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Coadjuvancy

It just felt right. The light, the gravity, the oxygen level, the scents ... Anichef could feel it in his very bones. Apparently the legends *were* true. This was the ancient home world. And yet ... To be called home there was one ingredient missing. He was the only human around.

Were the Temmi trying to play a trick on him? That was not their nature. Simply out of reflex he checked his environmental kit. It confirmed what his own senses had told him, that the world was perfectly suitable for his body. No need for an oxygen booster, histamine regulator or even letting his legs adjust to the gravity. He slung his gear over his shoulders and walked towards the transportation hub. Not rolling, not leefing, but simply walking.

The station was half hidden among the green, which flooded over it and itself in an abundance that topped even Gunathar III. Trees, defying the gravity, rising high and spilling outward with branches that buckled under the weight of leaves, drooping vines and thousands of fruits of several kinds. He also spotted colorful specks that seemed out of place, but then he remembered the bio-briefing. They were pollinating structures ... 'flowers' was the name. Pretty little things. Some longing rose within him. He wanted to run into that forest, to feel the moss on the ground, smell the wood, hear the calls of the birds. It was intoxicating and unsettling at the same time.

Only when he entered the station, with its sleek Hniftallian fiberwalls, the familiar octocolors and the broad water tubes, did he feel in his element again. He checked the train schedule. The first one would be leaving in seven and a half ... 'hours'? His data unit converted the number. About three *terze*. That was plenty of time to kill. He strolled to the cafeteria, which was run by an Ochttalmiad. It did most of the work by hand, or rather tentacle. They were equipped with temperature and chemiccal sensors that were just as good as mechanical ones. The food didn't look Ochttalmiadan though. Probably local chow. Strange to put a biological cook in a cafeteria who was not native. But as an experienced traveler he was used to eat whatever was available, so ordered a couple of dishes that looked palatable and attacked.

The food proved decent, though a bit bland. While he sated his appetite he checked his data unit again. As was to be expected, there was a awful lot of information to go over. None of it was labeled important, so he just browsed the summaries. Even those the Temmi managed to stretch into long, meandering ramblings that never seemed to get to the point. The Marith always joked that the universe would never die because it would have to wait endlessly before the Temmi finished commenting on the event. In the data there was mention of urgency, risk category 5, geological expertise required, blah blah blah. Nothing new. He became drowsy and sought a bunk to get some sleep.

He awoke on the first beep of the data unit, muscles taut and ready for action, then relaxed because he remembered where he was. The arrival of the train was only a few centesimi away. He washed his face and waited for it to arrive. The only other passengers were/was a group of Eqqi, swarming and swirling in a dense cloud as usual. He avoided them/it and looked for a suitable seat. There was none that fitted human anatomy properly, so he sat down on a plank.

The train whisked away, at first underground, soon above. Again he marveled at the landscape, which now rushed by as in a vid. Thick forest gave away to a savanna that crawled over mellow hills, with larger mountains sitting dark and silent in the distance. He spotted many herds of grazing animals, light brown with large ears, and also some predators, gray-furred hunters with short snouts. All quadrupeds, no bipeds or hexapeds. He wondered if they were native, but was too lazy to look them up. The train plunged underground again, piercing the mountains. When it emerged once more into the sunlight the terrain turned to desert, sparsely populated by shrubs and large barrel-shaped plants. Though much dryer and hostile than the forest, it had a raw allure to it. Again it triggered a instinctive, irrational wave of empathy in him.

Then the train passed an area that was studded with thousands of stone cones rising up as high as hillocks. They were heavily eroded, and their branches were reduced to stumps, yet they retained some of their original rust-red color. Anichef recognized them immediately: fossilized remains of radcheks. Those were definitely not indigenous. Radcheks had tough cell-repairing mechanisms that could withstand substantial radiation and did more than that: they fed on it, sucking energy from the decaying isotopes. So this had been the scene of a nuclear spill, possibly conflict. He wondered why he had never heard about it. Conflicts with nuclear weapons were rare. And if it came to war, no order was more knowledgeable than the Marith.

