LAGRANGE POINT 5

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After so many decades of humanity dreaming about the first expedition to Mars, who could have guessed that we would not get within thirty million miles of the place? We were approaching the Mars Lagrange Point 5, which trails sixty degrees behind the planet. The exact physics and mathematics of Lagrange points are nightmare country, but they can be described as five gravitationally neutral places that exist when anything large orbits something much larger. Things that drift there tend to stay there.

Even at Earth's closest approach to Mars, it is still nearly as distant as the red planet is from Mars Lagrange Point 5, so why bother? Decades earlier, *Apollo 10* tested the systems needed to get to the moon without all the hazards of actually landing there, and *Wayfarer* was meant to be the same sort of test. The difference was that there were small chunks of Mars at the Lagrange point, and we were going to perform actual landings. Some researchers even predicted that we would do better science than any expedition that landed on Mars itself.

A robotic probe, *Wells 3*, had already confirmed that rubble from early Mars was clustered there, including the asteroids Eureka and Lunette. It was pristine materi-

al, far better preserved than what was now on the surface of the planet. *Wells 3* had discovered a lot more than rubble, however, and that was why *Wayfarer* had been tossed together with frantic haste and sent on its way with a supposedly international crew. Some laws of physics did not seem to apply at Eureka.

It was November 2050 when we reached Mars Lagrange Point 5. The ion engines had been shut down, the solar panels were folded away, and good old hydrazine was providing the thrust when required. Conventional rockets were still the most responsive type of propulsion for delicate maneuvering near very large rocks.

As we approached we provided a live video stream back to Earth, with commentary. People expected to see aliens; in fact polls indicated that four out of five viewers expected us to encounter an alien starship. *Wells 3* had found nothing of the sort, but those same people also believed in government coverups.

"Now that red dot on the left of your screens is Mars," our captain explained enthusiastically to the media feeds, and his words began their seven-minute journey to Earth. "Yeah, I know. Go outside, look up, and Mars looks about the same. So why spend billions to reach Mars Lagrange Point 5? The two most important reasons are Eureka and Lunette, those disks on the right."

The Eureka system was a double asteroid, rather than an asteroid with a moon, and the two little worlds orbited each other just over a mile apart. Eureka was eight-tenths of a mile in diameter, and Lunette was a third of that. An astronaut could jump from the surface of Eureka and drift across to its smaller companion in less than an hour. Lunette was not the smaller world's official name, but while people on astronomical committees argued about whether a double asteroid should have one name or two, Lunette was the working name that we used.

"As we get closer you will see that Eureka and Lunette are pretty jagged," Captain Walker continued. "That's because they are too small for gravity to make them truly spherical. Mars, Eureka, and Lunette contain a lot of olivine, which is a mineral uncommon in other asteroids. That's why we think Eureka and Lunette were blasted off the surface of Mars by an asteroid impact. They could be a sample of Mars as it was billions of years ago, when it may have supported life. That means we are time travelers as well as astronauts."

Tori and I were strapped into acceleration couches at the command console. She leaned across to me.

"Does he always have to trivialize what we are doing?" she whispered.

"The broadcasts are not meant to be very intellectual," I whispered back.

"Time travelers! How could he write that nonsense?"

"At a guess, the real author was some contract influencer with an AI back on Earth."

It would have been funny had it not probably been true. Tori did not laugh.

"You might not think so, but there are problems visiting very low gravity systems," Walker was explaining. "Eureka is spinning really rapidly, its day is less than three hours long. Anyone working near the equator could be flung off into space by just standing up too quickly. That's why we all have jet packs."

I could hear Tori's teeth grinding.

"Give him a break, he's just trying to make all this seem exciting," I said softly.

"They're just two lumps of rock," she muttered.

"But significant lumps."

"Significant does not mean exciting."

Tori was not entirely correct. It was not just excitement that we were lacking, it was entertainment. The space stations have breathtaking views of Earth, and the Moon has spectacular craters and mountains. The only scenery outside the *Wayfar-*

er's portals had been pinpoints of light for the past nine months, and anyone on Earth could see that sort of thing with a pair of binoculars and an open window. All we had to offer were two little worlds that could easily fit into the Grand Canyon.

There were five of us in *Wayfarer's* crew, and although the spacecraft was mostly American built, the crew was meant to have an international look and feel. Just in case we did encounter aliens, we had to represent most of humanity, so genetic background was high on the list of selection criteria, followed by experience with diplomacy. Next came skills, fitness, and compatibility.

Tori was our doctor and xenobiologist. She was Chinese born, had degrees from London University, and used a name that sounded neither Chinese nor European. Her real name was Cheng Vi Ling. I had been born in Los Angeles to Norwegian parents, could barely manage conversational Norwegian, but had been instructed to speak with a Norwegian accent during interviews. As flight engineer it was my job to repair anything that broke or failed.

Pyotr's family had fled to France with all their money in 1917, but he was considered to be Russia's representative. He was also our physicist, and although his name was Pierre, he had been renamed Pyotr. The media feeds insisted on referring to our xeno-geologist as the African ambassador to the galaxy, even though Janice came from New York and had only ever seen Africa from space. She was the tallest member of the crew, not that it was noticeable in zero gravity.

