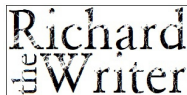


Felippe

Richard Jefferis



Self-published in Australia by Richard Jefferis,
aka Richard The Writer.

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Typeset, printed and bound by Richard Jefferis

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Chapter One

“I think I’m having a mid-life crisis,” said Gerald.

“About time,” I said. “I’ve been having them every day since I was 14.”

“No, seriously,” he said, peering intently over his wine glass at me. “I’m almost 45 and I’ve been a systems engineer for over twenty of them. Computer systems have changed dramatically over the last twenty years and I’m struggling to keep up with the changes. I’m not even sure I want to keep up with the changes.”

“Well, what else would you do?” I asked, quite reasonably I thought. “You are the archetypal computer geek and you don’t know anything else.”

“I don’t know,” he said. “But I see the young guys coming up, girls too, who speak a different language to me, like I’m antiquated or something. It’s all social media and AI apps. Apps, I ask you! I still call them applications or programs. They live for apps, shit, they even write them for their phones. I’m still server based.”

“I’m no expert,” I said, truthfully since I knew more about almost everything than I did about computer systems, “but don’t phone apps need servers?”

“Some do, some don’t,” he said. “Depends what they do. Anyway, I wanted to ask you something.”

“Sure,” I said, “fire away, so long as it isn’t about computers or apps.”

He put down his wine glass and edged slightly closer in a conspiratorial way.

“It’s about colours,” he said, “and you know about colours, being an artist and all.”

“Well, I guess,” I said. “Aren’t all computers beige?”

“Forget computers,” he said, slightly irritably. “I’m being serious here.”

“OK, forgotten,” I said, leaning back to avoid his sour wine breath. I nudged the bowl of mixed nuts on the bar closer to him. “So what colours are you interested in?”

“Well, I’m thinking of getting a sports car,” he said quietly, looking around to see if anyone was listening. “A BMW or an Audi or maybe a Harley Davidson and I wanted to know what was the best colour to get.”

“Have you ever ridden a motor cycle?” I asked.

“Motor cycle?” he said, looking confused. “Who said anything about motor cycles?”

“You did,” I said, grabbing a handful of nuts since Gerald wasn’t having any. It occurred to me that there may be some truth in the urban legend that on average there are traces of fifteen different people’s urine on the nuts provided free in bars so I put them back. “Harleys are motor bikes, big ones. You know, like Easy Rider.”

“What’s Easy Rider?” he asked then shook his head as if being bugged by a fly. “Doesn’t matter, forget it. So Harley Davidson’s are motor cycles, are they? I didn’t know that. No, I want a sports car, something that will show them at work that I can still hack it, run with the best. And I need an appropriate colour. Something that screams ‘Here’s Gerald! Hard core systems guru!’ White is too wimpy, isn’t it. I want something tough and incisive.”

“How about pink?” I asked. “It’s a clean, healthy colour and associated with roses and roses are tough, dangerous plants. Just look at all those thorns! Cactuses with charm.”

“Right,” he said, “thorns, yes. Cactus with charm. I like it.”

He was obviously visualising himself as a cactus with charm as he straightened the knot in his tie and smoothed his receding hair.

“Some BMWs are motor cycles as well,” I said. “Make sure you see what you’re buying before you commit yourself.”

“Good thinking,” he said. “Dangerous looking things motor cycles. Unsafe.”

“That’s right,” I said. “If you’re going to be a cactus with charm you need to stay safe. You want to look dangerous, not be dangerous.”

“Exactly,” he said then his smooth pink face creased in a small frown. “You don’t think pink is a little too, well, girly, do you?”

“Only for girls,” I said. “Not for someone like you. Mr Machismo. Anyway, the girls will think you’re even more charming when you pull up in a pink car. They’ll be very impressed.”

“I see,” said Gerald thoughtfully, his eyes dreamily fixed on the middle distance.

“You could have ‘cactus with charm’ embroidered on the seat covers, too,” I said. “Only make sure the covers are green and the embroidery is pink and matches the paint. Girls love colour coordination and it’ll look like you’re giving her a bunch of roses every time she gets in the car.”

“Right, yes,” said Gerald. “Girls like roses don’t they.”

Since Gerald had probably never spoken to a girl in his life other than to discuss some abstruse aspect of systems design, the likelihood of him ever getting a girl to sit in his sports car was tiny. Even if he did get a sports car which was also unlikely. System engineers didn’t make a whole lot of money.

“Another?” I asked, gesturing to his wine glass.

“No,” he said to my relief, as artists don’t make a whole lot of money either. “I have to be going home. Samantha will be getting worried.”

“Of course,” I said. “Got to keep the little lady happy.”

He drained his wine and clunked the glass on the bar.

“Well, I’ll be off,” he said. “I’ll give you a call later in the week. Pink,

huh.”

“Definitely,” I said. “Pink is so you. Give my love to Samantha.”

“Will do,” he said, and did that one fingered gun gesture that certain types of ageing yuppies like to do. “Love your work.”

I was glad one of us did.

I stayed for a little while longer mostly because, unlike Gerald, I didn’t have a cat to go home to and partly because there was an ambiance in that pub that night. Nothing tangible just a pleasant gelling of a variety of things. There was just the right number of people there, for example, not too many to make it crowded but not so few it seemed empty and echoey. The TV over the bar was off for a change and no one was playing the jukebox so people could chat with their companions without having to shout. There wasn’t even anyone particularly loud or obnoxious, just ordinary people quietly getting on with the business of having a drink with a friend or two. There was a gentle game of darts going on in the corner which gave the place an almost old world edge since the grimly flashing slot machine had been covered with a rug as it was out of order, as it had been for over a month.

“Same again?” asked Jiminy.

Jiminy managed the pub. She’d taken it over two years before when the previous manager had some sort of nervous breakdown and tried to hang himself from the imitation chandeliers in the saloon bar, pulling down half the imitation oak beams in the process. The brewery had installed Jiminy on a short term basis until they found a replacement. Jiminy, by the way, was really named Rosalind but people called her Jiminy. One rumour was that she’d played cricket for the county before running the pub and another was that she’d been a film or theatre critic. Someone had, rather unkindly, suggested it was because she looked like Jiminy Cricket, although she didn’t.

“No thanks,” I said.

She smiled, unimpressed by light drinkers, and leaned against the beer

pumps.

“Good crowd,” I said.

She curled her lip.

“Barely enough to break even,” she said. “At this rate the brewery’ll close the place down within a year.”

“You’re joking,” I said. “There’s got to be thirty or more people here.”

“They’re not drinking enough,” she said. “They come in for a chat and do their drinking at home. Food’s been losing money for months. The brewery’s told me to sack Oliver and take the food more upmarket.”

“Are you going to?” I asked. I confess I’d never had a meal here but they looked nice enough.

“I did, last night,” she said. “That’s why there’s no food tonight. Don’t know anyone who can cook, do you?”

“To pub standard?” I asked. “No, not really, although I’m pretty good with rice and mince.”

“Want a job?” she asked. “We’ve a thing in the back for making burgers and I’ll show you how to do chips.”

“I thought you were going upmarket?” I said.

“Put a few sprigs of parsley on the burgers,” she replied, starting to wipe down the bar with a dirty damp cloth. “How up market do you want to go?”

“What’s the money like?” I asked.

“£7.50 an hour,” she said. “And they wonder why we can’t get a decent cook. I s’pose I’ll end up with someone from the job-centre again. Are you coming in for the live band next week?”

“That’s pretty radical,” I said. “Never had a live band here before.

Might be an idea if you had some posters up or something, you know, let people know.”

“I’m picking up some posters tomorrow,” she said, “and if it works I’ll get a board for outside for forthcoming attractions. Maybe have a live band every Friday.”

“Sounds good,” I said. “Although the bands need to be good or they’ll just annoy people. Maybe you could have a karaoke night occasionally as well. People seem to like that. Do you want me to talk to my sister? She’s in a band and they do a few pubs, although mostly the other side of the river.”

“Who are they?” she asked.

“The Cockroaches,” I said then hurriedly added “they do classic rock covers,” when I saw her expression.

“I’ll think about it,” she said.

“Who’s on next week?” I asked.

“An Irish band,” she said. “Clustered Spuds.”

“Oh,” I said non-committally. “Well that should pull in the punters.”

“They’re cheap,” she said and turned to a customer who’d come to the bar. “What can I get you?”

“Two pints of lager and a packet of crisps, please,” said the lanky lad.

“Ready salted or cheese and onion?” she asked, getting two pint glasses out from under the bar.

“Ready salted, ta,” he said.

She passed him the beers and tossed a packet of crisps next to them.

“£5.90,” she said and the lad handed over a fiver and rummaged in his pocket for some loose change.

“Thanks,” she said when he finally found enough.

“I’ll see you,” I said, getting off the bar stool. I’d only had two glasses of wine but I stumbled a little and someone behind me laughed. I ignored whoever it was and made my way to the door, willing my numb foot to wake up again.

“Oh great,” I moaned when I got outside. “Bloody raining again.”

I pulled my jacket around me and started walking through the dark, wishing I’d thought to bring a hat. Little rivulets of water ran between the cobblestones which gleamed darkly in the reflections off the street lights. A car made its way past with a sloshing sound but otherwise the road was deserted apart from wheelie bins, squat and square like Chinese warriors lined up on either side of a river bank.

“Must remember to put the rubbish out,” I muttered to myself as chill droplets ran down my neck.

