Maarieda: The Landing

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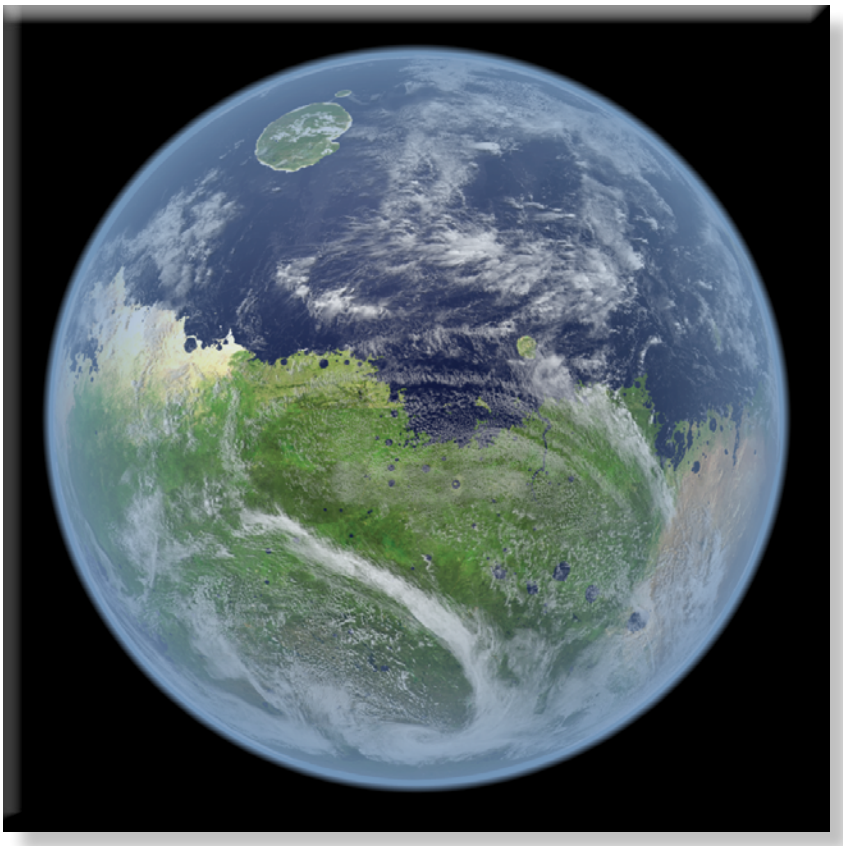

In anticipation, they watched the monitor. It had been twenty-five years since the adults left Earth. The kids were in awe as they looked at planet Maarieda below. They had seen pictures of Earth and Maarieda before, but that was just geography class, something not quite real until now. They had never set foot on a planet. The ship was the only home they knew. Grass, trees, lakes, and mountains were fairy tales, the stuff of imagination. But now, below them, it was beginning to look real, as if they might actually run through a meadow or climb a mountain.

It was time for the children to study the environment of Maarieda. The adults had been there before. People could live there. There was water, oxygen, and a mild temperature in the temperate regions, but there was nothing to eat. The plants had no nutritional value. Nothing was toxic, and they did not encounter pathogenic microbes. It seemed the humans were the only source of contamination, and with no new microbes from other people, they never got sick. But it was not a pleasant place. It just did not feel right, in spite of there being no scientific reason that anything was wrong. Maybe Earth was like this in the distant past.

On the ship, the children were studying the terraformation of the planet. That was the big gamble. Could the planet be made habitable for humans? They had to find out. There was a spiderweb of new forests and grasslands across the landscape. Flowering plants replaced the primitive moss where they had terraformed. The ends of the webs were where the agribots had died. They simply came to the end of their lives after years of planting, and there were areas where the plantings had died out and the moss had returned. The computer analysis said 85% effective. That was success. Maarieda should now be able to feed humans. It was difficult to find

traces of the animals that had been transported to this new planet. They should be everywhere, but little evidence was found. Hopefully they were there but just could not be seen from the ship.

There were two more weeks of study before they could land. They could almost taste fresh food. Spaceship food was bad. About all that could be said for it was that it was nutritious. Even all the spices could not make it good. It was a scientific nightmare—Frankenstein food. It met all the scientific needs of a human but none of the aesthetic needs. The adults had forgotten how bad it was after all these years. Now they remembered. The kids did not know the difference. Maybe fresh food would be strange to them. They did not like the spices their parents craved to cover the drab taste of ship food.

