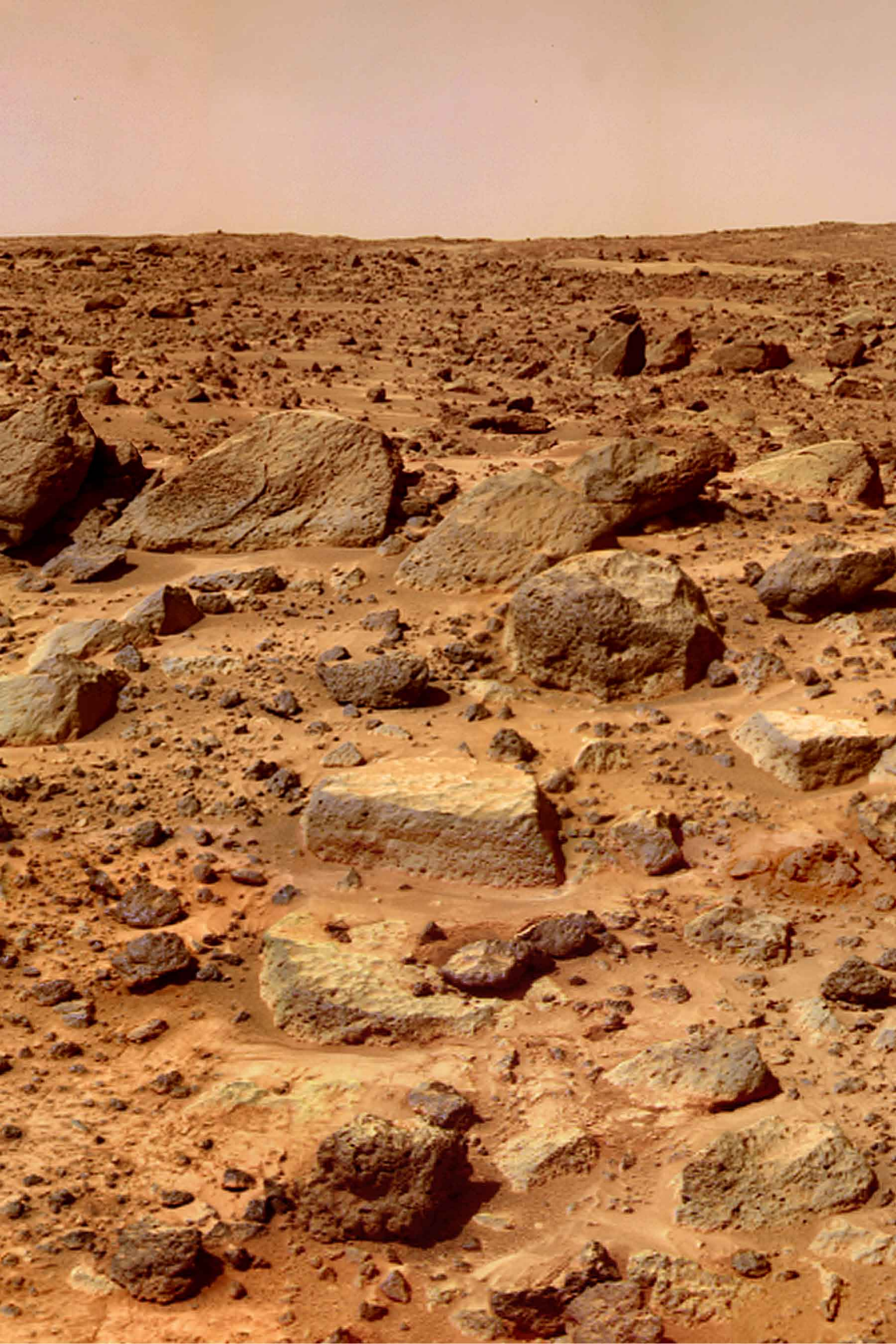
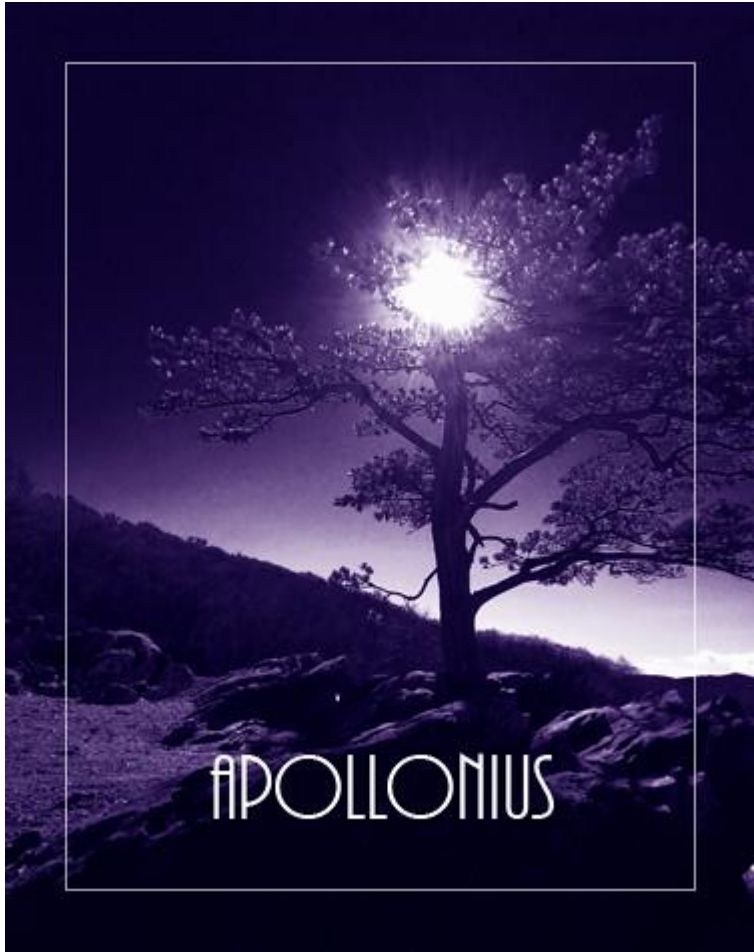


APOLLONIUS





Apollonius

By **Bob Kirchman**

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Introduction: A Bit More Reckless Engineering

The establishment of the Alaska Republic in the mid-Twenty-first Century opened up a time of new growth and prosperity for mankind.

Tundra farms, biospheres and determination tamed the world's Northernmost frontiers and created homes for millions. **Rupert Zimmerman** had been one of the initial visionaries but his daughter Elizabeth, his son-in-law Martin and his granddaughter would go even further. The Summer sun never set on the gleaming tower taking shape on Cape Lisbon and crews were working round the clock to complete the gigantic linear accelerator launch complex... a bridge, as it were, to other worlds. On drawing screenpads in Wales, the schematics for the *Great Northern*, a space ship of epic proportions were being developed. Since the days of **Jules Verne**, people dreamed of traveling into space and exploring her riches. The American space program set men on the moon in 1969 but there was no economic reason to go further. *Great Northern* would be built slowly, and the completed ship would be able to make the nine month long journey to the orbit of Mars. There the technology developed to tame the Earth's North; greenhouses and biospheres, would be tested as a means of beginning to terraform the red planet. There were always those thinkers who felt that mankind needed to extend their presence to other worlds to assure survival. Though Zimmerman felt the survival of mankind was in the hands of Someone much higher, he welcomed the investment of such people in the space program.

Indeed; Rupert saw it more as the same need he had first identified in his seven month old granddaughter... the need to go further. The need to move forward! He noticed that the girl was fussy as an infant, but as she learned to push herself up, to roll, and eventually scoot along the floor, she became quite content in her quest for adventure! Humankind seemed created with an almost insatiable need to reach out and that was reason enough for Rupert Zimmerman.

Chapter 1: The Challenge of Moon and Mars

The first man in space, **Yuri Gagarin**, was reported to have said: “*I went up into space, but I didn’t encounter God.*” That story was often repeated by the Atheistic Soviet Regime that sent him there and by the Western powers as they refuted the claims of the Soviet regime. His friend, General **Valentin Petrov**, a professor at the Russian Air Force Academy had a different story. He said of his personal friend the Cosmonaut: “*He always confessed God whenever he was provoked, no matter where he was.*” Gagarin was a baptized member of the Orthodox Church. Petrov remembered Gagarin saying something quite different in fact: “*An astronaut cannot be suspended in space and not have God in his mind and his heart.*” It was actually **Nikita Khrushchev** who had mockingly said: “*Why don’t you step on the brakes in front of God?*” In the Cold War days the U.S. President, John F. Kennedy, deftly created the civilian space agency, **NASA**. The struggle to control the high ground of space became recast as a race to the moon and it captured the imaginations of millions. When Gagarin orbited the Earth, the Atheist Empire was dominating. The Russians were depending on immense boosters to go beyond low Earth orbit and when they created the larger multi-engined rocket they needed they couldn’t make it work dependably. **Jim Lovell** commanded Apollo 8 on a mission to orbit the moon on Christmas Eve in 1968. He read from the Biblical story of Creation. “*And God saw that it was good!*” The Russians had been lapped.

Apollo 11 landed on the moon and **Neil Armstrong** and **Buzz Aldrin** were the first men to set foot on another body in space!, fulfilling **Jules Verne’s** vision in “*From the Earth to the Moon.*” They actually celebrated the Lord’s Supper there in the lunar lander before they set foot on the lunar surface! It was an amazing

time to be alive. Technological advances created as part of the space program enriched and saved lives as space technology found its way into other areas such as medicine. But the moon itself held no great riches. Men had come, but after Apollo 17 they never returned.

Futurists often wrote about colonizing the moon or Mars as a way to ensure mankind survived. *NASA*, having inspired millions and having brought together incredible talents in the sciences, became another federal bureaucracy and even gave up the capacity to launch men into space. They had to buy rides to the International Space Station from their old competitors, the Russians! After the new world of the North opened up in the wake of the Bering Strait Bridge, mankind again looked to the stars. As money and goods flowed through the new world that had been opened up, there Billionaire **George Apollonius** was alarmed. His plans for one-world government had been thwarted by the free men and women of the North Country and in his alarm he began to lobby for the nations of the world to terraform Mars, that is make it fit for human habitation. He would have his one-world government... even if it meant building a new world!

But he lacked much of the funding necessary to do it and the engineering ability as well. *NASA* was but a shell of its former glory and the great advances were being made by Alaska Republic and Israel's joint space launch complex at Cape Lisbon. Here Apollonius would seek an unholy alliance that would build a ship to take him to Mars. The Zimmerman Organization, for its part, was responding to a concern raised by the leadership of the Alaska Autonomous Republic. They wanted a platform for an enhanced version of Israel's Iron Dome to protect themselves from rogue nations lobbing nuclear warheads. Space Station/Assembly Center 005 was the platform from which incoming missiles could be detected and destroyed. Its components were initially ferried into orbit by U.S. and Russian Boosters, but of late, the supplying of the station was being accomplished by shuttles launched from Cape Lisbon's newly completed linear accelerator.

Apollonius and Zimmerman had an odd connection, through which began their odd partnership... both were members of London's Reform Club. Both men traveled quite a bit and were drawn to the club by its association with **Jules Verne's** fictional **Phileas Fogg**, who enters into his famous wager there over a game of whist! Both had been recommended for membership by associates who were in the club and both enjoyed the congenial atmosphere and the fine cuisine.

How goes your work at Cape Lisbon?" Apollonius asked **Rupert Zimmerman** at dinner one night.

We've just begun linear induction launches of small shuttles to our space station." the old man replied. "Research teams will then ascend to Space Station/Assembly Center 005. We plan to send an unmanned probe to Mars straightway. It will be far more sophisticated than Curiosity."

Men?, will you then send human explorers?"

No, cost is way out of line with the benefits."

I needn't remind you, Mr. Zimmerman, that your precious free world will one day conspire to blow itself up! Where will mankind go when that happens?"

Oh, Mr. Apollonius, I don't presume so as to think that man can

thwart the designs of a loving God toward His Creation!”

Come now!, you are a world leader, even as you avoid title and publicity. You know damn well that God is just a fable for the weak. All that you see is all that there is. What would it take to convince you to team up with me to build a manned mission to Mars?”

Iwould have to see some benefit that made it worth the risk of human life.”

The survival of mankind is not worth the risk!” Exclaimed Apollonius.

But would you acknowledge, dear Apollonius, that there is more to this universe than you or I can see?” Here Zimmerman secretly wished his friend Jonathan Greene present, but the old man was here quite without his mentor in things unseen. It was Greene who had helped open Zimmerman’s eyes to the Truth he now sought to defend. But Greene was on the other side of the Globe, so to speak. He was in the biosphere town on Big Diomedes in the Bering Strait. He was making animal pancakes for his daughter’s breakfast as it was the morning of a school day.

If they are unseen, they can be detected in other ways.” Apollonius responded.

Very well then, if you are an honest inquirer, I challenge you! And

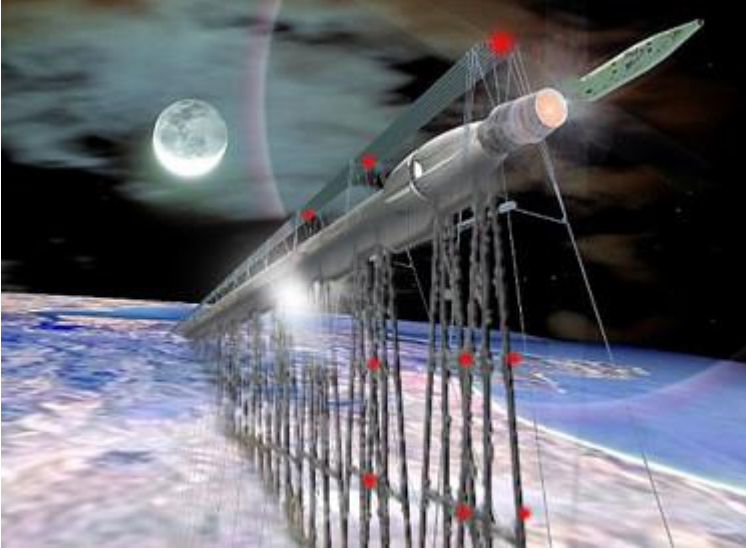
I invite you to come to Cape Lisbon and see for Yourself!”

The sun had set in London, but it was rising on Big Diomedea on a brand new day. To Zimmerman’s surprise, George Apollonius accepted the offer to travel halfway around the world. “...*on one condition. If I can convince you that the journey is worth the risk, you will help me organize a manned mission to Mars!*”

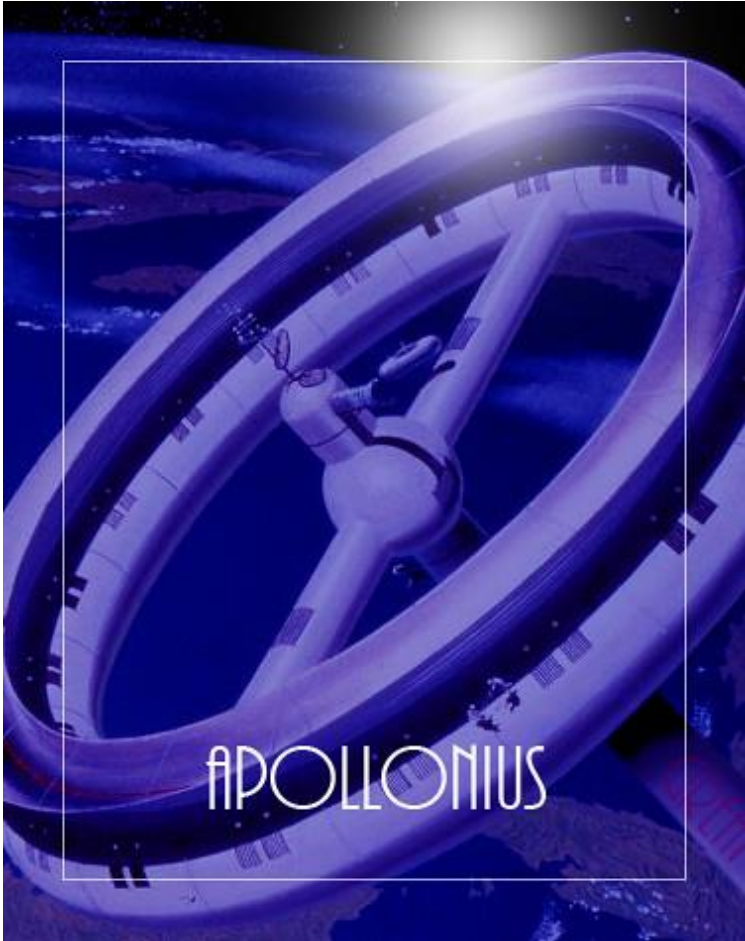
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This composite image of Earth and its moon, as seen from Mars, combines the best Earth image with the best moon image from four sets of images acquired on Nov. 20, 2016, by the High Resolution Imaging Science Experiment (HiRISE) camera on NASA's Mars Reconnaissance Orbiter. NASA Photo



The Linear Induction Launch System at Cape Lisbon. [1.]



Chapter 2: The Great Northern

The Starship *Great Northern* rode in Geosynchronous Earth Orbit at Space Station/Assembly Center 005 of the Alaska Autonomous Republic. Indeed the crafty Apollonius had spun a tale of potential benefits to mankind. Also, he had invoked an odd chapter in England's history where convicts and other undesirables were sent to colonize the remote island sub-continent of Australia and there they established a great nation. From 1788 to 1868, about 160,000

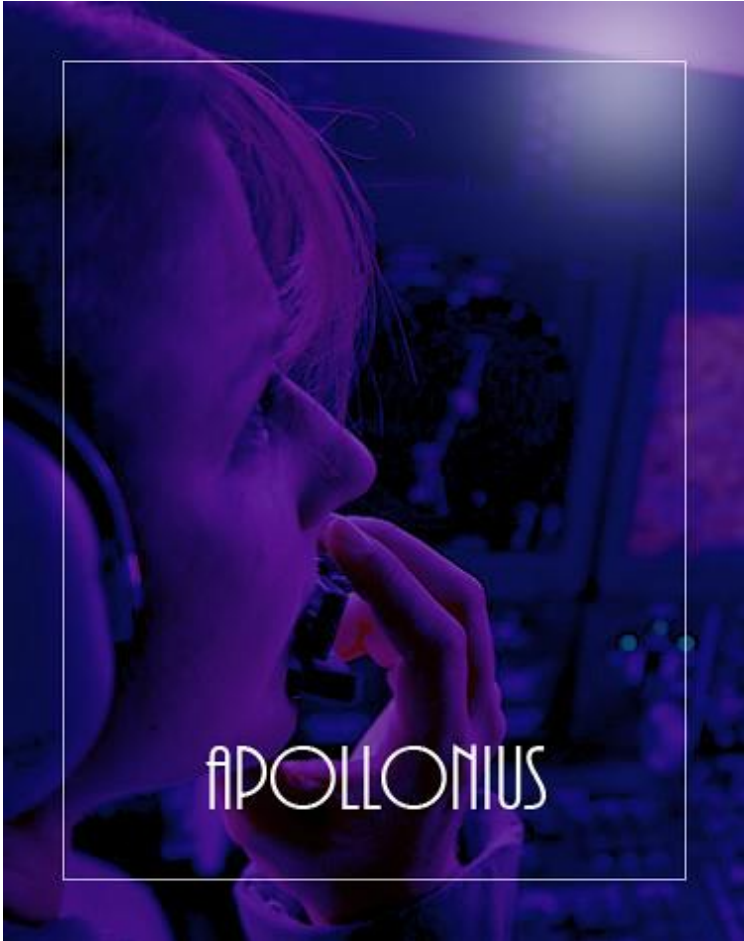
convicts were sent to penal colonies there. It was the unforeseen second chance that gave many Australians a hope and a future. Zimmerman, for his part was always willing to listen to any alternative to incarceration. His own incarceration in a U.S. Federal Prison weighed heavy upon him... that and the notion that Theodor Herzl had put forth that there could indeed be a society without prisons! Apollonius had opened his checkbook and the project had been accomplished in record time to build an interplanetary star ship. Cape Lisbon International Spaceport, for its part, provided new and unheard of economy and reliability putting men and materials in orbit. And so the ship, capable of carrying fifty souls on the nine month journey to mars orbited 'at anchor' at SSAC005. The ship was being stocked with 3D printers and plans for much of the space colony's needed machinery, which would be created on the planet's surface. The unmanned probe had already been sent and would confirm the resources were there to construct what the colonists required. The plan was to expand from the initial living pods out into a full-scale biosphere, much resembling the one on Big Diomedede, to protect the colonists from the effects of Mars's thin atmosphere which was mainly CO₂. In the Zimmerman Organization offices in Wales, greenhouse designs originally created for the tundra were being reconfigured for use on Mars. The parts were also being redesigned for 'printing' in factories on the planet itself. Botanists were collecting and cultivating plants that would refresh the atmosphere even as they provided food for the settlers. *"Eventually we'll need to establish a colony of 40,000 people in order to allow for a healthy and diverse stock."* Apollonius had said. Still, the initial mission was defined by the limitations of budget and practicality.