It took the train about one *terze* to reach Anichef's stop. There was still a quarter of the distance to travel, but no trains went to his destination. There were no roads either. That was not strange. Despite their general

inclination to efficiency, Temmi disliked roads. So he claimed a medium size spider and hoisted himself aboard. Routine made him check its systems: navigation, locomotion, environment and of course weaponry. Low level stuff, enough to keep predators at bay, unless they were giants. He set off deeper into the desert, steering northeast. The spider went slow but stepped with confidence. The large legs worked together in a smooth ambling gait that left little work for the balancers to keep the cockpit steady. Now closer up, he wanted to see more of the landscape, yet the sunlight was fading. What the hell, he thought, 'urgency' is relative, I can afford to linger for a couple of terze. He parked the machine and bunked down for the night.

The water was freezing back into ice. He was up to his neck into it and literally cold to the bone. There was no feeling left in his fingers, toes, limbs even. His brain, becoming sluggish too, just managed to realize that his body was going into desperation mode, drawing the last remnants of warmth inside to his vital organs.

"You think that you have reached your limit?" his sister asked with a voice like a dagger. "You are just starting! You won't start suffering permanent damage for another ten centesimi or so. Remember, lad, here is where you will learn your limits."

But that was not something that his sister would say! She was such a gentle soul. Somebody else had said that. He could not remember the name. He tried to reply, but his own voice was disrupted by the clattering of his teeth. "I c-c-can't s-st-s-st and it anny m-m-m-ore!"

His shivering and chattering of his teeth became so uncontrollable that his very vision start shaking too. The pale sunlight reflecting off the ice seemed to swell until it filled his entire vision. Then it shrunk again, all the way to the half-angry ball red dwarf of fire that was Halliniki's Star. Mesmerized he watched the ember dragons whirl through the corona in their mating dance, flaring up in vermillion and oregon blue, taunting, teasing, feinting and falling back in tireless play. Gods, the raw beauty of it! Even the assaulters, roughnecks that they were, had stopped their usual jabber and stared in awe. A man could drown his thoughts in that display.

His reverie was broken by a short jab in his side.

"Oy! Don't you doze off!" the pilot yelled.

He was in the second seat. It smelled like old leather, mixed with acrid stimpuff. Familiar smells, supported by the familiar roar of heavy engines. The flyer soared over the vast vetch field, stretching all the way to the horizon, stems waving in the wind like the hair of a forest nymph who had no end.

"It's official, oxygen level has reached 1%!" exclaimed the pilot. "When we land, do you want to try a run? Augmented of course, but that 1% will determine the outcome."

A Marith never backed away from a challenge. He turned to shoot a witty remark back, yet nothing came to mind. For some reason the pilot was not human but a Haikelledant. What would a Haikelledant be doing in a run, Anichef asked himself. It doesn't even have legs. Then it occurred to him that Haikelledants did not have arms either. How did it control the flyer then? The problem kept nagging him, while the flyer roared over the vetch, which seemed to stretch forever.

Meanwhile the window to his front had faded to a vague oval. Somewhere in the back of this mind he realized that he had just woken up. He was still completely fuzzy and disoriented, unable to determine if the circle in front of him was a mirror, a porthole or a tilted basketball ring. Had he really woken up? Usually you know when you are dreaming, even though you cannot control the thoughts, no matter what you try.

It was a door window, he decided. He pushed against the door and it swung open with a brief but loud hiss. He staggered into the hallway, which was clean and smooth and completely empty. There was circle in the wall. A porthole. He gazed out, to a black emptiness filled with stars. And a yellowish-brown orb. Mayant IV! They had arrived at their destination. A whole new planet to map, to sample, to be prodded, to be walked on, to be felt. With uncharted areas, alien peculiarities, unknown opportunities, nameless dangers. Ha! The Marith would make it home. He started walking down the hallway, to the briefing room.