It was a five-year trip to Maarieda for the first landing. That was ship time. Universe time, it was six hundred years. Everyone and everything they had known on Earth was gone. Communication was lost early. There was a war, and civilization collapsed. The plan to maintain contact failed. All the scientific data they were sending just went into empty space. Two more ships were coming. Three ships had been canceled due to budget cuts. The ark, the tool ship, and the mining ship were half built and abandoned. The other two ships had been pirated before being canceled, and left early, just as the administration changed. There were twenty-four humans left alive with technology and maybe a few survivors on Earth who had had to return to a primitive state. The prospect on Maarieda was a viable settlement, but there would be no way to maintain technology. Humans would return to a primitive state. But they could give themselves a good start.

When they arrived for the first landing, the planet was a strange sight covered in moss and ferns. There were no flowering plants and no detectable animal life, but there were plenty of algae in the seas—almost exactly like the algae on Earth. Even the DNA was the same. Studying life on the new planet pretty much proved the theory of panspermia. How much Earth life had evolved and how much had landed there from space was now the question. That was one of their original missions: to study all of this and send the data to Earth so more planets could be successfully settled—and maybe even save planet Earth. But now there was no audience other than the other two ships. They were alone, just twelve humans hoping for another twelve from the other two ships.

People had made fun of the subatomic particle drive. They said it was just another string theory, something nonexistent an egghead dreamed up to waste tax money. From the time their training started, they went from heroes to the laughing stock of news media. Now, the "nonexistent" drive based on "fake" science carried them through the galaxy, and they were about to land on a terraformed planet: a New Eden for a new human race. They could not beat the speed of light with a warp drive. Every try at that had failed. But there was a way around the time required to travel to another star system: accelerate at one G. In 354 days, they would have been at the speed of light, if it were not for relativity; but they would be close enough that the time dilation would make the trip short from the perspective of the people on the ship.

It was interesting watching the kids get ready for the landing. It was as if they did not really understand where they were going. All the survival classes did not seem to have registered. It was different for the adults. They had gone through the harshest training possible. For them, it was applied education, not just book learning. The kids would learn.

Linda, a daughter of Aimee and James, was the second-oldest of all the children on board. She was the natural leader and had a younger brother named Doug. Having just turned fifteen, Linda was in the middle of her college studies. She could keep the others working together when they were not engaged in a sibling-type battle.

Michael, the skeptic and oldest of the ship's children, was Bob and Sally's only child. Michael kept the other children in line intellectually. They did not believe all his criticism, but he made them think about and prove their ideas. The challenges they would be facing were unpredictable, but Michael was making them prepare. Lisa, the youngest, was the peacemaker. Her sweet disposition calmed the storms between the others. She came along later, after it was learned that Bob and Sally could not conceive a second child. After years of trying, they had given up, so Sam and Mindy had a third child after having Kristi and Terri. The plan was for six adults to have six children to populate the new planet. The children needed to be strong when they landed. It would be too late in life for the adults to have children after they landed. But now, they seemed young for their age. Without the constant attack by new viruses, their bodies were young. So, maybe four of the adults could have more children.

With five teenagers in full puberty, they were in a battle of the sexes. It looked like a bunch of siblings full of hormones with no idea how to act. In sex ed, they were curious and silly, like most children, but totally grossed out by the thought of one day being with someone they thought of as a brother or a sister. No amount of explanation and logical reasoning could change the idea that, psychologically, they were siblings. They were going to have to sort out the conflict between romance and incest themselves. That would be interesting to watch. The parents had given up on the issue and decided to leave it to nature.

It was landing day. The shuttle was loaded with six people and their supplies. Aimee, the pilot and captain, ran down the checklist for the shuttle three times. James, the commander, went over the schedule with the others. He was second in command. They would land on the coast of New Germania, a large temperate island with the most successful terraforming. The coast was tropical and never froze. Inland was a temperate forest, and mountains were just 100 klicks away. It was an excellent place for growing food. Their village would be New Eden.

The first order of the plan was to start crops and animal husbandry. They would live in a tent until housing could be built. Everyone was excited. It was a new experience for Linda and Michael. They were frenemies, the closest of best friends but sexually repulsed by each other. They had no blood relation but felt like a twin brother and sister to each other.

Now it was time for military order. Everyone was under the strictest of orders until they were safely on the ground. The shuttle was twenty-five years old and had made many trips from the terraforming missions. Everything seemed perfect, but they could not afford assumptions.