The *Great Northern* had a forward section with a rotating centrifugal ring to create the sensation of gravity for the passengers and crew. It was compact but comfortable. Portholes in the compartments offset the claustrophobic compactness. The ship had been assembled from components destined for platform SS/AC006,

the next orbital station to be built, and fitted with a fusion engine to become a large space-going vessel. The fusion engine was at the end of a long tube to the rear of the configuration and the bridge sat directly in front of the gravity ring section. At the helm was Captain Abiyah Ben Gurion, a veteran of the Israeli Air Force. A thoughtful man who spoke little, he had been at the top of his class in astronaut training and was given the opportunity to pilot the first mission to Mars. There was to be no forced assignment to this mission by Zimmerman's decree. Even the 'settlers' were to be volunteers. On this point he had won over Apollonius's insistence that the crew be chosen by George himself and ordered on the mission. The result was a tight group of hard-core military personnel as crew and an odd mix of adventure seekers and condemned men and women who did not fit into society in the potential pool of settlers. Zimmerman and Apollonius would oversee the final selection. Captain Ben Gurion was typical of the crewmen, a silent loner who kept to himself but was known for his devotion to his fellow airmen. He was not unlike those seamen of old who captained oceangoing vessels under sail. His passion was music and he earned the nickname 'Nemo' from the fact that he had a little midi keyboard in his cabin and the strains of his music often spilled out into the passageways. The crew loved it and almost never addressed him as anything but.

Nemo would be a man without a country for the duration of the two-year voyage. It would take about nine months to get there and then require about six months of orbiting the planet in a support capacity to the colony. After that, there would be the long return trip. The plan was to rotate crews each trip but Nemo secretly wished he could stay on for longer. "Not to worry," he thought to himself. "*Distinguish yourself in command and there won't be many who seek to take it from you.*"





Chapter 3: Major Cohen

Not surprisingly, the hand-picked crew was Israeli. The first mate was Major **Sarah Cohen**, who had been in service with Ben Gurion before. Ben Gurion made it clear that the Major was his first choice for the position and that without her selection, he was not interested in the command. In simulator flight practice you could see the crisp performance of the two veteran flyers as they worked together. In fact, no one would suspect the great secret they had in common... they were husband and wife! They had stood under a chuppah by the Sea

of Galilee with a few friends who were sworn to secrecy. When Abiyah's crew was finalized, you must know that the bulk of his crew were secret couples as well. Since the crew's quarters were in a sealed off area near the lift to the bridge, this would not present a problem... unless Apollonius insisted on occupying the crew's quarters as well. Fortunately he could not resist the offer of the more luxurious VIP quarters in another sector and so as far as he knew he simply had the best flying team in Israel handling his starship.

In fact, the crew were pretty much unopposed by any serious competition for their assignment. A few reckless adventurers and such vied for the positions but Ben Gurion's little group outperformed them all. They occupied the Great Northern as simulated flight situations were run through her cockpit... practicing over and over for the journey to Mars. Most of them had enjoyed remarkable careers in the IAF and this two-year mission would be a wonderful transition into civilian retirement. Sarah Cohen was young and ambitious, but she wanted a legacy most of all. Retirement might be difficult for Abiyah, if not downright impossible, but they both dreamed of children. That would have to wait until they were safely back on Earth.

Apollonius *makes me nervous.*" Sarah confided to her husband. *"He seems to have more than colonization on his mind. Trust me, I can sense it."*

We'll have him on our backs for less than a year, then we'll coast home. We've been in tighter places before. The Divine is our Hope and Protector."

You read PSALMS a lot, husband. I am glad they give you hope

and comfort, but this Apollonius... I think we all underestimate him, ESPECIALLY Rupert Zimmerman. That may just prove to be our undoing."

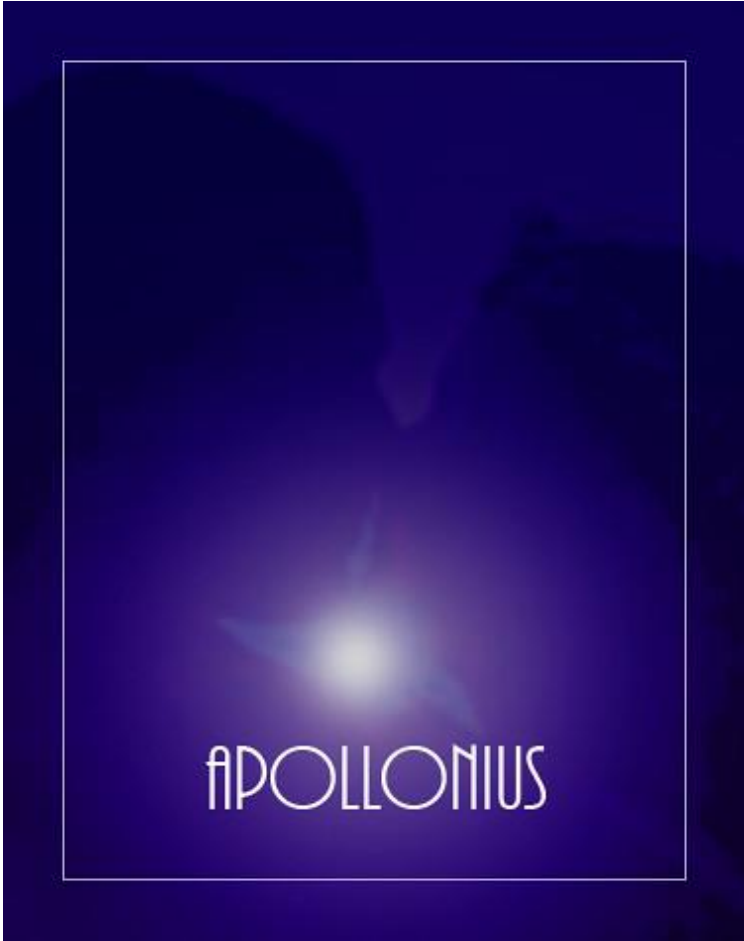
In Wales, AK, at the headquarters of the Zimmerman organization, a similar conversation was ongoing between **Elizabeth Zimmerman O'Malley** and Rupert's assistant **Hannah**.

The numbers all add up, Hannah, but I just don't see something here and I can feel that I don't see something!"

I know." Hannah replied. "Its like Rupert forgets to ask the really tough questions. Usually he's the one to ferret it out when there is something not quite right. But, as you say, the numbers make sense and the use of SS/ACOO6 virtually eliminates the unknowns as far as risk. So far as the mission itself, It's textbook except that we weren't going to do a MANNED mission and no one saw any benefit to colonization. We sell space on linear induction launches all the time. The people going out to the colony are volunteers and we've kept the process rigorous so they have plenty of time to rethink. The crew flying Great Northern is the best we have... and loyal to a fault. Apollonius himself, well, he's one smooth operator and he seems to deftly answer any questions. But there its like he's TOO scripted... TOO ready with the explanation. Do you know what I mean?"

I know. Really, it's his connection to the One World Government Movement that troubles me the most. AAR and Israel will get the credit for the mission all right, but is he pushing something else that we can't see here that will further his statist designs?"

He's out of the picture until he returns for the launch." said Elizabeth. *"In the meantime, I will work with Mr. Zimmerman to assure we have the proper oversight in place for the mission."*



Chapter 4: Apollonius Takes Charge

In the endless light of the midnight sun the supplying of Great Northern from linear induction shuttles proceeded round the clock. Soon the voyage would begin. Cohen and Ben Gurion shuttled down to meet with Zimmerman. A plan was laid out for command of the Great Northern and oversight of the colonists on board. Once shuttled to the Martian surface, the colony would be administered by the Alaska Autonomous Republic and Israel, but there would be no official presence of either nation there. Because AAR/Israel operated the only

ship capable of supplying the colony, this would be enforceable from Earth. Should the colony divert from the agreed upon mission and somehow challenge this chain of command, supply by Great Northern could be suspended. If, as Apollonius had hinted, there were great resources to be found beneath the planet's surface, the mining off them might finance additional long-distance ships and allow for annual and then twice-yearly visits and departures. George Apollonius might have detested the added oversight over the mission but he was gracious as he nodded to it. Soon the craft would be underway and he would be pretty much in charge of everything anyway. The crew would be busied by the operation of the ship and the colonists would be under his leadership as they traveled outward. Finally, Apollonius came aboard on the last Earth shuttle. He and 29 colonists made up the passenger manifest as the Zimmerman Organization had exercised no hesitation in disqualifying those it felt it needed to. That number could be shuttled down to the Martian surface in the ten Mars shuttles she carried. These craft would remain on the planet. Should an emergency force evacuation of the planet, all the colonists could take off in these craft and with emergency rationing in place, make it back to Earth orbit if need be. Future missions would add more 'lifeboat' craft to the colony.

George Apollonius took up residence in the VIP suite, the only quarters that came close to being spacious on the craft. The other 29 colonists were still crowded, though there were empty bunks. The chief surgeon and the engineers for the colony had slightly larger quarters but the cramped nature of the compartments brought to mind ocean voyages in sailing ships. The nine crewmen who would remain on Great Northern had slightly larger cabins than the higher ranking colonists. Due to the staggering of hours on duty, each crew member occupied a single cabin but because all but one were married, the couples enjoyed the luxury of a two-room suite apiece. There were ten crew cabins and a wardroom where the crew would take their meals, watch movies, read and enjoy large-screen Skype conversation

with family and friends on Earth. Exercise could be had on some equipment there as well and all of the crew used the gravity ring as a sort of perpetual track for running. Apollonius rarely left his cabin. He was the oldest person on board but the colonists knew that he would be governor of the new settlement and pretty much deferred to his commands.

The settlers were a rather raggedy lot, some prisoners taking up the offer of land and a future in a new world, some were adventure seekers who possessed skills needed for the venture. Others seemed to be of a quiet mysterious sort. They had skills, of course, but they seemed to fit some profile set by Apollonius himself. The selection process in the end rather resembled final jury selection for a drug trial. Zimmerman and Apollonius faced off like prosecution attorney and defense attorney and took turns questioning the final pool of applicants. Elizabeth O'Malley and Hannah were always at Rupert's side. He requested that, knowing that in the combined pool of their insight he probably would have not agreed so readily to the mission in the first place. In the name of 'diversity' or in claims of potential ineptitude, team Zimmerman was able to reduce substantially the number of people suspected of being Apollonius stooges. Still, in the end there was a small group that they noted Cohen and Ben Gurion should watch closely. Twenty-nine men and women and Apollonius would initially man the Mars station. Though they could have sent fifty cramped in the initial voyage, it was remembered that the Great Lake freighters could be operated quite smoothly with a crew of thirty or less. Crewmen would perform varied functions as needed and could be trained to do other functions en route. When cabin fever rose to a head, a crew this size could blow off steam with a few fights and life would settle down again. Full-blown mutiny was unlikely.

Zimmerman and Ben Gurion did not fail to consider the possibility,

however, that Apollonius might have some reason in his mind to take over the ship. He was a smooth persuader as he had been on Earth, using his fortune to influence the leadership of the world. It was clear to everyone that this was 'his' colony on Mars. The Federalism of AAR and Israel would not quibble with that. All of the colonists were duly warned/informed of this. Apollonius's Billions were funding the venture so essentially the creepy old billionaire was 'buying' the first house on Mars. The Zimmermans doubted it would ever become a colony of 40,000 souls, however, and Cohen and Ben Gurion would still have the honor of first setting foot on the Martian surface. They would lay no claim, rather the colony would be like the bases of exploration in Antarctica... operated by their respective countries but on soil that was considered open to all mankind. Research would be done, resources would be sought. It was like the beginning of a new Century of exploration but the reality was that Sixteenth Century explorers had found ready access to the new world's treasure. Mars would not likely offer such opportunities. Cohen and Ben Gurion, once they had established that it was safe, would return to Great Northern and the colonists themselves, who would train en route, would monitor their one-way descent to the 'new colony.'

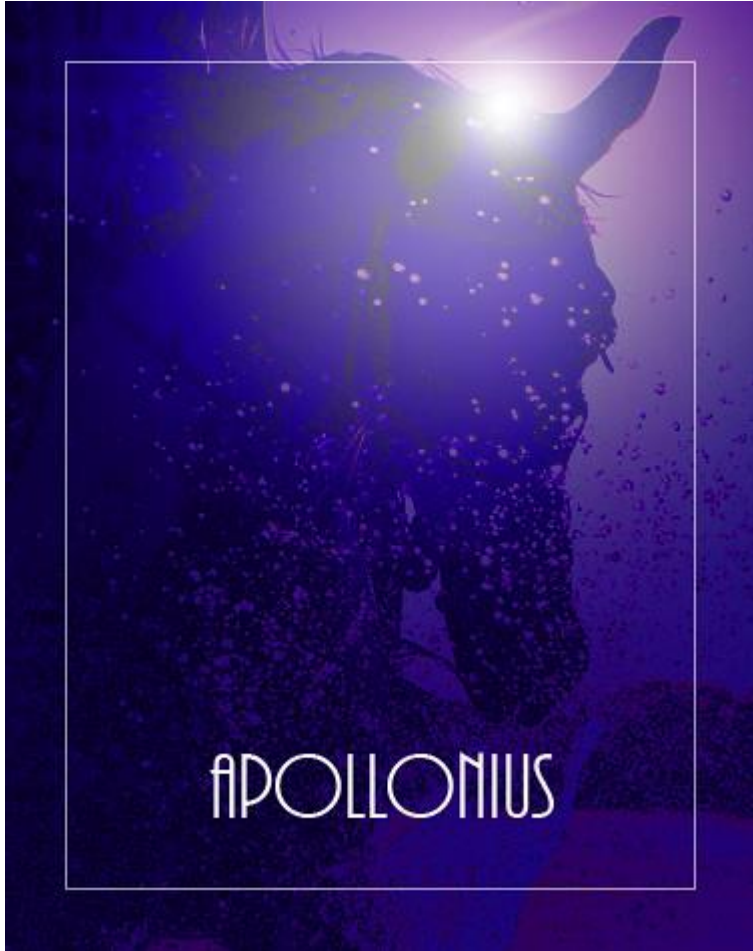
Abiyah told Sarah that she should go down the ladder first and be like Neil Armstrong in the history books. *"It's not likely you'll meet a bear or anything down there, and you'll have one whale of a story to tell the grandkids someday!"*

Y*ou are too modest, Abiyah!"* She responded, recounting many of the heroic man's past achievements and victories.

Y*es, but in the realm of great exploits,"* Ben Gurion continued, *"You need to catch up with me."*

Aright then, we'll jump down together." Sarah said dreamily. "That would be so romantic. History would say we touched a new world together, husband and wife!"

If I don't push you first!"



Chapter 5: Sarah Cohen Ben-Gurion

C*ertain springs are tapped only when we are alone. The artist knows he must be alone to create; the writer, to work out his thoughts; the musician, to compose; the saint, to pray [and] women need solitude in order to find again the true essence of themselves.” -- Anne Morrow Lindbergh*

In fact, Sarah Cohen was no stranger to the business of jumping into new worlds. As a girl she was always looking for new adventure. She crawled at six months and never stopped after that. She played for hours in the woods behind her house and most of her playmates were boys. Summertime allowed day-long adventures with them. At night, she was drawn to read Narnia, Tolkien and J. K. Rowling. She took up horseback riding and scared the wits out of her dear mother, it is said. For Sarah, the collaboration of man and beast opened up new worlds of speed and sensation. Once she'd learned to gallop a horse, she only stopped in kindness to the animal.

Her girlhood in suburban New Jersey probably wouldn't count as being all that extraordinary. It was those quiet lazy afternoons in the Summer woods that fueled her imagination. Camping out in the Pine Barrens with her family and in the wild mountains of Western North Carolina, she was first drawn to the stars. One exceptionally clear night she lay in the open on a mountain roan as the rest of her family slept soundly and looked up at the Milky Way. *"How many stars are out there?"* She mused. *"What wonders lie out there that I cannot see?"*

Then came the day she announced to her surprised family that she was going to Israel. She was going to serve in the IDF! Well, somehow along the way she took a test for pilot skills, aced it, and the rest is history. No doubts her confidence as an aviator was first forged on the back of a strong horse! She flew F-17's and that is how she came under the command of her husband when she joined his squadron.

The *Alaska Space Program* opened up the possibility of a childhood fantasy coming true for both her and her husband, as they both

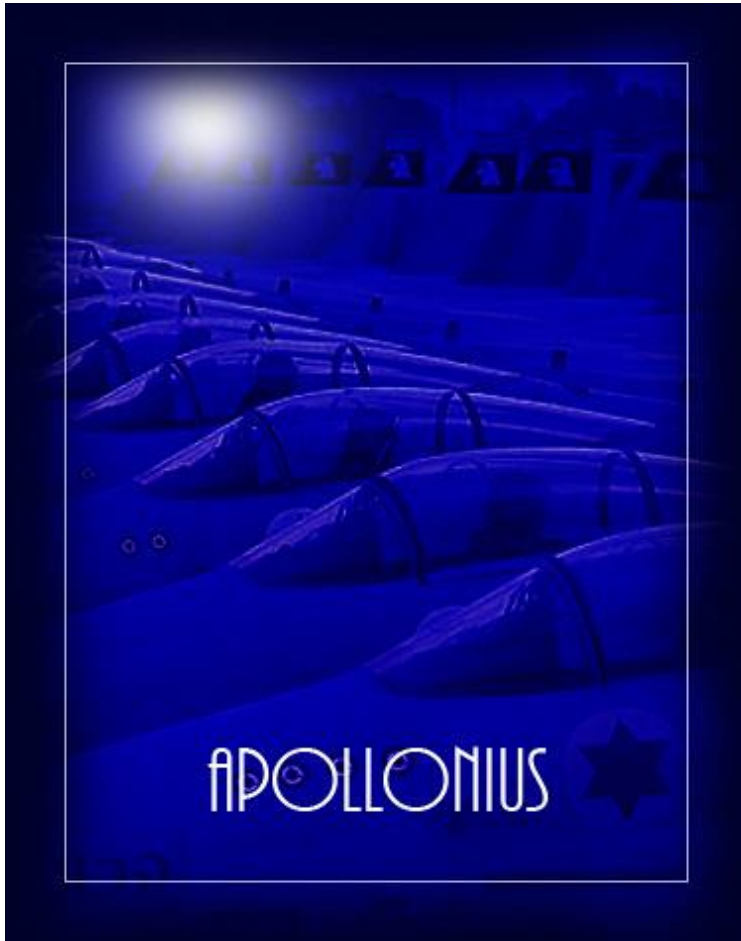
admired the American astronauts of the nineteen-sixties and the seventies who had taken man to the moon. Sarah also admired **Anne Morrow Lindbergh**, who, together with her husband, had pioneered the establishment of air service around the world. Anne and Charles had in fact flown together in a relationship very similar to hers and Abiyah's. Anne married Charles in 1929 and got her glider pilot's license a year later. She served as Lindbergh's navigator, radio operator and copilot as the famous aviator worked to lay out the routes for modern air travel. Their travels together took them to Europe, Asia and the Caribbean.

Atrue Renaissance person, Anne Lindbergh became a writer as well.