He awoke in twilight. Not evening, but dawn. He performed a brief morning ritual and set the spider in motion again. Bit by bit the landscape became once more green. He spotted hulking shapes in the distance, calm grays and dark blues. More mountains. The planet must be quite geologically active to have so many of them, he thought. The geologist in him blinked his eyes, interested.

Then spider strolled through an area that was different. Anichef spotted a pattern that was clearly not natural: a roughly rectangular grid with small mounds in the squares. On the outsides there were flat areas that were almost perfect circles. Remnants of an old civilization? Apparently one with an obsession for simple geometrical structures. Suddenly it dawned on him that if this was the home planet, that civilization

might have been that of his ancestors. He mused on the age of the ruins. Was this why the Temmi had summoned him? His expertise was geology, not archaeology. He called up maps on the monitor and studied them, trying to find more traces. Despite the wealth of information, it was difficult, because most landmarks were labeled with names that had been morphed and mellowed through the ages, until their origins had become lost in the mists of time. I should be a linguist, he thought.

While he was studying the terrain, the spider started veering to the south, away from his target. Puzzled, he consulted the map and saw that there was a large curving detour right in the middle of the otherwise straight path.

"Why?" he asked the brain.

"Restricted area," was the answer.

Restricted area! Another favorite theme of the Temmi. Protect this, preserve that, or shield it even if they were not certain what they were dealing with. The Temmi could never decide when they wanted rugged pristine wilderness or carefully composed environments, or a mix of the two. Though he had to admit they often came up with things that were dazzingly beautiful.

He wondered what it was that had to be protected here. No radchek cones, so it was not a nuclear waste like back in the west. Maybe some overspecialized species of plant that would grow only in certain soil and in a certain climate, and would perish when confronted with hungry herbivores. Or another ancient ruin, possibly in a state that would reveal more? He used the optical sensors to scrutinize the landscape. There was a visible barrier, a narrow barren strip of land to his left. By the looks of it, it was equipped with a double-edged blower barrier to keep out wildlife. So the shielded phenomenon was neither flora nor buildings, but fauna. His Marith heart bled a small tear. How pitiful for the animals inside, to be able to see the world outside but not be able to venture into it! He contemplated how fortunate mankind was, always on the frontier, never constrained.

Then he spotted some large shapes moving through the vegetation. At that large distance? Adjusted for the magnification they had to be huge, two or three zigs tall! In this gravity? He just *had* to see that.

"Steer towards the east," he told the spider brain.

"Unable to comply," it shot back. "Restricted area."

Damned bureaucrats! On a whim Anichef decided break their rule. They would punish him for it, but as they needed him, the penance would not be too severe. He unbuckled, ignoring the controls, which beeped alarm. He climbed out of his seat and opened the maintenance panel. As far as most travelers knew spiders were totally controlled by their brains. But Temmi would not be Temmi if they had not built in not one, not two, but three backup mechanisms. One of them was a manual steering control. Anichef, proficient with spiders across many worlds, brutally broke several circuits, rerouted another and made an improvised connection to his personal glove controller. The spider jolted to a halt, then resumed walking when he made the final patch.

Now in control, he veered right, straight towards the giant creatures. Up close they proved to be magnificent animals indeed. The largest were eight zigs long and two high, with thick short legs and long slender tails and necks. Their heads moved left and right over the shrubs like metal scanners, their teeth munching continually. In their wake they left a totally devastated flora, ripped apart and trampled.

The beasts eyed the spider wearily, but did not break formation. Anichef marveled at their size. This would be as large as animals could get in this gravity, at least on land. Again he pondered if they were native or not. Suddenly the giants did panic. Not because of the spider, but because of a predator! It broke from cover and rushed onto the scene, running on two legs instead of two. So there were bipeds after all. It had two puny forelimbs and was covered in a kind of feathery coat. It was much smaller than they, but had a massive jaw filled with dagger-like teeth. Then his pupils widened. The carnivore aimed not for the big grazers, but for the spider!