I glanced back at the pub. Despite the rain it seemed uninviting. Inside had been quietly pleasant but from the outside it just seemed forbidding, grimy, almost confronting. In times past this area of South East London might have packed the pub with factory workers and slaughtermen from the abattoir but now, with the factories closed and the area becoming gentrified the hard core drinkers in hard core surroundings were being replaced with more sophisticated palettes that wanted more sophisticated environs. Hence the imitation oak beams and the imitation chandeliers that sought to present a facade to hide the reality.

Chilled and wet I let myself in through my front door, a seemingly solid piece of work that was yet another facade. A lightweight security door designed to look hewn from ancient oak, despite the panel of glazed glass with embedded wire mesh that afforded some, but not much, transparency. It even had a ring handle in an attempt to emulate the eighteenth century look that ‘completed and complimented’ the restructuring of the old warehouse. It had, some fifteen years previously, been converted into six ‘executive apartments’ although it was unlikely that the architects had intended the executives to be from global multinationals as they were pretty ordinary and, by

London standards at any rate, cheap.

The architects had also created two 'studio loft apartments' on the top floor although 'small storage attics' might have been a better description. Mine was the one on the left, nearer the river although there was no window that side so I could only get river glimpses from the other windows rather than the river views one might expect. The two studio lofts were essentially single large open plan rooms although each had a small partitioned off area which served as the bathroom. Still, it was home and, more importantly, it was cheap since I'd inherited it from a sweet uncle along with 84 years remaining on a 99 year lease which meant I only had to pay the ground rent and a contribution towards maintenance charges.

More importantly still, I did have a north facing window although it was in the sloping roof rather than the wall. As any artist will tell you, or at least one from the northern hemisphere, a north facing window is way more important than irrelevancies like toilets and kitchens since you don't get direct sunlight, which means you don't get any movement of the light as the sun moves and you don't get any bright patches to wash out colours.

And this was where I spent my days and my nights. My days painting by the light from the north window, when it wasn't too overcast, and my nights in my single bed, dreaming of the days when I would achieve recognition as an 'Artist Of Repute' rather than as the 'artist of portraits' that provided the means to pay for my share of building costs and other miscellaneous odds and ends such as food and turps for my brushes.

Another benefit of my studio loft apartment was that it was on the fourth floor which kept me pretty fit and discouraged unwelcome casual visitors. There's something about being an artist that makes people think you're not really working and are happy to drop everything anytime they fancy popping in which can be really quite irritating. Sometimes, of course, aspects of painting can be routine but a lot of the time you're in a creative zone and interruptions break the creative process. Of course, I tell people that the intercom is broken and that the maintenance people still haven't got around to fixing it but actually it is still working just fine, or would be if I reconnected

the wires.

Still, I let myself in through the front door of the building, strode damply past my bicycle propped against the wall of the hall, or 'lobby' as it was known, somewhat facetiously, by the residents and dripped my way up to the top of the stairs. I was almost dry when I got there.

There was a faint thumping of music from the floor below as I shut my door on the world and crossed my sanctuary to get a towel. I hung my jacket on a clothes hanger from the shower rail and dried my hair then wandered out to make some coffee. Mug in hand I wandered around the edges of my world, touching a book here, an ornament there. I even checked the top of my little TV for dust and straightened the untidy pile of CDs next to my stereo.

Slowly I made my way, unwillingly I have to admit, to the easel. I had a commission, you see, a nice little earner. Another of those little commercial transactions that the current structure of society requires in order for one to survive. Obviously it depends on exactly how one defines Art but it does amuse me, in a hollow, despairing sort of way, that a lot of the paintings on display in Art Galleries, museums and private collections aren't Art in any true artistic sense, they are busywork done for the money. That portrait of, say, the First Earl of Gateshead, hanging in the Tate Gallery is actually a fraud. It isn't Art, created for the sake of Art, it's a paint snapshot bashed out for fourteen guineas, or whatever, so the First Earl of Gateshead could admire himself and feel important and thereby allowed the artist to buy some food and fresh paint so he could do something that actually was artistic. There were no women artists in those days as it wasn't considered 'suitable' for women.

Still, I could empathise with that artist even though I can never emulate him. I paint portraits for ready cash as well, as scruples tend to fade as hunger rises, but none of my portraits will ever reside in the Tate or the National Portrait Gallery. Not because I don't have artistic talent but because my subjects are not Lords or Ladies or Famous (or infamous) People. They are pooches and moggies, on the whole, although I have done a few horses and, once, a goat. The much beloved but otherwise un-notable pets of doting but otherwise unremarkable people. Still, I do my best to create Art while pocketing

the cash. I am, after all, a fairly responsible sort of person. The thing is, much as I like animals, and I have some pets of my own living in the roof, there's no spiritual achievement or even satisfaction in the work.

More to the point, my unwillingness to go to the easel was not, directly, anything to do with my views on Art. It was more to do with my views on money and responsibility. After all, I had been, or at least was going to be, paid to produce a three foot by two foot likeness of Tyson, the adored Rottweiler companion of Akuchi Zimbabwe, a local resident, if six streets distance is within the bounds of local. Akuchi, or Reg as he is known to his parents, or AkuZee as he is known to those who purchase the various substances he offers, specifically wanted a recognisable likeness of Tyson and kindly produced a photograph of the beast as it would be unlikely Tyson would condescend to sit still for several hours while I painted him. Not being the poorest of the local residents, Akuchi was willing to expend a respectable fee for respectable likeness. I call him Akuchi, incidentally, as I am neither his parent nor a consumer of his wares.

Unfortunately Tyson had a particular, some would say evil, gleam in his eyes most of the time and the red in his eyes caused by the flash when his photo was taken had enhanced this gleam rather than diminished it. Indeed, it was this gleam that made Tyson Tyson. Without it he was just another dog. A Rottweiler to be sure, but a generic Rottweiler. And, despite several attempts, I had, thus far at least, been unable to capture that fundamental Tyson characteristic. I had a pretty good, even if I say it myself, portrait of a Rottweiler but I didn't have a portrait of Tyson.

A professional sense of inadequacy was one aspect of why I was unwillingly drawn to the easel. Another aspect was that if Akuchi was in a good mood he simply wouldn't pay me for the portrait of Tyson. If he wasn't in a good mood he might introduce me to one or two of his acquaintances whose skills were more physical than intellectual. And, if he was in a very bad mood, he might leave me alone with Tyson for a while.

It was a bit of a conundrum as I couldn't quite decide where the problem lay. Was it the precise shade of red in the gleam? Perhaps the

shape, with that slight undulating twist as the curvature of Tyson's eyeballs wasn't as smooth as you might expect. On the whole, I had a feeling that the problem might lie with the degree of transparency of the gleam, the precise extent of which Tyson's true personality revealed itself.

I stared at the portrait for a while, comparing it with my memories of Tyson then picked up the photograph and stared at that. Back and forth. My eyes switching between the two sets of Tyson eyes, with the possible threat of his real eyes watching me in some not too distant future.

"You know," I said to myself after a while, "I think it's a combination of shade and transparency. That gleam needs to be a tiny bit lighter and just a smidgen more translucent."

I resolved to have another attempt in the morning and went to bed. Sleep came after a while although dogs did appear in my dreams, but they may not have been Tyson. I was woken by the irritating tune on my phone that I use because if it wasn't irritating I wouldn't bother to answer it.

"Have you seen this morning's paper?" asked Gerald excitedly when I answered.

"Of course not," I said irritably, "you woke me up."

"Sorry," he said, "only there's a thing in the paper about BSpaceE looking for people to train as astronauts."

"Great," I said. "Can I go back to bed now?"

"I need your help," he said. "I want to apply."

Chapter Two

“Oh for god’s sake,” I said sleepily, my eyes closed and my head drooping. “Don’t be absurd.”

“I’m not being absurd,” he said indignantly. “I meet all the criteria in the paper and it’s fired my sense of adventure. Just imagine! Me, a space man! Better than a bloody pink Audi.”

“OK,” I said. “Sounds wonderful. Go for it.”

“I’m going to,” he said. “But I wanted to ask you a favour.”

“Sure,” I said, “anything, only do it tonight, OK. Only I’ve got to get some sleep and I’ve got some work to do later so down the pub, OK.”

“OK,” he said. He could have sounded disappointed but I wasn’t really listening closely enough to be sure. “After work, sure.”

I hung up the phone and dropped it on the floor and rolled back over.

“Oh,” I said belatedly, lifting my head off the pillows, “bye.”

I gave a half wave in the general direction of somewhere away from my bed and within seconds was dreaming of being back in one of my old school classrooms where the teacher, Mr Davenport by the sound of his voice, was droning on about something except his voice was muffled since he was wearing a spacesuit. I vaguely recognised some of the other kids in the class but quite a few were dogs with red eyes, paying close attention to Mr Davenport and gently wagging their tails.

I woke up naturally at a far more respectable time, somewhere after elevenish. Some people like to get up early and I’m told some even like to see the dawn but I’m not one of them. I find the dawn infinitely depressing. Once, at Art College, I’d had to do a dawn scene as an assignment and, for reasons that escape me now, I’d actually got up early to see the dawn rather than painted one from imagination. I’d tried hard to do a happy light and breezy impressionist style painting but my tutor had commended me for the novel way I’d combined gothic grotesque with surrealism and had insisted it be displayed in

the end of year Art Show. I don't know what happened to it. It's probably still lying round in the college stores somewhere unless someone recognised it for the monstrosity it was and burnt it.

