light haze of falling ash, the Great Spirit is an overshadowing entity with a flickering red heart, driving them out of their ancestral home.

The men form an envelope around the women and children protecting what remains of the tribe, making good time across the flat prairie. The sky hangs heavy over them, keeping the sun spirit at bay as they trudge through perpetual twilight.

That evening, nearing exhaustion, the People make camp at the edge of a broad shallow valley. Tired and hungry, they eat what they have and huddle around small fires for warmth and protection. Talk is muted and the sound of children almost absent. The newcomer tries to lie down close to a group of women but several of them hiss and strike out, driving her away. Ur motions for her to come to him. As she approaches, he notices for the first time, something is different about her, the way she walks and her bearing. Totally exhausted, he pats the ground beside him and lays back, almost instantly falling asleep. She snuggles up against him sharing a pack for a pillow and stares into the darkness, munching on a piece of dried meat and a few stale nuts retrieved from her pouch.

Hours later, on this, the blackest of all nights, a juvenile leopard, only recently cut loose by his mother, creeps towards the sleeping people. He has not eaten in many days but worse still, has not slept for even longer, devastating for an animal that typically sleeps twenty out of every twenty-four hours. His species is small and he, not yet fully grown, weighs less than two hundred pounds. Under normal circumstances, he would never consider attacking the hominids.

Creeping forward, the young cat can detect no movement around the flickering fires. Exhaustion, hunger, and inexperience overcome his fear of these creatures. He senses a swift snatch and run will net a sorely needed meal. Slowly he advances, his belly never rising more than an inch from the ground. Around him, the ash has all but stopped falling and the only sound is the occasional rumble of thunder somewhere in the distance. Coiling his legs beneath him, his eyes grow large and remain steadfast on the small body of his target. With a final wiggle, he pounces, sprinting across the last few yards in a rush of muscle and fang.

Instantly awake and without thinking, the young woman grabs Ur's spear and meets this specter of death just feet from his goal. Coming in from the side, she catches the lithe killing machine by surprise and jams the wooden shaft into his eye, instantly breaking his charge.

With pain shooting through him and his vision shattered, the leopard roars his frustration and anguish as he twists away from this unexpected adversary. A second later, the big cat is gone and the camp erupts.

The mother of the child pulls the frightened boy to her breast and comforts him, rocking him gently in her arms, her eyes returning repeatedly to stare at the tall stranger with wonder. The woman stands, feet wide apart, defiantly facing Ur and the tribe. Slowly, calmly she hands him the spear, her mouth speaking unintelligible gibberish.

Some in the tribe want to drive the stranger out but Ur resists. Taking a flaming branch, he walks to where drops of blood lead into the darkness and the enormous paw prints scar the ground. The ash holds many in perfect suspension, letting him see the size of the beast that had stalked them. The woman's footprints are there as well and he quickly grasps the details of the attack. This woman has driven away a demon of the night. He brings her to his fire, ignoring the grumbling of the others. He returns the spear to the stranger before finding sleep once again.

By dawn, the ash stops falling and a warm clean shower greets the People. After the rain clears the grime from the newcomer, Ur is surprised to see how different she is, her fine hair is a soft brown instead of coarse black, and her skin pale. Around her neck hangs something shiny. She returns the curious stares of the People with a calm steady gaze. Ur is astounded she cannot speak properly, her words utter nonsense! Only children do not know the words of the People! Even so, he learns her name is Avalyn, for him a word difficult to pronounce. He calls her Ava.

The People resume their trek, only now the men's eyes scan the tall grasses around them, pausing to listen every few yards. Several of the more experienced hunters run ahead hoping to jump game before the tribe has time to spook it. Midmorning they down a small deer and a pig an hour later. After thanking them for surrendering their spirit, the tribe consumes both raw. They shatter the bones to get at the fat-rich marrow inside. It's mid afternoon before they see the face of the sun spirit. Many of the tracks the People have left in the thick wet ash become frozen in time, baked by the sun into a hard stone-like mass, preserved for the ages.

After many days of travel, the Great Spirit is still behind them. Shifts in the upper atmospheric winds occasionally bring the tribe more ash but not nearly the quantities as before, just enough to drive them on. Ava begins to learn the words of the People and every evening Ur teaches her more. The other women are reluctant to accept her and the men see only another female, even though she carries a spear and hunts. Ur takes her on the fifth night. She shows him pleasures he did not know existed.