The *Wayfarer's* original captain had died a month before the launch, when a car left the road and annihilated the sidewalk café where she was drinking her morning coffee. Her replacement, Walker, had ancestors who fled to San Francisco from Mexican authorities in 1848 and found enough gold to buy a new identity and settle down. A dozen generations later, that made Walker the Hispanic component of the crew, yet he had never been south of the Mexican border. He was also a skilled civilian test pilot, and this was good as far as I was concerned.

We had not been chosen as a high-powered team—in fact we had been selected on the basis of compromise. None of us had any sort of military background, and this was also quite deliberate. If there were aliens at Eureka, having a trained killer in the crew might create the wrong impression. One commentator said we were like a bunch of post-graduate students who shared a dorm but had nothing in common.

Walker continued to supply his commentary as I eased the *Wayfarer* into an orbit between Eureka and Lunette, but he could not conjure anything like the drama of the *Apollo* landings. Both of the tiny chunks of Mars had negligible gravity and no atmosphere, so everything happened at a leisurely pace and with absolutely no sense of danger.

"We have an anomaly," I remarked to Tori after shutting the engines down.

"Same as last time?" she asked, with no real interest.

"Same as. Our velocity changed too slowly."

"So we have more mass than we ought to?"

"That's it. By the look of the torsion vectors, there's about a ton of excess oxidant in tank 4. After the previous burn Mission Control said it was an instrument calibration problem."

"So nothing to worry about?"

"Apparently not."

Tori leaned closer to me.

"Any sign of the Elf Zone?" she whispered.

"Absolutely nothing."

"I think it's just a glitch in *Wells 3*."

"I do too, but it freed up the funds to get us here."

* * *

With the broadcast to Earth wrapped up, the five of us gathered in the command module for a briefing that nobody needed, except to make sure that we were all on the same page.

"So here we are, nowhere near Mars," said Walker, his voice now less upbeat because he was no longer playing to the media feeds. "From now on nobody but Erik and myself will broadcast to Earth on any channel. Understood?"

Heads nodded and thumbs were raised.

"*Wells 3* showed us that Eureka has properties that may be artificial," he continued. "Everything electrical shuts down within five hundred yards of the surface, and our first mission objective is to check whether living things can survive whatever field surrounds Eureka. We then try a landing on Eureka's surface. If we find an alien artifact, it's medals all round."

The official term for the inexplicable field was Eureka Anomaly Radius, but Mission Control preferred us to call it the Elf Zone to make the whole idea of aliens seem like a joke. We were cool with that. Elf Zone was less of a mouthful.

"After Janice, Pyotr, and myself have landed on Lunette, Tori and Erik will launch Rat Alpha in a carrier pod. It will travel in an elliptical orbit that dips into the Elf Zone for a few minutes. If the rat survives, we will try again with me."

We had several rats and had discussed giving them human names, but had decided against it. If the unknowable and unthinkable happened to Rat Alpha, it would not seem like a human was the victim.

Two oppositions earlier, *Wells 3* had visited Mars Lagrange Point 5. Lunette seemed to be a snapshot of the surface of Mars as it had been over four billion years earlier, when some cosmic impact had blasted it into space. Then the probe had fired its thrusters and edged across to orbit Eureka—and made a discovery beyond the wildest dreams of its builders.

Wells 3 went silent. Absolutely silent. As far as anyone could tell, it had suffered a catastrophic power failure, yet hours later the probe's signal returned. At first a systems glitch was blamed, but the outages continued. It was in an elliptical orbit around Eureka, and soon someone noticed that *Wells 3* was shutting down whenever it came within five hundred yards of the asteroid's surface. Something about Eureka closed down everything electrical.

Just six hours after arriving, we watched as Janice, Pyotr, and Walker pulled away in *Ariel,* the landing craft. Again, coverage of the landing was being transmitted to Earth, along with Walker's commentary.

"Apologies to those who have heard all this before, but it's a good time for a recap," he said. "We are going to explore Lunette first. Both asteroids are chunks blasted out of the Martian surface around four billion years ago–"

"So visiting them will be like traveling back in a time machine," muttered Tori, slightly ahead of Walker but matching him word for word.

Now that our audience on Earth was focused on Lunette, Tori and I moved on to the main reason for the mission. I attached Rat Alpha's carrier pod to a jet pack with a radio control unit, then launched him into an elliptical orbit around Eureka, one that dipped a few yards below the Elf Zone's boundary. The *Wells 3* probe was still orbiting Eureka, dipping in and out of the Elf Zone every few hours, still losing power, then coming back to life.

Right on cue, the absolutely unknown snuffed out the telemetry from Rat Alpha's pod. There was no drama, no flash of light, and no portal displaying strange stars. The pod remained visible, and radar signals bounced off it.

"That confirms what *Wells 3* discovered," I said, stating the blatantly obvious for the lack of anything else to say.