Which is what I did with my toast so I chucked the cinders in the bin and tried again with better success. It's difficult to burn coffee so that worked OK and by the time the second round of toast had cooled enough for margarine and Marmite the first round of coffee was filtering into my bloodstream. Holding a piece of toast I positioned a chair and climbed on it to look out of the window in the roof to check the River Thames was still there. It was so nothing dramatic had happened during the night. No floods or outbreaks of war, which was nice to know. In fact, I noticed after a while, it wasn't even raining.

"Excellent," I muttered and stuffed the rest of my piece of toast into my mouth.

I climbed off the chair and put it back beside my small kitchen table. I picked up another slice of toast and wandered over to look at Tyson.

"Yes," I murmured. "The eyes definitely need to be a little more translucent."

With my toast firmly in my mouth I rummaged around in the old biscuit tin where I kept various odds and ends for a fine scalpel. The one I was looking for wasn't there but there was a blade for a Stanley knife still in its oiled paper wrapper which would do. I was starting to salivate from the toast in my mouth so I tossed the blade onto the table and concentrated on the toast then had a swig of coffee and picked up another piece. I always do four slices at a time as toast is rather moreish and it's not unknown for me to do another four slices when I've finished the first four.

Still, today wasn't one of those days. Four slices was enough and my fingers were itching to get to work slicing Tyson's eyeballs, metaphorically speaking. I took the blade out of its wrapper and sat in front of the easel then hesitated and put the blade down.

"I need a magnifying glass," I muttered. "Where did I put it?"

It wasn't in the usual places and calling out "magnifying glass, where are you?" in a sing-song voice didn't seem to work either. It also wasn't under the kitchen sink, which is often, for some incomprehensible reason, where missing items usually seem to turn up.

"Phooey," I muttered and finished my coffee while standing beside the sink and looking around the room. "Sod it."

I went back to the easel and sat down again and picked up the blade. I needed to scrape the dry surface of the red glint in Tyson's eyes off so I could get at the still slightly wet layer underneath. With the cool damp weather we'd been having lately it would take two or three days for the oil paint to dry completely. I bent close to Tyson's eyes and ever so gently touched the canvas with the blade.

"No!" I said loudly enough to surprise myself. "No! That's it!"

I jerked back and dropped the blade onto the floor as the thought struck me. Scraping off some of the paint wasn't the answer. What I needed to do was to add more layers of paint, several shades lighter so that the darker red underneath became a background *behind* his eyes and, and this seemed important, the extra layers would help to create that slight bulge in his eyes. A slight 3D effect with the additional thickness to enhance the painted one with just the merest hint of white highlighting to add that intangible gleam.

I rummaged round among my brushes and found one that I didn't like. In fact I'd only ever used it the once then cleaned it and dumped it. It just didn't feel right when I held it so I never used it. Using the knife blade I trimmed all but three or four hairs so it was ultra fine then squeezed a tiny drop of red paint onto a scrap of paper. Using a bent safety pin I added tiny amounts of white until the red was just right then, with another long handled brush under my wrist to steady my hand, I painstakingly added tiny cross-hatchings to the gleam in Tyson's eyes. Finally, after dipping the brush in some turps and wiping it clean on a handkerchief, I added infinitesimal dots of white randomly inside the cross-hatchings. It took forever.

Stepping back I studied the picture intently then started to prowl

round the room taking sudden glances at Tyson to try to take myself by surprise. I went back and turned the easel around and moved it back so it was directly underneath the window.

“You know, I think that might be right,” I said.

I picked up Tyson’s photo and held it beside the picture and compared the eyes. The shape wasn’t exactly right but there was a definite sense of amused malevolent contempt in his eyes now.

“Hell, it’ll do,” I said after a while, knowing that I’d check again the next day and maybe tweak it a little more. “It’s definitely Tyson now, though.”

I found a pair of tweezers in my biscuit tin and removed a small fleck of fluff from the drying paint then went to make some coffee.

“Shit,” I said, remembering when I opened the fridge that I’d finished the milk. “Just have to have it black, I guess.”

I’m not fond of black coffee but it’s better than no coffee and I wandered aimlessly around my apartment with my mug in hand. I find it difficult to settle when I’m at the end of a painting. I feel an urge to be doing something but there’s nothing really to be done and it takes a while to get used to it.

“I’d better go get some milk,” I said after a while, remembering that I was out of milk.

I went to the fridge and checked inside and decided to get some tomatoes and some cheese as well, and something for dinner. I grabbed my wallet from beside the bed and got my jacket from the shower and let myself out then went back in before I’d closed the door to get my keys and a carrier bag. I had a spare key sellotaped to the wall of the top floor landing but it was easier to remember to take mine. The key was behind the creeping fig plant in a pot on a shelf. I’d got the creeping fig because a lady friend had told me they thrive in fairly dark places and since the landing is only lit by a single small window and a low wattage light that’s on twenty four seven it’s fairly dark there. That was three years ago and the thing was not only still

alive but was gradually taking over the landing, much like a triffid.

Key safely in my pocket I ran nimbly down the stairs and undid the combination lock on the chain on my bike. I wheeled it out the front door and sat astride it while checking the contents of my wallet.

“Hmm, probably not enough,” I thought, “oh and I’m going to the pub tonight too. Better get some money out.”

I turned the bike round and headed off towards the bank. It was one of the few irritations of my life that my apartment lay almost exactly midway between my bank and the supermarket and roughly a mile from each so doing both ended up with a four mile round trip. Still it was a nice day. It’s only really irritating when it’s raining.

“Why am I going to the pub?” I wondered as I cycled along. I pondered for a couple of blocks then remembered Gerald had phoned in the middle of the night and wanted some sort of favour. He’d had some sort of crazy idea but for the life of me I couldn’t remember what it was.

“Probably wants me to look at a car he’s going to get,” I thought. “Maybe he’s going to have it resprayed pink. Oh god, I hope he isn’t getting a Harley after all.”

There was someone at the cash machine when I arrived so I propped my bike against the wall and stood nearby but not too close so the person at the cash machine didn’t think I was trying to get their PIN or was preparing to mug them or anything. As always happens when someone is at the cash machine before you they seem to need to do fifteen different things and do every one of them incredibly slowly. Someone else arrived and took up position behind me.

“The Birth Of A Queue,” I thought to myself. “Sounds like an idea for a painting. A surrealist interpretation of modern life.”

I was happily musing on how to develop The Birth Of A Queue when I was interrupted by a cough.

“Machine’s free mate,” said the man loitering behind me.

I looked up and sure enough the woman at the machine had gone.

“Oh yeah, thanks,” I said and darted forward in case anyone should suddenly appear and jump the queue. I push my card into the little slot and the machine slowly sucked it in like a snail eating a piece of cabbage leaf. I keyed in my PIN and waited self consciously, feeling the gaze of the man waiting on my back while it digested the cabbage leaf and considered its options. I selected the option for Balance Enquiry and told it to display the balance on the screen.

“Jesus! Is that all?” I exclaimed. I’d thought there was more in my account.

I cancelled the balance display and selected the option to make a withdrawal and selected half what I’d been planning to take out. The machine clicked and whirred and, with the same level of reluctance that my dad had shown every Saturday when it was time to give me my pocket money, slowly disgorged a single note. I sensed a level of contempt in the machine, as though it was saying “You aren’t really worth my time.”

I took the money and my card and waited for the display to clear to indicate that it had finished with me. Even though I knew it wouldn’t be able to do anything without my card in its innards I didn’t like the idea of someone else starting their business before mine was fully gone. I turned away and the man behind me stepped eagerly forward.

“Excuse me,” I said, “what’s today’s date?”

He started, as if surprised someone had spoken to him this close to a cash machine, and it occurred to me that I might have breached some sort of etiquette. Using a cash machine is about on par in terms of privacy as going to the toilet. He hesitated, torn between getting to the machine and looking at his phone. In the end his British sense of politeness won and he looked at his phone.

“The fifteenth,” he said, looking blank.

“Thank you,” I said.

I almost wished him a happy transaction but good sense won out and I went back to my bike. If it was the fifteenth then the monthly Housing Association payment had been taken out which accounted for the low level of the balance. I seemed to have misplaced a couple of days as I'd expected to have finished Tyson and been paid by Akuchi.

As I cycled off to the supermarket I tried to console myself with the notion that few great artists were wealthy before they became famous but sadly it isn't actually true. Well, it is to an extent but the truth is that most of the great artists came from wealthy families who supported them and, more often than not, bought a lot of their early work. Da Vinci's father, for example, was a wealthy notary and both Michaelangelo and Cezanne came from banking families. John Constable's family were millers who owned several mills. As a general principle, poor people from poor families tend not to go into the arts. They have more sense.

At the supermarket I bought a bag of flour and some sultanas since it looked like I was going to be having drop scones for dinner since they are cheap and filling.

Tyson was still looking good when I got back so I sent Akuchi a text message saying the portrait was ready for him to come and see and, with a bit of luck, pay for. He wouldn't be able to take it away until it had dried and been varnished.

When I got to the pub, Gerald was already there, sitting at the bar with a glass of wine studying some papers.

"Hey Gerry," I said, coming up behind him and tapping his other shoulder so he looked the wrong way. It always worked which is why I always did it.

"Hi Felipe," he said, "what are you having?"

"Can I have a beer?" I asked. "Hey, I'm a bit short of funds at the moment so ..."

He took no notice as it wasn't an uncommon situation for me to be in and stared at Jiminy while she dealt with someone else at the other

end of the bar. With that sixth sense that bar people have she sensed another order and glanced over and nodded at him as I sat down. I decided to eat the nuts in the bowl regardless and pulled them closer.