From the beginning, the women distrust Ava. They are unaccustomed to a female doing the work of a man. The first to offer friendship is the mother of the boy that had been the leopard's target. Ava begins to help her in her traditional duties of tending fire and cooking, the preparation of hides and clothing making. Even as Ava learns the ways of the People, she teaches the women of things taught to her as a child. From her foraging trips, she brings back a verity of herbs and spices to the surprise and delight of everyone. Her use of bone needles and simple patterns rapidly change the way they make their clothing. As time passes, the activities around the evening campfires become more efficient,

easing the burden on the women of the tribe. Ava becomes a leader among them.

As days become weeks, some of the People begin to talk of turning back, longing for the familiar forests and lands of their birth. One night Ur has a dream, a vision in which he leads the tribe to a place of abundant food and safety, a place where the Great Spirit smiles on the People. The next morning Ur tells his fellow tribesmen of his vision. By force of will born of deep belief, he convinces them the Great Spirit has spoken to him, promising them paradise at the end of their journey. He ruthlessly drives the tribe onward across the seemingly endless plain, convinced of his vision, confident in his conviction that the Great Spirit has something more in store for his People than the endless journey.

One evening while watching Ur carefully put a new edge on a hand ax, Ava asks to see his flakes, the chips and fragments of any useful size that he generates every time he works a stone ax or scraper. The tribe knows of only three places where tool stone exists, all of them at the base of the volcano they had just fled. The obsidian the tribesmen now possess has become precious beyond belief.

Puzzled, Ur unfolds the leather and lets her look. Leaning over the treasure, Ava quickly sorts through the fragments, moving them around until she finds one to her liking. Holding it up, she asks Ur if she can work it.

Ur looks at the flake and back at this strange woman. Smaller than his palm and rather thin, it is marginally big enough for him to have kept. Too small to make a hand ax, it would serve as a fragile scraper at best. Yet, he's glad he has it. He refuses.

But Ava is persistent and with reluctance he finally gives in. Sitting cross-legged by the fire, she produces a small antler tool from her pouch, well worn at both ends. Smiling at Ur, she cradles the fragment in a piece of leather and begins to work it. Applying pressure skillfully, chips smaller than a fingernail soon litter the ground around her. Other men come to Ur's fire to watch Ava. They have never seen a woman work stone and it fills them with wonder.

Nearly symmetrical, the finished object has a blunt tang at one end, coming to a point at the other and bifacially sharp along both edges. The men pass it around looking at the strange miniature. Barely the length of his thumb, Ur asks her of what use is so small a blade?

In answer, Ava does a very strange thing. She cuts a long thin slice from the leather in her lap and pops it in her mouth, chewing vigorously. When Ur and the rest of the gathering grunt in amazement, she laughs and fetches his spear. Normally sharpened by fire hardening and scraping it to a point, the tip had split that very morning. The spear would require shortening by almost a hand.

Deftly, Ava carves away at the damage, chewing the leather strip in her mouth as she cuts a V-shaped hollow in the wooden shaft using Ur's hand axe. Taking the stone point from Ur, she does a trial fit. Not satisfied, she carves some more until the point fits snugly. Taking the hide from her mouth, she wraps the wet leather tightly around the base of the tip where it fits into the notch, expertly pulling it taut before tying it off. Holding it over the fire well away from the flame, she roasts her creation, drying the leather and making it shrink and tighten right before their eyes. With one final test wiggle of the installed point, she declares it complete, handing the modified spear back to Ur.

He instantly recognizes its advantages. In complete amazement, he presses Ava for an explanation. All she will say is a great hunter taught her when she was a little girl.

Over the next few days, Ava demonstrates how to make spear

points and fasten them securely. She also introduces new ways to work stone, what would come to be known as the Levallois technique of shaping a point before shearing it from the core. Ava gives the gift of knowledge. She is no longer just another female in the minds of the men. The People look upon her with new eyes.

To mark the passage of days, Ur ties a knot into a thin strip of hide each morning. On the sixth day, when the number of knots matches the number of fingers on his hand, he loosens them all, ready to begin the process anew after a day of rest.