Even with the very best of human technology, we could not tell whether Rat Alpha was alive or dead. The pod was chemically heated and the oxygen supply had no electronics or moving parts, but the rat had to survive more than a power supply failure.

"Brains and hearts work on electricity," said Tori, giving our worst fears a voice.

"Schrödinger's rat," I replied. "Just now he's neither dead nor alive."

"Do you ever wonder about us?" she asked after some moments.

"You and me?" I asked, genuinely surprised.

"No, the whole crew. We're a bunch of highly skilled nobodies, not interesting to anyone except family."

"I'm cool with being nobody," I said, truthfully enough.

"Soldiers parachuting into a war zone are nobodies. Nobodies are easy to forget if they get killed."

"Do you know something that I don't?" I asked.

"No, but I have a feeling that it's more dangerous out here than Mission Control is telling us."

The laws of planetary motion established by Newton and Kepler were operating normally at Eureka, so Rat Alpha's pod emerged from the asteroid's Elf Zone after half an hour, right on schedule. The electronics came back to life at once, and the cameras and telemetry showed the rat to be alive and apparently in good health. I reported this to Mission Control, linked into the pod's remote systems, fired the jet pack and guided the pod back to the *Wayfarer*. Once Rat Alpha was back aboard, Tori checked him for everything from glucose levels to cell damage, but he was textbook healthy.

In the meantime Walker had piloted the *Ariel* to Lunette, stepped out onto the surface, and said something profound. Janice and Pyotr then got out and began doing real science. Within a few hours Janice had made some genuinely impressive discoveries about conditions on early Mars and had found a fossil coral. Pyotr's micrometeor impact analysis confirmed what everyone had been hoping. The impact that had blasted Eureka and Lunette clear of Mars had indeed been over four billion years ago, when the planet had extensive, well-established seas.

That first trip to Lunette lasted just ten hours. By the time the lander returned, Tori had conducted a more thorough examination of Rat Alpha, but found nothing to indicate that he had been changed in any way at all. I sent videos of him back to Earth. Before long he had an online fan club of two million.

When there is a seven-minute time delay in transmission, media conferences have to take the form of media releases. Janice and Pyotr were the stars of this particular event. The coral from Lunette was composed of biogenic silica instead of calcium carbonate, and was like nothing that had ever evolved in Earth's oceans.

Tori acted as host. According to Mission Control, the more Walker talked, the lower his approval rating dropped with viewers, but Tori was screen friendly. Janice's discoveries were fascinating, but she tended to focus too much on trivial details. Tori had to coax her into describing the big picture.

"Your turn, Pyotr, and I'm sure the whole of Earth wants to know if you found any interesting physics on Lunette," said Tori after Janice's ten minutes had run out.

"Interesting, yes, explainable, not so easy," said Pyotr, in an accent that sounded more French than Russian. "Analysis of the samples confirms that four billion years ago some object struck Mars with about the energy of Earth's dinosaur-killer asteroid. It knocked Eureka and Lunette into space, where they drifted away to Mars Lagrange 5."

"That sounds plausible," said Tori brightly.

"Maybe not so plausible," said Pyotr. "Can you explain, Janice?"

"Automated probes have not found the right sorts of residues on Mars. Asteroid impacts leave a planetwide layer of dust with quite characteristic chemical signatures. Mars had seas back then, so there should be a layer of sediment made from pulverized asteroid."

"So not a meteor," added Pyotr.

"Are you saying it was something artificial?" Tori prompted. "Maybe an alien spacecraft, Pyotr?"

"Hard to say. Perhaps it was made of dark matter or pure energy, something that left no residue."

"But something survived and became the Elf Zone."

"Yes. The thing could have hit Mars so hard that part of the surface got forced inside it. That's what we call Eureka."

He turned and gestured to an image of Eureka on the screen behind him.

"And all this happened four billion years ago?" asked Tori.

"Give or take, yes."

"And it's still working, even though its creators vanished while our ancestors were still microbes," said Janice, her enthusiasm barely held in check.

"So what is it?" asked Tori.

"If I had to bet, I would put my money on space junk," said Pyotr. "Very advanced space junk, but still space junk."

Once the interviews were over, Tori and I gave Walker a briefing on Rat Alpha's adventure. After working for him for nine months I found his reaction predictable, if a bit disappointing.

"Don't get me wrong, but can you imagine the military implications of whatever is on Eureka?" he asked us.

"Everyone can, sir, that's why the Russians and Chinese are launching *Firebird* and *Dragon* next Mars opposition," said Tori.

"This could be the end of weapons of mass destruction," said Pyotr, a trifle too hopefully. "They all use electronics."

"So viruses with tweaked DNA could become the new weapon of choice?" asked Walker.

"No way," said Tori. "If the enemy can shut down our electron microscopes, we're not going to be able to weaponize viruses."

"Then we might go back to wars with guns and edged weapons," said Walker.

We are stepping into a new frontier, yet we are discussing how to continue killing each other, I thought. *Is there any hope for humans?*

"So we're clear for me to fly into the Elf Zone next?" Walker asked.

"More or less, but first we should send Rat Beta into the Elf Zone for comparison," said Tori.