“I phoned them,” he said, happily. “They emailed me the paperwork.”

“Oh good,” I said. “Who?”

I took a deep breath and tipped a handful of nuts into my mouth.

“BSpaceE,” he said. “You remember, I told you over the phone.”

Now that he mentioned it I vaguely remembered something about that.

“Aren’t they that space exploration company?” I asked.

I couldn’t taste any urine on the nuts so I figured if there was any it wouldn’t be much and my stomach would be able to handle it. It probably wasn’t much more than you’d get at a public swimming pool anyway.

“Yes,” he said, picking up his papers. “British Space Exploration, they’re looking for astronauts. Look, I printed out the article too.”

He passed it over and I scanned it quickly. Essentially BSpaceE had been set up in 1999 by billionaire entrepreneur Sergey Vanofov with the objective of establishing a permanent colony on Titan, one of the moons of Saturn, and were currently looking for potential colonists.

“How interesting,” I said.

Jiminy came over and Gerald ordered me a beer, which he paid for. He’s a good lad is Gerald.

“I went to their website,” he said, pointing to the website in the article. “It’s true, they really are looking for people to go into space.”

I remembered now. Gerald had phoned at some ungodly hour saying he wanted to be an astronaut. It had been such an absurd idea that I’d

assumed I'd dreamt it, along with the teacher in a spacesuit and dogs paying attention.

"You want to be an astronaut," I said in disbelief.

"Yes," he said happily. "Look, I downloaded an application form."

He thrust several sheets of paper stapled together at me.

"You're mad," I said, not taking them.

"I'm serious," he said, flapping the papers.

I started to laugh.

"It's a scam," I said. "How much do they want you to pay up front?"

"Nothing," he said, putting down the application form and sliding other pieces of paper around until he found the one he was looking for. "Look, all the people will be employees, paid a salary with health insurance and life insurance and free accommodation and stuff. It's not a scam."

"But you're scared of heights," I said, a little perplexed. "And you're old and not particularly fit and you aren't a test pilot. In fact you don't even like flying."

"No, but they've already got the specialists for flying the rocket," he said, still excited. "They're looking for people to be colonists. Look, all you need is to have a degree and pass their physical. You don't need to be super fit, so long as you don't have any chronic conditions or mental problems. Look, it says so here."

I took a long drink of beer and watched him closely as he picked up pieces of paper, scanned them and put them down in front of me.

"Gerald," I said, as gently as I could. "Gerald."

I reached out and touched his arm to get his attention.

“This is all just part of your mid life crisis,” I said. “You’re in a dead end job and you’ve suddenly realised you’re getting older. You feel life is getting away from you. That’s all this is. You’re not a space colonist. You’d hate it on another planet. And besides, what are you going to do about Samantha? No way will they let you take a cat and you’d really miss her if you left her behind. What would you do with her anyway? Who could you possibly trust to look after her properly? Come on, let’s go and look at some sports cars. They’re far more up your street.”

“You’re right, of course,” he said, seriously. “They won’t allow pets. That’s been bugging me all day, what to do about Samantha. Obviously I won’t have her put down but I don’t know who’d look after her properly. Still, I’ll think of something, launch isn’t for a few months anyway.”

“Hey, Gerry,” I said, snapping my fingers in his face. “This is me, OK. Stop joking around. Be sensible for crying out loud. You are not the sort of person who’s cut out to be an astronaut or a colonist. For god’s sake, man, you’re a middle aged stay-at-home systems engineer. You get stressed about going to France on the ferry. Come on, face the facts.”

“Felippe,” he said, looking at me very seriously. “I’m 45 and losing my grip on my job. It’s changing too fast and the newcomers are leaving me behind. I’m going to have to retrain in something and apart from you and Samantha I have no one else in my life, not since I broke up with Amanda and I am bored. I am so bored with London and all the changes that England’s going through and I’ve been thinking of emigrating anyway, it’s just that everywhere else seems to be just as bad as England or even worse and I’d still need to retrain anyway. I’m not going to walk into another systems job in another country and I don’t know how much longer I’m going to be able to hang on to this one. I’m screwed whichever way I turn and this looks to be the only way out. They’ll give me training and pay me and take me somewhere new and exciting. Don’t you see that? It’s my last chance.”

“But what about your sports car?” I asked. “Don’t you want a fancy sports car? Won’t that bring some excitement back into your life?”

“For a week or two, maybe,” he said. “But then what? How do I keep

the excitement going? Get a bigger flashier sport car? On my salary?"

"Well, can't you find another job?" I asked. "One that is exciting? How about the navy? They might let you drive one of those aircraft carriers or fire some missiles or something."

He gave me a look as if to say I was being an idiot. Yeah right, even more of an idiot than he was being?

"You've got to be young to get into the services," he said. "They won't take people my age and there's no way they'd let me drive a tank let alone an aircraft carrier."

"Well, umm, what about your computer skills," I said. "Surely the military would love someone with your skills for cyber warfare and stuff like that. Or hacking, why don't you take up hacking as a hobby? Break into big systems and pass what you find to Wikileaks. That would surely be exciting enough."

"Oh yeah, right," he said, "and spend the rest of my life being persecuted like Julian Assange or Edward Snowden or that chap in the US army, what's his name, umm, thingy, you know, Bradley Manning. No, I wouldn't find that exciting at all. I want to be an astronaut, a colonist, you know, that old pioneering, frontier spirit. An explorer, like Daniel Boone or Captain Cook."

"He's definitely having a mid life crisis," I thought to myself. "He's no more a pioneer than I am. He doesn't even like camping."

"Well, I see where you're coming from," I said cautiously. After all, what harm would there be in letting him apply? There wasn't a snowflake in hell's chance BSpaceE would ever accept him but he would at least feel he'd tried and maybe settle down to being a non-entity again.

"Good," he said, "because I wanted to ask you a favour."

"I'm not looking after Samantha," I said, quickly. "You know pets aren't allowed in my building."

“No, not that,” he said, “although she is a worry. No, I was hoping you would help me with the application and come along to the interview. You know how nervous I get with these things.”

Chapter Three

“How do you expect me to help with your application?” I asked. “I’ve never applied for a job like that.”

I’d had jobs in the past, of course, but they were short term casual ones where you went and asked someone for a job and they said ‘yes’ or ‘no’ on the spot. I couldn’t even remember a job where I’d had to write down anything beyond my name, address and NI number.

“I can do the factual stuff on the form,” he said, “but they want a personal statement and you know I’m not very creative with things like that. Oh, and they want a video as well, up to three minutes long. I want you to help me figure out what to say and record it and so on.”

“Well, I suppose I can do that,” I said, “although what the hell will impress the people watching it I have no idea. When do you want to do it? Now?”

“No,” said Gerald. “This is going to take some thinking. Are you free at the weekend?”

“I’m supposed to be going to the south of France on my yacht at the weekend,” I said, a little caustically as I’m always free at the weekend unless I’m in the middle of a painting which seemed unlikely.

“Oh,” said Gerald in surprise. “I didn’t know you had a yacht.”

“I don’t,” I said. “I was being sarcastic. Your place or mine?”

“I’ll come over to yours,” he said. “Maybe the creative atmosphere will stimulate something.”

“OK,” I said. “Better bring some biscuits or something as well as I don’t have a lot in at the moment and I’ve a feeling this is going to take a while. Do you have a video camera?”

“I thought my phone,” he said.

“Won’t there be camera shake if it’s hand held?” I asked.

“Good point,” he said. “You think I should buy a proper video camera and a tripod?”

Actually I didn’t see a whole lot of point spending real money on this as there was no way he stood a chance of being selected so it would just be a waste. Besides, he was going to need every penny to buy himself a fancy sports car as consolation when he didn’t get through the first round. I didn’t give his request that I went to the interview with him a second thought as Gerald getting as far as an interview was absurd.

“No,” I said slowly, as if I was thinking about it. “You don’t want the video to look too slick and professional, you want it to be real. A bit of camera shake will add to the integrity of it.”

He looked admiringly at me.

“That’s exactly why I need your help,” he said. “You think the right way. Keep it real, that’ll impress them more than fancy camera tricks. Do you think I should tell them at work that I’m applying to be an astronaut?”

“God, no,” I said, instinctively since I was fairly sure that would make him a laughing stock and hasten the demise he was anticipating. “Best wait until the last minute then it’ll be more impressive. Make them realise just what calibre of employee they’re losing.”

“You really have your finger on the pulse of this, don’t you,” he said, looking at me with what could have been taken as a form of respect.

“Not really,” I said, “I’m just better with people than you are. By the way, I think it would be a good idea if you don’t say you’re going to be an astronaut.”

“How come?” he asked.

I wanted to say “because you sound like a dickhead” but didn’t have the heart to vocalise it.

“Because it isn’t really true,” I said. “Astronauts are people who fly the

space craft and stuff. By the sound of it you're only going to be a passenger until you get wherever it is so you're more of a space tourist or a migrant or something. By the way, how long will you be away?"

"About ten years," he said and I nearly dropped my beer.

"Are you serious?" I spluttered. "The moon landings were only like about two weeks or something."

"Well, it says here ..." and he searched for the right piece of paper, "umm, oh yes, here, it's going to take about three years to get there and another three to get back and they're allowing three to four years to set up the base. They've got a precise schedule but every stage has a flexible window so potentially it could be as little as eight years or as long as ten and a half."

"Wow," I said as I couldn't think of anything else to say.