The tribe continues north over the great savanna, the pace slow, the daily routine comfortable. Armed with stone tipped spears, bands of hunters regularly roam far from the main column bringing back meat and hides to the evening campsites. Every night after the evening meal, the People gather to hear the ancient stories. Occasionally, Ava spoke of where she came. Over time, her stories seep into the tribe's mythology; new words, new ideas, and new knowledge add spice even when they are hard to believe.

Weeks turn into months and still they trek onward. The People grow tired of the constant travel and some begin to talk again of turning back. Ur will hear none of it. Over the last few days, Ava has pointed out the increased number of birds in the skies overhead and in the number of predators at night. She thinks the Great Spirit is telling them they are nearing their goal.

That evening a lion snatches a boy child who strayed too far from the fires. The wailing of his mother keeps everyone awake far into the night until finally Ur comes to her. He kneels and strokes her head, telling her the death of her firstborn had been for the good of the People, that the Great Spirit had taken the boy to be with Him, but He would give something in return. The woman takes little comfort in his words.

The next morning Ur breaks with routine, not letting the tribe

relax even though it is the sixth day, insisting they forego rest and push onward.

That afternoon, with the sun hanging low in the western sky, the tribe comes to the edge of a great valley. At its bottom flows a river the likes of which they have never seen. Like a mighty serpent, it undulates back and forth across a broad fertile flood plain. In the distance, great herds of beasts are scattered amongst the trees and tall grass. Birds screech at them and insects buzz about their ears. Ur's nostrils flare with the fragrant aroma of lilacs and cherry blossoms. Around him, the tribe marvels at the beauty.

Ur comes to the woman who had lost her son the night before and spreads his arms wide indicating the rich valley that lay before them. In a voice all can hear, he reminds her that her boy had not died in vain and prays loudly to the Great Spirit, thanking Him for the generous gift of paradise. He promises to retell the story of the People until the end of time. Some among them declare Ur a prophet, one who speaks with the Great Spirit.

Jubilant in their good fortune, laughter fills the camp of the People as they dance and cavort about blazing bonfires. Spits of freshly killed meat hang low over the hot coals of the cooking pits and wet hides are rolled in tight bundles and piled close by to dry. Gourds of sweet spring water and ripe fruit spice the evening meal and not even the roar of hungry lions just outside the fire line, can keep the celebration in check. Seldom has the tribe partaken in such a feast. The People rejoice in the land given them by the Great Spirit.

Content in his accomplishment, Ur sits on his leather blanket padded by the rich grass, well within the radiance of the cooking fires. Ava is at his side, her pregnancy not yet showing. He begins to tell for the first time the People's tale of paradise lost and knowledge gained.



Downwind, several hundred yards away, hidden amongst the trees and tall grass, three figures watch and listen. A gentle breeze carries the odor of cooking meat, inciting anger within the elder of the group. It is just as the oracle foretold! He flashes his teeth and growls, slamming his hunting club down on the grassy loam, swearing to the spirits of his ancestors, this sacrilege will not go unpunished!

His companions vigorously bob their heads in agreement, eyes wide with excitement. They are young and ignorant of war, but they have heard the stories many times and both are anxious to prove themselves in battle. They yearn for glory and to have heroic tales told of their deeds.

The old warrior leads the trio away from the camp of the invaders, down into the fertile valley that has been his species home for the last eleven thousand years. As a veteran of many battles, he fears not, because the gods are on his side.

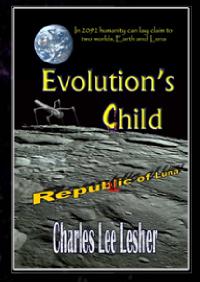
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Evolution's Child is Chuck's debut novel and begins the Republic of Luna series. It is set in 2092 and explores the high tech society that will develop when people are separated not only by oceans or deserts or mountain ranges, but the harsh unforgiving vacuum of space. It is available at all major bookstores and or you can buy direct from the publisher at:

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Chuck's email: chuck@charleslesher.com

Website: http://charleslesher.com/

Letters Home

Dear Diary

6/15/28 Four dead. That's how many died in the landslide. One mistake is all it takes. John, Chris, Judy, and Wendell. All gone. I swear I will never forget them.

From: Silas Pak To: Henry Pak

Subject: I'm on my way!