Inspired by Anne's stories, Sarah kept a detailed diary of life aboard the Great Northern and in her spare moments took thousands of photographs as she planned to create a permanent record of their own historic adventure. She shuddered at the thought of the terrible kidnapping of Anne's first child and wondered how she and Abiyah might drop out of the public eye and find some anonymity when they had their own children. Sarah Cohen was a dreamer, a visionary, and she was driven on in her present task by the knowledge that most of all one must give their children dreams and vision.



Charles and Anne Morrow Lindbergh traveled the world in airplanes such as this as they charted the routes for intercontinental air service. She acted as his copilot, radio operator and navigator.



Chapter 6: The Mad Monk Squadron

Abiyah Ben Gurion seemed most at home in the cockpit of an F17, at least that is how it seemed to **Sarah Cohen** as she first tried to understand the man who commanded her squadron. He said little. He gave few clues. Most of the men and women in his command knew that he had studied engineering at MIT, but returned home to Israel determined to make as much difference as he could to his tiny country. As a boy, he'd had a fascination with flying and had his pilot's license as a teenager. He must have had some wild adventures, but he never

spoke of any. Outside of command, he rarely spoke unless spoken to. If you met him on the street, his short stature made you miss the fact that he was lean and muscular. He avoided showing that off too. Though there were rumors that he could drink bigger men under the table, he was only actually known to enjoy a polite drink at beer-call with his colleagues and go home early. Serving under him, as a strong pilot in her own right, Cohen began to see inside the man.

Once they were on leave in Jerusalem and as they walked in the old city, a suicide bomber/active shooter situation developed around them. After the initial blast, a sniper was attempting to inflict more casualties on the first-responders. There was a little Arab boy standing dazed in the street and before Sarah could articulate it in a sentence, Ben-Gurion had pushed her into a doorway, rushed out to grab the kid and ducking erratically, managed to return with the frightened child to the safety of the doorway. One of Ben-Gurion's fellow flyers saw where the shooter was and ended the terror with a well-placed shot from her sidearm. Abiyah was concentrating on comforting the boy and it seemed like he was oblivious to the greater events playing out around him... until he congratulated his colleague: *"Nice shot, Rachel."* *"He must have some incredible peripheral vision!"* Cohen thought to herself. The fact is they both scored exceptionally in that area at about the same level.

His only recreations seemed to be reading and nature photography.

That was something he and Sarah shared. Gradually the two pilots found themselves sharing their hobby. Abiyah loved to photograph flowers and often visited the commercial nurseries where thousands grew. His stunning macros actually became quite sought after as he marketed them under a pseudonym. He had just recently become more serious in reading and studying Torah, his mind opened to the possibility of worlds unseen. Sarah was the product of a good Liberal

home and initially listened politely as Abiyah shared his personal journey. The fact is the two were drawn to each other and it would be only a matter of time before Sarah thought feelings might be expressed. Abiyah seemed to have one great dream... he wanted to see the desert *"blossom like a rose."* Then there came an unprecedented rain and the opportunity for leave. *"Sarah,"* he said, *"I have wanted to see this. I've secured a pass for both of us. Would you come with me to see the blooms in the desert?"*

Yes, Abiyah!" Sarah spoke before thinking.

They drove to a little hotel by the Sea of Galilee and checked in.

From there it was a short drive to the desert where the recent rain had unleashed a vibrant display of wildflowers.

If the truth be known, the two had become quite good friends. They were probably already considered a *'couple'* by their colleagues but the taciturn Abiyah seemed to take their friendship for granted. *"Did he have family?"* Sarah wondered. Sarah had learned, however, that there was substance behind the silence. She trusted that as she gave herself to him in her mind.

The two set into photographing desert flowers but Abiyah seemed to have something on his mind. Pilots learn to read cues from one another and Sarah said *"Penny for your thoughts?"* absently.

Oh, Sarah, I was just thinking..." an exceptionally vivid desert rose seemed to distract him for a moment, *"...about you... and, er... us!"*

Abiyah Ben-Gurion obviously was pretty lame when it came to pick-up lines. *“What about us?”* Sarah returned.

I *don’t want to live without you.*” Abiyah blurted out. *“I was just wondering how you felt about me?”*

W*ell, most of our colleagues think we’re already pretty intimate.”*

D*o they?”* Ben-Gurion asked, not so incredulously. *“Is it that obvious in my eyes?”*

Sarah said nothing.

E*ven though I am an uncommunicative old goat, you can still see the love that I have for you Sarah?”*

I *can.”*

“...and what do you think of that, dear Sarah? I see your affection for me, but is it love of the same fervor as mine for you?”

I *love you, I love you, I love you; Abiyah Ben Gurion.”* She replied through tears. *“There, does three times make it clear?”*

Quite!" he said, as they lost themselves in embrace.

Iwant you in the worst way," Ben-Gurion continued after they had walked blissfully through the desert wonderland for some time.

Iam yours." the woman responded, kissing him passionately. "Have me!"

Imean.." the man stammered, "I want you before God! Under a chupah! ...and I do want you! Body, Soul and Spirit!" Sarah blushed. In the complex and convoluted world of modern 'romance,' such directness caught her off her guard, but in truth, she desired the same and nodded her approval.

The Chupah, and a few friends hastily gathered by the Sea of Galilee witnessed the marriage of Sarah and Abiyah. "We'll make it public when we can," Ben Gurion said, "But today we've made it forever."

Someday I want to live in a place that's called 'Shalom' and make mad love to you until we fill our house with children." Abiyah said as they slipped off to consummate their marriage.

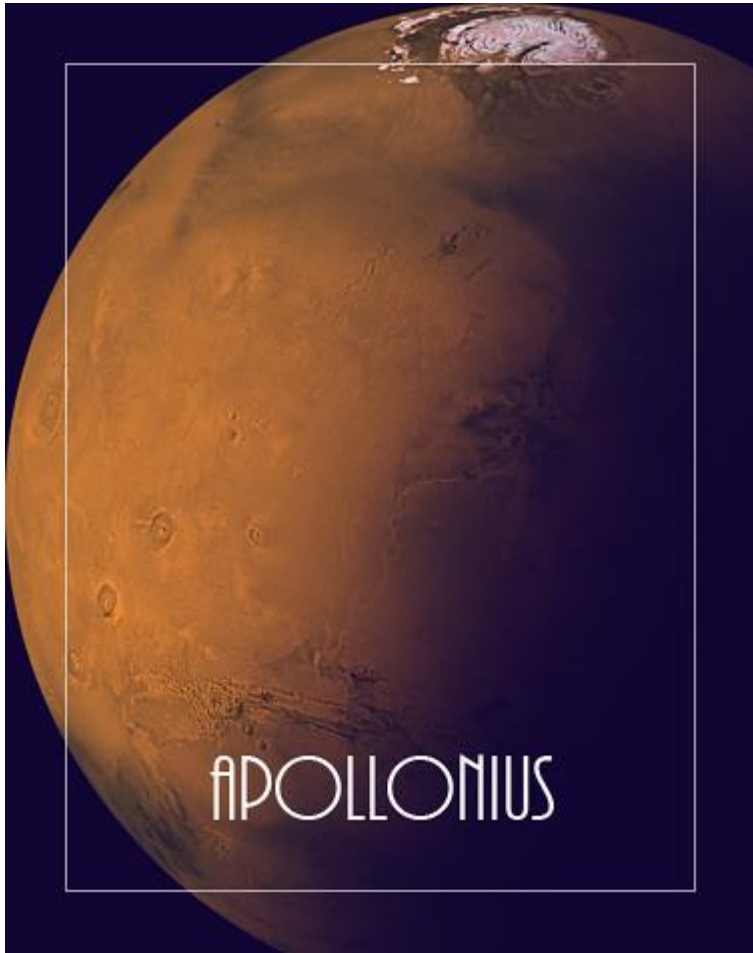
Aiyah Ben Gurion would only lay claim to one virtue, that being gratitude. In the time that followed their whirlwind marriage, Sarah

would learn that her husband began life as an orphan in London. His early years were wretched ones. His kind adoptive parents gave him a name that would command respect by its mere mention in their home country... and a name that carried with it a great hope and a future!

They indulged his passion for aviation, taught him Hebrew and encouraged his nobler dreams. The boy was filled with wonder at the new world that opened up to him when his parents immigrated to Israel and sent him to university in America. While many young people take their good fortune for granted and often treat their parents and home country with disdain, Ben Gurion never got over the wonder.

He was a wild, tough youth of course. But he ultimately channeled that wildness to give something back to everyone who had blessed him... and that is what led him to love Torah. He read the history of his new adopted country. “Was this the work simply of a great people,” he wondered, “or is my land’s miraculous history truly from the hand of the Divine?”

His gratitude found a new focus as he read the Holy Texts. Like most young people he suffered through a series of awkward attempts at romance. When young and beautiful Sarah became part of his life, his gentleness toward her sprang from the most fervent gratitude to the Lord almighty!



Chapter 7: Setting Course for Mars!

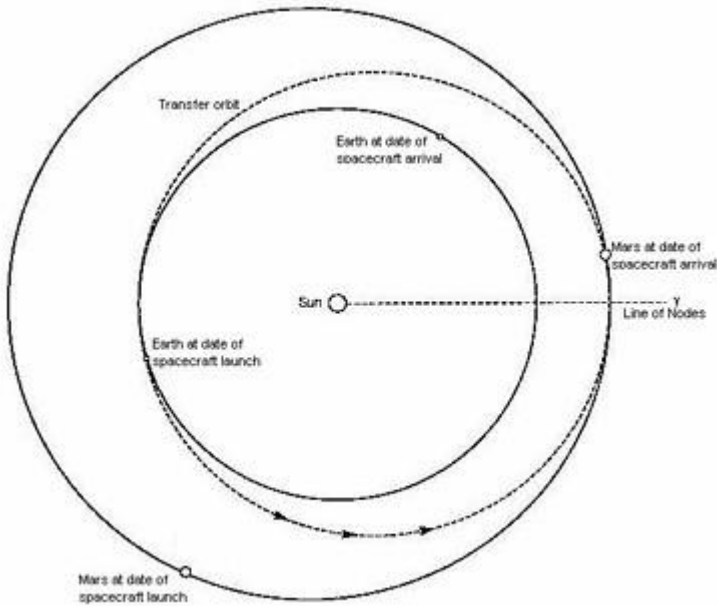
Unlike the Apollo Program, which had been built from the ground up through the Mercury and Gemini flights, The mission to Mars had been assembled in less than a year by using “off the shelf” technology. The Space station was simply attached to a long shaft that in turn was connected to the engine array. Of course, much testing was required to assure the flight worthiness of the combined systems but there were no ‘unknown’ systems being added. The closest thing

to *'unknown'* were the ten re-usable Mars landers. They had originally been created for a lunar mission but in anticipation of Mars flights, they had been *'over engineered'* as far as power accordingly. The landers were not large. They carried a crew of five to seven people, anticipating that two people would be able to operate it for a return to the mother ship. Since each craft was capable of returning by free trajectory to Earth orbit, they were going to remain on the Martian surface as *'lifeboats.'* There was also a missile to be delivered to the colony as a sort of *'last resort'* signal (*sort of like a distress flare*). Since help was a year away, the flight directors wondered about this, but in the end it was decided that it should be kept.

Ben Gurion and his crew ran through the required test procedures for Great Northern and the landers. It was decided that he and Sarah would take the first lander down and so *'fine tune'* the approach sequence. They would indeed set foot on the planet and deliver the first round of more delicate supplies. Less critical components would have already been parachuted down in one-way craft to a *'drop zone'* outside the camp. This would allow the rapid deployment of a lot of construction supplies from the orbiting mother ship. On the mother ship was the master navigation computer, dubbed *'Katherine'* in honor of NASA's **Katherine Goebbels Johnson**, a very human *'computer'* who in the 1960's had calculated the paths of Apollo missions. One must remember that you can't simply jump into a space ship and steer for the coordinates of your destination and then travel straight until you reach it. Everything in space is moving in elliptical orbits and to move from one place to another involves taking that into consideration. You must calculate an elliptical path between two objects moving in elliptical paths. You need to be aiming for the place your objective will be when you arrive.

That is why so many space dramas are simply unbelievable. You

can't pilot a spaceship looking out the window, so to speak. In the end it was decided that after the initial visit and return by Ben-Gurion and Cohen, the colonists would be ferried down in the landing craft under control from Great Northern and 'Katherine.' All ten would remain as escape vehicles should evacuation of the colony become necessary. They would fire the distress rocket, then begin the complete evacuation of the settlement. A medical emergency might be handled by the return of a single craft and it was probable that an Earth craft could depart with needed resources to join them in free return trajectory. The procedures and redundancy were all taken from work done in the preceding Century. **Werner Von Braun** had written a novel: *Project Mars*' in 1952 which pretty much detailed the physics that would carry Ben-Gurion's mission to the planet. **Edgar Rice Burroughs** had written *A Princess on Mars* and somewhat predicted the 'atmosphere factory' that would make it possible for men to live on Mars.



Contrary to the 'point and shoot' idea, an actual trip to mars looks very round a bout as the figure above shows for a typical 'minimum

cost' trajectory. This, by the way, is called a Hoeman Transfer Orbit, and is the main stay of interplanetary space travel. It depends on the details of the orbit you take between the Earth and Mars. The typical time during Mars's closest approach to the Earth every 1.6 years is about 260 days. Again, the details depend on the rocket velocity and the closeness of the planets, but 260 days is the number I hear most often give or take 10 days. Some high-speed transfer orbits could make the trip in as little as 130 days. NASA Website

Though **Arthur C. Clark** and **Kim Stanley Robinson** predicted the *terraforming* of the entire planet, it was clear that only greenhouse/biosphere habitation could be made fit for humans to live in. The solar wind continually stripped the lean Martian CO₂ atmosphere and scientists had pretty much disproved the global effect of manufacturing 'greenhouse gasses.' Planets, they had discovered, tend to balance themselves out in equations produced by a much larger equilibrium. Indeed, human pollution could create harmful inversions in Los Angeles and the Katmandu Valley, but the vastness of planet oceans and atmospheres tended to mitigate the effects on a global scale. George Apollonius had insisted that equipment be carried on the mission to test the theories that Mars could be *terraformed*, but at Cape Lisbon, scientists shook their heads knowing that even if it WAS possible it would require Centuries to accomplish.

The research they were anxious to see, on the other hand, was that of **Dr. Stanley Kline**, the flight surgeon. The observations of men and women in prolonged space environments was still very incomplete. Long-term exposure to cosmic radiation, lowered gravity and many aspects of life away from Earth were simply not well-enough known. Dr. Kline was the only unmarried member of the crew but he was a bit of a solitary melancholy fellow and seemed to thrive

on his somewhat hermit-like existence. He had excelled in medical studies and had pioneered a lot of advances, but it had come at a cost. He had started medical school with a young wife and children but sacrificed them as he was driven by an unrelenting drive to be the best of the best. Finally the man who many thought was a machine started breaking down. He took the opportunity with the space program and moved out of his high-pressure world just in time to avoid the inevitable break-down. Somehow he felt the two-year voyage would take him back to the simplicity of his days working with white mice at Bowman Gray Medical Center. Astronauts tended to be a healthy lot, and the trip should provide little in the way of drama.

Dr. Kline looked forward to logging a rather mundane report, useful for future ventures into space, to be sure, but not at all Earth-shattering. He looked forward to Skype time with his sons, who would likely take some pride in their father's accomplishment. Still, two years of their young lives would pass without human touch. Sometimes he thought about that and felt a twinge of remorse. The remainder of the crew were two more couples who were also pilots, but who had unique scientific or engineering backgrounds, deepening the crew. Finally there were the stewards, chief cook Maria Giuliano and her husband Salvador. Final supplying of the ship took place and with very little fanfare, the Great Northern's engines began pushing her out of Earth orbit toward her rendezvous with Mars. The actual departure was governed by the orbits of the planets and was timed to allow for the shortest possible trip. Still, it was about nine month's journey nonetheless. Economy was important due to the sheer magnitude of the journey and Zimmerman's setting of a pretty austere budget.

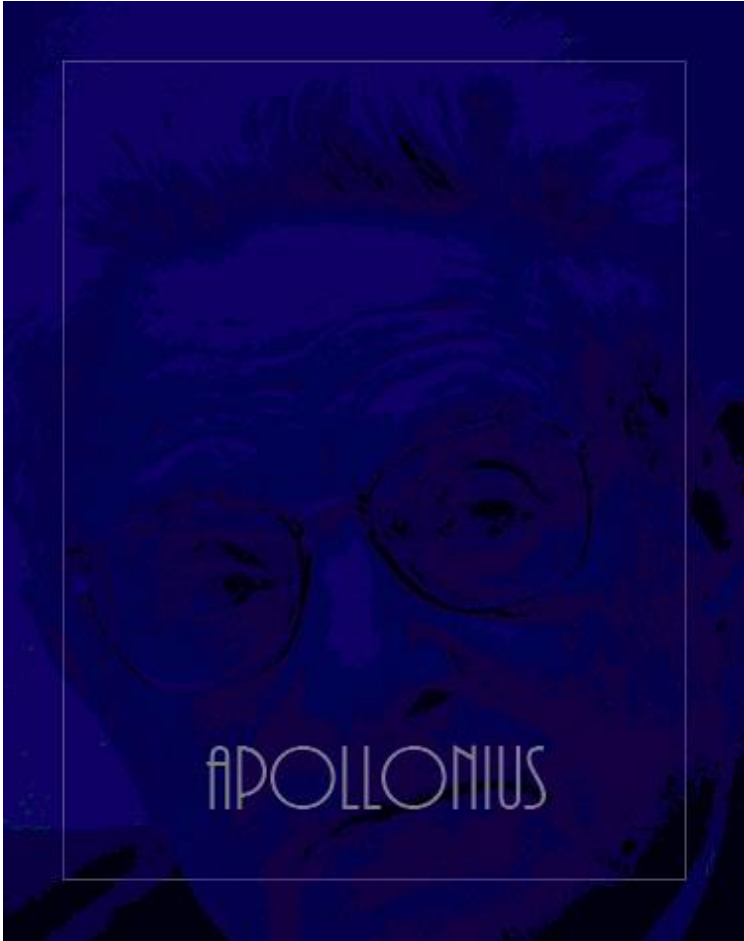
Cape Lisbon Command kept constant communication with the crew. Flight director **Joseph West** had worked with Ben-Gurion and his

wife long enough that they could pick up much information beyond their spoken words in voice inflection and hesitation or pauses. “*Cleared for Mars transit insertion,*” West blandly stated. “*Hold course 1129 as directed by ‘Katherine.’ Dorothy/Mary confirm. Inform command of all corrective burns/maneuvers en route.*”

The computer was essentially flying the ship. Human monitoring was a redundancy but in an unknown environment it was a most necessary redundancy.

Ground computers received ‘*Katherine’s*’ calculated trajectory numbers and continually verified them. Should the computer on Great Northern fail, there was a backup named ‘*Dorothy.*’ On the ground they were backed up by ‘*Mary.*’ Since it was impossible to fly the ship without continual input from the computers, this was essential redundancy. The three computers would be in constant communication except for those minutes where the spacecraft was orbiting the far side of Mars. Then ‘*Mary*’ would have to catch the position and trajectory of the starship and account for any discrepancy.





Chapter 8: The False Messiah!

Dr. Kline would not oversee the care of the ship's most prominent patient, George Apollonius, however. His personal physicians were accompanying the billionaire to the colony and would oversee the healthcare of the settlers. They were two young Russian women and had been caring for the man for some time. Kline wondered if this was a set-up for Apollonius to sire offspring on Mars, but his presumed age made the good doctor forget the thought. Surely Apollonius had wanted thousands of colonists in his original vision. That was simply

unrealistic. Even adding fifty settlers a trip, that would take centuries if no ships were added to the fleet and the colonists did not rapidly produce lots of children. This wasn't like the wild places of Earth, where you simply built your dwelling and tried to farm. Survival required a fairly complex biosphere to maintain atmospheric pressure and breathable air. The settlement that would be built would be merely a prototype.