"That would take another half day! The mission's media profile is not doing too well because everything is too scientific. Soon the weather reports will be getting more viewers. If only we could hit a glitch, just for a bit of drama."

His tone was jocular, but the words still worried me.

"We're in space, sir," I replied. "All glitches are dangerous."

"Yeah, I know, but people only remember *Apollo 13* because something blew up."

"The astronauts nearly died."

"You're right, I suppose, but . . . but don't you think this whole expedition is really unfair?"

"Unfair, sir?"

The rest of us used first names, but Walker was captain and he liked to be called *sir, Captain,* or *Captain Walker*. He did not make an issue of it, and the rest of us were happy enough to play along.

"This is the most momentous voyage in the history of space travel, yet a football game would get a bigger media audience."

"Asteroids are not great screen spectacle," said Tori.

"If only Lunette and Eureka looked interesting."

"Eureka does have the Elf Zone," I said.

"The Elf Zone is invisible," said Walker with a theatrical sigh. "People only remember things that are spectacular and glorious."

To me this was not a problem. The job statement of the flight engineer is all about keeping the equipment working. Glory always involves risk, and I don't do risk. Spectacle? My idea of a great spectacle is an instrument panel full of green lights.

My sleep cycle was overdue by then, and I am meticulous about getting the scheduled amount of sleep. I could not afford to make mistakes, because the ship kept us alive, and I maintained the ship. I woke to learn that Walker had spent the previous eight hours reading the social media feeds that Mission Control sent us. This turned out to be a bad idea. His first footprint words were polled at just over five thousand likes, but my photo of Tori holding Rat Alpha polled five million.

"The rat is a thousand times more popular than me," he said as I floated over to the command console.

"Public opinion is pretty fickle, sir," I replied, "and a lot of those votes were probably for Tori. She's seriously glam and the rat is cute."

He did not seem to hear me.

"I stood on Mars as it was four billion years ago. I was the first astronaut to travel through time as well as space."

"Some people have no sense of occasion," seemed like the right thing to say.

"Even Janice and her fossil worm got a million likes."

"It's actually the silicone exoskeleton of a Martian coral."

He was flipping through images that we had sent to Earth. He glared at my photo of Janice holding a large, deep green olivine crystal. Mission Control had decided to auction it for charity, and by now the bidding had exceeded what the five of us could earn in a lifetime.

"Only you are polling worse than I am," said Walker.

"Nobody wants to know about the flight engineer until something breaks, but I'm cool with that."

"Why does even Pyotr poll a hundred times better than me?"

"He has aristocratic Russian ancestors and a charming French accent. He's a scientist, too. Smart is sexy."

"I can't believe that all this is not getting to you, Erik. Don't you feel resentment?"

"I'm an engineer, sir. We make sure things work and hold everything together. But my daughter always votes for me."

"And your wife?"

"She said it was Mars or her. I pointed out that I was actually going to Mars Lagrange Point 5, but she still filed for divorce."

That seemed to resonate with Walker.

"It's so hard to be a hero. Mission Control should be promoting us as heroes, but . . . we're like the crew of *Apollo 10,* destined to be one of history's footnotes, doomed to be forgotten."

I had heard all this before, and by now I was tired of hearing it.

"Have you heard of Tommy Flowers?" I asked.

"Who?"

"He was an English engineer who designed and built Colossus, the world's first programmable electronic computer. It was used at Bletchley Park during World War II for cracking Nazi communication codes. After the war the British kept it secret for decades while the computer industry grew and other people got the credit for being IT pioneers, but Flowers knew he was first. He died in 1998, and by then the world was being run by computers."

"But that's terrible! He should have sued the government."

"Why bother? He died knowing that he helped change the world. I get that."

This was apparently beyond Walker's comprehension, but he called up the entry for Tommy Flowers and Colossus from the *Wayfarer's* data files and read the text carefully. I could not help noticing that he kept shaking his head in disbelief and sighing.

"How long to configure *Ariel* for retro mode?" Walker asked suddenly.

"About half an hour, less if Pyotr helps."

"Then make a start. I'm ready to pilot *Ariel* into the Elf Zone."

"But Tori hasn't finished her higher brain function tests on Rat Alpha. The field's effects may be like radioactivity—slow but deadly."

"There's such a thing as too much caution, and I'm not going to be treated like Tommy Flowers. I'm going to take the lander out. Now."

Can one feel one's heart sink in zero gravity? I definitely got that feeling, but orders were orders.

"Mission Control won't like it," I warned.

"Mission Control is seven light-minutes away."

"Tori won't like it either."

"Erik, worst outcome, we only lose one life. I mean hell, anyone can act as captain."

On this mission, retro-mode meant that some equipment could operate without electric power. Pyotr helped Walker into his retro-suit after we reconfigured the lander to work in both retro and electronic modes. It was chemically heated, had chemical lighting, and supplied oxygen from tanks with mechanical valves and gauges. Walker fired the *Ariel*'s thrusters, dropping the lander into an elliptical orbit.