Dear Uncle Henry;

You wouldn't believe the mountain of red tape involved with just the October Mining Company in order to get to the Moon. I'll try to condense it for you. There are always forms to fill out. One was to certify my space worthiness. Another was family history, along with my physical results. A third form was for security, in case I am secretly a terrorist. I don't think I'll be sabotaging anything while I'm there.

The other new hires and I took a company plane down to Brazil, to an artificial island in the mouth of the Amazon River. This is where a space elevator is built. It's called the Espaco. This place rivals any large metropolitan airport! After presenting our credentials, we were ushered to a waiting room. But we didn't need to wait long. Those of us with wearable computers were instructed to download the company employee's manual. Only one person had an older handheld unit. But it was able to get the manual as well.

The actual elevator car or capsule, if you prefer, was rather large. Two thirds of it held cargo and supplies, while the rest was for passengers. Our basics were loaded into overhead compartments, and we strapped in. The computer voice announced liftoff, and rather than a rocky, jolting explosion under us, we gently and swiftly departed.

My next letter is from the Moon!

Love, Silas

Ocean of Stars

By Linda Kenny Sloan

Before us a new ocean appears not of water but of stars inviting us to begin a new journey. Do we dare set sail on this ocean where life forms into many colors, shapes and sizes to surprise us with its diverse messages? Imagination opens wide the door of seeming impossibilities while reality's door limits our view to what could be now.

Each island star and planet holds
its secrets that may be revealed
or hidden in mystery.

They will not be found by staying put
but only by the adventurous will
they be discovered for what they are.
A new mystery and new puzzles to
be solved
by whom?

Who will take that long journey to answer a million questions for each point of starlight in this ocean?

Will it be you?

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Linda Kenny Sloan is the owner of Information Universe. Her company develops easy access to the manuals, documentation and other critical information your company needs in order to provide customer services and technical support. She has a solid background in technical writing, library science, aerospace engineering and space systems analysis. Let her find and refine the information you need.

17701 S. Avalon Blvd. Suite 407 Carson CA 90746

Linda's email: lksloan@informationuniverse.com



Welcome to My World

By James E. Gurley

"Rover One to Cydonia Base." Jake Tyland spoke into the mouthpiece of his suit's radio with a sense of suppressed urgency in his voice. He listened intently over the static that hissed in his earphones but heard no comforting reply. He had been trying for over an hour with no results. He glanced over at his traveling companion, Des Ramirez, fast asleep in the passenger seat, a drop of spittle seemingly defying gravity by rolling up his square chin and dancing along his lower lip, a by-product of the low gravity and the spirited animation of the rover.

Luckily, the jostling and bouncing of the rover over the uneven surface did not appear to bother Ramirez at all. In fact, he was oblivious to it. From space, the Acidalia Planitia looked like a large, flat beach. All it needed was a chaise lounge and an umbrella. From the driver's seat of the rover, Jake thought it was more like a ride through the Mojave. Low dunes, half-submerged rocks, deep arroyos and small craters made driving difficult. Taking his eyes off the tire tracks of previous rovers could mean disaster.

He brushed the mouthpiece aside angrily. It snapped off and fell in his lap.

"Damn!"

Des roused. "What ...what is it?" He looked around warily, his sleep-filled eyes coming to rest on the dials on the control panel automatically. He saw the blinking red glow of the low oxygen indicator. "What's up?" he asked, thumping the panel with his finger uselessly.

Jake sighed. "I can't raise Cydonia and we have a leak." "Bad?"

As if any leak on Mars wasn't bad! "See for yourself," he snapped, indicating the reading. "We don't have enough to make it back."

The small rover provided a sealed environment for its occupants, breaking down water to component oxygen for breathing and hydrogen for fuel. A slow leak in the water tanks was bleeding off their fuel and their air.

"Why didn't you wake me?" Des asked, irritated.

Jake looked at him pointedly. "Because you used less oxygen asleep."

"Right," Des replied slowly. "Can we walk out?"

Jake shook his head. "It's night outside. We would freeze before we got back to base, even if we had enough oxygen."

"What about the reserve tanks?" Des' voice was getting frantic, Jake noted.

"We're on them now. I switched about an hour ago." He had been trying to contact Cydonia Base to arrange a drop from a drone Hopper.