Bone against metal was possibly safe, but possibly not; those were very big teeth. He whirled the machine around and made it run off, back to the border. Now the legs could not keep the machine balanced, so he was bumped and tossed like he was riding a wild thefrit. The predator followed, keeping pace with thunderous steps. A chase! Sweet adrenaline pumped through his veins, while he surged around obstacles and over streams. Jump here! Sprint there! Knock a wood, do it good!

And again humanity won. He cleared the barrier with the beast just a few zigs behind him. Apparently it knew what it was, because it skidded to a halt and bellowed in frustration. Anichef smirked back at it, wishing that the animal could see his grin, knowing that in a way it did. He wiped the sweat from his brow. That was fun!

But he had to get back to business. Still on manual control, he steered northeast again.

The walk was sure to last several more terze. Despite its beauty, he started to get accustomed to the scenery. And a bit bored too. From his military training he had learned to get some sleep whenever possible, though now he was too well rested. What to do? He decided on something he seldom did: reading. He dived into the Infosphere. Right in front of him was his mission briefing again, but he ignored that. He bundled his keywords: Temmi, humans, planet, history. The wealth of information was overwhelming: news bulletins, research papers, commentaries, exploration reports, trade tables, meditations, 4D visualizations, activity logs, dott strings and more. Most had been written, drawn or puttoted by Temmi, a little by other races. The alien stuff was hard to read, as neither the Temmi nor the others seemed capable of writing coherent documents with a beginning and an end. Rather, they wrote pieces that linked to each other in endless associations, so one could lose himself in them without ever reaching a conclusion. He spent a quarter terze on a parody of bunch of Temmi who portrayed as Ochttalmiadi, concocting the most outrageous and over-complicated schemes to become masters of the universe, always failing.

Fun, but distracting. He deliberately narrowed his search, cutting off associating branches. Finally he found the text of the Earth Contract of 12.573.783.554.606, a massive legal document. There were hundreds of different versions of it, one for each ancient human language, and of course a Temmi version, without clear boundaries. He bit into an Interling translation, which still proved hard to digest. The writers spent several thousands words just to define the two parties involved, the humans and the Temmi. "[...] shall include Homo Sapiens, but excludes other species of the genus Homo, both ancestral and sibling. It shall include artificially created and genetically modified humans, up to a limit of 1.74% genetic variation on the Hknelli scale from the Na-!Kung benchmark. It shall include transmentals that manifest through biological, mechanical, aerial or otherwise physical and semi-physical means. It shall exclude non-Homo genera, both terrestrial and extraterrestrial. It shall exclude singular, non-special and unclassified beings, sentient, demi-sentient and non-sentient, both terrestrial and extraterrestrial, [...]"

He backed off and just skimmed the remaining part of the introduction. His concentration increased once more when he found the section that dealt with the task division. "[...] The Residential Party shall be responsible for the planet's ecological management; economical exploitation; population control; biological diversity; astronomical preservation within the physical limits of the planet in its current orbit. All until its sun leaves the main sequence, as defined in the Errky-Samahalavinedar-Grottkal Astral Quantization. This barring disruptive galactic phenomena, including novae and supernovae, transmutative solar orbital aberrations, flexiae and gamma-ray bursts and passages of rogue stars, but excluding solar flares, meteorite strikes and other local solar hazards, which are considered part of the ordinary local spatio-temporal flux. [...] The Exploratory Party will devote itself to scouting; establishing outposts; coping with emergencies; technological innovation; defense against aggressive alien sentient, demi-sentient and non-sentient races, beings, hives and other manifestations of life; frontier experimentation, prototyping and testing. [...]"

The document went on about detailing all those activities, but Anichef knew that part already; it was the normal line of work for the Marith. His attention was drawn to a large section about population size. "[...] The Residential Party shall limit its numbers on the planet to a maximum of 93,312 organisms at all times. The Exploratory Party shall be accepted into the Sentient Confederacy. In return it will completely and irrevocably evacuate the planet and convert to a nomadic existence among the stars. There it shall limit its numbers to 0.207 per habitable luzagh in its field of operation. The exodus shall be facilitated by the Federate Haikelledant Interstellar Shipping Enterprises and the collective Human United Space Administration, using materials from the solar asteroid belt to construct spaceships and planetary habitats. The operation shall be completed in six Earth-years time. Any stragglers, willful or accidental, are to be exterminated in another six years time, this being responsibility of the Residential Party. [...]"