"In a sense he's a good choice," said Pyotr as we watched the lander pulling away from us.

Pyotr had a way of seeming relaxed under any circumstances. Tori and Janice were somewhere between alarmed and exasperated.

"Walker?" Tori exclaimed. "He's as flaky as a granola bar."

"True, but all he has to do is be a human. Erik can pilot the ship, and the rest of us have real jobs, too."

"So Walker makes the first step into the new frontier because he's surplus to requirements?" asked Tori.

"Yes."

"But what's in it for him?"

"Glory."

"Glory?" Janice exclaimed, her amiable manner cracking as she stared at the departing image of the lander on the screen. "Going where a laboratory rat has already gone?"

"Joking aside, do you have any orders for us, Erik?" said Tori.

"Me?"

"The moment Walker stepped off this ship, you became acting captain."

Until then I had always been the deputy whatever, the committee member with

vice or *assistant* in front of his title, or the expert from the back room who did not even have a title. It had been my job to sit among highly paid people, smile pleasantly, nod, explain why some expensive device had exploded, or to advise others about what to put in the damage report. Now I was in charge, and I suddenly understood how leaders felt if something went catastrophically wrong. I would have to give explanations in front of rooms full of important, unsympathetic people, while video cameras and bio-monitors recorded my every pulse, twitch, and hesitation.

"*Ariel,* you are approaching the Elf Zone boundary," I told Walker as I monitored him from the command desk. "Radar estimate is ninety-five feet."

"I don't see any elves," he replied.

"We're not expecting any. Ninety feet."

"But this is where the magic happens," said Walker dreamily.

Alarms rang within my mind as I scrambled to think of a suitable reply.

"Magic is just unexplained science, sir."

"That's good, I forgot to pack my wand."

What the hell will Mission Control make of this? I thought. *Is he just keeping the tone light or is there a problem?*

Inside the Elf Zone there was no functional electricity, but there had to be some sort of field there. What would Walker be exposed to? He might be like a nineteenth-century scientist handling rocks that gave off heat, without realizing that dangerous radioactivity was providing that heat.

The radio comms to *Ariel* dropped out as it entered the Elf Zone, and I switched to our laser link. This gave us one-way communication with Walker, because the sound waves of his voice generated minute vibrations in the hull of the lander. The laser detected those vibrations.

"He will skim just below the boundary for about ten minutes then rise clear," I told the audience on Earth. "If that goes okay, he will fire the engines again and attempt a landing."

"I feel like I'm approaching a very beautiful woman in a bar full of dangerous men," came Walker's voice over the laser link.

"What the hell?" exclaimed Tori.

"I might get myself killed, but something wonderful is about to happen."

We heard a loud clack.

"What was that?" asked Tori.

"Sounded like one of the four hatch fasteners being released," I replied.

Another clack.

"But he's not wearing a helmet," said Tori.

"I know. That would muffle his voice for the laser link."

I was tempted to cut the radio link to Earth, but that would have resulted in a deluge of conspiracy theories.

"Samson," said Walker.

"What is that supposed to mean?" demanded Tori.

Another clack.

"Samson."

"Erik, hit the remote override and take control!" cried Tori.

"He's still in the Elf Zone. No electricity means no remote override."

"Samson."

Clack.

Over the laser link we heard a loud hiss that quickly dwindled into silence. Absolute silence. Pyotr zoomed the telescopic image up to maximum. *Ariel*'s hatch was hanging open.

"What the hell just happened?" asked Tori.

"I think the retro-lander had a hull breach," I replied.

"Was it the Elf Zone?" Janice said in a whisper that was both a statement and a question.

Nobody answered.

"What do we tell Mission Control?" I asked.

"I think you are meant to decide that, Captain."

Captain. I was definitely not in my happy place. I keep things running, I do not do policy or make hard decisions. Suddenly I was in charge and people would do whatever I ordered, not because it seemed sensible, but because I said so.

At last my nerve cracked and I shut down the radio link to Earth.

"Mission Control is seven minutes away at the speed of light, and we need to work out what just happened quickly, face to face, or there's going to be mass panic on Earth. Tori, as medical officer you have seen Walker's files."

"I have, but revealing anything Class A-Restricted without life-and-death justification is a career breaker for the authorizing officer."

"Technically, me."

"Well, yes."

"Walker is dead, and we don't know why. I think that qualifies as life-and-death."

"But—"

"The rest of us may be at risk and I have responsibility. Did Walker have a psychosis?"

By way of reply Tori produced a data drive and released it to float before her.

"He had problems," she said, folding her arms.

"There can't have been anything serious or he would never have been given command," I said, stupidly as it turned out.

"Sorry to disappoint, but they looked serious to me."

"Can we have an executive summary?" I asked

"How about thirty gig of really graphic spy camera videos of his wife conducting relationships with other men?"

She tapped the data drive and it floated across to me.

"I'll take your word for it," I said, and tapped it back to her.

"But it's important to understand Walker's—"

"Neither Janice nor yourself have shown any interest in me over the past nine months, and that points at two more years of celibacy. Watching erotic videos will not help me through that."