No one knew how old George Apollonius really was. There were rumors that he had been kept alive *'past his time'* by drugs and secret technology. A photograph of World War II Nazi S. S. officer **Oskar Groening** once circulated, misidentified as **George Apollonius**. That had been pretty solidly debunked... Apollonius wasn't even born then! He had, in fact, accompanied an uncle in his native country of Hungary as he confiscated private property from people considered *'enemies of the state.'* He said of that time: *"I could be on the other side or I could be the one from whom the thing is being taken away. But there was no sense that I shouldn't be there, because ... If I wasn't doing it, somebody else would – would – would be taking it away anyhow. And it was the – whether I was there or not, I was only a spectator, the property was being taken away. So the – I had no role in taking away that property. So I had no sense of guilt."*

Apollonius had made the bulk of his fortune by manipulating currencies. During one Asian financial crisis, Malaysian Prime Minister Mahathir bin Mohamad accused him of bringing down the nation's currency through his trading activities, and in Thailand he was called an "economic war criminal." Known as "The Man who Broke the Bank of England," Apollonius initiated a British financial crisis by dumping 10 billion sterling, forcing the devaluation of the currency and gaining a billion-dollar profit. These fortunes were used

to turn the course of elections in the United States and elsewhere. Much of it was given to media organizations that perpetuated his ideas. He was a globalist and sought to diminish nations such as the United States and Britain through a variety of channels.

He once said: *“I admit that I have always harbored an exaggerated view of my self-importance—to put it bluntly, I fancied myself as some kind of god... or I carried some rather potent messianic fantasies with me from childhood, which I felt I had to control, otherwise I might end up in the loony bin.”* He was, to be sure a megalomaniac, and a very dangerous one! He insisted it was in everyone’s best interest for powers such as the United States to become subservient to international bodies. He sought more power for groups such as the World Bank and International Monetary Fund, even while saying the U.S. role in the IMF should be “*downsized.*” Of course, he would find an ever greater role for himself. In 1998, he wrote: *“Insofar as there are collective interests that transcend state boundaries, the sovereignty of states must be subordinated to international law and international institutions.”*

The establishment of the Alaska Republic accompanied by a renewed vitality of Russia put a wrinkle in his plans. Private property and individual initiative figured too heavily in the fabric of the new Alaska and the North. They, not the globalists, poised themselves as leaders in a new and wonderful economic revolution.

In the end, it was the cook/stewards who be in a position to learn the most about the reclusive billionaire as they were required to serve his meals in his quarters every day. Ben Gurion, Kline and the rest of the crew could only wonder.



Volume XIX, Issue XII

Apollonius

By Bob Kirchman

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Chapter 9: The First Three People on Mars

In the long shaft connecting Great Northern's gravity ring to the engine complex, hundreds of supply pods were stored, ready to be dropped to the plane's surface. The parts for greenhouses, an initial biosphere and solar panels along with pipe and machinery could be dropped in a fairly low-tech manner, and as the ship slowed into Martian orbit the process of site selection began. "Flat site, easy path to polar ice for initial water line, visibility from Earth so semaphore signals or emergency rocket could be seen..." After a day in orbit several were identified. In conversation with Earth control, it was finally narrowed down to one prime site and Abiyah and Sarah entered returnable shuttle 001 and waited as *'Katherine'* cast them free. Retros fired and the craft made an arced descent towards the surface. Abiyah was praying his return engine would light. Sarah was praying she wouldn't lose her lunch. Both were filled with anticipation. The Martian surface rose to meet the descending craft. The computer called out the distance to the surface in 100' increments now... Retro fire! Slowed descent and a cloud of dust as shuttle 001 gently rested on her landing legs on the Martian surface. "*We're on the surface,*" Sarah announced through the microphone. History had been made!

Adding gloves and helmets to their pressure suits, the two astronauts wasted no time in getting to the surface. The first humans to set foot on Mars climbed down the ladder together and stood on the last rung holding hands. Abiyah counted "*One, two, three...*" and then they jumped... still holding hands to the Martian surface. The athletic Abiyah pulled up his feet at the last possible moment so that Sarah would touch first... by a second. Standing on the surface they said nothing for a few seconds, staring at a vast red world. They had been rendered quite speechless! Then in unison, the two astronauts began in Hebrew: "*O Lord, our Lord, how excellent is thy name in all the earth! who hast set thy glory above the heavens...*"

When I consider thy heavens, the work of thy fingers, the moon and the stars, which thou hast ordained; What is man, that thou art mindful of him? and the son of man, that thou visits him? For thou hast made him a little lower than the angels, and hast crowned him with glory and honor. Thou madest him to have dominion over the works of thy hands; though has put all things under his feet.”

Oh Lord our Lord, how excellent is thy name in all the earth!”

As much of the world’s secular media howled in protest, two astronauts mediated on the eighth Psalm and then set down to work.

Ready to release sensitive equipment pod.” Sarah chimed.

Housing Module A10001 deploy.” said Abiyah.

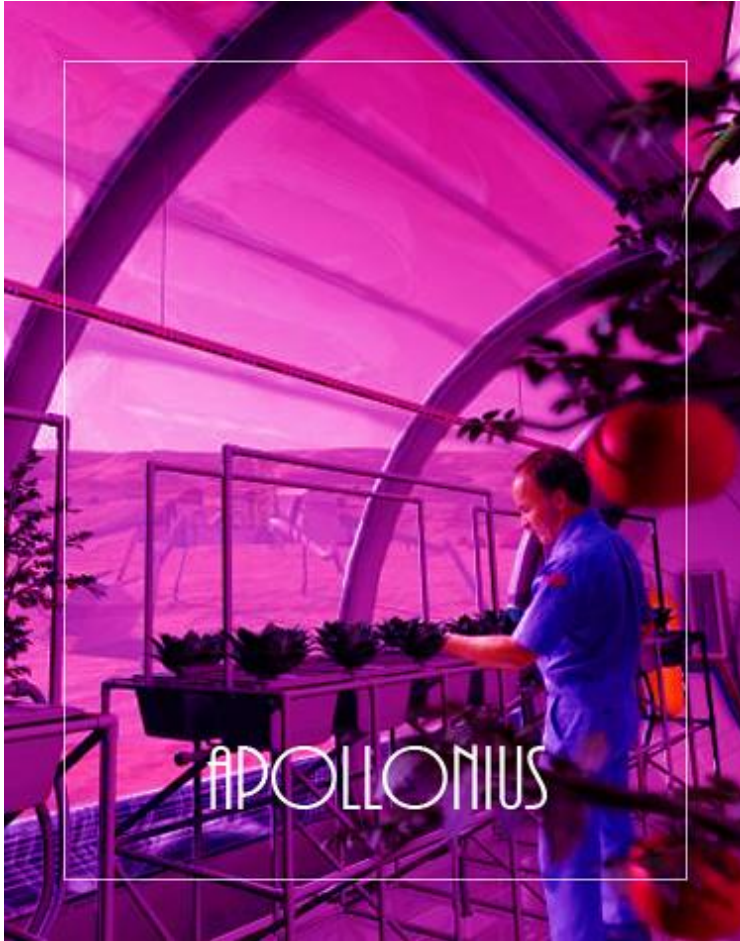
D9 Special Edition Deploy” said Sarah as a very customized bulldozer was ejected from the craft.

Life support/com module deploy.” said Abiyah.

Solar array for initial camp deploy.” said Sarah.

That day the astronauts used the 'special edition' tractor to position the first house on Mars, its life-support systems, a small folding greenhouse and a construction office/communications center. They spent the night together in the little house and were sure to lay claim to another historic 'first' as far as that was concerned. Sarah ached to tell Abiyah her suspicions but she knew that he could afford no distractions now. Reckless intimacy in the crew house on Mars was probably too much as it was, but that was part of who they already were. As for what Sarah suspected was happening inside her, the time was not right to talk about it.





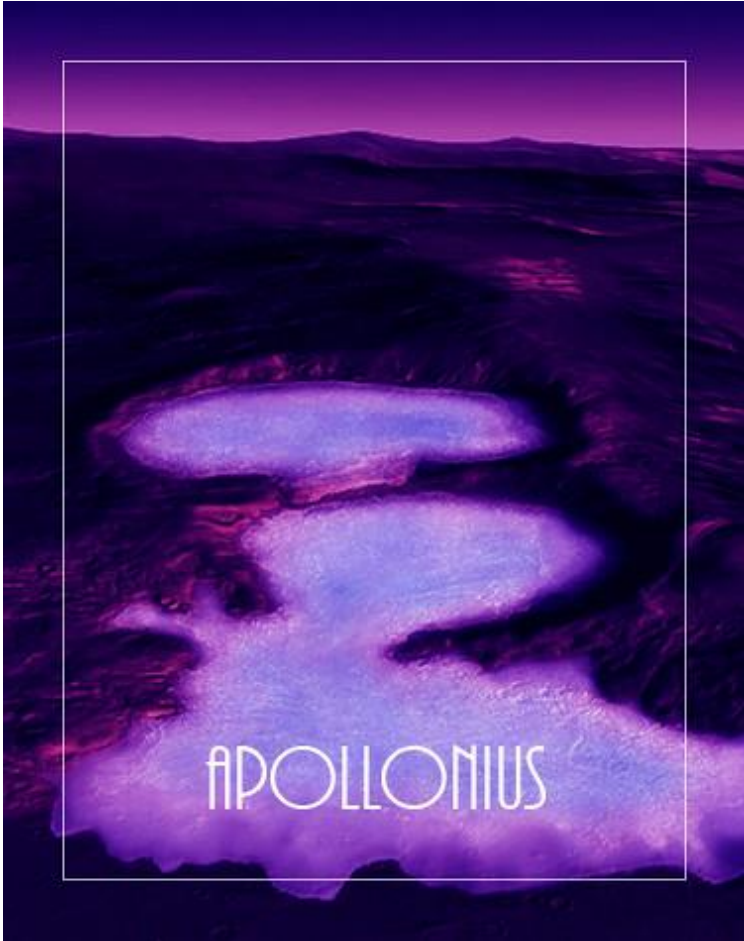
Chapter 10: Settlement on Mars

Shuttle 001 returned safely to *Great Northern* three days after it landed on the surface, having established the beginnings of the colony. The final shuttles down to the planet Mars would be piloted by settlers. The shuttles would remain on the planet as 'lifeboats' in the event that a speedy return to Earth became necessary. That would allow for emergency evacuation of the entire population if the need arose and they could safely reach Earth orbit and rescue. This required the flight crew to train the landing crew... and hours and

hours of simulation. Sarah was the sharpest pilot in the crew according to the astronaut scoring system and she was also gifted as a teacher. Sadly, the settlers were tough students, having been recruited from a part of society that did not necessarily prize high achievement in the sciences. Sarah was especially adept at recasting the lessons for them though and the training kept them too busy for mischief... or at least that is how it seemed. Sarah was not enjoying the hours in zero-gravity necessary to work with the pilots of the craft. You see, though she had never had problems with queasiness or space-sickness before, there was a new reason for her unsettled stomach... one that would have been a happy one had she been safely in a house on Earth, but here approaching an unknown ball of red rock, it was an uncertain one. More than once the seasoned astronaut had to grab the upchuck bag as she taught. It was embarrassing but it was quickly passed off as space-sickness to the unsuspecting students.

Though she had tried to learn the names of the 29 settlers when they came aboard, Cohen found it somewhat distressing that the settlers were of late referring to each other by their badge numbers. *“How odd!”* she wondered to herself. *“Going off to build a new community, new lives and a new civilization and they’re talking to each other like they’re part of some bland Twentieth Century bureaucracy!”* If she’d distrusted Apollonius before, she now grew to loath him. *“No doubt, this is HIS doing... making them into cogs in his machine. The settlement will take on the personality of Apollonius but suppress the spirit of its occupants.”* She longed to confront the billionaire on this but orders were to transport without comment. Besides, she had a new reason to be concerned stirring within her. *“Get them delivered, get home. Retire!”* She longed for the time the settlers could be deposited safely on Mars and it would be just them again... just the tight little crew of the Great Northern. Then it would be safe to tell Abiyah he was going to be a father!

With relatively few mishaps, thirty settlers in ten little craft set down in a precise circle on the Martian plane. They set to work extracting more shelters from the shuttles, more life support modules, more pieces of a colossal puzzle. Apollonius was supposed to be their leader but thankfully Ben Gurion's crew had trained the settlers well enough that they could assemble the colony quite without him. That is exactly what they did. George Apollonius had something on his mind... but it was not the colony.



Chapter 11: New Life, Old Lies

Sarah could not wait to tell Abiyah the blessed news! With the last colonists on Mars to stay, the little crew felt a rush of freedom! Though they certainly pitied the colonists in their authoritarian community, they were glad to be rid of the oppression of George Apollonius themselves. Sarah was practically giddy as she raided the galley for ice cream. Abiyah was coming off the bridge for mandatory rest and the young woman beckoned him to their quarters. *“I have something to tell you!”* She hoped he would be joyful as well... but she

held her breath as the steely captain of the Great Northern wondered at her words. “*You are a father!*” She saw the light in his eyes. They laughed and cried together. Captain Ben-Gurion was speechless! The veteran space pilot floated through the next ten hours of ‘rest period.’ He returned to the bridge with such a lightness of step that the crew accused him of slowing the gravity ring! He smiled as his closest colleagues teased unmercifully. He light-heartedly ordered them to “*Stow it!*” and resumed his emotionless stance at the ship’s controls... monitoring the sensors and controls for the least little sign of trouble. He now had one more member of his ‘crew’ to keep safe, and Abiyah took that part of his job very seriously already!

He would not have relaxed even as much as he did had he been able to know what was transpiring on the planet’s surface. Assured that no more ‘visitors’ would crash his settlement, George Apollonius quietly motioned his two most trusted launch operators into a control room.

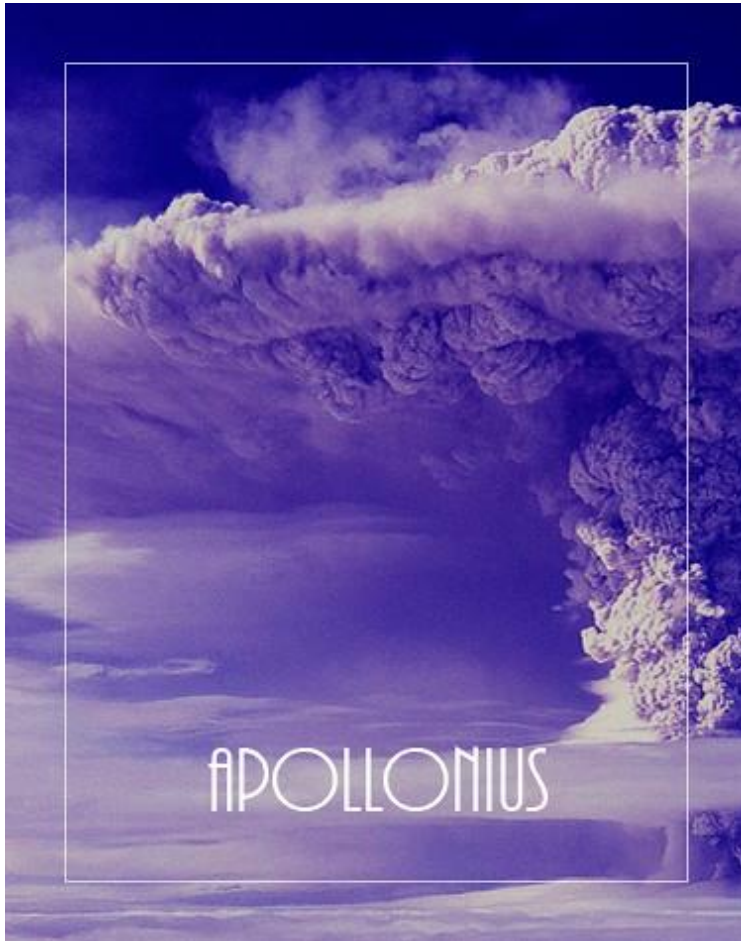
L*ast operator shift was over 30 minutes ago,”* said #211. #097 nodded agreement. “*Is the candle ready for the surprise?*” Apollonius asked.

R*eady and loaded”*

C*an I light her?”*

L*ight away!”* said George Apollonius.

Apollonius rubbed his hands together. Surely he was pleased with himself for having smuggled five Iranian nuclear devices aboard in spite of Alaska Republic's tight security. He had been able to, with the help of #097 and #211, create some confusion during the loading of the final shuttles. The scanner crews scanned five containers twice as a result while five were brought aboard unscanned. One of the devices had been installed on what was meant to be a distress signal in the event there was an emergency at the colony and they were unable to raise Earth. It really wouldn't do much good, but it would at least give them a final means of calling for help. Until there were multiple colonies, however, any help would be slow in coming. The rocket was not supposed to be able to reach Earth return trajectory, however. Whatever Apollonius and his two co-conspirators had in mind would happen close to Mars. He would show the world he had weapons... the man who had insisted that the Great Northern carry none. As most of the colonists set to work to tame the hostile planet, it was now clear that George Apollonius had bigger things in mind.



Chapter 12: Failure to Launch

A warning light and buzzer sounded ominously on the bridge of Great Northern. The warning was from sensors installed as a part of the Iron Dome defense system for SS/AC006 but though the sensors indeed detected and were tracking a launch of a missile who's trajectory would lead it to *Great Northern* and though 'Katherine,' the computer was plotting an intercept course, there was no Iron dome countermeasure in place. That was part of the agreement for space colonization. The ship was to carry no weapons. But scanners

detected a warhead on top of what was supposed to be a signal rocket for use in distress... and the sensors said it was headed right for them! *“How could that be?”* Wondered Captain Ben-Gurion, as he watched the unusual event unfolding before him. *“Evasive maneuvers!”* he crisply ordered but the big ship had such a slow response rate to controls he knew that was likely futile. Still, his instincts moved him rapidly as he sought to defend his ship. Changing orbit and velocity he winced as ‘Katherine’ confirmed that the missile was adjusting trajectory to intercept them. *“Trapped!”* He thought to himself. Apollonius had likely pulled some sleight of hand during loading and this was the result! He could destroy the ship but he still had the landing craft... each of which had a range that could bring it to Earth! *“So, what could he gain by destroying Great Northern?”* the captain wondered... *“Only the ability to bargain with Earth! He likely had more than one warhead and the landing craft could be employed to use them to threaten Earth.”*

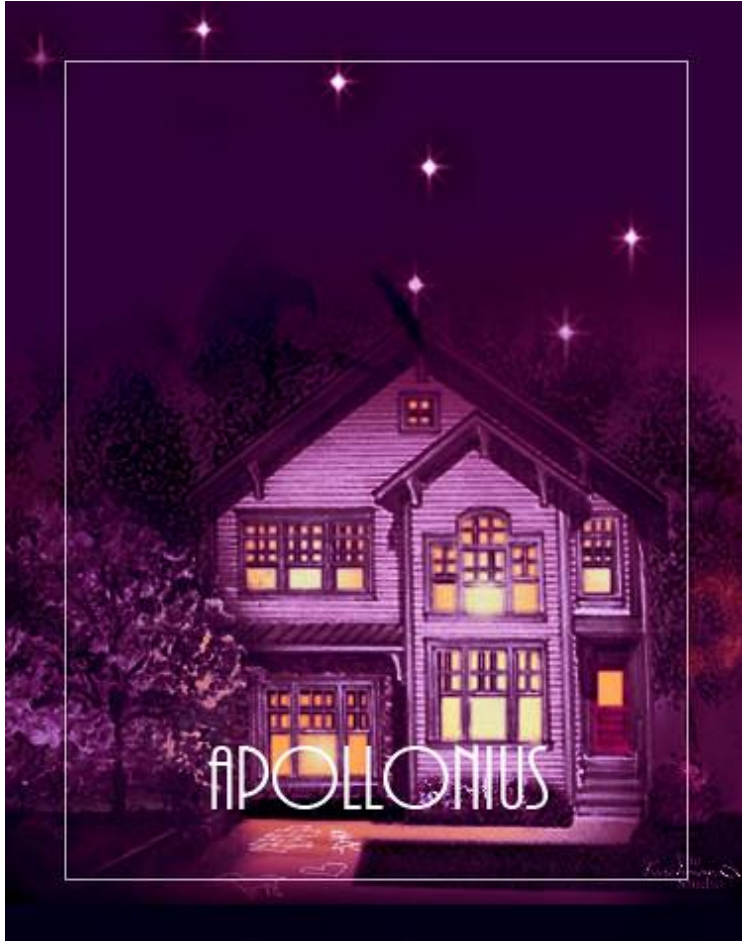
Ben-Gurion did not have time to engage in any deep emotion, however. Even as he continued to attempt evasive maneuvers, he knew he had twenty minutes at best.