"All this while I was asleep?" Des sounded incredulous.

Jake shrugged. "I slept last. You had been awake for twenty-two hours. I figured you needed the sack time."

"We'll be out of fuel soon," Des noted, looking at the electrolysis screen. He checked their location on the Mars Global Positioning System and did some calculations on his wrist comp. "We're headed

due south. If we head east a little, cut across the Marsh, we could save time."

"Are you crazy?" Jake cried out.

The Marsh was a region of fine dust near the southern edge of the Planitia overlying honeycombed caverns and deep chasms. Both an unmanned lander and a two-man rover had vanished there in the past three months, sucked down by the unpredictable sands. To suggest driving through at night there was suicide.

"What other choice do we have? Do you want to draw straws to see who gets to live and who gets to breathe Martian atmosphere?"

Jake didn't. "We still might not have enough oxygen," he countered.

"My calculations show we can save twenty minutes by cutting across the Marsh. We make it with three minutes to spare?"

"Three minutes? You want to risk the Marsh for three minutes?"

Des grinned. "We can hold our breath for another two. That's five, total. We'll make it."

Jake turned the steering yoke sharply to the right, breaking free of the well-worn path. "I'm game if you are." The rover leaped over a low ridge and hit sand, sending it in a shower that fell slowly back to the ground. He had been on Mars six months and still had not gotten used to the spectacular effects of the low gravity.

Des shrugged. "We can at least take pictures. I'll set a homing beacon. If we don't make it, someone will find us and our samples."

The samples. Jake had forgotten. They were the main reason they had spent twenty backbreaking hours outside in the freezing cold digging a trench. He glanced back into the cargo bay. In it sat a container with two hundred pounds of strange rocks they had found near the so-called D&M Pyramid.

The rocks looked remarkably like clay bricks, crumbled and

cracked by the extreme climate. The fact that they had found them neatly stacked atop each other like a wall was intriguing but not in itself conclusive. There were many instances on Earth of masonry-like formations discovered to be entirely natural in origin.

Des was certain they were part of a structure dating back over 250,000 years. Jake was not as sure. There had been previous claims of Martian artifacts that had turned out to be bogus. He didn't want to get a reputation as a quack.

Back at the Base, chemical tests could prove if the bricks had been fashioned or if they were natural in origin.

The mission planner at NASA had chosen the Cydonia Mensae region for the first semi-permanent base on Mars because of the Face and the City Complex, features discovered by the Viking 1 in 1976 and later by the Discoverer in 2010 that, at least to the more gullible, like Des, proved that life had existed on Mars. Even from close up, Jake thought the features looked more like mesas and buttes he had seen in Arizona while training for the mission than man-made structures,

"We're coming up on the Marsh," Des informed him.

Jake could see the vast expanse of rust-colored sand ahead of the rover. He powered down. "I'm going to slow us down. It'll be safer."

"Safer?" Des laughed. "A broken neck might be preferable to slow suffocation." He looked at Jake and smiled. "We don't have much time to spare." He tapped the fuel indicator meaningfully.

"Okay," Jake replied, powering up the rover to full throttle. It bounced precariously along the sand, threatening to go airborne over each small ridge. To their west rose a series of small, conical outcroppings protruding from the sand. They stood about three meters above the surface as enigmatic as when the first aerial flybys had discovered them. "We've got some snorkels outside," Jake said.

They had only limited information about conditions in the Marsh. The origin of the snorkels, the hollow tubes that sometimes protruded above caverns, was unknown. One theory required the slow dripping of water from a source above the snorkels — a long lost layer of sediment blown away by the Martian winds after the ocean had evaporated. Another suggested a similar scenario but with gases venting from the caverns below. There had been plans to explore the Marsh thoroughly but the deaths of the other rover crew had placed them on a back burner. The mission was on a close timetable and no one wanted to miss the launch window. Spending another year on Mars on short supplies was not an option.

"What's that?" Des asked as the rover began to slow down. The high-pitched whine of the hydrogen motor dropped in frequency.

Jake fought the controls. "The sand's too deep and powdery. It's almost acting like a liquid."

"Power up and plow through!" Des called out. Jake could hear a hint of panic in his voice.

"If I do that, we might sink even deeper. I need to power down and ease through." He pulled back on the throttle and the rover's six wheels bit into the fine dust, slowly finding traction on the balloon tires.