Neither Janice nor Tori were inclined to comment.

"It's okay, I know," I said. "Engineers are boring until something breaks. Pyotr, Tori has some videos that need a second opinion."

"I'll pass," said Pyotr.

There was another short, awkward silence.

"Is this something I should know about?" I asked.

"A gambling agency has a lot of dollars wagered that various combinations of the crew can't stay celibate for the entire voyage," said Tori. "We have logger implants that keep track of, er, erotic arousal."

"I don't have an implant," I said before I could stop myself.

A third, even more awkward silence followed. Still, that did explain a lot about interpersonal relationships on the *Wayfarer*.

"Story of my life," I sighed as Tori put the drive away. "Getting back to Walker, Psych Eval gave him a clean report, even though he was having extreme domestic issues. That doesn't make sense."

"The content of the video files is pretty salacious," said Tori. "I'd say someone left them in the operational folder and played them back occasionally for a giggle. Whoever it was then forgot to delete them when the ship's database was uploaded."

"So the agency was spying on Walker's wife?" Pyotr asked after yet another ten-second silence that seemed to last about an hour.

"According to the metadata, it was Walker doing the spying," said Tori. "Psych Eval just hacked his laptop."

"So Psych Eval knew that he knew."

"Yes."

"And they still made him captain? That's ludicrous!"

Tori just shrugged and spread her hands.

"So why did he suicide?" asked Pyotr. "This was his dream come true: first human into the new frontier."

"He still had control of his voice, so that rules out alien mind control," I said.

"That's right, and he said the word *Samsonite* three times," said Tori.

"Samson, not the luggage," said Janice. "Samson was a biblical superhero who pulled a temple down to destroy his enemies. A sort of suicide bomber without the bomb."

"Do you think he forgot that his helmet was off?" asked Pyotr.

"Would you?" I asked, then let them think about all that for a few awkward moments.

"His actions look absolutely deliberate," said Tori. "If he was able to speak, he must have been in control of the rest of his body. Psych Eval should have flagged any predisposition to suicide."

"Yet they did not," said Pyotr.

"Maybe they knew about the symptoms, but ignored them," I suggested. "Does anyone have observations of his behavior they would like to share?"

"He kept hinting to me that his marriage was in trouble," said Janice. "I thought he was just hitting on me."

"Thirty gig of spy camera videos say he was telling the truth," said Tori.

"To me he seemed very approval conscious," was Pyotr's contribution. "He once asked me if the thought of my wife with another man was humiliating."

"What did you say?" asked Tori.

"I told him I was not married."

Now it was my turn.

"He told me that *Wayfarer* was like *Apollo 10,* which made the trip to the Moon, but did not land there. His feeling was that nobody would remember our mission because we didn't land on Mars. We were doomed to be forgotten."

"That hints at undiagnosed narcissism," said Tori. "Okay, my turn. Walker's profile looks bad. Failed marriage, weak leadership skills, no prospects of being the first to land anywhere important, and that's just the highlights. Add narcissism, and that would have put him in a very fragile state of mind."

"I'm hearing this but not believing it," I said. "My daughter would have been a better choice for captain, and she's twelve."

"Yet Walker was selected," said Janice. "Why?"

I was beginning to guess at an answer to that question.

"He once asked me if I wanted to be remembered like Columbus," Pyotr recalled. "I told him that after I was dead I would not really care. Another time he said being first was not good enough when it came to being remembered. One had to be first at something truly memorable."

"Like being the first human killed by aliens?" asked Janice.

"That would qualify."

"Anyone else?" Tori asked

"How many dozen alarms would you like?" I asked.

"Give us the worst."

"He said he wished we would hit some sort of glitch."

"That's insane, we're in space," said Pyotr. "Glitches kill people."

"His theory was that we only remember *Apollo 13* because the command module blew up."

"And he still got past the psych evaluation committee?" said Tori, pinching the bridge of her nose. "What were they smoking?"

"Call me paranoid, but maybe he didn't," said Pyotr.

"What do you mean?"

"We humans have a history of putting narcissists and psychopaths in charge. They can inspire confidence and seem strong, attractive leaders, even though they are useless."

"Then why did he commit suicide?" I asked.

"To be a hero, to look great, to be remembered as the first human who died fighting aliens."

"Plausible," said Tori. "He died in the Elf Zone, so his death might seem like a warning that saved the rest of us. People would remember him and think *Hey, what a great guy!* Anything else?"

"He made a point of saying *Samson*," I recalled. "He said it three times."

Nobody had any theories about that.

"Maybe we should just send the facts back to Mission Control and let them start pointing fingers," Janice suggested. "I mean, *we* didn't appoint him captain."

"Should we even say it was suicide?" asked Tori.

"Good point," I said. "Best to tell them that he said *Samson*, then opened the lander's hatch. No more, no less."

"Some clown is sure to say it was alien mind control rays," said Pyotr.

"Maybe so, but we won't," I decided. "Tori, string some text together that describes the medical circumstances of Walker's death. It's a pity we won't be in Mission Control to hear what the pigeons say when we release the cat."