The rocket was visible now, having cleared the launch area at the colony and ascended above the settlement. Then, a most remarkable thing happened. The rocket sputtered and began to succumb to gravity, spiraling back to the red planet and picking up momentum as it fell. It had only risen enough for ‘Katherine’ to track its trajectory but now it fell wildly to the Martian surface. There was a flash of light as the warhead exploded. It appeared to have dropped back almost on top of the colony having lost power and control functions all at once. A vast cloud of dust rose from the Martian surface as Ben-Gurion tried to raise a colony frequency. Nothing! The Great Northern rapidly orbited out of direct line with the colony and there was a long silence

before they came in range and Ben Gurion began calling again.

On the surface of Mars, about a half-hour before, #437 and #787 suspected something was happening as they monitored the return craft bays and launch stations. They were supposed to have left duty an hour prior to this time but the two were among the more conscientious members of the team and noticed some calibration issues that they wanted to go ahead and fix if they could. They entered the bunker that contained the trajectory computers and began noting the readings of the various monitoring devices that oversaw the general health of Mars Colony launch systems. *“Why is the distress signal being launched?”* #437 asked his colleague. #787 replied that she did not know. They stepped quickly to a screen and saw the trajectory information they were not supposed to have noticed. *“That shouldn’t be,”* said #787. *“Likely an error but it’s going to hit the Great Northern! Abort Procedures NOW!!!”* And so the two launch operations personnel found themselves inside a shielded bunker running a shutdown sequence on the ascending rocket. The rocket’s engine sputtered. *“It should drop slightly clear from the colony. I hate to lose the signal capacity but we had to take it down.”*

The rocket sputtered and fell initiating an automatic retro/return to pad sequence that #437 and #439 had neglected to override. They dismissed this, momentarily thankful that they might save the rocket. #437 and #787 felt the dull thud of touchdown, as expected, but were totally surprised by the loud explosion that followed. In the bunker they could not see the bright flash of light, but the ceiling crumbled above them, pelting the two technicians with debris. They fell to the floor among the rubble as the entire room went dark. Power was totally gone. In the darkness, Josiah called out to Allison (for those were the Christian names of #437 and #787). He heard her groan and everything went black.



Volume XIX, Issue XVI: Special Book Section

Apollonius

By Bob Kirchman

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Chapter 13: The Long Road Home

A new crater now scarred the Martian surface. The colony was gone!

In the shadow of some rock formations there remained some greenhouses and solar panels but it was clear that the missile intended for *Great Northern* had fallen and detonated so as to kill the colonists instead. Sarah wiped her eyes frequently as she manned scanning equipment. “*Had ANYONE survived?*” she wondered. But if they did, what would become of them. All of the landing craft appeared to have been destroyed along with the colony and as this was a contingency unforeseen, there was no landing craft left with the *Great Northern* capable of going to the planet’s surface and returning. If indeed anyone had survived the blast they would be marooned. It would be two years before *Great Northern* could return and if a smaller craft were readied it would probably take six months to do so. Sarah anxiously scanned the surface each time the ship orbited above. Nothing! No sign of life appeared. No radio call for help ever came. The radiation readings from the planet suggested there would be little chance of survival anyway. Finally, with great regret, Ben-Gurion gave orders to burn the main engine and insert *Great Northern* into Earth Return Trajectory. It was a lonely feeling as the craft slowly gained escape momentum. Sarah was reminded of a similar moment portrayed in the movie version of an old James Michener novel where an apocryphal Apollo 18’s lunar lander crashed into the lunar surface and the command module pilot returned to Earth alone as James Taylor’s “*Sweet Baby James*” played as background music. In reality the lunar program had ended with Apollo 17 and LEM pilot **Gene Cernan**, aware of the risky nature of this craft, uttered the last words spoken from the surface of the moon: “*Let’s get this mother out of here.*”

If the truth be known, Abiyah Ben-Gurion must have said something similar as he eased the starship out of orbit. Only his wife knows what he said though. In communication with Earth he was cool and emotionless... but his eyes flowed with the emotion his voice covered. Sarah and Abiyah could read each other’s subtle voice inflections and facial expressions. They mourned together unashamedly.

Although their communications with Earth were crisp and professional, life aboard Great Northern eased into a relaxed sort of waiting. Sarah's female colleagues surprised her with a baby shower and their inventiveness in creating infant clothing and toys from space supplies knew no boundaries. The good doctor moved out of the crew quarters so a nursery would be created. All would be found out upon return docking anyway so the sparse cabin became a study in pink and blue. Major Johnson even painted a little mural of children running and doing cartwheels under an apple tree as birds flew overhead. The good doctor started experimenting with a concoction of a sort of formula made from space foods should it become necessary. The due date approached as the ship traveled along the free return trajectory. Abiyah and Sarah actually enjoyed the suspense of not knowing the gender of their baby. Then one day Sarah, after a long and difficult labor, laid eyes on her son! The boy was a good nurser and the formula concoction was not needed. The two decisive pilots had discussed names, but now they gave themselves the luxury of time in deciding what to call him. Abiyah even jokingly assigned him a number but his wife ended that with one look. Now the crew flowed in the sequence of tasks necessary to begin braking into the same orbit they had left from. *'Katherine,'* their faithful trajectory computer whirred and spit out instructions to the retro engines. Soon the great mission to Mars would be over. Debriefing was planned to take place at Cape Lisbon and extended debriefing would occur at the town of Shalom inside the biosphere complex at Big Diomedede. This would provide the astronauts with some privacy as they tried to make the transition back to Earth life. No doubt, there would be ticker tape parades and tours to be done but that could wait. A fairly curt press release would suffice for now.

After Apollo 11 returned from the moon, the press became bored

with space exploration and did not even bother to cover the shuttle missions. They remained in this frame of mind until two shuttles were destroyed in terrible accidents and then they pretty much lobbied the shuttle program out of existence. Cape Lisbon's linear induction launcher marked the true beginning of regular and safe transfer to orbit even though its Northern location meant that the heavy unmanned payloads and parts of space stations were still delivered by large boosters from launch sites closer to the Equator. Being sequestered on Big Diomedea would give the astronauts time to think. Book contacts were already put forth and the crew would be hard at work for the next year to meet them. Sarah wondered to herself about the change. Abiyah would not take well to retirement. She was now taking on motherhood with the same energy she had poured into her work as a pilot and astronaut. What bothered her was the probability that once they stepped out of the biosphere they would be living in a fishbowl.

T*he Lindberghs could travel in the end and get away from it all for at least a while. Anne was able to raise five children. I just don't see how though.*" Sarah opined.

Ben Gurion thought for a minute: *"The only thing left for us really is to somehow find a way to quietly pass along the things we've learned. Please note my emphasis on QUIETLY, if you will dearest."*

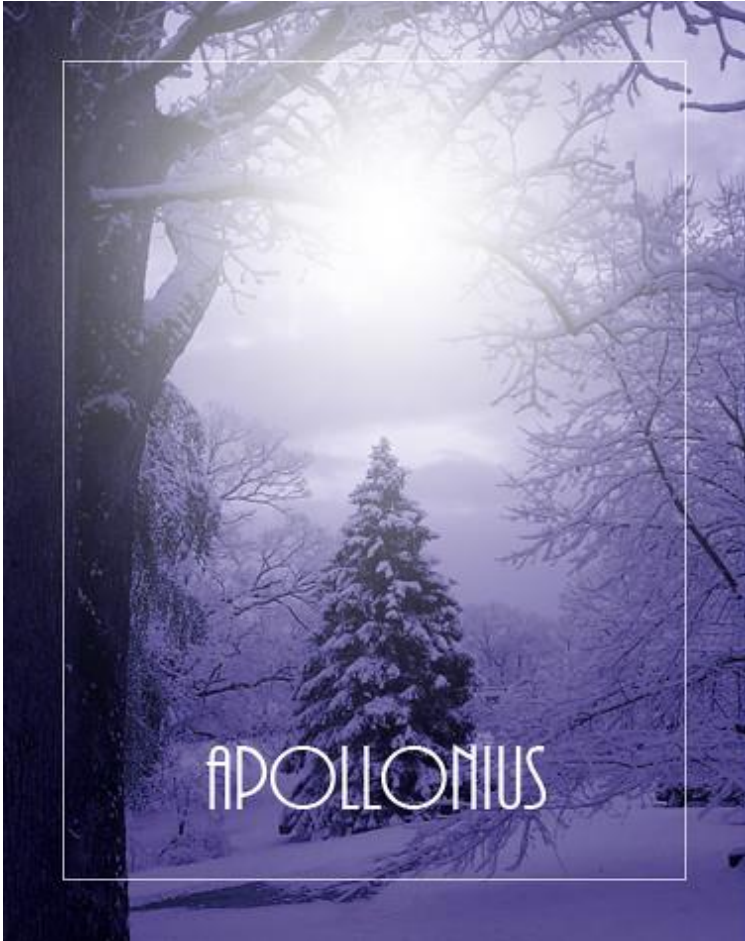
I*sure don't want to end up in some walled compound full of diplomats!"* Sarah answered. *"I do think there is a place where we might be useful, but not on public display."*

Sarah was ambivalent, however, about the possibility of assignment

to Cape Lisbon, though that was certainly isolated. She had a child now and that changed her desires as to where she would live. Childless, she would probably not have thought twice about herself and her husband joining the *'Baltimore Gun Club,'*^[1.] as the linear induction launch team called themselves. This was not a reference to their love of outdoor sports. The name came from Jules Verne's novel *'From the Earth to the Moon'*^[2.] ^[3.] and it referred to the munitions experts who built the large cannon from which Verne's fictional spacecraft was launched. The Cape Lisbon team lived in a fairly austere environment. "*No place to raise a child,*" she mused to herself.

Between the little college with the community church and parsonage and the Zimmerman family compound there were some as yet unoccupied faculty houses for the college. Here the astronauts were to finalize their debriefing and writing. Ben-Gurion and his wife were given the one closest to the college where they would have access to people and resources as they finished their work. Sarah carried her infant son into the garden to calm his crying one afternoon. She was at first startled when a lady filling her hummingbird feeder with clear nectar looked up and saw her from the adjoining yard. "*May I try holding the little fellow?*" the neighbor asked... "*Oh, please excuse the paint on my hands... I assure you it is dry and nursery-safe non-toxic. Mural painting today, if you must know*"

And so, the copilot of the Great Northern happily surveyed a little place with very down to earth beauty and simplicity and thought: "*I think I might just like it here.*"



Chapter 14: New Beginnings

The Great Northern was home. She was reassigned to her original destination as SS/AC006 and crews came aboard to install the Iron Dome system that would allow her to be a part of the defense against rogue missiles. Abiyah and some of the original crew made a few trips up to 'hand her off' but the station now was staffed on a rotation of one month on, one month off by Alaska Space Program regulars. No more would man spend prolonged time in space with its unknown

consequences. The only deference to the mission to Mars was the decision to preserve the nursery. It was a welcome touch of home... particularly for some of the women crew members who set up the SKYPE lounge there with the running children in the mural as a backdrop. There they would talk to their own children on Earth and their children felt connection as they saw the playful scene surrounding their parent. The crew now was more like those in merchant service who can count on regular extended time at home when their tours are over. Mars was really the last world nearby that was explorable by humans. The large planets such as Jupiter had dense toxic atmospheres and intensely strong gravity. The service would return to their original plan and build sophisticated probes and rovers designed to survive the harsh conditions. Abiyah and Sarah wound up their report writing and their official assignment was coming to an end. They walked one evening a few houses down in Shalom to the home of Rupert and Pat Zimmerman for dinner, little son in tow. There they engaged in an interesting dialogue with the old engineer.

Well, *I think it is safe to say that you two will go down in history as the first humans to set foot on Mars, but I am afraid we will not want to send you back.*”

Sarah stifled a chuckle: *“I should only want to make that journey once anyway.”*

Yes, *when our forefathers and mothers set sail for new worlds,*” Zimmerman continued, *“They did not find empty lifeless wastelands. They found rich lands inhabited by people who could show them the riches to be found there. Squanto was there to teach the Pilgrims how to farm, and Sacajawea was there to guide Lewis*

and Clark. Though it is disputed today, it is pretty clear that the first men and women crossed the Bering Strait upon a land bridge of some sort. They settled the land little by little and when others came they learned from the ones who went before how to survive there. Sadly, human nature being what it is, there was always conquest, land grabbing and killing... and that went on before the Europeans showed up and engaged in even more of it.”

History shows us that venturing forth into new worlds is never a sure thing. In 1587, **John White** brought more than 100 men, women and children with him in a small ship in the first attempt to found a permanent English colony in the New World. The group settled on Roanoke Island, one of a chain of barrier islands now known as the Outer Banks, off the coast of North Carolina. Later that year, White headed back to England to bring more supplies, but England’s naval war with Spain would delay his return for nearly three years. When he finally arrived on Roanoke Island, on August 18, 1590, White found the colony abandoned and looted, with no trace of the settlers. Only two clues remained: The word “Croatoan” had been carved on a post and the letters “CRO” scratched into a tree trunk. The settlers of Jamestown and Plymouth almost starved to death.”

So,” Sarah said, “There is no gradual and logical migration of humanity to the planets?”

No. And I was a fool to be taken in so quickly by George Apollonius in thinking that it would happen because we had a new space technology. Mankind needs to gain some real benefit from going out and I’m afraid Apollonius could only spin vain promises of undiscovered riches. His true motive was always to recast society in

a way that he could control it. He thought if you could create the best all-powerful centralized government it would usher in a new age for mankind. The problem is that some of the darkest societies in the past century began with the same promise. Unfortunately control of mankind appears to be a poor substitute for actual redemption.”

God rest his soul, he and his fortune perished as the rocket fell back to Mars.”

Well,” said Rupert, “He left a sizable deposit in the bank of Wales to cover unforeseen costs of maintaining the colonies. He was so afraid of issuing bonds and having to answer to stockholders. We have been able to cover our costs from the Mars mission out of that and now there is enough left over to fund a couple of teaching endowments at the school of aerospace engineering.”

But, as you say, isn't that pretty much a science that has been already pushed to its limits?”

Oh NO,” Replied Zimmerman, “I merely said that manned missions were done with, at least for the time being. Think about all of the old science fiction stories. They'd go to Mars and meet Martians and so space was like a giant world in itself. We'll not meet anyone else in those hostile worlds we've actually seen so far. No Squanto... no Sacajawea! But that does not mean an end to exploration? On the contrary, we now have the ability to expend a reasonable amount of resources and learn incredible things. Who knows, we might even find a reason for mankind to venture out there again, but it shall not be over a challenge received at a dinner at the Reform Club!”

Epilogue: Joshua Adam Cohen-Ben Gurion

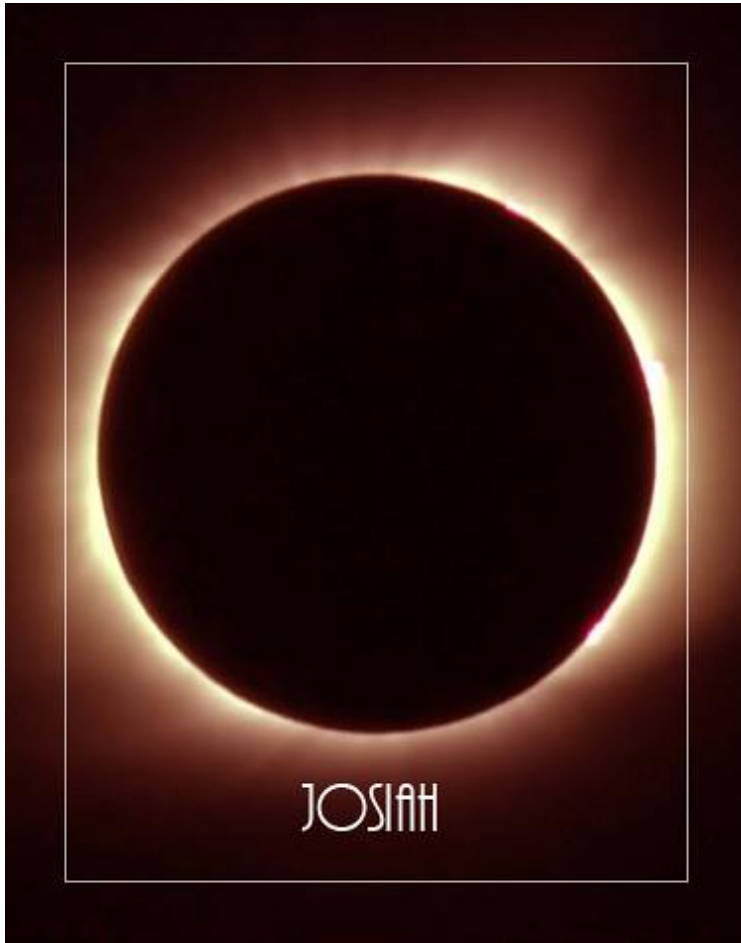
It was a bright Summer day a few years later on Big Diomedede. Sarah and Abiyah's son was playing in the attic bedroom of his favorite babysitter. The Greene's eldest daughter and he played in a closet that Mrs. Greene had painted to look like the wardrobe doorway into Narnia and little Adam was enthralled by it. The boy often stared into the painting's horizon... looking into another world it seemed. Major Cohen and her husband had settled in the biosphere upon their retirement, taking positions as professors of aerospace engineering at the college. They lived next door to the Greenses and Adam was quite happy with his new sitter! Sarah Cohen had just returned to pick up her son and she stood quietly in the doorway with Kris Greene watching the wonder.

D*o you suppose he knows he was born in a most miraculous way?" Sarah Cohen mused.*

I*would be hard pressed to answer that." said Kris, "But then, isn't EVERY child's birth a miracle... and aren't their little lives a glimpse into that unspoiled world of God's creative Glory?"*

D*o you mean by that, Kris, that there is more of a connection to the Divine in this world than we suppose?" Sarah continued, "Could it also be true that our children are more adept at showing us the doorway than we give them credit for?"*

Book II: Josiah



Chapter 1: A Mystery Appears

Y*ou wanted to see me right away?" Abiyah Ben-Gurion said as he walked into the Zimmerman offices in Wales, Alaska. Elizabeth O'Malley's assistant Hannah replied, "Yes, I did! I just received this communication from our office on Space Station/Assembly Center 005. It seems they've observed something you need to look at on Mars."*

She continued: *“As you know, we’ve done periodic flyovers of the abandoned colony ruins... sort of a chance to observe decay in the Martian environment... and, Oh, I am so sorry. I recall how painful that was for you, but please indulge me. There is a mystery here we need you to weigh in on. Let me bring up the images.”*

Hannah’s deskpad displayed two views of the colony ruins taken from orbit. The first was a photo Abiyah’s wife Sarah had taken several decades ago. The second was freshly processed from an unmanned probe that was orbiting Mars as they spoke.

See those surviving greenhouses in the shadow of that rock mass. *That was all that remained of the APOLLONIUS Colony when you returned to Earth after it had been tragically destroyed by the missile. Look at the footprint carefully. Now look at the view from our probe as it flew over yesterday. See the difference?”*

Abiyah’s keen eye caught it at once, *“The footprint is different!”* he exclaimed. *“How can that be?”*

We’re perplexed as well. *It is BIGGER! We wondered if blast sand had covered some greenhouses and now has blown off, but Sarah’s images of the colony before destruction show no greenhouses there!”*

Well, *I’m stymied,*” said Abiyah, *“we scanned repeatedly for signs of life and you know how thorough Sarah is!”*

The 3D printers we sent up then were pretty primitive by today's standards. There was not the AI to self-duplicate anything. As I recall, the greenhouses involved a fair amount of human manipulation to construct. They could manufacture the struts and clear panels from local soils heated in the kiln, but that too required a lot of human oversight."