"That's it! Ease her through!" Des coaxed Jake and the rover along.

Jake felt a shudder and the horizon suddenly spun ten degrees.

"Wh... what was that?" Des stammered, gripping the arms of his seat tighter.

"We turned," Jake explained. Another shudder followed and the rover began to spin around slowly, like a carrousel. The horizon rose around them, spinning dizzily.

Jake turned to Des. "We're caught in a dust funnel. The roof of a cavern below us must be collapsing." "We're sinking! What do we do?" Des asked as he fought the restraining straps. "We've got to get out of here!"

Jake laid his arm across Des's chest to keep him in place. "And go where? There's more air in here than in our suits. Maybe we can ride it out."

As if to contradict him, the rover began to spin more rapidly as the front-end rose at a sharp angle. Sand began to cover the front window.

"We'll be trapped! Like the others!" Des was frantic, fighting off Jake's attempts to keep him in his seat.

Suddenly, the bottom dropped out of the funnel. The ten-meter drop felt much farther and landed Jake was pleasantly surprised when the rover landed upright. They bounced around like sardines in can but received only a few bumps and bruises.

Overhead, out of their reach, the Martian sky glowed blood red for a few moments. Slowly, the shifting sands began to fill in the funnel until only a small hole remained. They watched the sky disappear completely.

"Well, we're dead now," Des said. He seemed calmer now that the rover had settled.

"At least we know what happened to the other rover," Jake said.

"Fat lot of good that does us!" Des snapped.

Jake began to put on his helmet.

"What are you doing?" Des questioned.

"Might as well explore, right? That's why we came, isn't it?"

Des shook his head and grinned. "You kill me, Jake. You know we can't get out of here in time, don't you?"

"Like you said, with the beacon on, someday they'll find the rock samples. What do we matter in the long run? We said a few words for Charles Freemont and Doug Ingalls when they were lost, wrote their names on a brass plaque at the Base but did we slow down or give up. No. Neither will the others. We're here to find some answers. I intend to explore, write down my findings and let others interpret them." He clicked his helmet snug and unsnapped his seat restraint. "I'm going outside. You coming?"

"Hell, we're a team, aren't we?" Des smiled and grabbed his helmet.

The rover had come to rest in a small cavern just big enough to hold it but the rover's lights indicated a small tunnel ahead of them. Digging the airlock out of the sand by hand was not easy but they managed.

As they walked, Jake played his flashlight along the walls. "See this," he said, reaching out a gloved hand to touch the wall. "These rocks are sedimentary. There's only one way that could happen. This whole area was once under water."

"That goes along with the theory about the Planitia," Des agreed, "but that was a long time ago. Why haven't the caverns filled with sand since then?"

"Good question."

The tunnel branched off into several smaller ones but they continued the direction they had started. They came to a larger cavern. One small pinpoint of light illuminated the sand in front of them. Jake shone his light upwards and saw a small circle of light.

"It must be one of the snorkels," he guessed.

"What's that?" Des asked, shining his light along the wall. The beam rested on a pile of globes, slightly iridescent, protruding from the sand at the wall's base. They looked like giant pearls. He played the light around and saw that there were many such globes in the cavern.

Jake walked over and picked one up. It resisted. He saw that it was attached to the others by a short hollow fiber.

"It looks like a root," he exclaimed in surprise.

"No! It must be more like fibers of some exotic mineral," Des suggested.

Jake pressed his finger into the globe.

"It gives. It's like a plant."

Des picked one up and yanked it away from the ground. A hissing sound filled the cavern. Des struggled to check his air supply line.

"I've got a leak!" he yelled in panic.

Jake was watching the globe slowly deflate. "No. it's the globe. It's filled with gas." He pulled an atmosphere tester from one of the many pockets of his suit. He watched the readout and smiled.

"My God! It's oxygen!"

Des took the reader from Jake's hand. "It can't be. Plant's produce CO2."

Jake laughed. "Not this one."

"I don't believe it," Des cried as he read the gauge. He moved away and tested the air of the cavern. "It's breathable! Oxygen 22%! CO2 less than 1 %. Nitrogen and a few inert gases make up the rest."

"How is that possible?"