They were off. Weightlessness was making the teens sick and excited. They were enjoying the sensation. The planet looked bigger and bigger as it filled the window. The emerald green of the vegetation was enchanting. After circling the landing area three times, the shuttle set down. Breaking protocol, Michael and Linda rushed past the adults and tumbled down the stairs, landing on a gravel beach. They tore off running across the meadow in pure joy. The air was fresh and had a wonderful smell. It was not like anything they had experienced before. Rolling in the tall green grass, they embraced and kissed. Realizing what they had done, they backed off from each other in disgust and returned to the shuttle to begin working on the colony. There was lots of work to do, and the other shuttle would arrive in a few days.

None of the prairie chickens were left. They should have been the best bird for the area, according to Earth research, but they were all gone. They had overpopulated, exhausted the food available, and completely died off—the product of an unbalanced ecology. A trip in the ultralight later on showed their descendants on New Austria, another island. Somehow,

they made it there and evolved into seven very different subspecies. It was reminiscent of the Galapagos Islands. Two subspecies became predators and controlled the population. One almost looked like eagles. They were four times the mass of their ancestors. Another had the look of a peregrine. But they still had some resemblance to prairie chickens. There was also the mini emu, which was purely terrestrial—a tiny bird that lived in holes in the ground—and three types of songbirds living in trees. So here, the animals had formed a balanced ecology. The bugs were doing better here. Every kind of caterpillar and butterfly lived here. There was even a form of oats that had evolved into a prairie grass. Nine hundred years in an untouched environment gave free rein to epigenetic evolution.

The pudu deer were gone, too, as were the royal antelope. Hopefully, the same happened to them as did the prairie chickens. They were easy to feed on the ship because of their small size and could be used for embryo transfer just like the prairie chickens. They would bring many species to the new world. On the ship were cryogenically frozen embryos of hundreds of species that needed a host. Fish, reptile, and amphibian eggs could just be frozen. Many had been released during the terraforming, but none could be found today.

The ocean water tested with signs of shrimp and other animal life, but none could be found. They would have to set up a shrimp farm. That was the main protein on the ship, and ship shrimp had no taste whatsoever. Hopefully, ocean shrimp would be better.

The shuttle was unloaded and camp set up. Tomorrow they would explore. Star-set was awe-inspiring. The kids were amazed by the campfire. It was like something from science fiction. It was impossible to sleep. The adventure was so intense.

Watching the star-rise was a dream come true. The kids were asleep, as they had hardly slept all night. After dragging them out of bed, half the group followed the coast north, and half followed it south. There were a few shells on the beach, so some sea life took hold. But there were no shrimp. The ship had one kind of shrimp, dull-gray, tasteless shrimp. Shrimp were a delicacy on Earth, and the adults fondly remembered that. Twenty species were planted in the ocean. Hopefully, they would find them someday and get tasty food again. There was another campfire and another night of ship rations. The kids thought their parents were crazy for wanting planet food so badly. They found some coconuts, but they were out of season—one food source identified.

Another star-rise, and everyone was awake. Today was the day to explore the forest. There were fruit and trees there. Near the camp were avocado trees. They were old and withered and had a few avocados. Everyone ate avocados until they were bursting at the seams. Even the kids loved them. On the way home, they found some bananas. They were out of season, but there were a few. Now everyone was sick from eating too much. On days two and three, food sources were identified. They were successful days. The next day, the other shuttle would come. Only Sam and Lisa would be back at the ship monitoring the environment. The other shuttle would bring one of the rovers so that longer exploration could begin.

Day four and everyone was up for star-rise. The shuttle landed with Sam, Doug, Kristi, and Terri. Everyone was running through the meadow. Kristi chased Doug and tackled him. They were close like twins, too. But Kristi, the tomboy, had a crush on Doug. She was always hitting him, and when he complained, everyone laughed. They all knew it was just play. At fourteen, Doug was blind to Kristi's puppy love and wiped off her kiss. He wasn't interested. It was yucky being kissed by a sister, even if they were not actually related. The parents laughed. It looked like the village would be a success. They planned the

next day's exploration. There was a walnut forest that might have some nuts. That night, they had another campfire.

Day five found the adults traveling into the forest with a rover. Moss and ferns were an impossible barrier to cross. There were long stretches of grassland cut through the moss. The grass barely made any progress into the moss. They had thought that after 900 universe years, the grass would have spread, but it didn't. The trees were massive, and the forest was spreading into the moss and taking over. It was clear and easy driving under the forest. They left markers to identify a path. There were walnuts everywhere. They only made 25 klicks because they were documenting everything. They were hoping to find one of the agribots, but its beacon was dead. The beacon was designed to last, but it didn't. Maybe they would find it tomorrow. When they got back to the village, the kids had the new agribot out and were playing with it, trying to learn how it worked. That would be for tomorrow. It could start a garden. The campfire had become a nightly ritual. The kids loved it. They were surprised at how hot the day was and how cool it was at night. All their lives, they had experienced a constant temperature, and now that was gone.