So, obviously we have someone... or someTHING adding on to the remains of the colony!"

That's it sir, we have a riddle on our hands."

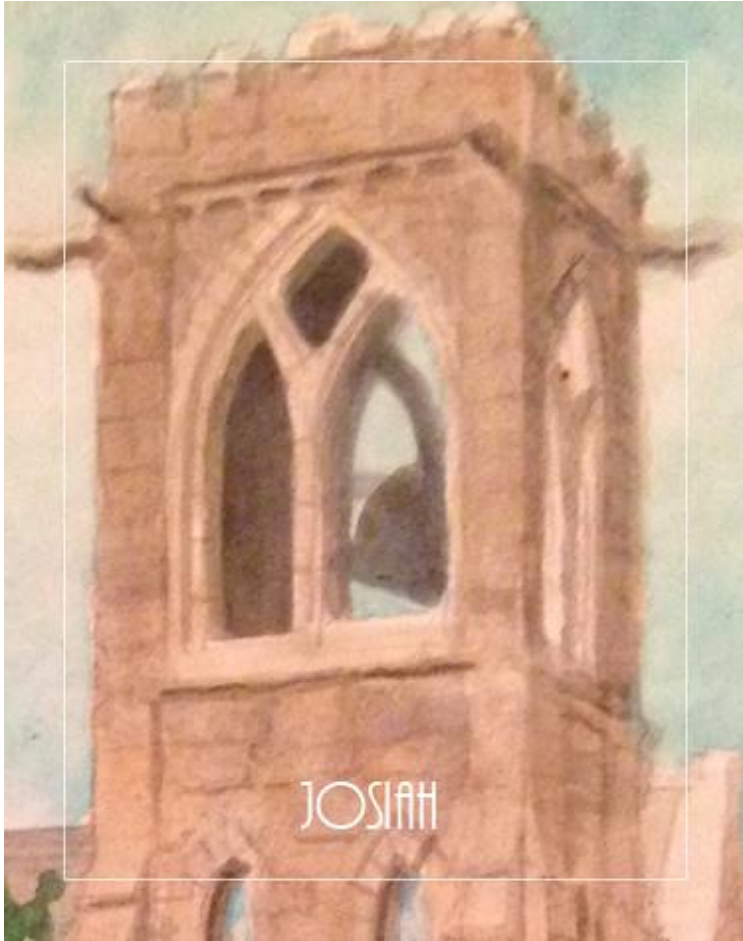
Well, Hannah, let's use Occam's Razor to begin with. Someone has been adding greenhouses to our colony... or what's left of it. Who would be the simplest to suspect. We have not tracked any ships from other nations going out to Mars. Space Aliens are always invoked in a case like this... but we've never actually seen one... EVER! I would have to say that someone survived the blast that destroyed the colony, incredible as that may sound. The reason we didn't detect them was that they remained in an underground bunker... perhaps aware of the radiation danger outside. They had no communication ability as that was totally destroyed."

He continued, "It would have had to have been one of the more technically inclined colonists, to be sure -- Someone who could keep the oxygenation going in the greenhouses and run the 3D printers. I daresay there is more than one survivor."

S*o, what do we do next?" Hannah mused.*

W*e need to make contact, if we can. Remember they launched the missile to destroy our ship in orbit. It fell back to Mars and exploded on the colony... we thought it exploded destroying everyone. We don't know if they are so poisoned by the leadership of APOLLONIUS that they believe we are tainted and they are the enlightened ones."*

Hannah looked up at the painting of Rupert Zimmerman, the mind behind the enterprises that now required their oversight and wondered what Mr. Z would have said at this moment, but it had been some time since Rupert passed after taking pneumonia following the ceremonies to commence construction on the St. Lawrence Island Crossing. Rupert had always been somewhat of an enigma to those closest to him in life, and his painted eyes gazed down at Hannah giving nothing away.



Chapter 2: Unto All Nations

On the campus on Big Diomedes, young Josiah Zimmerman, Rupert's grandson, walked with Jonathan Greene, the president of the college and Josiah's favorite professor. They were discussing Matthew 24:14: *"And this gospel of the kingdom shall be preached in all the world for a witness unto all nations; and then shall the end come."*

What constitutes a nation in the eyes of the Divine?" Josiah asked.

The dictionary says, ‘a large aggregate of people united by common descent, history, culture, or language, inhabiting a particular country or territory.’ Not too helpful in determining the mind of the Master. The rebirth of freedom in the North has come with a rebirth of fervor to reach the nations, as is evidenced by your presence at this institution. Still, I think we can identify such groups around us with some certainty and we are putting the Bible in their hands. The upcoming World’s Fair in Fairgate, Alaska will no doubt mark a point where we’ve pretty much put the Holy Scriptures in every human language there is. We correspond with believers in every part of the world. I think at this point the burden is on us to identify any particular place of occupation that has NOT been reached. That is where I think our Master’s focus would be.”

That is my frustration, sir. I feel like the work is going to be done before I get there. I read about the Moravians going out into the wilds and reaching the Cherokee and the joy of shining the Gospel where it has never shone before... and I look at the situation today. Even the Middle East is opening up to the message. With the demise of APOLLONIUS, the academy and the media have found new faith quite without our help. They started looking for truth and beauty again. Guess where it led them?”

Is it wrong, Dr. Greene, to be jealous to do a great work for God?”

That is a good one, young friend, and it deserves a thoughtful answer.” The good doctor was silent for a moment, then he continued, “Remember our discussion last week, and how for an artist like Sandro Botticelli the recognition of beauty led to

transcendent truth. When he painted 'The Birth of Venus' it is evident that his sense of desire has been guided Heavenward. So it shall be with your ambitions to do great works. Think of Ransom in the college maintenance shops. He likes to work with his hands. Building a door gives him great pleasure... but I pray one day he will see who he's building the door for! He's an old special forces guy... mind and conscience pretty much seared, but get a planer in his hands and his eyes light up. God does not despise us for our aspirations. He meets us there. But, mind you, He will lead us upward. He has no desire to leave us playing in the mud when he's planned for us a holiday at the beach! (I'm paraphrasing Lewis here)."

B*ut, why should I feel such a passion to reach the nations if they have already been reached? I mean, should I not be able to find contentment and purpose in a simple task like Brother Lawrence who served most nobly working in the kitchen? Still, if I deny the drive inside me, I feel that I am lying."*

P*assion is good, but true knowledge must define it. Remember the 2033 eclipse over Alaska. There was an author who wrote a book about the eclipse signaling the end of the world... nothing new here. The Millerites did it in the 19th Century. They were still waiting after their 'appointed' date and refigured it. Then they were still waiting after that. I think the Divine holds his cards close for a reason. We need to serve him like this will be our last day on Earth, but we need to build our works to last for 100 years. Some see contradiction there but it is clear that the tension between the two holds us in place to serve Him. I'm rambling, but I feel like the Lord will inform your passion and make it most profitable. You will indeed hear Him say 'Well done, good and faithful servant!' one day. That is enough."*



Chapter 3: Survivors!

Survivors,” Ben-Gurion repeated thoughtfully. *“How should we reach them?”*

Indeed the presence of survivors presented an obligation to those who pondered it. Simply doing nothing seemed immoral at best but what to do seemed not so cut and dried. An unmanned landing might be best as there would be the ability to send a message without risking

more lives. The initial lander could be configured to take back survivors if necessary. “*How fast could we prepare a lander mission?*” Hannah asked. Theoretically it could be ‘pulled from the shelf’ and launched within the month. It would take nine months to get to Mars. In the event it were necessary, Great Northern could be taken from its defense position and flown with additional landers to evacuate more people.

What if they don’t want to come ‘home?’” Abiyah asked. “*Should we be prepared to resupply them?*”

That is a good question.” said Hannah. “*Since our last contact was aggressive on the colonist’s part, we need to think about this.*”

Some of Cape Lisbon Space Center’s best minds were brought to bear to hash out the proper thing to do. There at Cape Lisbon’s linear induction launch canon, they called themselves the “*Baltimore Gun Club,*” since their device seemed similar to the one Jules Verne first wrote about in *From the Earth to the Moon*.

It was not a columbiad, as Verne predicted, but rather a linear induction track similar to the high speed transportation system being built to link the world via vacuum tubes. Massive use of fossil fuels was now replaced by electromagnetism. That electromagnetism was produced by tapping the geothermal energy of the earth itself. It was clean, efficient, did nothing to harm the environment and it was cheap!

Some sections of *HYPERLOOP* between large cities were already in

operation and the entire system was going to open by 2059. It was going to usher in new economy in world transportation. The launch canon used the same electromagnetic propulsion as well and it presented the most economical means of sending a craft to Mars.

In the end, a hastily prepared lander was dispatched and flown remotely to the planet's surface. A 'rover' was on board to move about and survey the colony. A message was composed to offer the surviving colonists an olive branch and a radio/video communication device was included. The 'rover' carried standard pressure suits and breathing packs. Every effort was made to offer the survivors a remotely piloted 'ride home.' The biggest problem was that they had to guess how many there might be.

The unmanned emissary was launched within the month. For nine months the controllers in Cape Lisbon and on SS/AC005 waited.

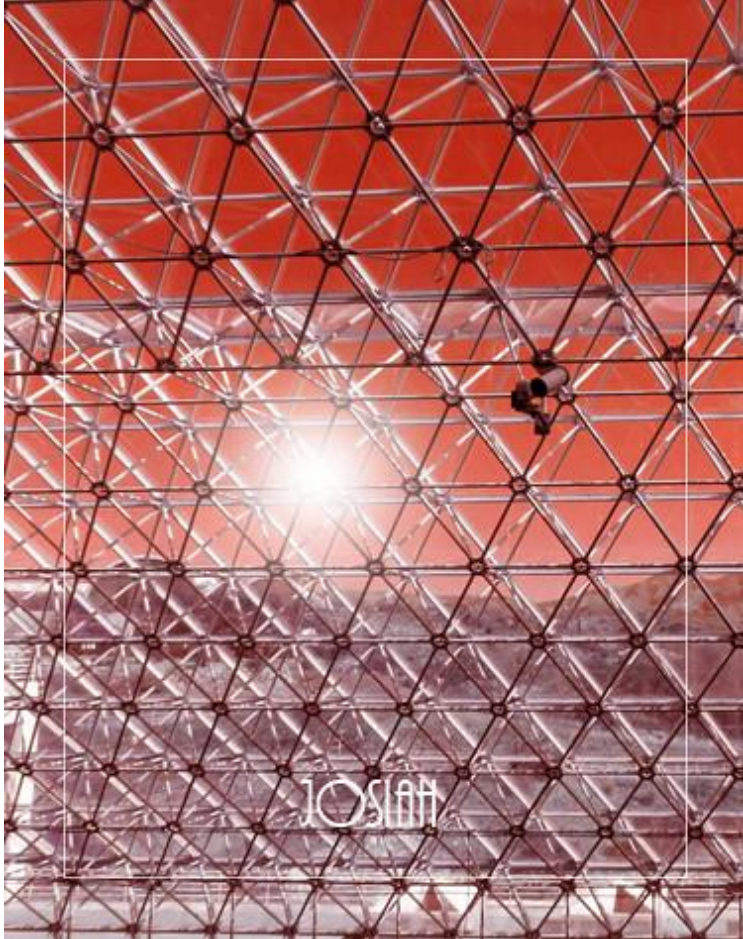
The lander fired its descent engine and arced down to the Martian surface. The engine slowed it as it touched down next to the remains of the Martian colony. The rover was deployed and began its survey of the colony. It approached a door on one of the greenhouses and showed the controllers on Earth a lot of space-booted footprints coming in and out. The rover reduced power and waited.

Discovery was not long in coming. Two figures in space suits emerged from the greenhouse door and seemed to be in quite animated hand-gesture concerning the new 'visitor.' In the end they pulled the rover into a bay with a tractor for further examination. The bay was pressurized and the two figures removed their helmets,

examining the rover further. They read the message of peace and discovered the camera/radio.

They said nothing loud enough to be heard, however and eventually one of them disappeared for a time. He returned with a third man who deliberately positioned himself in front of the camera and activated the communication device. Controllers on Earth held their breath as he began to speak.

M*y name is JOSIAH."*



Chapter 4: Mars Ain't the Kind of Place to Raise Your Kids

At Mission Control Commander West listened and watched intently.

The whole conversation was being recorded and Josiah began: *“Hello Earth! I suppose you are wondering what we are doing here?”*

West asked Josiah to tell his story.

Let us start with that moment so long ago when our distress signal missile was fired at the starship *Great Northern*. I am sure you want to know what transpired here on Mars. As you know, APOLLONIUS had his ‘inner circle’ on this mission and they had smuggled aboard a number of Iranian nuclear devices. As near as we can tell, they planned to demonstrate what they had and hold Earth hostage. As you probably know, the missile was aborted and a ‘return command’ initiated, basically the quickest way to save the starship involved bringing the missile back where it came from in a ‘hard turn’ maneuver.”

So,” West asked, “Who aborted the missile?”

I did, sir,” said Josiah. He related the story of how he and his colleague had remained after their shift and noticed unusual activity. Upon investigation they saw the launch of the missile from the blockhouse and though at the time they thought it was a malfunction, they stepped in to stop it.

They expected it to fall to Mars without much trouble. When the world was rocked by an explosion and everything went dark, Josiah and Allison knew it was something worse. They had initially signed on to the voyage because they were political/ideological prisoners and had lost everything. They thought the Mars colony would offer them a new life. Soon, however, it was clear that APOLLONIUS was creating a dark kingdom. The colonists were required to forsake their names for numbers and APOLLONIUS expected unquestioned loyalty. Josiah and Allison simply played along and kept their suspicions to themselves.

How many survivors are there then?" West asked.

Initially there were thirty-seven." Josiah said. "Four of those died from injuries and other causes in the time that followed."

The colony was destroyed. How did you all make it?" Exclaimed West.

That's the really strange part." Returned Josiah, "You see, we normally would have been in the colony proper at the time but in an odd sort of way, many hands became needed in one of the more remote greenhouses. Even stranger, those greenhouses were in an area sheltered by this interesting rock ridge you see behind me. After the radiation subsided, Allison and I made our way over to the surviving greenhouses. It was just a hunch, but we thought those greenhouses might still be functioning if the blast had been stopped by the intervening ridge. We were not at all surprised to find the greenhouses intact, but we were happily surprised to find so many of our fellow settlers still alive!"

West interrupted, "So, I have to ask you, as a matter of necessity, what is your colony's stance toward those of us on Earth?"

Personally, Allison and I have no animus toward AAR or Israel. I have to say that I cannot speak for the ones who were more loyal to APOLLONIUS. For decades we simply haven't thought about it. We determined that you were above us scanning for survivors but could

detect none. When we no longer saw the ship in the sky, we assumed you had given up and the Great Northern had returned to Earth. Our communications were totally destroyed so there was no way for us to tell you otherwise.

I *assumed command of the colony because no one knew what to do.*

We managed to create a village in the remaining greenhouses where we live today. They are pretty much simple mud houses but they serve us well. We grow our own food and have been able to hold on for some time now.”

West asked, “*So, there are thirty-three of you still on Mars?*” He did the math. It would be impossible to evacuate thirty-three souls from Mars in the single lander. He awaited Josiah’s answer.

O*h no, there are now 122 of us.”* Came back the answer from Josiah.



Chapter 5: In Fact It's Cold as Hell

In the darkness of the bunker, Allison and Josiah suspected something terrible had been attempted and thwarted. They now prepared to die. The bunker, however, had been provided with ample oxygen for more crew members than it now held and the two settled in to a routine as they waited for the radiation levels outside to subside. Then they donned pressure suits and pushed open the hatchway. Digging through the rubble they eventually emerged on the cratered surface. That night they watched the Great Northern arc across the Martian sky. *“Tomorrow we’ll try to create an’S.O.S.”* Allison said. That night was the last time they saw Great

Northern pass overhead.

Allison and Josiah looked hard at the suicide pills. There was a problem, however, as they would have to get into a pressurized space to remove their helmets and take them. Removing the helmets, they correctly surmised, would lead to a painful death if they did it in the rarified Martian atmosphere. The pathway back into the bunker was very unstable. *“Let’s see if any greenhouses have survived past the ridge.”* Josiah said as they began the long walk out. There might be a place where they could go in, remove the helmets and take the pills. Then they could sit in the gardens as their lives ebbed away.

They walked for most of a day. *“I wonder what happened to the tractor?”* Allison thought to herself as they trudged on.

Threading through a small crevasse in the ridge, they saw the tractor. A pressurized personnel trailer was attached to it and it sat parked at the airdock of the closest greenhouse. The greenhouses sheltered by the ridge had indeed survived and likely there would be others there. The helmet radios were short range by design so they would have to enter the airlock to find out. They proceeded to do so and soon stepped into a biosphere garden, lush with all forms of edible plant life.

The greenhouses were large, with pathways laid out in a grid and graveled so as not to become mud in the constant irrigation. Up ahead, Allison spotted a maintenance barn and the two colonists decided to investigate. Josiah cautiously opened the door. As his eyes adjusted to the light, he saw signs of encampment. Bedding and personal spaces seemed to have been established inside. *“Hello,”* he

stammered. “*Anybody home?*” There was only silence. He and Allison stared at the makeshift living quarters for a long time. Had the survivors actually lived on? Were they able to avoid the radiation and somehow make a way for themselves?

Josiah and Allison stepped outside into the bright Martian sunlight filtering into the biosphere and made a meal of the vegetables growing in raised beds near the barn. The graveled paths did not yield clear or fresh clues as to movement within the biosphere so the two marked the position of the barn and set out in a likely direction.



Chapter 6: And there's No One There to Raise Them

An hour or so later, Allison heard voices. Then the two stepped into an open area where the remainder of their colonists stood assembled. A heated discussion was underway about the future of the colony. Men and women who had been subjugated into numbers struggled openly with the task before them of leading the colony. The two Russian doctors had tried to take charge but that had obviously gone badly. There was already emerging a faction that blamed APOLLONIUS and anyone associated with him for the present

calamity. Another faction, equally as vociferous, blamed the AAR. The truth was that no one at the moment really trusted either. As Allison and Josiah stepped into their midst, they became silent.

In the reality of farming a new world, it was already obvious that there were those who labored harder than others. It was also obvious that there were those who felt their status allowed them to live off of the labors of others. Here, many miles from Earth, was a scene from the time the Pilgrims set foot in America. The 'Common Course and Condition' had resulted in general lack of initiative among the colonists as a group. Josiah stepped forward. Relating the story of his and Allison's survival, he then suggested a division of labor more in keeping with the flight director's world that they inhabited. Each colonist would be given a section of greenhouse as their own. They would be responsible for their own sector's productivity.

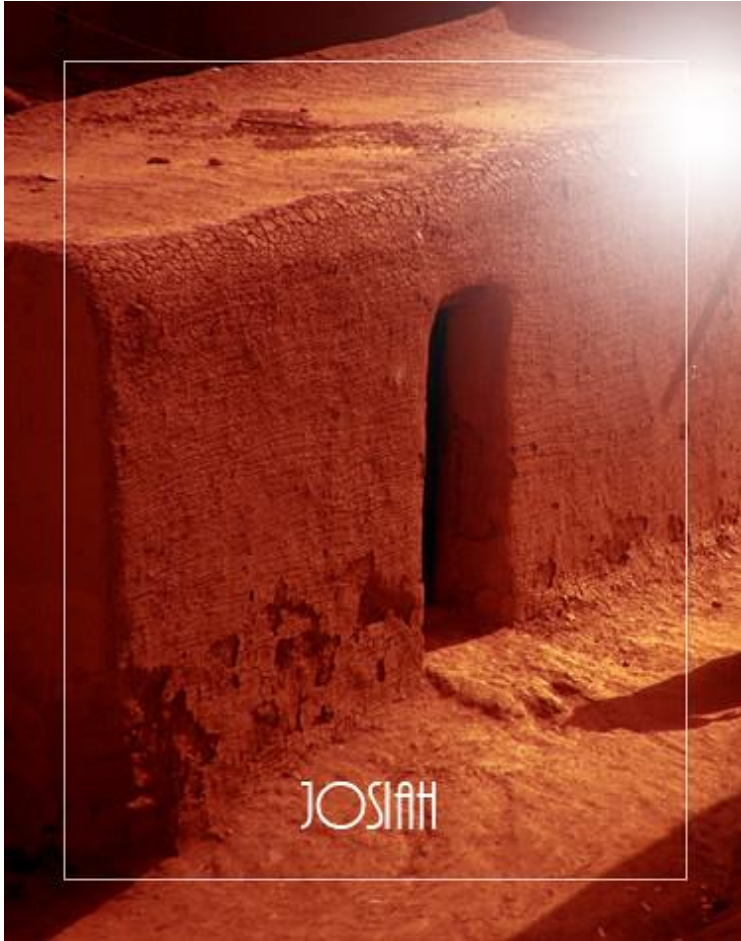
Indeed, they would need to cooperate and work together, but Josiah had now insured that each area would have a responsible person over it. In doing so, he unwittingly 'elected' himself leader of the APOLLONIUS Colony on Mars.