We floated into the galley module for a meal that was more or less lunch.

"Four billion years," I said as I added hot water to a paste that was supposedly miso soup. "Could some of the aliens from that thing have survived?"

"After four billion years they would be very short of groceries," said Pyotr.

"Maybe a machine?"

"Machines are like animals, they break down and stop working if you wait long enough," said Tori. "Cosmic rays, embedded radioisotope contamination, they all cause damage that adds up after even a few thousand years, let alone billions."

"The facts keep saying that Walker was definitely in control when he said all that strange stuff," said Pyotr. "I mean, why Samson? By itself and away from any context it's meaningless except as a prearranged codeword."

Even as he was speaking, the facts suddenly clicked together in my mind.

"That's it," I said softly, making a conscious effort not to babble with terror.

"That sounds like someone having a good idea," said Pyotr.

"Walker was a narcissist, he wanted to be remembered," I said breathlessly. "He was given command of the *Wayfarer* by people who were able to spot every narcissist who walked into the interview room, so why appoint him? They *wanted* someone willing to sacrifice himself to save the world if Eureka turned out to be a threat."

"And he decided to save the world whether it needed saving or not," Tori concluded.

"How?" asked Janice. "He just suffocated himself."

"His last words were *Samson*, three times," I reminded them. "It was like he was making sure he got it on the record. Samson, the biblical strongman who killed himself to destroy his enemies."

"That doesn't compute, we're not his enemies," said Janice.

"He wanted to be the hero who saved the world, so we don't matter. There's one met-

ric ton of excess mass aboard *Wayfarer* that Mission Control keeps trying to laugh off. That's about the mass of a bomb big enough to destroy Eureka as well as us."

"A one-ton bomb?" exclaimed Pyotr. "Eureka is nearly a mile across, it would hardly make a dent."

"Not a chemical bomb, Pyotr. A hydrogen bomb. Walker was given *Samson* as a keyword. It's a word that's unlikely to be spoken unless . . ."

"Unless we encounter bloodsucking alien zombies," said Tori.

"No way!" exclaimed Janice. "Nobody in any position of authority believes that sort of crap."

"Have you ever looked at what our politicians have been saying on the conspiracy theory media feeds? Wild, crazy stuff gets votes."

Blind terror shut my brain shut down for a moment, but it came back in survival mode.

"We have been talking for nine minutes!" I cried. "Seven minutes for Walker's last words to reach Earth, seven minutes for the bomb's detonation code to reach us. Pyotr, prep the hydrazine engines. Tori and Janice, unpack the spacesuits and seal off the command module from the rest of the ship."

"What are you going to do?" asked Pyotr.

"Three minutes to jettison oxidant tank 4, then we run at full power."

"We'll have two minutes. Even at full power that will not take us clear of the blast radius."

"Just do what I say!" I shouted, or maybe screamed.

I calculated a new orbit as I jettisoned oxidant tank 4. The *Wayfarer* had several times the mass of the largest commercial airliner, so even pointing it in the right direction burned up too many precious seconds.

Entitled, powerful people with more influence than we had dreamed possible thought that Eureka might have to be destroyed if hostile aliens were discovered. If that also involved reducing us to radioactive plasma, hey, only five nobodies were involved. Offer Walker a chance to be the hero who saved humanity and he would jump at it.

Nine months ago, someone who was currently a very safe eighty million miles away had told Walker about the bomb and given him a keyword: *Samson*. That made me very angry, and with anger comes strength. I fired the engines, but in my mind I was already firing a barrage of missiles at those entitled, powerful people.

Everything aboard that was not tethered or fastened down tried to remain in the same orbit while the spacecraft set off in a new direction. It was not a substantial change, but a very significant one. After counting out some hastily calculated seconds at full thrust, I shut the engines down.

"Dropping toward the boundary!" I shouted, feeling that as captain I should shout something. "Three minutes."

"The Elf Zone?" exclaimed Pyotr.

"Yes!"

"We should have taken the bomb with us, the Elf Zone would have shut down its electronics."

"That's not the point. Everybody, into your suits and switch to retro-mode in case there's a hull breach when it explodes."

"The detonation code will reach us in a few seconds. What good is reaching the Elf Zone suited up if we're radioactive gas?"

"Humans are not machines. Right now people on some oversight committee will be thinking about what happens to their jobs, bonuses, and reputations if they send the code."

"If they're military they will be trained to make quick decisions involving deaths."

"They think they have plenty of time, they don't know we're running for the Elf Zone. This is the biggest decision any of them will ever have to make, and they will be careful about it. Get into your suits. Now!"

The fourteen-minute deadline came and went. Destroying the *Wayfarer* meant killing us, and the people in charge of the detonation codes would have been arguing about how they could justify their actions in a court of law. I knew that because we were still alive. Would they argue for another three minutes? While two more absolutely interminable minutes dragged by I tried to think of anything else that needed doing.

"Are we dead yet?" asked Pyotr.

"Maybe we were wrong about the bomb," said Tori.

"Is anyone worried about what the Elf Zone will do to our bodies, especially our brains?" asked Janice.