"Seems to me," he said with a relaxed but happy smile on his face, "that I'm the perfect age. I'm mature and stable but still young enough to be adaptable and when I get back I'll be 55 or so and what with writing my memoirs and advising film studios for their science fiction movies I won't be needing to return to my old career or even really start a new one. I'll be able to retire, maybe do some lectures and things like that."

"Well, OK," I said, still trying to process the ten years part.

"You know the best bit?" he asked. "Samantha could still be alive. She'll only be about fifteen. Do you think she'll still remember me?"

"I'm sure she will," I said. "I need another drink."

"My treat," said Gerald. "Beer or a wine?"

"Scotch, I think, if you don't mind," I said. "I'm having trouble processing all this."

He nodded his head as if in understanding and tried to catch Jiminy's eye. She was over in seconds.

“Two scotches coming up,” she said cheerfully. “Celebrating something are we?”

“I’m going to be an astr..., umm, a colonist,” said Gerald.

“Oh, how nice,” said Jiminy, “somewhere sunny?”

“You know,” said Gerald thoughtfully, “I’m really not too sure.”

“So, where are you going?” she asked, holding a glass underneath the upended bottle of scotch mounted on the wall behind the bar.

“Titan,” said Gerald, not seeing me rapidly shaking my head. “Have one yourself.”

“That’s in America, isn’t it?” she said, plonking one glass on the bar and holding up another. “I’ve got a cousin in America, in Kansas. Oh, don’t mind if I do, thanks ever so.”

She held up a third glass which she carefully stowed underneath the bar.

“Can’t drink it now, love,” she said, noticing me notice. “Wouldn’t do for me to get pissed before closing time. Save it for later. So are you going to want the function room for your going away do?”

“Umm, probably not,” said Gerald. “I expect there’ll be an official farewell function at head quarters.”

“I can do you a nice discount for a corporate booking,” she said, “food included and an open bar.”

“I’ll be sure to mention that,” said Gerald diplomatically, “although it probably won’t be for six months or more.”

“Best to book early,” she said, unwilling to let it drop. “Never know how the bookings are going to go.”

“I’ll mention that as well,” said Gerald. “Well, cheers then.”

He knocked his scotch back in one movement and stood there silently for a good half minute, getting pinker in the face until his eyes started to water. “Damn, that’s strong,” he muttered after a while. “Phwoar.”

I sipped mine slowly. I rarely have scotch and I like to savour it.

“I think I ought to be getting home,” said Gerald, holding on to the bar with one hand. “All the excitement, you know.”

“Thanks for the scotch,” I said, raising my glass to him.

“You’re welcome,” he said. “I’ll just tidy up my papers and then I’ll be off.”

He sat heavily back on his bar stool and slowly gathered up his papers and put them neatly back in their blue cardboard folder.

“Right,” he said. “I’ll see you on Saturday.”

“After lunch,” I said. “I don’t do mornings.”

“And bring some biscuits,” he said. “Excellent. This is going to be very productive. An idea shower session.”

“A what?” I asked.

“We can’t call them brain-storming sessions any more,” he said standing up. “Apparently it’s disrespectful to epileptics or something so we have to call them idea showers now.”

“Oh,” I said. “An idea shower. Isn’t that disrespectful to plumbers?”

“Oh it’s all a load of old poppycock,” he said. “Just business jargon for an attempt to incentivise the creative paradigm. Corporate executives have all these catchphrases to hide the fact that they don’t really have anything worthwhile to actually say. Like tomorrow, I’ve a forward planning meeting at ten.”

“So what’s wrong with that?” I asked. “Isn’t planning a good thing?”

“Yup, planning is great but it’s always forward,” he said. “Who the hell is going to waste their time planning backwards? Another one that really pisses me off is everywhere at work at the moment. We’re supposed to be developing strategies to monetise future media streams.”

“Sounds impressive,” I said. “What does it mean?”

“It means finding sponsors for YouTube videos,” he said, starting to get agitated. “Which is basically just a matter of making a video about anything you want and mentioning someone’s products while you do it in the hope that people who watch the video will rush out and buy whatever it is. It used to be called endorsements back when it was well known sports people but nowadays it’s bloggers. You know they’re not even bloggers anymore? They’re called influencers. That’s why I have to get out of this industry. I like to design client-server data systems, not influencer orientated pull-down streaming media modules.”

“I’ll see you on Saturday,” I said, having lost the thread of the conversation and with that he nodded and ambled off.

“Poor sod,” I thought watching him go. “More of a mid life catastrophe than a crisis.”

I sat there nursing my scotch watching the people which is often a good source of inspiration for a painting. In fact, I realised after a while, the Argentinian artist Fabian Perez could have used me as a model as he painted quite a number of pictures of men sitting drinking on their own in bars. Such pictures can be quite powerful although a lot depends on the exact posture and expression of the man at the bar as that can emphasize his solitude and aloneness to a more psychological or spiritual level than simply an absence, however temporary, of a companion.

Was I, I mused, sitting alone in a bar drinking simply because my companion had gone? Or was I in some way separate from the other people there? Isolated? Admittedly many were with companions, laughing, joking, and would no doubt be resentful of an intruder but there were a few others, all men incidentally, who were also drinking in solitary splendour. It would be easy to strike up a conversation

through a casual remark or two but I chose not to. I am, so often it seems, the outsider looking in; a human camera, recording but not participating. Observing and observed but rarely, if ever, involved.

"I don't see anyone eating," I said when Jiminy came back to my end of the bar. "Still not got a cook?"

"Had a couple round from the job centre," she said, pausing. "Totally bloody inept. Anything more than two minute noodles was beyond them. I wouldn't have trusted either of them near hot oil."

"That bad, is it?" I asked, my scotch nearly gone and no immediate prospect of a refill.

"It's the money," she said. "You have to be desperate to work for £7.50 an hour. I suppose I'll have to up the pay a bit."

"How much to?" I asked.

"Why? You interested?" she asked, suddenly alert.

"Could be," I said. "I'm a bit strapped at the moment. Burgers aren't that hard to cook."

"It's not just burgers," she said. "We do steak and chips, fish and chips, burgers and chips and some people prefer a salad to chips although not many. Reckon you could handle that?"

"Doesn't sound too hard," I said. "What happened to roasts on Sunday?"

"No one wants 'em," she said. "Well, not enough to get through an entire joint. Much more cost effective to do portions anyway, that way we can keep them frozen and cook them when they're wanted."

"So everything is frozen in portions?" I asked. "Just get them out of the freezer and cook them? Even the battered fish?"

"Yup," she said. "And the chips. Salads aren't though but they keep a long time in the fridge. So how much would you be wanting?"

“How about £10 an hour?” I asked.

“Hmmm,” she said. “That’s a bit steep. How about £8.50?”

“How many hours?” I asked.

“Four hours a night, six nights a week,” she said. “Mondays off.”

I laboriously worked it out in my head using the little shortcuts my maths teacher at school had tried to instil once he’d realised that maths wasn’t my strong point. 24 hours at £10 was £240 which was easy. Knock off £24 makes it £216 for £9 an hour so knocking off another £12 for the 50p brings it down to £204.

“That’s not a lot for a week’s work,” I said.

“It’s half a week’s work,” she said, “evenings only. Do what you like in the day.”

“I’ll think about it,” I said. After all, once tax was taken out, which it would have to be as it would be on top of my earnings as an artist, it wasn’t that much even though I don’t do much in the evenings as painting by artificial light is generally a wasted effort.

“Cash in hand,” she said. “No questions asked.”

“When shall I start?” I asked, since £200 tax free a week was definitely more interesting.

She laughed. “Not so fast, Phil. If you’re serious you can come in tomorrow for a trial and we’ll see how it goes.”

“OK,” I said. “Although go easy on me to start with. I’ve never cooked in a commercial kitchen before.”

She thought that was hilarious.

“I’ll just serve that customer,” she said when she’d stopped laughing, “then I’ll give you the tour of our commercial kitchen, OK?”

“OK,” I said and finished my scotch.

She came back a few minutes later and lifted a section of the bar to let me through and took me through a doorway off to one side.

“There it is,” she said. “How commercial do you want?”

It didn’t look much different to my kitchen at home although the fridge was probably twice the size and she had a big freezer next to it. The cooker was two ordinary upright four burner cookers side by side. The only real difference were the two chip pans. They were rectangular and stretched across two burners and had matching wire baskets that sat neatly inside which could be clipped to the side so the chips could drain and each one had a thermometer attached to it. All the pots and pans and so on were battered and dented, just like mine at home. Everything was slightly grimy, again just like mine at home.

“Who does the washing up?” I asked, having a pretty good idea of the answer.

“That,” she said, pointing to a big cube in the corner that looked like another freezer. “Just stack the dirties in there as they come back and turn it on at the end of the evening. Takes about three minutes.”

“Awesome,” I said as I didn’t have a dishwasher at home. Well, I did actually but it was the old fashioned kind. Me, and I took a lot longer than three minutes although I didn’t do the dishes every night. More like once a week.

“So how does it work?” I asked.

“I’ll show you how everything works tomorrow,” she said.

“No, I meant the system,” I said. “Like when someone orders something.”

“Oh right,” she said. “They order through me at the bar and I write it down and put it in that tray in the serving hatch. You take them from the bottom and cook it and when it’s ready you put it in the hatch with the paper and I yell out for them to come and get it.”

“Seems straightforward enough,” I said. “What time do you want me here tomorrow?”