Anichef frowned. This was not the story that was told among the Marith. In that tale humanity had willingly abandoned their ancestral home world in order to fully commit itself to its duty as space pioneers. The documentation was wearing him out. He wanted to ask the Temmi, though they would probably respond as elaborately, possibly even more.

But why did the agreement state that all humans had to leave? Why not leave some behind to man the base that was ultimately their home? He navigated from the contract to associated data. He found the summary of the Environmental Report, also drawn up by Temmi. It read like the twisted fantasy of a super villain from a comic story. "[...] total population is 9.6 billion individuals, currently growing at a rate of 5% per Earth-year. Humans are the top of the food chain, feeding themselves by eating both plants and animals. They make up 0.01% of the biomass, consume 4.66 egzhi of energy per Earth-year, occupy 41% of land and 5% of ocean surface. These portions are expanding at a rate of about 4% per Earth-year. The planet

faces a host of environmental problems, most prominently temperature rise from increasing greenhouse gases, biodiversity loss, global pollution, deforestation and soil degradation. Humans are aware of the troubles but are largely ineffective in tackling them because of their instinctive focus on short term goals rather than long term safety. The root cause of all their problems is overpopulation due to excessive breeding, which the race, unlike the other troubles, does not even consider to address. If left to their own, humans will degrade the entire planet to a wasteland within a few tens of Earth-years and cast themselves back to a level 4 civilization due to poisoning, famine, epidemics, exposure to natural disasters and war. [...]"

That was ridiculous. A level 6 civilization consciously tearing itself to pieces? Apparently the Temmi *did* have some sense of humor. He disconnected and turned back to his travel.

During the remainder of his journey the landscape reversed, going back to savanna and then forest, while the spider started to climb slopes. In the afternoon he arrived at what his map declared to be his destination. The building was a very solid trapezoid granite structure, the kind the Temmi constructed when they wanted it to stand for millennia. Camouflaged of course, as if it was just one more hill among many. Yet instantly recognizable to an experienced eye. He maneuvered the spider to the entrance, grabbed his gear and disembarked.

"Marith Pioneer Anichef, TZ67583004, Gohune Sector, reporting for duty." There was no reaction, but he knew sensors were active. He waited patiently while they scanned him for weapons, biological contamination, physical health and even mental state. After two centesimi the doors opened, their massive bulk swinging silently along smooth seams. Floor lights guided him inwards. He was allowed to refresh himself and then followed more lights to the briefing room.

The light here was a bright bluish glare, radiated by hard working unilamps. It was the light of Ghoro, the large young sun of the Temmi home world Tem. His nose picked up their scents too: salt and the rot of drifting woodweed. Anichef had never been to Tem, but every Marith knew their environment. They were the most common race in the Orzigf star cluster; it was hard to avoid them.

Six Temmi were present. Their flubby bodies floated in the their habitat lake. Some moved by squeezing water into brief jets; others lazily drifted about, feeding on plankton with their feeding tentacles.

Anichef walked onto a guest board, where a communicator had been set up. It translated the subtle light patterns displayed by the Temmi skin pigments into an approximation of human speech and vice versa.

"Greetings, esteemed managers," he said.

"Greetings, pioneer," the communicator replied. "We are pleased that the Marith were able to send one of their members on such short notice."

Indeed, summoning a Temmi would have taken much more, Anichef thought. "You were lucky that I was working in the Oart cloud, close enough to heed your urgent call. The ship used quite a lot of energy to get me here quickly. Now I am here, ready for action. What is the task at hand?"

"The sensors noticed that on approach to this location you violated Dinosaur Enclave 4 and came in conflict with a mapusaurus. This is a major transgression of environmental rules. Do you have anything to say in your defense?"

Stickling, already? Anichef improvised quickly. "I was investigating a possible threat to my spider."