"It did nothing to Rat Alpha," said Tori.

"How do you know? Did he write a report? Anyway, what about Walker?"

"Trust me, he was just a psycho."

At seventeen minutes, electrical power shut down abruptly, but in retro-mode our suits had chemical heating, and mechanical valves supplied our oxygen. I cracked a chemical light stick, and three faces turned toward me in the pale blue light. I gestured for everyone to close up and touch helmets so we could talk without radios.

"We appear to be in the Elf Zone and in control of our bodies," said Pyotr.

"No idle chatter," I snapped.

"Idle chatter is needed," Pyotr insisted. "Does anyone else feel like they're in a bar full of alluring women and dangerous men? Does anyone feel like saying the *S* word?"

Silence.

"I think that proves Walker became the first suicide bomber astronaut," Pyotr concluded.

"Sorry for shouting you down," I said. "What else did you want to say?"

"We should have set the *Wayfarer* spinning, then dropped the tank. Angular momentum would have flung it into the Elf Zone where the bomb's electronics would not work. By the time its orbit took it out of the Elf Zone again, we would be thousands of miles away."

"Good plan. It might have worked, but we're stuck with my plan."

"What is your plan?" asked Tori.

"No time for talk. Pyotr, can I have an estimate on the tank's distance?"

"Maybe three hundred meters."

"So about ten thousand times less than is safe."

"So now what?" asked Tori.

"Friends, colleagues, I wish to take this opportunity to—"

Brilliant light flooded in through the portals. Amazingly, nobody screamed or cried out. Moments later it faded and continued to fade until the blue chemical light sticks were again the only illumination.

"We're alive," said Tori.

"How?" Pyotr asked.

"The Elf Zone," I said. "It's shielding against collisions with interstellar dust at near light speed. Anything that could survive an impact hard enough to knock a cubic kilometer of Mars out to Lagrange Point 5 is not going to be bothered by a crummy hydrogen bomb."

The moment we rose above the Elf Zone, the power was restored. Lights glowed red or blinked on every control panel, and alarms blared, buzzed, or announced problems in urgent, artificial voices. Before long we had the air circulation and purification sys-

tems functioning, and electric heaters began taking the edge off the temperature. I fired the engines and put us back into an orbit just above the Elf Zone.

For a time we just floated about, appreciating things like warm air, light, electronics that actually worked, and being alive.

"Should we report back to Mission Control?" asked Pyotr. "I mean, they must have seen the flash."

"Let them suffer," muttered Tori.

"Yeah, and after what our fellow humans tried to do to us, I'm not even sure I want to go back to a planet full of them," said Janice.

"Greedy, selfish, violent, cheating, oversexed monkeys," muttered Tori.

"Our world runs on greed, violence, and deception," said Pyotr. "Were you not aware of this?"

"Unless anyone knows where else we can get food, oxygen, water, and spare parts, we're stuck with Earth," I reminded them.

"Speaking of Earth, why didn't the alien probe go there first? Surely it was a better prospect than Mars for studying the local wildlife."

"Four billion years ago biological life was more advanced on Mars than on Earth," said Janice. "It made sense to go there."

"And now this thing is still trying to gather data for its creators, who are probably extinct," I said.

In silence, we thought about that for a time.

"Maybe not," said Pyotr.

"What do you mean?" I asked. "It's still working."

"Its shielding still exists, the same way a dead satellite with a radioisotope thermoelectric generator is still a bit radioactive. That probe's structure cancels out electricity, don't ask me how. I'm only an oversexed monkey with a PhD."

"So what do we do?" asked Tori.

"We type up a politically inconvenient, unencrypted report about what just happened, then we send it to Mission Control and anyone else with an antenna pointed in this direction," I decided. "There should be quite a few after the bomb went off."

My report announced that we had discovered and disposed of a nuclear bomb on the *Wayfarer,* and that our psychotic captain had died while trying to detonate it. I added that the Elf Zone appeared to be just very old, but highly advanced alien wreckage.

When Mission Control finally got back in contact, we were told that a large number of important wrists were in handcuffs, and that public outrage was boiling over but on our side. So many heads of state, military leaders, and chiefs of covert agencies were lining up to apologize to us that I had to assign one of the *Wayfarer's* AI systems to handle the replies.

Now we have returned to our original mission. Once we recovered *Ariel,* Tori found nothing out of the ordinary during her postmortem of Walker. Rat Alpha continues to be a normal, healthy rat. We are using the lander in retro-mode to explore the surface of Eureka. I doubt that we will find anything that humans can recognize.

When the orbital dynamics of Earth and Mars allow it, I shall fire the *Wayfarer's* ion engines and start us on the journey home. When we return, I hope to do a speaking tour, pointing out that we humans have made an absolute shambles of our first encounter with evidence of aliens. Luckily for us, no aliens noticed, but this has flagged a serious and fundamental problem for humanity. Eventually we will come into contact with living sentients who have very advanced technology, and the human race has a lot of growing up to do before then. Suicidal ambassadors armed with thermonuclear warheads create a very bad impression. ❍