“Come it about 5,” she said. “I’ll take you through how we do things and if all goes well you start at 5.30 and knock off at 9.30.”

“What if no one orders anything?” I asked. “Do I still get paid?”

“Sadly yes,” she said. “It pisses me off but no one would ever work here if the pay was per plate.”

“OK,” I said. “See you tomorrow.”

“Just one thing,” she said as I turned to go so I turned back. “No drinking until you’re done. I catch you drinking or even smell it on your breath you’re out of here, OK. No room for drunks in a kitchen.”

“No problem,” I said. “I don’t drink much anyway.”

“Same with drugs,” she said. “And if you’re on any prescription drugs let me know. Anything that causes drowsiness, you don’t go near the kitchen.”

“Makes sense,” I said. “Right I’ll be off. Oh, umm, tomorrow’s trial, do I get paid?”

“If you don’t screw up the first order, yes,” she said.

“What if I do screw it up?” I asked.

“I’ll make you eat it,” she said. “Although I won’t charge you.”

“Jolly decent of you,” I said. “See you tomorrow.”

I whistled happily on my way home. It was a pleasant rain free evening and, assuming I didn’t screw up, I was onto a nice little £35 a night earner which would keep me in oil paint and canvas for a while and if push came to shove I could probably eat any food that was going spare at the pub. Jiminy probably wouldn’t even notice if I cooked an extra meal on a busy evening. In fact, if things went well

and I stayed for a while she'd probably turn a blind eye even if she did notice.

I let myself in through the main door and half ran happily up the stairs. Even the triffid looked happy. I let myself into my apartment and flicked on the main light and Tyson went for my throat. I cried out and leapt backwards through the open doorway, my arms protectively in front of my face and tripped over my own feet and sprawled against the landing bannister. Fortunately it was quite strong and I didn't plummet down four stories to my untimely death.

"You pissed again?" drawled a familiar voice.

I peered out from under my outstretched arms. Le Shadow was standing in her doorway peering at me in amusement.

Her name was Lesha Dow but she liked to call herself Le Shadow, even though the gender was wrong. Being a girl, even though she was a Goth/Punk and attracted to leather and chain based clothing and used safety pins as jewellery, she should really be La Shadow, not Le since Le is the masculine gender in French.

"I, er, thought I was being attacked," I said.

"Right," she said, folding her arms and leaning against the door frame. "My old man had DTs too."

"I haven't got DTs," I said, cautiously getting up. I peered in through my own door and saw the painting of Tyson. I'd forgotten that I'd turned it round so it was facing the door. Jesus, it was a good painting! It had scared the bejesus out of me.

"Come and look at this," I said so Le Shadow prised herself off her door frame and swaggered into my apartment, her Doc Martens clumping noisily. The light glinted off the freshly shaved side of her scalp.

"Shit," she said. "Friggin' awesome!"

She sauntered over to inspect the painting more closely.

“ere, that’s Tyson, innit? AkuZee’s killing machine?”

“You know him?” I asked.

“Everyone knows friggin’ Tyson,” she said. “You done a good job there, mate.”

“Thanks,” I said. “You should do some photographs of him.”

Le Shadow was studying Photography and Media at London South Bank University. I’d been to one of her exhibitions at the Uni and come away quite impressed. She liked hard, gritty street night life photographs and worked mainly in black and white.

“AkuZee don’t like being photographed,” she said. “I took a couple of shots once and got my camera smashed.”

She started going through some of the paintings I had stacked against a wall.

“That wasn’t very nice of him,” I said, going to put the kettle on. “Fancy a coffee?”

“Nah,” she said. “He bought me another one, much better so I ain’t complaining. Hey, I like this one.”

She held up a small, fifteen inch semi-abstract piece of a frozen landscape I’d seen in a dream a few weeks previously and tried to capture on canvas. The washed out colours hadn’t behaved themselves and I’d given up since I couldn’t quite grasp what I’d dreamt.

“Take it,” I said, pouring my coffee. “Happy birthday.”

“It’s not my birthday,” she said, looking at it.

“It will be sooner or later,” I said.

“You serious?” she asked.

“Yeah,” I said. “I don’t like it myself. It didn’t turn out right.”

“Cool,” she said. “Thanks.”

We chatted for a few minutes in a friendly way although we were too different to ever properly connect. I was too old and male, her tastes didn't incline that way, and she was too young and aggressive. Still we were on amicable terms. She retired to her own apartment, clutching my painting. I retired to my couch and flicked on my stereo and started going through my CDs looking for something to suit my mood.

There was a single, heavy, knock on my door that briefly echoed around the room.

“I bet she wants a nail,” I thought so I got up and opened the door.

Two very large, serious looking men dressed in muscles and tattoos stared disinterestedly at me.

“Oh shit,” I said.

Chapter Four

They were silent, unmoving, just watchful and alert.

I knew who they were, of course. Cyril and Graham, associates of Akuchi Zimbabwe, who was nowhere to be seen.

“Hello lads,” I said, trying not to be nervous. They’d never given me the slightest hint of any trouble but I was always very conscious when they were around that they were completely indifferent to my continuing existence.

“Can I come in?” asked Graham, the fractionally shorter of the two. He enunciated his simple question with the same thinly veiled contempt that the police use when thanking you after you’ve passed a breath test and ceased to be of any possible interest. It was a rhetorical question anyway since, if Graham wanted to come in, very little would be able to stop him.

“Of course,” I said, stepping out of his way.

Cyril didn’t budge. He just stood there while Graham came into my apartment and looked around. Graham went over to my bathroom and investigated that then peered out of each window in turn. Finally he looked at Cyril and gave a barely perceptible nod.

Cyril lifted the mobile phone, it looked like a small wafer biscuit in his hand, and thumbed the screen slowly and deliberately then turned his back on me. Graham went and stood beside the cooker in my kitchen area.

“So, umm, how did you lads get in the main door?” I asked. It was supposedly a strong security door and, in theory at least, only accessible to the general public through my pressing a button after they’d identified themselves through the intercom.

“We opened the door,” said Graham which, although no doubt literally true, didn’t really answer my question but I decided not to pursue the issue.

I could hear some footsteps coming up the stairs and the sound of heavy breathing so I went and sat down in my armchair to try to appear nonchalant.

“Bleedin’ ’ell,” wheezed a pronounced South London accent. “Ain’t you never heard of lifts?”

Cyril moved to one side and Akuchi appeared in the doorway. He leaned against the frame in a show of mock exhaustion and wiped imaginary sweat from his brow. He liked to play down his physical fitness but I knew for a fact that he worked out with Cyril and Graham at one of the gyms he owned.

“Hello Akuchi,” I said. “How are you?”

He was looking pale, but then he always did. He had that sallow whiteness that you can only achieve through the dedicated avoidance of any form of natural light.

“Friggin’ knackered, mate,” he said and came into the room. “Nice closet, where’s the rest of the apartment?”

Tyson followed him in. As Rottweillers go he wasn’t that large but like Cyril and Graham he bulged with muscle. Unlike Cyril and Graham he wagged his tail in a friendly manner and came over to sniff my trouser legs.

“Woah,” said Akuchi, freezing when he saw the painting on the easel.

His eyes narrowed and he stood there studying it intently then walked up close and reached out.

“Don’t touch it,” I said urgently sitting forward quickly. Graham twitched in alarm and went to DEFCON 3 and Cyril whirled around to assess the threat level.

Akuchi hesitated, unused to being told what to do.

“The paint’s not quite dry yet,” I said, getting up and going over. Tyson padded quietly after me.

“Right,” said Akuchi, relaxing and he dropped his arm. Graham subsided to DEFCON 4. “But it’s finished, yeah?”

“Yes,” I said, “umm, unless you want any changes?”

“Nah, man,” he said, grinning. “It’s friggin awesome, like. What you think Gra?”

“Nice,” said Graham without bothering to look at the picture. “Very artistic.”

Akuchi bent over to scratch Tyson behind the ears.

“Hey, puppy dog, that’s you,” he crooned. “Does-ums like um’s ikkle piccy?”

Tyson sat down and licked his nose and didn’t appear to notice the picture. Akuchi grabbed him around the chest and hauled him upright so his head was level with the painting. No mean feat considering Tyson weighed in at somewhere around twelve stone and didn’t particularly want to be lifted.

“Grrr ruff,” he said throatily, clearly unimpressed.

“He likes it too,” said Akuchi, dropping Tyson unceremoniously. “So when’s it dry?”

“Two or three days,” I said. “Do you want it varnished?”

“How the fuck would I know?” he said. “You’re the bleeding artist not me. What difference does it make?”

“Umm, when the paint’s properly dry it’ll look a little matt and dull,” I said. “A coat or two of varnish will give a gloss finish and make the colours stand out a little better. Like this.”

I went over to the wall where I stacked my finished paintings and retrieved a picture of a Siamese cat I’d painted a year or so previously. Sadly the cat’s owner had died and none of her relatives wanted the painting so I was lumbered with it. Still, it was a nice picture and the

varnish set off the cat's white to chocolate colour graduation.

Akuchi studied it then looked at the painting of Tyson. "Yeah," he said. "Varnish it."

"Will do," I said. "It'll be ready on Monday. Do you want me to bring it round or will you collect it?"

"I'll send someone," he said and twitched his head slightly. Obediently Graham headed for the door and Cyril moved to the top of the staircase. Tyson went to investigate my rubbish bin.

"Umm," I said, wondering how to broach the subject of payment.

Akuchi sighed. "Cash or product?" he asked.

"Cash," I said.