Des shook his head. "It's not, not naturally. I'm a geologist, not a botanist, but I don't think any plant could produce gases in these proportions. Not naturally."

"You mean ..." Jake began.

"Somebody created these plants." Des had a big grin on his face. "Martians," he whispered.

Jake's head spun. First the bricks; now these plants. They had come to supposedly dead world with hopes of proving it might once have harbored microscopic or primitive life forms. Now, they had discovered clues to a possible alien civilization. Experimentally, he cracked the seal on his helmet.

"What are you doing?" Des asked in surprise.

"Testing the air." Jake took a couple of deep breaths, coughed a little, and said, "Dry, but breathable." He looked at Des. "Might as well try it. We might be here for a while."

Des took a shallow breath; then smiled. "Kind of like Arizona in the winter—cold, dry and dusty."

"We'll have to watch the lack of moisture. Be sure it doesn't desiccate our lungs." Jake saw Des had a strange look on his face. In alarm, he asked, "What is it?"

"You don't suppose the others ... they couldn't still be alive, could they?"

"Freemont and Ingalls?"

"Yeah."

"It's been three months. Even if they landed in an air-filled chamber, they would have run out of food and water by now. And heat," he added pointedly.

"These plants have to find moisture from somewhere," Des protested.

"Not nearly enough for a human." Des had given him an idea. "Come on."

"Where to?"

"Maybe these caverns are all interconnected. We might find the other rover."

"So what. We can't drive it out either or they would have."

"The oxygen tanks! Maybe they have spare oxygen tanks. We're not too deep. Maybe we could dig our way out and walk to the Base."

"What about freezing?"

"If there's enough oxygen, we can rig a portable heater."

Des's face brightened. He slapped Jake on the shoulder. "I knew there was a reason you were the boss."

For hours, they trudged through the underground caverns. The

tunnels twisted, turned, and wound their way up and down. Jake marked the walls at intervals so they could find their way back, reluctant to rely solely on the MGPS.

"I think I know what the snorkels are," Des announced suddenly as they ascended one particularly narrow tunnel."

"What?"

"When this area was underwater, there might have been air in the caverns even then. Air broke through cracks and bubbled up through layers of sediment, forming dry tubes. Then, the upper layers eroded."

"Makes sense."

"Yeah. I hope I get the chance to find out for sure."

Jake almost lost his footing. "There seems to be a larger chamber here. Watch your step!"

The pair emerged into a cavern much larger than any of the other caverns they had encountered were. Jake shined his light upwards and barely reached the roof. He played the beam around the cavern. The light reflected off an object a few hundred meters away.

"Let's check it out," he told Des.

As they approached, he could see it was the rover resting on its side almost covered in a mound of sand. From the shattered condition, it had fallen through the ceiling of the cavern with no sand to cushion its landing. Pieces of metal lay scattered about. Jake could see two immobile forms still harnessed to their seats.

"Freemont and Ingalls," he whispered.

Des nodded.

"The fall must have been too much. Close to forty meters. Probably broke their necks."

"If only they knew how close they came," Des said, shaking his head slowly.

"The spare tanks are still attached," Jake said with hope.

"Let's pray they're full."

They fought their way up the loose mound of sand to the rover. Jake checked the tanks while Des crawled inside the broken vehicle. The tanks weren't full but had enough oxygen to replenish their tanks. They could drag a spare tank with them to power a heater.

Des emerged with an armload of packages. "Rations and water," he said. "They didn't get a chance to use them."

"Let's fill up," Jake suggested, indicating his oxygen tank. "Then help me with this spare tank."

"Should we bury them?" Des asked, nodding to the vehicle's occupants.

Jake looked at his friends for a few moments. He had arrived on Mars with Ingalls. He shook his head. "They'll preserve where they are. Let's leave them until we can get a rig out here to dig them out. I've been mapping the area with our MarsGPS."

Des nodded. "Yeah. It'll be a memorial to them."

"Let's hurry. We don't have much time to spare. By the time we find a spot to dig out, we may be cutting it close." Jake glanced at the MGPS unit. "There's a cavern much higher than the level we're on. If my rough calculations are correct, it's less than ten meters to the surface from there. It's our best starting point."

Des pointed along the wall. "There are more of those globe plants. Hundreds of them!"