Josiah then asked how so many of them were in the particular area that survived. Amazingly, all but APOLLONIUS and a couple of launch officers were here intact after an event that might have destroyed them all.

It seems that APOLLONIUS had chosen to launch his missile at the time of an important farming lecture. The whole colony turned out, concerned that they really were confused and they wanted to learn more as a matter of survival. Even the doctors showed up, skeptical of

the health claims in the course's description. They would, they thought, weigh in to discredit it. The result was that the colony itself was quite uninhabited at the time of its destruction. Had APOLLONIUS planned this? That might never be known, for he and his launch technicians perished quite suddenly in the explosion.

Ironically, the basic farming methodology for the colony was from a text known as 'Squanto's Garden,' which had guided the Northern greenhouse culture. It invoked the simple methods of early farmers and avoided heavy use of pesticides.



Chapter 7: Generations

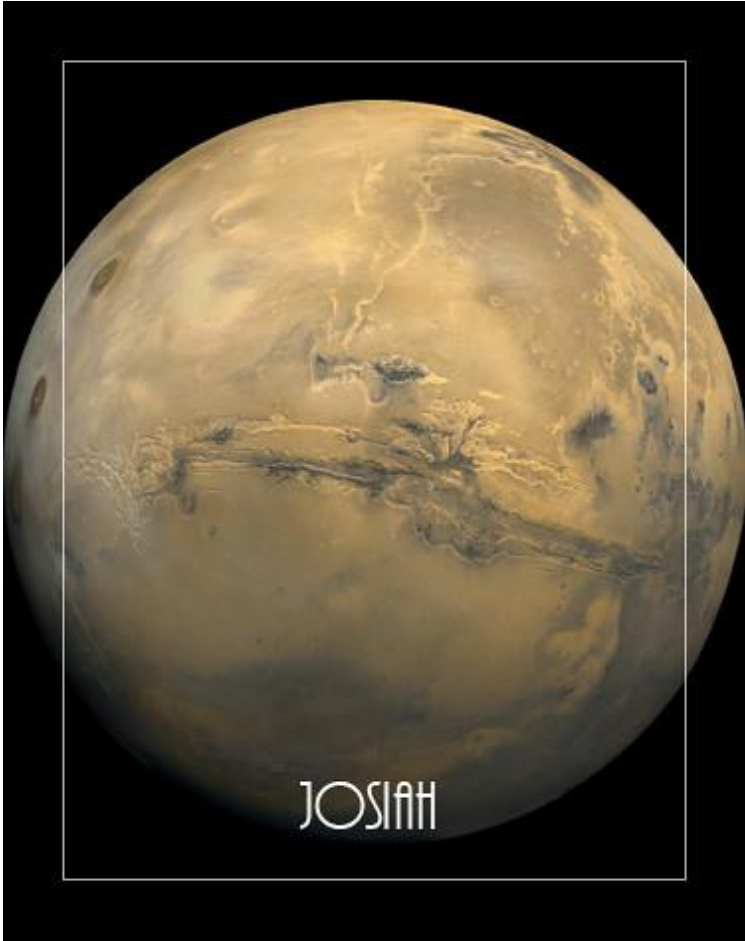
Having quite likely spared the colonists the agony of the Pilgrims' first year, Josiah and Allison divided the greenhouses into plots. They encouraged the building of mud houses on one's own section and the mere expediency of being on the land gave each settler a sense of purpose when he or she awoke in the morning. There even developed a bit of healthy competition in keeping one's rows straighter than that of her neighbor. The result was, of course, a better yield than the original collective method might have produced.

The artisans who ran machines that wove cloth, the repairers of pressure suits, the makers of fired pottery and plates all collected in houses close to one another and although this was to have been a cashless society, a simple accounting and currency system emerged nonetheless. Eventually a little cookhouse developed into a tavern. The owners fermented a bit of grain for ‘personal use’ at first but as the years passed, they made enough to share and then sell. Their skill in preparing food did not go unnoticed and soon they were a regular stop for the settlers. There much discussion and business would be transacted.

There were no movies. There was no radio. All of the really high technology had been destroyed in the explosion, but somehow the noisy engines of agriculture and production had been relegated to the fringe... and that is why they survived. Evenings were quiet and the settlers eventually produced children. Although APOLLONIUS was originally planning to raise them in collective nurseries, the simple life of the settlers made it more logical for small family groups to raise their own children. In the decades that followed, those children had children. That is why the colony now had 122 souls. Obviously that part of colonization worked pretty much as planned.

As the years passed, youthful Josiah found his hair tinged with grey. He now watched grandchildren play in the yard of the much enlarged mud house. He vaguely remembered a phenomenon that someone in the Zimmerman Organization had referred to as ‘White Dog Thinking.’ It seems that in his younger days, Zimmerman had known a couple who were so convinced that the world was so awful that they decided to have no children. Instead, they lavished their affections on a series of large white dogs. The colonists, for their part, were so

steeped in the mindset that they needed to be fruitful that as bad as things seemed, they never succumbed to 'White Dog Thinking.' Surely another ship would come and the colony would go on. The world they had left was really a bad place, they reasoned. It was only a matter of time until Mars became what APOLLONIUS had envisioned – a new home and hope for humanity!



Chapter 8: Déjà Vu All Over Again

That ship never came. For decades the little band struggled on.

Josiah struggled to lead them. A small core of APOLLONIUS devotees were always perturbed that the collective mindset originally prescribed was not adhered to. They were led by Mark and Sergey, who had barely made it through Elizabeth Zimmerman's vetting process. Though the group as a whole dispensed rapidly with addressing each other by number, Mark and Sergey resisted that change to the bitter end. Finally it was only them referring to each

other by number anyway. Then they gave it up.

The problem was that the two of them brooded together privately and stirred up some dissention publicly. Sergey would often interrupt Josiah with the statement, “that’s not by the book.” He was committed to restoring the purity of the original colony mission as he saw it. Josiah’s leadership was necessary now but in the long run it would have to go.

The two doctors gravitated to this mindset. They arrived at the colony both expecting and when their babies came they attached themselves to some men of the APOLLONIUS faction. APOLLONIUS was not the only person on Earth pushing for colonization, they reasoned. Others would follow and they would be the charter village of the new order when the latecomers arrived. Josiah had inventoried the remaining stores and they were actually not in any immediate danger of depleting resources. The doctors, for their part, did not strongly resist the change to home education. They considered their children the rightful heirs of APOLLONIUS and intended to raise them as such. Combined education might indeed get in the way of that.

Then there was the Allison/Josiah faction. They held rule of the colony by necessity and because of Josiah’s giftedness in that area. Even their enemies acknowledged this. The loss of APOLLONIUS had left most of the colonists quite rudderless if the truth be known. Steeped in the Progressive thought that had been overshadowed by a rebirth of Faith in the North Country, they were quite capable of creating institutions but clueless as to the deeper stirring of human nature that seemed to make them run so wretchedly.

The new colony was to have no prisons, but it became clear over the years that the folly that necessitated them was still present in humankind. Though they had cast off all of the antiquated beliefs and institutions, they were surprised at the dark shadows that had followed them across the solar system. Josiah dealt with the raft of petty crimes within the community with an application of something very much resembling the old 'Golden Rule.' When thievery was discovered, restitution was expected. Abusive and violent situations were not so easy. Initially mandatory separation of the aggressive parties seemed to work, but then there was the murder.



Chapter 9: Spoiling the Garden

As Josiah related it to West on Earth, it was not so clear how it started. He began with a bit of background, *“You know, we now were ready to create a new evolution of human institutions so we intentionally cast off a lot of the ‘archaic’ rules of the past. Our society became a pragmatic one. We don’t force monogamy, for instance, insisting only that the society as a whole take responsibility for the needs of the children. Well, most of the settlers simply paired off like in the old days. They raised their own kids. They lived quiet*

lives. But there were some of the APOLLONIUS faction that were not content to stay within the lines. Human jealousy, I'm afraid, is still very real and when a man lies dead and another stands with a bloody stone in his hands asserting his boundaries, the institution's response is not so clear anymore."

W*hat did you do next?" West asked.*

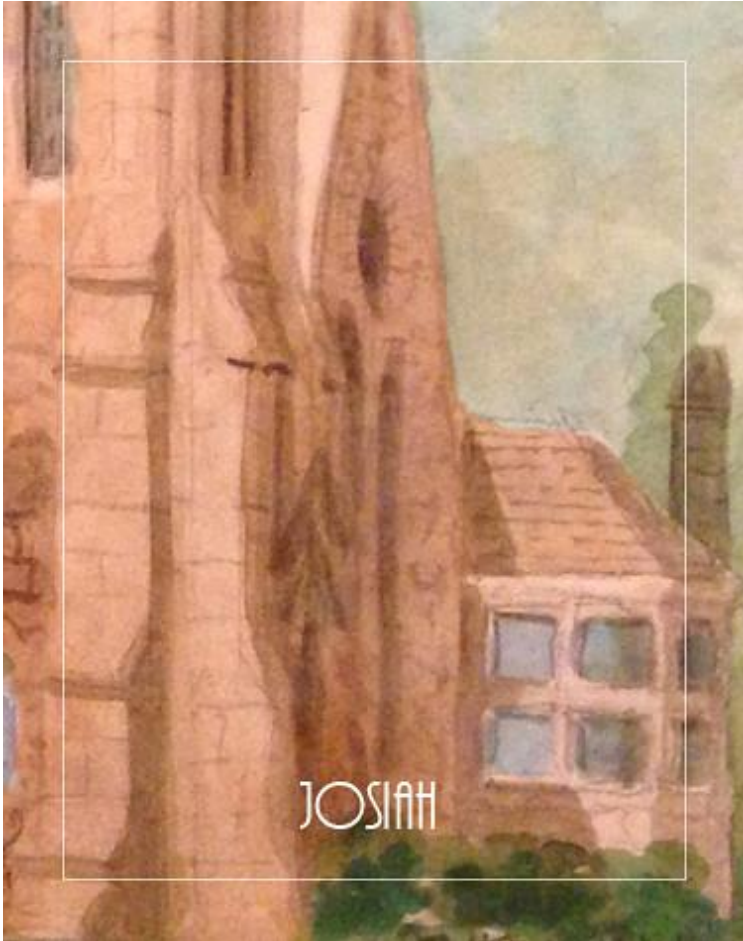
W*ell, we don't believe in capital punishment, so the question was how to deal with the crime. The killer was simply restricted to his portion of the greenhouse and was informed that if he ventured forth he would simply be forcibly returned. It was an answer, but it was not a good one. Over the years you can see the tension between his people and the people of the victim. Our society, I fear, is a very fearful and unsettled one at the moment. I'm beginning to wonder if we can actually achieve the vision APOLLONIUS left us with and I don't say that lightly. Mr. West."*

S*o, should we begin to evacuate you? We can only move ten out in the transport that just landed, but we can send others. We can resupply the colony as we gradually get you home."*

B*ut there are those who see this as home, and the life they've fled so wretched, that I believe they will not come."*

T*hink about it, Josiah, and we will formulate a plan for your evacuation and reassimilation."*

I *will discuss it with the Counsel.”*



Chapter 10: Quandry

Young Josiah Zimmerman knocked on the office door of Abiyah Ben-Gurion. “*Come in.*” Professor Ben-Gurion said. “*I am deep in a quandary.*” The young man said.

Ben-Gurion loved young Zimmerman. The young man had

originally arrived at the school to study Aerospace Engineering but after a stirring talk by Dr. Greene in chapel, he experienced what the old-timers call the *'Burning Bosom.'* Persuasive and articulate, the young man saw his gifts most applicable to some sort of evangelism, but he still loved the sciences. As with many young people who are so blessed, young Zimmerman struggled with his calling and his passion, and that is why he sought out Ben-Gurion. Abiyah was a deeply rational man, but he seemed to understand that man was more than a rational machine. The professor's walls were filled with amazing floral photography that he had taken. He was quiet about his faith, but it was well known that he always left his office on Fridays long before Sundown. He often slipped over to Wales in time to be there when it was Saturday so he could worship in the manner of his Fathers. His voice reading the Holy scrolls was known only to a few people, but they knew it was beautiful.

What his students saw was the strength of his character. He was tough, but fair. He met you at eye level and would listen. He was downright reluctant to give up on a student. He had helped Josiah Zimmerman understand that his heartfelt need to study Spiritual matters was a good thing. "The Divine will see to it that you have opportunity. You, my friend, must keep your eyes open and learn to recognize it."

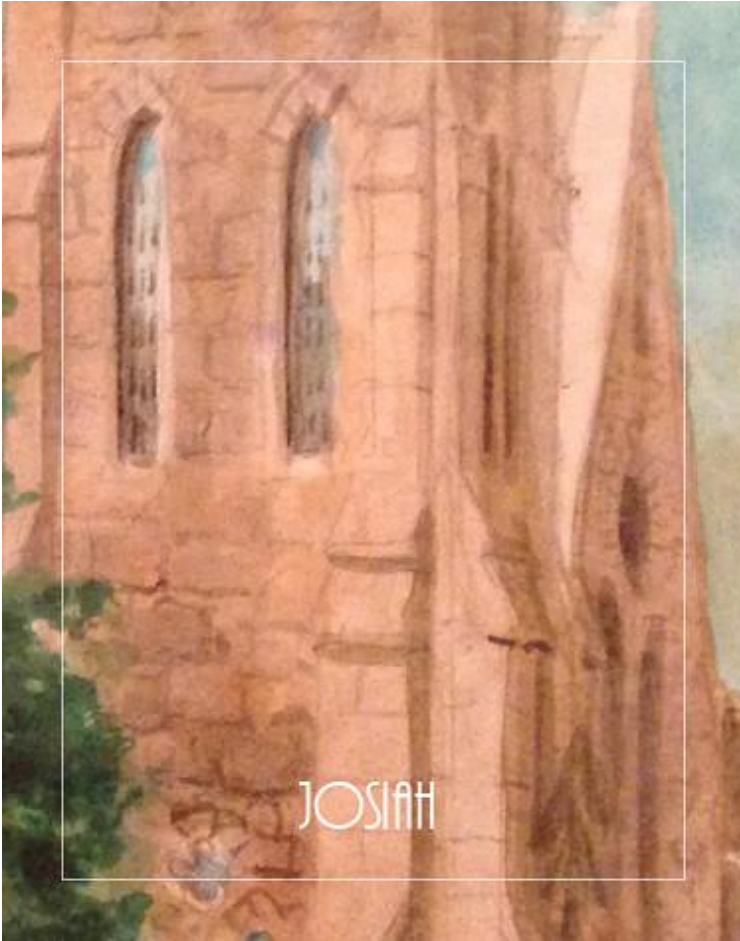
Ben-Gurion, at the moment, was wrestling too. He had just received the latest transcript of West and Josiah's conversation on Mars. "*Those Martians are like sheep without a shepherd,*" he thought to himself. Peering at the young man seated across the desk from him he wondered, "Could this man be the answer?"

The re-assimilation proposal had been floated with Josiah of Mars.

He in turn had visited the Council with it. Not surprisingly, the APOLLONIUS faction was against it. Those closer to Josiah and Allison were cautiously interested in hearing more. As a group, they met the repatriation proposal with a resounding sentiment of “*Not so fast.*”

Ten spaces sat waiting in the lander. No one would step up to be first to go. Josiah might have been tempted but there were a few things that stopped him cold. First of all, he sensed that the volatile colony might indeed disintegrate upon his departure. More than once, he and Allison had defused some tense situations in the new colony with some old fashioned thinking. Josiah shuddered as he thought of how close the colony had come to chaos. He didn’t love his job, but he feared the vacuum.

He and Allison had children. If everyone dear to Josiah returned with him there would be room for only a couple of other colonists. Josiah would not leave his family, especially to an uncertain future. Their children knew nothing else than the red world they inhabited now with its green biospheres. If more landers were available in the future it would be fine but that would require some negotiations and some guarantees.



Chapter 11: Taking in Confidence

Ben-Gurion was wrestling. In the end he decided to take young Zimmerman into his confidence. Though the events on Mars were at the moment shrouded in secrecy, it would soon enough be time to let relatives of those who had survived know the fate of their loved ones.

He began, *“Do you remember the Mars Mission before you were born? I was the pilot.”*

Yes, a sad one, to be sure. *No one survived on the planet’s surface. It must be painful for you to remember.”*

Abiyah leaned closer, *“We just sent an unmanned ship to the colony. There were survivors and we’ve been in conversation with them!”*

The young man gasped.

Survivors – but *HOW?!*”

Ben-Gurion related the events that had transpired over the last year. He described the condition of the colony and the quandary it presented. *“You see,”* the professor concluded, *“they see themselves, wretched as their lives are, as quite severed from Earth.”*

So, *am I to understand,*” said Josiah, *“that they have just enough technology to consider themselves self-sustaining, though they lack for so much we would consider basic essentials?”*

Exactly, *and MY quandary is what do we do next. They’re always on the verge of killing each other yet they fear us back on Earth more.*

APOLLONIUS taught them well, but he left out the most important lessons. They could stand to read Moses! Even though he killed the Egyptian, he thought better of it.”

Abiyah continued, *“I am wrestling, my young friend – wrestling with making of you a most unusual request. Jon Greene and I are aware of your unique – gift, and your quandary as to how to use it. Obviously it would make more sense for ME to go to Mars, but I am a man of family. The other astronauts are largely technicians. They love their job. They man the defense platforms and in practice they get to blow stuff up, but they communicate in monotonous bursts. I am thinking we need someone gifted to ‘build the bridge,’ as it were.”*

In Shalom, the Biosphere community on Big Diomedede, as in the whole Zimmerman Organization, *‘Building the Bridge’* carried great meaning. It was a term not spoken lightly.



Chapter 12: Build a Bridge!

Hannah brought out the coffee for the young man who had just arrived at the Zimmerman Organization Headquarters in Wales. In true form to the local traditions, Josiah poured her a cup, then one for himself. It honored Zimmerman’s Mother who was an engineer in that formerly male dominated profession decades ago. Rupert Zimmerman had insisted the practice continue as a memorial to her.

In fact, the culture of the bridge now contained many such nods to those who had paved the way. Josiah had laughed at them in his youth, but now he had come to learn that they were rooted most of all in a sense of reverence for the Divine, who made families and gave wisdom to be passed from generation to generation.

Soon they were joined by Alan West, Flight Director for Cape Lisbon, Rupert's Granddaughter, Chief Engineer of the Zimmerman Organization, Elizabeth Zimmerman O'Malley, CEO, Abiyah Ben-Gurion and Jon Greene, Professors of the College on Big Diomedé.