"Tyson," ordered Akuchi and pointed to the door. Tyson looked at him and ambled off. Akuchi withdrew a slim wallet from the inside pocket of his tailored pure wool double breasted half length overcoat and counted out ten £50 notes, laying them neatly one by one on my table.

"Thanks," I said. "Let me know what time and I'll make sure I'm in."

"Makes no difference," he said. "But let me know if anything else goes missing at the same time."

He turned to look back at the painting and smiled.

"Tasty," he said and glanced at Graham who nodded. "See ya," said Akuchi and headed for the door. Cyril padded softly down the stairs with Graham not far behind. Tyson waited in the doorway for Akuchi then followed him. They left the door open.

I slowly shut the door and leaned against it with a sigh of relief. Dealing with Akuchi was always touch and go. When he was in a good mood everything was fine but he was notorious for his sudden mood swings and I had a faint suspicion he might even be bi-polar. God

only knows how his live-in girlfriend coped on a day to day basis.

* * *

“So you’ve passed the first test,” said Jiminy looking up from her newspaper that was spread over the bar. The pub was otherwise empty.

“Oh?” I said, walking over to the bar. Despite the thin carpet my footsteps echoed a little. “What was that then?”

“You turned up,” she said dryly. “Most don’t. Fancy a drink?”

“No thanks,” I said, surprised. “Umm, aren’t I supposed to be working?”

“You passed the second too,” she said, closing the paper. “Looks like you’re a keeper. Come on through.”

I lifted the folding section of the bar and joined her. The entire pub looked different from this side.

“Right,” she said. “Wash your hands, don’t want no food poisoning here.”

Obediently I took off my overcoat and hung it from the peg on the back of the kitchen door and went to wash my hands in the sink. There was a sliver of soap on the back of the sink and the little hand cloth was decidedly grimy.

“Come over here, Phil,” she said from beside the cookers.

“Actually it’s Felipe,” I said, giving the name a slight Spanish inflection.

“OK, Philip,” she said, giving it a strong English inflection. “See that?”

She pointed to a grease coated sheet of cardboard sellotaped to the wall. The sellotape was peeling off in places and was rimmed with black.

“That’s your timings, OK?”

“OK,” I said, peering at it. “What does chips 1 10 mean?”

“That means you do your first cook of chips for ten minutes,” she said.

“Oh, OK,” I said. “So chips 2 5 means the second cook of chips is for five minutes?”

“Exactly,” she said, turning on all four burners of one of the cookers and lighting them.

“Great,” I said. “So, umm, what does that mean?”

“What does what mean?” she asked, looking puzzled.

“Umm, why are there two cookings of chips?” I asked.

“I thought you said you knew how to cook?” she said looking suspiciously at me.

“I’m better with rice,” I said defensively. “One and a half cups of water for a cup of rice and simmer for about twenty minutes.”

“No rice here,” she said. “See those thermometers in the chip pans?”

“Yes,” I said.

“Keep that one at about 130 degrees,” she said, “and the other at 190. Put your frozen chips in the first one for ten minutes to cook then leave ‘em to drain. When you’re getting ready to serve put the basket in the hot oil for five minutes so they crispen up.”

“Oh right,” I said. “I never knew chips were cooked twice. How long do they have to drain?”

“Oh you can leave ‘em for hours,” she said. “It’s a good idea to always have two or three serves of cooked chips ready so they can crispen while you’re doing the main. Just a matter of being organised.”

“So WD, M and R are for the steak?” I asked, perusing the card again. “I’m guessing well done, medium and rare?”

“That’s right,” she said. “And those times are per side. Burgers get three minutes per side like a rare steak and fish gets eight minutes in the fish oil. And make sure you start different things on the same order at different times so they all finish together. People get upset if one person’s food is cold and someone else’s is hot.”

“Which is the fish oil?” I asked. “The 130 or the 190?”

“It’s the small one on the other cooker,” she said. “Never put the fish in the chip oil, makes the chips taste of fish.”

“OK,” I said. “Seems easy enough. How about desserts?”

“Ice cream’s in the freezer, just given ‘em two scoops and a couple of squirts of whatever sauce they want. Cheesecakes are individual portions and you microwave them for 15 seconds each. Burger buns you nuke from frozen and the salad stuff’s in the fridge as well as the onion and relish for the burgers. That’s it, pretty much. If you’re still here at the end I’ll show you how to operate the dishwasher.”

“What about knives and forks and things?” I asked, trying to look as though I was at home with all this information.

“Out in the bar,” she said. “I’ve already unloaded the dishwasher but that’ll be your job in future.”

“OK,” I said, looking round. “Anything else?”

“Plates,” she said. “Fish on the ovals, steaks and burgers on the round, ice cream in the bowls and cheesecakes on the small. Got it?”

“Got it,” I said, hoping that I had. “Umm, you said something about the brewery wanting you to take it upmarket.”

“Ohhh, you’re ambitious!” she said. “Get the hang of the basics then we’ll talk, OK?”

“OK,” I said.

“Right, I’ll leave you to it,” she said and headed for the bar. I wasn’t entirely sure why I’d had to be there half an hour early since my training had taken no more than five minutes.

“Oh, by the way,” she said pausing in the doorway.

I kind of expected her to say something reassuring like “you’ll do just fine”, or “you’ll get the hang of it quickly”. Instead she pointed the first and second fingers of her right hand at her eyes then at me.

“I’ll be watching you, OK,” she said, trying to look threatening. “Don’t screw up or you’re out.”

I laughed, more out of bravado than anything else and she sniffed disapprovingly and disappeared.

“I wonder if Gerald has managers like that?” I wondered, standing in the centre of the kitchen and looking round. “What have I got myself into?”

I felt very vulnerable and alone so for want of anything better to do I checked the temperature of the chip oil. They were both about fifty degrees and the smell of cooking oil was starting to pervade the room. I lit the burner for the fish oil so that it would be hot if and when I needed to cook some fish.

“Hmm,” I thought. “I’m going to need something to cook the steaks and burgers in.”

I opened a couple of cupboards and found some cheap looking frying pans and selected a couple and put them on the other cooker. This made me feel quite professional so I picked one up and twirled it the way I’d seen chefs in cooking shows do it and knocked the other one onto the floor. I picked it up off the floor and, out of the corner of my eye, saw Jiminy peer round the doorway to see what I was up to so I ostentatiously went to the sink and washed the frying pan.

I looked through the other cupboards and found a small pile of fairly

clean looking cloths so I tossed the one by the sink into a corner and put out a clean one. Opening the freezer I saw industrial sized bags of frozen chips, a couple of cardboard boxes containing fifty burgers in each and similar quantities of steaks and pre-battered fish.

“OK,” I thought, “now I know where the food is.”

I shut the freezer door and opened the fridge door.

“Ahh, good thinking!” I said out loud. There was a large metal tray with half a dozen defrosted steaks on it. “Ohh, bummer.” I’d just spotted the box of tomatoes and a couple of lettuces but there didn’t seem to be any already sliced.

I shut the fridge door and looked around for something to sit on while I let my brain assimilate my new situation. There wasn’t one so I propped myself against the table.

“I suppose it would be a good idea to get some chips going,” I thought, “and get a bit of salad chopped up too, just in case.”

I checked the thermometer of the chip pan and it was almost 120 degrees so I hunted round and found a chopping board and a metal bowl and dumped them on the table. I got a couple of tomatoes out of the fridge and a lettuce and the half cucumber that was hidden behind the lettuce and dumped them on the table too.

“A knife,” I said, clicking my fingers. “Where did I see some knives?”

I started opening and closing cupboards and finally spotted an assortment of knives on a rack on the wall. I selected one at random and tested the blade with my thumb. It started to bleed.

“Seems sharp enough,” I thought. “Now, where did I see some bandages?”

I gazed around and remembered they were in a plastic box in the fridge, for some reason, so I got one and bandaged my thumb. It was a rather pretty shade of blue. The chip pan was now at 132 degrees so I turned the burners down to half and got out a bag of chips.

“How big is a portion?” I wondered.

I got a large round plate and put a handful of frozen chips on it. It didn't look enough so I added another half handful. That looked OK so I dumped five handfuls of chips into the chip basket and lowered it into the oil. It started to bubble quite satisfactorily.

“Sweet,” I said. “How long's ten minutes?”

I looked around and couldn't see a clock anywhere so I started opening cupboards again looking for a timer of some sort until I realised both cookers had timers built into them. I peered at the timer over the chip pans and fiddled with it until I figured out how it worked and set it for eight minutes since I figured the chips had been in for two already.

Encouraged I started to slice the tomatoes and put them in the metal bowl then started on the lettuce and realised I was going to need two more bowls. The timer pinged so I rushed over to the chip pan and pulled it out then stood there like a lemon wondering where to put it to drain.

“Oh right,” I said, noticing the bar at the back end of the basket. “That must hook over the pan itself.”

It seemed to work so I left the chips and checked the temperature of the other chip pan. It was a little over two hundred degrees so I turned down the burners and checked the other chip pan. That was down to a hundred so I turned them up a little.

“Too easy,” I thought. “This is going to be a doddle.”

“Order!” called Jiminy, slapping a piece of paper down in the tray. “Everything OK?”

“Yes,” I said, going over to get the order.

“Oh, you've cut yourself,” she said, noticing the bandage. “You didn't get any blood in the food, did you?”

“No,” I said, wondering what happened to sympathy, “I was just testing the knife.”

“Well, all right then,” she said darkly and withdrew.

I picked up the order. One steak, medium, and one burger.