Day six found them training the kids how to program the agribot. It started plowing a small garden. There was a discussion on seeds, vegetables, and grains. Imagine eating food from the ground instead of a ship. It was a new idea. The kids only knew processed food. The machine was slow, but it ran all day and all night. They made a plan to recover the remains of the old agribots. Some could be reached by rover and some by the ultralight. With repair parts, some would come back to life.

Day seven was a rest day, an old-fashioned tradition. Experience taught them they needed it. When they tried to ignore the idea, they got less done. The body and mind were not right without a rest day. So everyone just played and ate and built a bigger campfire.

On day eight, one shuttle was off to the ship for more supplies. The rover was hunting fruit trees, and the ultralight was hunting old agribots. Everything was progressing, except they were still dependent on the ship for protein. That would be hard to come by. The shrimp farm was started, but it would take the second agribot months to build it.

New moon came every forty-two days. It seemed like a good time to celebrate. They had forgotten about moon phases and such. To the children, moons were just more round rocks on a chart until they looked up and saw the full moon lighting up the night. It was brighter than Earth's moon. They named it Dianna. That sounded good and brought back good memories. It was just a star-chart name before. Twenty years earlier, on this very day, humans had set foot here on Maarieda for the first time. Four years of hard work had left a mark on the planet, but it was not a habitable place, unless one wanted to eat ship rations and die. The garden wouldn't grow anything. When they tried grass, it barely grew. After nine hundred universe years, the soil had changed, and the environment began to change. That was the plan—to change the local environment—and it worked. For them, it was sixteen ship years. The formula said they only needed a little less than six space years for nine hundred universe years, but there were black holes in the area, and they had to be avoided. The ship had zigzagged the area. Some black holes had been identified from Earth, but some were found as they traveled. And the pulsing stars had to be avoided. From Earth, it was smooth sailing, but to circle this part of the galaxy required a complex route.

Everyone danced all night. The teenagers displayed their angst with their love-hate relationships as their hormones drove them on. And then there was talk of a vineyard. Spaceship vodka was terrible. There is something about

being locked up in a can for a third of your life and now experiencing freedom under the stars. Yes, stars—ornaments in the sky, inspiring everyone with their beauty—not just points on a chart. The sky had freckles, just like the faces of everyone here. The sunset was like their hair. Birds of a feather flock together, and they were all redheads. They liked it that way. The captain was the top cosmonaut in training. The captain would pick the next crew member. Then he/she picked the next, and so on, with each crew member picking the next person. They even named themselves "Homo maariedan," a new species of humans. And that they would be.

By the second Dianna festival, the ship was unloaded. Sam and Mindy were making boat trips up the coast to see what was there. The water analysis showed sea life, but the nets returned nothing. Nine hundred years was nothing in the life of an ocean. If the ocean currents swept the sea life away, it could be thousands of years before it circled the globe and returned. They had to study the currents and plan where to put the remaining seed for the sea. They wanted the currents to wash sea life in, not wash it away. Linda and Michael took up the task of studying the ocean currents. The young couple was beginning to like each other. Hormones were winning.

In the third month, Bob and Sally captured some of the birds from New Austria. It was time to start the embryo transfer program. It would take a long time. They did not have the limitless supply of birds that was hoped for. The others were out looking for the deer and antelope. Without them, there would be no mammals other than humans. It was possible for humans to provide donor wombs, but they needed more humans. They did find frogs on one of the islands on the other side of the planet. The whole island was covered with them, so they named it Frog Island. They could spread these frog eggs plus the few they had left from the first trip.

The inventory showed twelve humans, two of whom were pregnant; seven subspecies of birds with new chicks from three more species; frogs; five kinds of fruit; and two kinds of nuts. Approximately 1% of the land was now terraformed, and it would take another thousand years for the new plants and animals to cover the planet. The garden and shrimp farm looked promising. Twelve more humans were coming in a few years. The future was hopeful, but there would be problems to solve and probably some setbacks. Not all the terraforming was successful, which was no surprise. They had a long way to go to settle Maarieda. **Ω**

"Science-fiction writers foresee the inevitable; and although problems and catastrophes may be inevitable, solutions are not."

—Isaac Asimov