"The briefing clearly indicated the presence, position and borders of the enclaves, the impossibility of wildlife breaking out and the prohibition of breaking in. Also, your body language indicates that you are lying."

Damned sensors. He did not reply.

"Disciplinary measures are under consideration and will be meted out after the mission."

After? They must be quite desperate. Still, he could face a fine, or worse, a demotion. Better to perform admirably during the assignment.

"As you read in the briefing, we are currently in the caldera of the hotspot super volcano that used to be known as Yellingstein in ancient English. The volcano has had three major eruptions during the last 2.1 million years, the latest one 78,000 years ago. It is about to belch again. The eruption will devastate the local region. The global ash fallout will lower temperatures significantly for several years, if not decades."

He should have read the briefing data more thoroughly. However ... They had not seen this coming? The Temmi? It had to be a major crisis. Now he started to sense what he had been called in for. "You want me to stop it?"

"Do not be ridiculous. Volcanic eruptions are common on this planet. Vital infrastructure, habitats and conservatories have been moved to the Eurasian continent, half of which has been kept empty for accidents

like this. Here, on this smaller continent, most plants and animals will perish and some sentient beings too. All that is temporary; life will recover."

"So what *do* you want me to do?"

"Gaian planets are rare in the universe, and gaian planets with active plate tectonics are rarer still. Our sensors have detected that recently a network of empty lava tunnels has sprung up under the volcano. With the pressure rising, they will not remain empty for long. This brief time window presents a very good opportunity to learn. We have not dealt with this kind of situation before and there has not been enough time to prepare properly. Our lesser sensor probes lack foreknowledge and are not flexible enough to respond to the rapidly changing conditions beneath the surface. So a sentient speleologist, equipped with the human expertise, is needed. You are to descend into the volcano, study the eruption and report back."

So no planet-saving. It still was quite a change from whisking through the vacuum of space and tunneling through dull dead asteroids. "Of course the risk involved more than offsets my minor transgression on the way to here."

"Disciplinary measures regarding your disturbance are unrelated to the current mission and will be meted out after it."

Anichef donned the environmental suit. It was quite different from the bulky space suits that he was used to. This model was smaller, thinner and built to cool rather than warm. Over the usual flexifoam it had a layer of countless microfans, protected by an outer coating of graphene. The joints were small but flexible, made from self-repairing material that could not suffer heat indefinitely, though a long time.

"You should be aware that is not a properly tested model," the dressbot said. "Coverage of durability tests is only 56%, insulation tests 78%, longevity tests 12%, ..."

"Yes, yes, I get it," Anichef interrupted. "I'm a Marith, not a tourist."

"Close your helmet and check if the systems are functioning properly."

They were. He tested the grip of his shoes, attached climbing tools and four small moldclumps to his belt and proclaimed himself ready before the dressbot could start complaining about missing equipment. He was going climbing and did not want to haul a heavy burden.

Soon he descended through a tunnel that had been carved out by lava from an earlier eruption. This world was more like others he had explored: dead rock, rough and uncaring. The tunnel was very uneven and at times narrow, so he walked and climbed carefully, going ever deeper. The suit was making more and more noise, a sign that it had to work harder to keep the temperature down. Apparently it did a fine job, because he still felt comfortable.

The Temmi, as was their wont, were monitoring anything and everything, including his external and internal sensors. Occasionally there was an instruction. "Go left here." "Keep an eye on your oxygen level." "Watch out for the crevice up ahead." As if he hadn't seen that himself! Pampering fussyfeet.

It soon became apparent that the tunnel mapping that the Temmi robots had done earlier was not right. Or more likely, that the network of caverns, fissures and chambers had changed since. Maybe the rock was not so dead after all. It caused alarm at the other side of the communication channel. "The area must be remapped! The fate of the operation is shifting into a high risk segment. Return to the surface!"

The fate of the operation? How about the human life on the line? But Anichef was used to danger. He ignored the chatter and continued to clamber through the maze. When he got so deep that the radio signals started to falter and fail, he was relieved to be able to rely on his own wits again.