Ms. O'Malley began, *"My Father devoted his life to making a way for mankind to go where we'd never been before. He considered himself most blessed that he lived to see the things he did. But he always felt a responsibility to those he felt he'd recklessly lead there. It is in that spirit that I have called us together. That drive led us to go to another world and now there are people living there in some confusion. We do not want to send 'Great Northern' back there – we don't even think it is wise, but we'd like to reach out to the colonists and try to help them."*

West offered, *"We could continue to supply them remotely with unmanned landers. Eventually they'd have enough landers that some of them could return to Earth, if they so desired. But it is painfully obvious that they feel alienated from us – and our traditions. We feel a human touch would do much to 'build a bridge,' if you get my drift."*

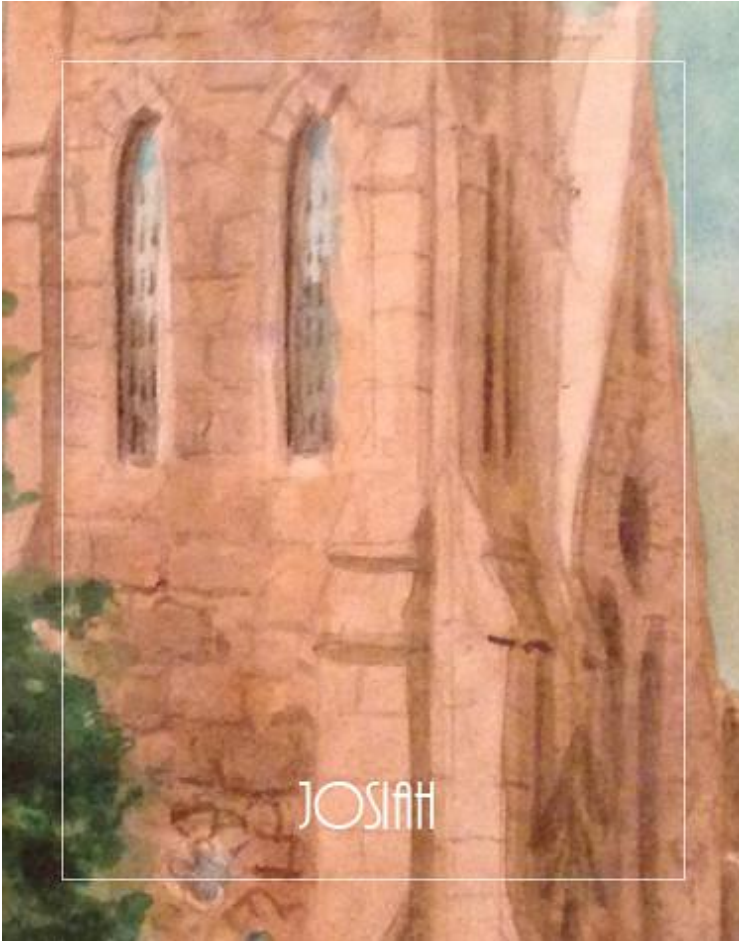
Greene observed, *"Ray Bradbury once wrote about a similar scenario. Earth is destroyed in a nuclear war but a family takes a*

rocket on a "fishing trip" to Mars and they escape destruction. They destroy all artifacts of their old 'misguided' life. Later, the father offers his sons a gift in the form of their new world. He introduces them to Martians—their own reflections in a canal. That is what we have here. You once said you wished for an unreached world to reach. May I introduce to you the Martians?"

West interjected *"It would mean nine months in a fairly cramped environment. There is some risk in any spaceflight and we plan to send a crew of three. There would be no guarantee as to how the colonists would respond when you landed. It seems there are several factions and they disagree on things sharply."*

Josiah's mind wandered to the story of Nathanael "Nate" Saint, who along with four other men, Jim Elliot, Ed McCully, Pete Fleming, and Roger Youderian, sought to establish communication with the warlike Huaorani of Ecuador. They set out in a little yellow Piper PA-14 and landed on a beach of the Curaray River. Though the Huaorani had enthusiastically received gifts lowered in a bucket from the plane earlier, they murdered the five men with spears on January 8, 1958.

Though the men were armed, they did not want to kill any Huaorani and they did not use their weapons. West said *"I think it prudent to give you some means of protecting yourselves, but I cannot guarantee anyone's safety at this point. We could continue to send supplies by unmanned craft, but I think they need to see us as more than that, if you know what I mean."*



Chapter 13: Entreat Me Not to Leave Thee

West concluded the meeting saying *“You must think it over. We must know that this is something you do of your OWN volition. We have reached out to those who might be your fellow crewmen. Of course, they and you are sworn to secrecy. Just think, if the news media in the ‘Lower 48’ get a hold of this, they’ll start making all sorts of statements and demands. You know how they love to paint*

the Alaska Republic as a ‘cold and uncaring’ entity. Even though APOLLONIUS destroyed his own colony, they’ll make us the villains. They’ll accuse us of marooning the settlers there. There will be any number of ‘conspiracy theories.’”

I... must pray, and let you know then.”

In the days that followed, Josiah Zimmerman sought the continued counsel of Greene and Ben-Gurion, who for their part, happily gave him all the time he needed. Of course, he wanted the adventure, and the purpose of the mission. What would his parents think? What about his fiancé, Adila? He understood the secrecy and its necessity, but he didn’t even know who he was crewing with. In the Twenty-first Century such commitment to the unknown was rare to ask of anyone. It was something out of another time. So Josiah Zimmerman screwed up his nerve and sought out Dr. Greene, spilling his fears and concerns. The good doctor said little, but said he’d arrange a meeting soon to help him through this.

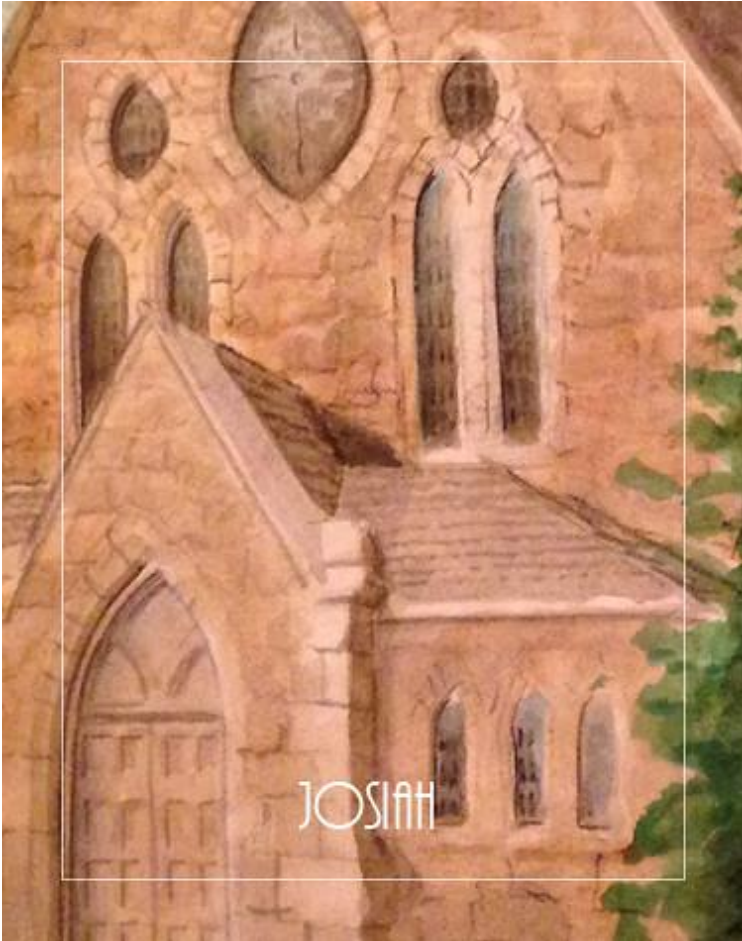
A week or so later, Greene sent a message that Josiah should come to the chapel office that afternoon at 2:00pm, Big Diomedé Time. The young man arrived freshly showered and somewhat out of breath. He was surprised to see his parents and Adila there! With them were Sarah and Abiyah Ben-Gurion and their son Adam. *“We are the first three people to set foot on Mars.”* Abiyah said, and he went on to explain that Greene was not going to be there as he had a granddaughter’s dance recital to go to that afternoon. *“Besides, he told me he’s pretty much out of advice for you anyway. He WILL be present to counsel you about another step you might take in life – one that I think will come up in the discussion this afternoon.”*

Ben-Gurion continued *“I’ve invited Adila’s parents to this meeting as well. I think you know Sarah and my story. The secret marriage and all – and you know how Adam was already with us when we set foot on Mars. Sarah touched the planet slightly before me, but that is for the historians to sort out. In the Guinness Book of World Records, we’re tied at the moment. Since Adila is fluent in five languages and aerospace studies as well, she was also a logical choice for this mission.”*

Since our mission,” Sarah chimed in, *“Mission Control has written stricter policies about things such as our ‘secret marriage,’ if you get my drift. But, since you have already made it quite clear that you are committed to each other, we just want to make sure you know that you need not decide without the benefit of blessing. And we sure do not want you deciding in the dark without input from those who love you.”*

Adila spoke next: *“Entreat me not to leave thee, or to return from following after thee: for whither thou goest, I will go; and where thou lodgest, I will lodge: thy people shall be my people, and thy God my God: Where thou diest, will I die, and there will I be buried: the LORD do so to me, and more also, if ought but death part thee and me.”* – the words of Ruth to Naomi, but also much referenced in marital loyalty as well.

The two of them would follow in the footsteps of Abiyah and Sarah. They set to work planning their wedding.



Chapter 14: Unto All Nations

The next few weeks were a whirlwind of activity as Big Diomedea readied for the celebration! The little chapel on the island always seemed happiest when it rejoiced with the bride and bridegroom and Mrs. Greene spared nothing in decorating it. But all the while they wondered – who was third on their crew? Both were well trained in the work of spaceflight and balanced simulator time with getting

fitted for wedding clothes. Abiyah Ben-Gurion was suspected, but he was getting older and didn't visit the simulator rooms much anymore. He was, many people noted, taking lots of long walks with Adam now.

Adam had followed in the footsteps of his capable parents and was a great pilot in his own right. He was a loner like his dad had been and everyone assumed he must like it that way. He did seem to have a lot to discuss with dad these days. Was his dad in fact going back to Mars? He still passed the physical – with a few 'look the other ways' by the flight surgeons.

We'll never know for sure, but if the truth be known, I doubt it was clear who would go; Abiyah or Adam, as they talked it out but clearly the father felt some responsibility for the colony and the son loved his father. He had rebelled some as a youth but he now saw how wonderful his upbringing had been. The virtue of gratitude – the only virtue Abiyah would lay claim to, had been passed from father to son!

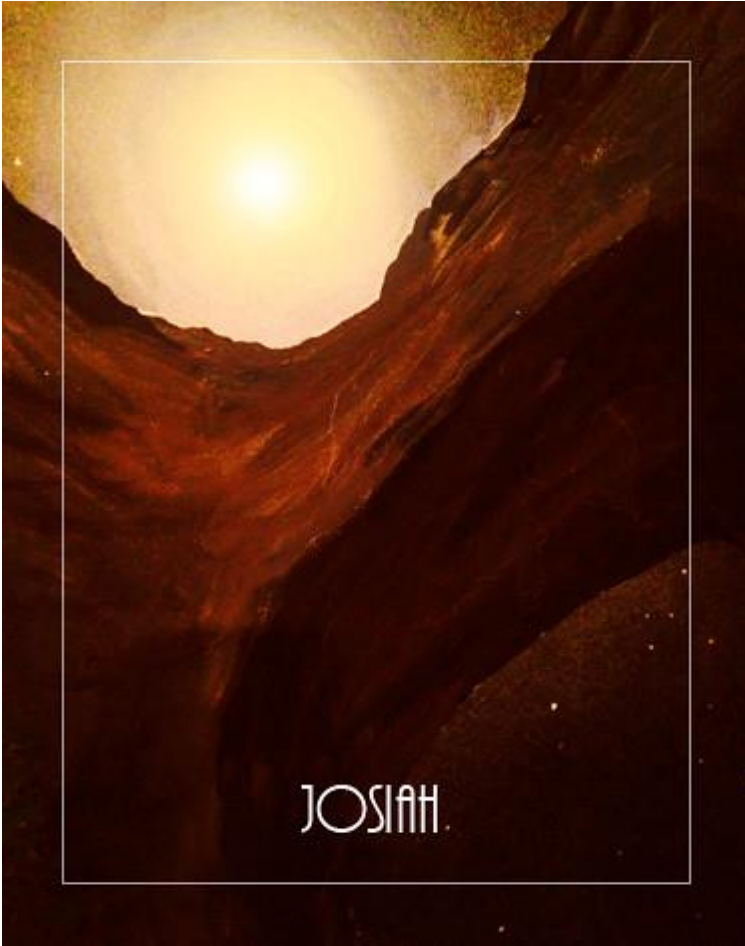
Though the older Ben-Gurion was methodical in his attempts to discourage his son, he was also quite proud of him. In the end, it was Adam who begged his father for the chance to complete the work that he had begun. Sarah and Abiyah, of all people, were uniquely able to understand the drive of their son. Since they knew Josiah, Adila and Adam quite closely, seeing them work together at school, they saw a team that was every bit as capable as the team of Cohen – Ben-Gurion decades before them. Now they congregated frequently at the Ben-Gurion home for meals and conversation.

After the wedding, the three began training for the mission in dead earnest. All three of them expressed some disappointment that

meeting the best launch window meant missing the World's Fair in Fairgate, but that was a small concern. The Martians were waiting. Josiah and Adila also sought out the company of the Greenes and over macaroni and cheese, they discussed such things as the journeys of Paul in the First Century. Surely they were following in his footsteps. "*What constitutes a nation in the eyes of the Divine?*" Dr. Greene asked his pupil and his pupil's wife as they supped together.

T*he dictionary says, 'a large aggregate of people united by common descent, history, culture, or language, inhabiting a particular country or territory.'*" Responded Josiah.

THE END



Epilogue: The Bridge of God

For decades it had simply been known as *'The Great Mystery'* by the colonists. Indeed it was a wonder to them that the opening existed at all. Upon landing, the colonists had discovered the opening that gave entry into the little valley. The fine soil and natural protection had led them to place a substantial part of their greenhouse agriculture in that valley. That was why the colonists survived. Josiah the colonist and

Josiah Zimmerman walked through the arch one afternoon in their spacesuits. Josiah the colonist told the story as they stared up at the 90' wide archway that rose 215' above them. Young Zimmerman found the whole scene strangely familiar.

Really, this looks just like a place I remember from my

boyhood," young Josiah mused. "It is the spitting image of the Natural Bridge in Rockbridge County. My grandfather would take me there. We would stand under the arch and look up at it. He would whisper "MOHOMONY." That is what the Monacan Nation called it and it was a sacred place to their people. The name was alternately translated 'Great Mystery' or 'The Bridge of God.'

The Monacans were a Souix people who lived in the Valley of

Virginia. Once a band of Monacans were being pursued by a much larger army of Powhatans and in their distress they prayed. They had been pressed to the edge of a deep chasm, the valley of Cedar Creek. Escape was impossible. But looking up they saw the natural bridge that spanned the chasm. They hurried their women and children across it. Now the warriors turned and faced their enemy on the narrow bridge. The larger Powhatan force was reduced by the width of the bridge and that day the Monacans prevailed." Grandfather never tired of telling that tale.

When the unmanned lander had sent its rover through the arch, no one thought to pan the camera up. It remained a secret until the relief shuttle crew walked through it.

Josiah Zimmerman thought of the Virginia colonists and how they had discovered a bend on the James River that looked just like the

bend in the Thames River at a place called Richmond. Thus the capital of the new place took its name from its similarity to a place familiar. Here in a faraway and forbidding place was a scene familiar as well – and even more amazing, it too played in a story of Divine deliverance. In the times to come, it too would become known as ‘*MOHOMONY*.’

T*hen Joshua called the twelve men, whom he had prepared of the children of Israel, out of every tribe a man: And Joshua said unto them, Pass over before the ark of the Lord your God into the midst of Jordan, and take you up every man of you a stone upon his shoulder, according unto the number of the tribes of the children of Israel: That this may be a sign among you, that when your children ask their fathers in time to come, saying, What mean ye by these stones? Then ye shall answer them, That the waters of Jordan were cut off before the ark of the covenant of the Lord; when it passed over Jordan, the waters of Jordan were cut off: and these stones shall be for a memorial unto the children of Israel for ever. And the children of Israel did so as Joshua commanded, and took up twelve stones out of the midst of Jordan, as the Lord spake unto Joshua, according to the number of the tribes of the children of Israel, and carried them over with them unto the place where they lodged, and laid them down there. And Joshua set up twelve stones in the midst of Jordan, in the place where the feet of the priests which bare the ark of the covenant stood: and they are there unto this day.” – Joshua 4:4-9*

THE END

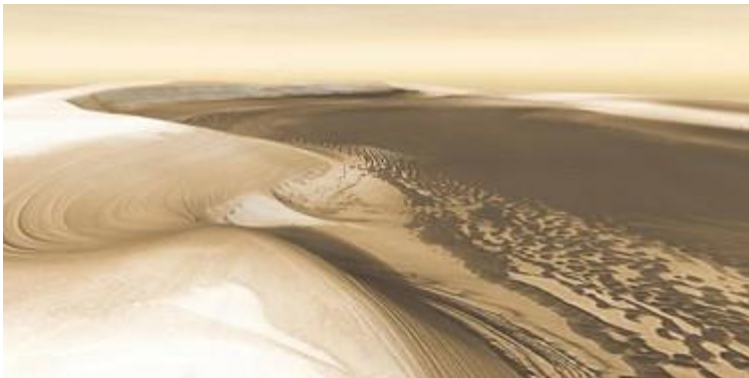
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Terraforming Mars

National Geographic

For some time there has been a fascination with the idea of colonizing Mars.

In 1952, **Wernher von Braun** wrote a book called *"Project Mars"* [1.] which imagined that human colonists on Mars would be led by a person called "Elon." Starting with *A Princess of Mars* [2.] in 1917, **Edgar Rice Burroughs** wrote eleven novels that portrayed an arid world he called *Barsoom* made habitable by an "atmosphere factory" (these books were the basis for the recent Disney movie *John Carter*). The stories in **Ray Bradbury's** 1950 collection *The Martian Chronicles* [3.] were set on a desert planet crisscrossed with canals built by an alien civilization to distribute water from the polar caps. **Arthur C. Clarke's** 1952 novel *The Sands of Mars* [4.] also presents a transformation of the Red Planet to support human life. **Kim Stanley Robinson's** *Red Mars/Green Mars/Blue Mars* trilogy was published in the period of 1992-1996. [5.]

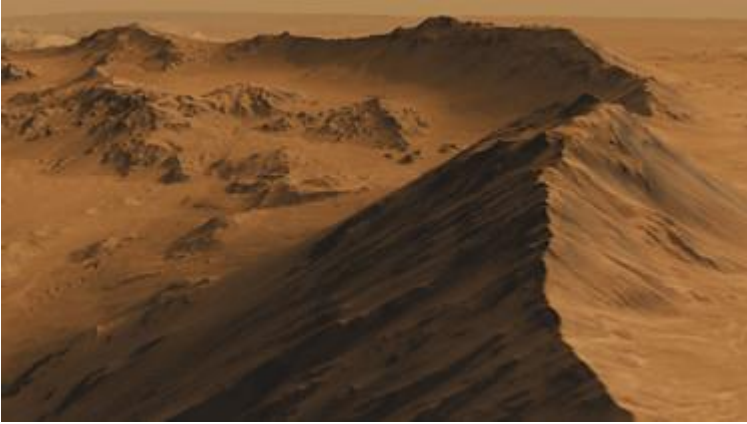


Chasma Boreale, a long, flat-floored valley, cuts deep into Mars' north polar icecap. Its walls rise about 4,600 feet, or 1,400 meters,

above the floor. Where the edge of the ice cap has retreated, sheets of sand are emerging that accumulated during earlier ice-free climatic cycles. Winds blowing off the ice have pushed loose sand into dunes and driven them down-canyon in a westward direction. NASA Image



The Orb of Mars. NASA Photo



This is a screen shot from a high-definition simulated movie of Mojave Crater on Mars, based on images taken by the High Resolution Imaging Science Experiment (HiRISE) camera on NASA's Mars Reconnaissance Orbiter. A 3-D surface model was created using stereo pairs from the HiRISE camera. Mojave Crater has a diameter of 60 kilometers (37 miles). NASA Image



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