Jake followed his arm and saw them, row after row of the oxygen generator plants. He also saw something else. He began to walk toward them.

"Where are you going? I thought you said we had to hurry."

As he got closer, Jake was certain of what he saw. He laughed.

"What is it?" Des asked as he came abreast of Jake.

"Look," Jake said, pointing.

Des looked; then said, "I'll be damned! They're rooms!"

Jake nodded. A series of uniform, rectangular openings lined the wall of the cavern. Small grooves in the openings indicated where long-decayed doors had been attached. Most of the rooms were half-filled with piles of dust but one was open. In it, he could see patterns carved in the walls, pieces of stone furniture, even a piece of pottery with the desiccated skeleton of a plant sticking out of it.

"Martians!" Des called out in wonder. He ran to the door and looked in. "Why aren't there any bodies?"

"They might have died out a long time ago, or maybe they just went somewhere else as the water disappeared, maybe closer to the polar ice cap."

In one corner of the room stood a stone cistern, carved from the natural rock of the cavern. Jake slid the covering stone aside. The cistern was long dry. "They got water from somewhere."

"Everything looks so ... so —" Des stumbled over the right word.

"Primitive," Jake finished for him. He had been thinking along similar lines

"Yeah! Except for the oxygen pants, everything is craved from stone."

"The more delicate items may have long crumbled into dust," he suggested. "Or, it could have been a long, slow fall as the planet's climate changed."

Des knelt on a rectangular stone in front of the room's doorway, tracing the outlined of carved runes. "Martian writing," he whispered in awe. "I wonder what it says."

Jake looked at the stone slab and broke down into laughter. He laughed so hard tears came to his eyes. He thought of the precious moisture he was losing in his tears. He wondered if the moisture starved Martians cried. He turned to Des. "It says 'Welcome'."

Des just stared at him, unsure whether or not Jake was joking. Jake knelt beside the stone, lifted it up and probed beneath it.

"What are you doing?" Des asked.

Jake handed Des a small metal disc, so corroded only a sliver of metal remained.

"Spare key," he said. "The last one to leave turned out the lights and locked the doors." He started walking away.

"Where are you going?" Des shot at him. "This is the find of a lifetime. Ten lifetimes!"

"I'm going home," he answered, grabbing the harness they had fashioned for the spare oxygen tank and heater and pulling it behind him. "I'm going home."

As Des reluctantly left his explorations and ran after him, Jake thought of the rubber mat in the hallway outside his quarters at Cydonia Base. He used it to wipe off the ever-present Martian dust from his shoes without thinking too much about its historical significance.

He thought of the lives it had cost, the dedication of the crew at Cydonia Base. He wondered what they would think when he told them they had come 40 million miles to find the Martians were long gone but had left out the welcome mat for them.

"You don't think there could be live Martians still here; do you, up at the polar cap?"

Jake smiled. He thought of the worse than Arctic temperatures of the Martian night, the low atmospheric pressure and the lack of moisture. In spite of their apparent ingenuity, no race could beat back the slow death of an entire world.

He wondered if mankind might face the same challenges someday. At least they had made the first tiny steps into space. It was possible mankind could avoid the fate the Martians faced.

"If there are, don't forget to wipe your feet."



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James was born in Corinth, Mississippi on February 19, 1954. He grew up in the country. His backyard was the Tennessee River and Shiloh National Park and Battlefield, a civil war site filled with mini balls, bayonets and belt buckles. History became a large part of his

life and remains a major influence in his writing. James has done many things, laboratory technician, phlebotomist, musician, oil field worker, dredge barge worker, Loss and Damage clerk for a truck line, blaster for a dredging barge on the Tenn-Tom Waterway, door maker, dairy worker, Sears store installer, horticulturist, chef and writer. In all of these, James observed people and how they react to each other and to different situations. They became the characters in his books. Many people have encouraged James to write and many more have helped by buying and reading his books. James writes to please himself, hoping in turn to please others. With your support, James will continue to write.

JE Gurley lives in Arizona with his wife, two cats and assorted critters. He writes full time and plays guitar with Lip Service, a local Tucson dance band.

He has published two novels, God Seed and Father Blood: Demon Spawn, as well as numerous short stories. Check out his website at www.jamesgurley.com.

E-mail: james_gurley@yahoo.com

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