The tunnel network was extensive indeed. His sight, even augmented with his other senses, was inadequate for the job. He sat down and thought for a while. Then he took two moldclumps and programmed them for a primitive sound emitter and conical receiver. The moldclumps were not suitable to make something that could do proper input processing. So he pried one of the sensor units from his suit and opened the cover. The suit made protests but he turned the alarm off. The sensor was good design, robust yet flexible. He wondered how many human and/or Temmi engineers had worked on it in times past.

Another sixth terze of tinkering later he admired the device in his hand: an improvised sonar scanner. He calibrated it by beeping into various tunnels, comparing their lengths, widths and branches with the output of the scanner. It took some getting used to, but he felt he was becoming a bit of a flightless bat, a batman! He resumed exploring, descending deeper into the labyrinth. Meanwhile the suit's sensors mapped temperature, gas levels, rock textures and more, storing everything in memory until radio communication would be restored again. Anichef himself gathered small rocks that looked interesting into his pouch. Here his knowledge of geology was fundamental, allowing him to discern valuable pieces from junk. A half-hand chunk of nychterite, nice. And look, another piece of ryolite! This volcano had to be explosive indeed.

Then he stumbled on a crevice that was spewing out scalding hot steam. It was a tempest of screaming vapor that made it impossible to see how wide it was. The sonar failed to penetrate it too. That was another unanticipated obstacle! The plan had been to go through empty tunnels; nobody had expected a steamer to open up.

Once more he sat down and thought. Soon he had an idea. He taped his walking sticks together to make a long pole. He detached another sensor unit from his suit. This time there was a sizable hole in the armor. He patched it with part of his collection pouch, which forced him to ditch some specimens. Too bad. He stuck the pole into the steam as far as he could, retrieved it and examined the sensor readings. The gap was more than a man-length wide ... With a small run-up he could jump that, though he did not know what was on the other side.

He decided to risk it. First he disassembled the pole again and transformed it to a primitive grappling hook. Then he secured everything that was loose, drew a deep breath, ran a few paces and jumped.

And smacked his face into some rock, breaking his nose. The pain shot through him and nearly made him pass out. Panic set in when he sensed himself slide down. Suddenly he felt a hold, grabbed it, steadied and hauled himself to more or less level ground. He had descended as much as he had jumped.

Just a foot behind him the steam continued to hiss and roar. His suit roared too, a sign that the temperature was high. Indeed he could feel it himself, though his patched hole, where the skin was beginning to hurt. He felt something else too: a sense of wideness. His headlight had not survived the clash but was not necessary. Red light from the lava deep below illuminated a vast cave. The walls and ceiling here not bare rock, but covered with a mat of small growing and creeping things, most of them white. Countless of them, all busy with hunting for food, mating, breeding, dying. Life! Small, primitive life, deep down in the soil! This was something that the Temmi would want to preserve, he thought. Though there was little chance of that if the volcano was to erupt soon.

There were no other exits from the cave. Clearly he could go no further; then again he considered to have gone far enough. The sensors recorded every sight and sound and smell. Anichef even let them sample some organisms that were close to his position. Valuable data indeed! But how to get it back to the surface? On this side, there was no room for a running jump, just a standing one. There was no way he was going to make that.

He tried to come up with ideas. Build some kind of bridge? A swinging rope, without rope? A jet burst, without a jet? All were impracticable. His mind went round and round in circles, trying variations of the unworkable ideas but failing to achieve a breakthrough. His ingenuity had reached a dead end.

A sobering thought entered his mind, that he might just perish here. Here, deep down in the bowels of his home planet, where his race was supposed to have originated. His sensor readings would never reach the Temmi, yet he derived a strange kind of pleasure from that. This is between the humanity and the planet, you aliens! Suddenly he wanted to strip his suit, to feel this world on his skin, before it would burn him to ashes. Instead he sat down to study the antics of the troglodytes for as long as he would last.

He awoke inside a medical care unit. His skin was pink as a baby's and felt tender. There was a thick stubble on his chin and cheeks. They must have kept him under sedation for a long time while they healed him. He felt weak, but the Marith scorned weakness.

Causing consternation among the multitude of medical robots, he hauled himself upright and jumped out of bed. His legs were a bit wobbly, but stable enough to walk. The horde of medics wanted to monitor, bandage, advise and resedate him. He brushed them all aside. Just before the riot could become problematic a Temmi whooshed in through a water tube.

"Ah, pioneer Anichef, you are conscious again."

"I had expected to have decomposed by now," he replied.

"The volcano. We guessed that something had gone wrong, so sent a tentacle after you. You know we always keep tactile tentacles on standby when doing mining work. Your suit seems to have decided that your body functions were failing and transformed itself to a protective cyste. That gave the tentacle enough time to reach you. It hauled you back to the surface before your organism had shut down completely."

Anichef wanted to reply, but found himself out of breath and weak in his knees. How long had he lain in bed?

"Your data has proven very valuable," the Temmi continued. "We are applying for follow up research on other worlds with volcanoes and called for a ban on planetary mining. Asteroid exploitation will have to do for a while. It will slow the economy down for a few centuries, but we have enough slack."

Several thoughts and questions whirled through Anichef's head. Would this cancel out his brush with the

mapusaurus? Was there more work to do on the planet, or would they whisk him away for a new assignment elsewhere? How long would it take to bring his skin back to its normal tan? Or would the women actually appreciate the pink?

Instead he said: "One thing has puzzled me since I first came here. The Marith are spread over much of the Orzigf star cluster and are fanning further out over the Orion-Cygnus arm as we speak. We have been removed from this planet and forbidden to return. So what am I doing here? Are you not breaking your own agreement?"

"There are exceptions to the general rule, as clearly stated in subsection KR59832. You have read your briefing, no?"

"You are right, a single human makes little difference. What *really* nags me is this: Your records state that the human population before the diaspora numbered 9.6 billion. It also claims that they all consented to leave their home world. Humans? Consented? All of them? You know as well as I that humans never agree on anything."

"Indeed, despite the strict conditions 38.7% stayed and suffered the effects of the repair operation."

In other words: They died. The Temmi did not care much about individual organisms. Neither did humans, Anichef reflected. "So where are they?"

"The original squatters have died several millennia ago. Their descendants are living comfortably in designated areas. They live a life that is perfectly in tune with their tendencies."

The swirl of thoughts inside Anichef's head coalesced into a decision in the blink of an eye. "I want to visit them."

"That is not possible. You would contaminate their culture."

"Are you going to deny me seeing members of my own species?!"

"We denied you to visit them. But seeing is permitted. You can watch them from a hidden observation lounge which is embedded in a mountain. Note that you yourself will be watched closely too; we remember the mapusaurus and will not allow further transgressions."

The journey to the spy post was by train again. This time the metal snake spent much of its time underground. Anichef was restless. The planet seemed to have contaminated him instead of the other way around. He was no longer comfortable among stone and steel. He longed to be in the open air, surrounded by the cacophony of life of the planet.

So when he disembarked at the station his expectations were high. How would his fellow home world humans have coped with the environment? What kind of residences would they have built, what kind of activities would they be engaged in? He rushed through the checkpoints and Temmi formalities as fast as he could. When through, he ran up to the observation lounge, which had one-way mirrors, telescopes, data stations and every other kind of spying equipment.

After just a few moments he located the first of his kind. They strolled over a narrow path in the woods, walking single file. They were half clad in coarse animal skins and carried leather pouches, wooden spears. Their skins were suntanned and dirty with grease, their hair unkempt. One of them bore a dead rodent.

A Temmi swam over through a water channel. "This group is about to go out hunting. Watch and see how they will sacrifice the animal to this mountain, which is their 'god'. Do not fear; we are quite certain that they have not detected our presence here. There is probably something in the shape of the rock that makes them revere it. Maybe you, as a human, can help us figure that out."

But Anichef just stared at the natives started singing in disharmony, cut the rodent open and spilled its blood over the rock, grinning in anticipation of a good hunt.