“Cool,” I thought. “My first order!”

I went to the fridge and got out a steak then to the freezer and got out a burger and put them in the frying pan then remembered they needed different cooking times so I went and got a plate to put them on and checked the times on the card.

“Right, four minutes each side for the steak and three for the burger, sweet.”

I lit the burner under the frying pan and wondered if I should put in a little oil.

“I guess a teaspoonful wouldn’t hurt,” I muttered and searched around for a teaspoon. I couldn’t find one so I grabbed the widest bladed knife off the rack and dipped it in the chip oil and let it drip into the frying pan. I tossed in the steak and it sizzled nicely.

“Oh yeah, the second cooking for the chips,” I thought and grabbed the draining chip basket.

“Umm, how do I get three handfuls of hot oily chips?” I wondered, staring at them.

I pondered this for a while then remembered I ought to get the burger on so I tossed it into the frying pan and turned my attention back to the chips. It seemed insoluble. I gently touched one of the chips with my finger and it didn’t seem too hot so I gritted my teeth and grabbed a handful and dropped them in the hot chip oil. I tossed in another couple of handfuls then reached for the spatula to turn the steak. It slid out of my oily hand onto the floor.

“Damn,” I said and picked it up. I rinsed it in the sink and dried it

and my hand on the clean cloth and tried again. The steak looked a little burnt but maybe it was supposed to be like that. I turned the burger and that looked fine.

“Cool,” I said.

I got a couple of plates and laid them out on the table ready and went back to check the food. It was all progressing well.

“Order” called Jiminy, slapping another piece of paper in the tray.

I ran over to get it, suddenly feeling under pressure. Two fish and chips. OK.

I ran to the freezer to get the fish and dropped them into the fish oil. The chips in the hot chip pan looked to be done so I put their basket to drain then took the frying pan over to the plates and slid the steak onto one and the burger onto the other. I put the frying pan back on the cooker and grabbed the chips. Back at the table I went to grab a handful of chips to put on the plate and yelped. They were bloody hot!

“How am I going to get them on the plates?” I wondered. “Ahh, I know.” I carefully tipped about half the chips onto the steak plate and the rest onto the burger plate.

“That doesn’t look right,” I muttered, stepping back and looking at my completed first order.

“Order,” called Jiminy.

I ran over to get it.

“Where’s the steak and burger?” she said. “They should be done by now.”

“Oh yeah,” I said. “I’ll just get them.”

I ran back and grabbed the two plates and brought them over.

“Where’s the frigging bun?” she hissed.

“Oh shit,” I cried. “I knew it didn’t look right. Just a sec.”

I ran to the freezer and got out a pre-sliced burger bun and ran back to the serving hatch.

“Not a bloody frozen bun,” she hissed, watching me with beady eyes that glittered like a rat’s. “Nuke the bloody thing and don’t forget the onion and relish.”

“Sorry,” I said, feeling flustered. “Half a mo’.”

I ran back to the fridge and spotted the fish in the fish oil.

“They look about ready,” I said to myself. “Oh shit! I forgot the chips!”

I grabbed the half cooked chip basket. There weren’t enough chips in it for two servings.

“Oh god,” I said. “Ummm, what to do? What to do?”

I upended the chips into the hot chip basket and dumped it in the hot oil and lifted the fish basket out and left it to drain.

“Onions and relish!” I said, slapping my forehead. “Shit.”

I ran over to the fridge and got out the relish and looked for some sliced onions. There weren’t any. I grabbed a whole onion and ran to the table and feverishly started to peel and chop it.

“Shit! The bun!” I dropped the knife and grabbed the bun and shoved it in the microwave. “How long for?”

I ran over to the card on the wall. There was no mention of buns.

“Order,” called Jiminy. “Where’s that frigging steak and burger?”

“How long do you nuke the buns?” I said in panic.

“15 seconds,” she said. “Get a friggin move on. There’s two orders waiting now.”

I set the microwave to fifteen seconds and pushed START and ran back to the table to chop the onion. The microwaved pinged and I grabbed the bun and feverishly spread relish on the top half with my finger. I dumped the burger on the other half, added some onion and put the top half on the top.

“Steak and burger,” I said, running up to the hatch.

“About bloody time,” said Jiminy irritably, turning round from the bar. “Where’s the fish order?”

“Coming up,” I said trying to sound confident.

I went back to the chip pan and they looked done so I used the knife to lever the fish onto two more plates and spread the chips around a bit to make it look as though there were more.

“Two fish,” I said, taking them over to the hatch.

“Did you have to catch them first?” she asked sarcastically. “Jesus, bit light on the chips.”

“Sorry,” I said. “I didn’t do enough.”

“Maybe they won’t notice,” she said, looking dubious. “Oh well, better get on with those two.”

“What two?” I asked.

“Those two orders waiting,” she said nodding to the order tray. “Two steaks, two fish and a burger.”

“Right,” I said. “I’ll do them straight away.”

I picked them both up and headed for the freezer to get the fish and burger then went to the fridge for the steaks.

“Oh sweet Jesus!”

I made my way to the hatch.

“Jiminy,” I called. “Umm, bit of a problem.”

“Just a sec,” she said and finished serving a customer.

“What?” she said coming over to the hatch.

“I forgot to put more chips on for the first cook,” I said. “It’s going to be at least ten minutes before I can even start these two.”

“Oh for crying out loud,” she said. “Have you got them on now?”

“You just can’t get decent staff these days, can you,” called a joker propped against the bar.

Jiminy glowered at him and he started laughing.

“I’ll go and put them on now,” I said. “Sorry.”

“By the way,” said Jiminy, “that burger was cold. I had to give her a refund.”

Chapter Five

I went to bed early Friday night. I remembered Gerald was coming round to work on his application and, after three evenings working at the pub, I was exhausted.

I was dragged from a deep sleep at some ungodly hour by my incredibly irritating ring tone. Even more annoyingly it wasn't beside the bed. I'd left it on the arm of the couch so either I had to put up with the noise and then lie apprehensively half awake to see if whoever it was rang again or get out of bed and answer it. There's something about someone not answering the phone that makes people ring again immediately. I guess they think if you didn't answer it must have been a wrong number but, in all honesty, in these days of digital phones you rarely get wrong numbers anymore.

The phone kept ringing, so tritely cheerful I couldn't imagine what kind of twisted and warped personality had composed it. Conceivably it could even have been computer generated; some AI system that trawled the internet looking for irritating music and, once learned and analysed, devised new techniques of psycho-audio torture. Eventually, my taut nerves stretched to breaking point, I climbed out of bed and lurched towards the phone.

As inevitably as the sun rises every day and tax demands come through every year the phone stopped ringing just as I was about to pick it up. Modern smart phones aren't quite smart enough to know when they're about to be answered, which is a definite flaw in their design and, if you think about it, their designation as 'smart'. Maybe some phone company somewhere is working on a sensor that can tell the caller that the owner of the phone is coming and to hang on just a second or two longer. On the other hand maybe I should just enable voice mail. That way whoever rings can say why they rang and not need me to actually interact in real time, as if time were real anyway. Unfortunately the phone company wanted me to set up a four digit PIN to use every time I wanted to access my messages and, frankly, I wasn't interested enough to bother.

I cursed, the phone so not smart it didn't have a clue that it was being cursed, and took it back to bed with me although I dropped it part

way when it started to ring again. The screen said it was Gerald but only because I'd told it that was Gerald's number, not because it was smart.

"What?" I demanded after swiping the screen in various directions until I hit on the right direction by happy chance.

"I'm downstairs," he said. "Let me in."

"Must I?" I said. "I want to go back to bed."

"Push the button then go back to bed," said Gerald, almost as annoyingly cheerful as the ringtone.

"Go away," I said and pushed the Disconnect button before getting back into bed.

The phone rang again and I pushed the Disconnect button again. It rang again. I groaned and got out of bed and went and pushed the button on the wall that opened the front door downstairs. It was decidedly nippy so I went back to bed and buried myself deeply in my arctic strength duvet. I must have gone back to sleep because I didn't hear Gerald come in but my nose did start to twitch as the aroma of hot fresh coffee filtered its way through the bed covers.

There's something about coffee that wakes you up, even just the smell of it.

I heard a muffled clunking sound and slowly pushed back the covers. There was a mug beside the bed. I reached out and touched it. It was hot.

"Good morning," said Gerald.

I pushed back the covers and grimly raised myself onto my elbows. He was sitting comfortably on my couch.

"So what time is it?" I asked.

"Eleven thirty," he said. "I made you some coffee."

I had a brief fight with my pillows and persuaded one to stay upright against the wall long enough for me to lean my back against it. I sat there staring blankly at Gerald for a while then reached over for my coffee. He'd brought his iPad and was reading something on it. He knew what I was like in the mornings.

Slowly the coffee did its magic and I put the empty mug back on my bedside table.

"Right," I said, positively. "I'm getting up."

Gerald ignored me so I counted to five, psyching myself up, then threw back the duvet and got out of bed. I pulled on my dressing gown and tied the belt.

"More coffee?" I asked.

"Not for me," he said so I went over to the kettle and turned it on.

"You're here early," I said, noticing the shopping bag on my kitchen table.

"I know how long it takes you to wake up," he said.

I grunted and opened the shopping bag. There was a packet of bread rolls, some deli ham and a couple of packets of biscuits. Cool. Gerald had remembered to bring food for later. I got some slices of bread out of the packet and put them in the toaster.

"So how's your new job?" he asked.

"It's OK," I said, watching the toast cooking.

"I didn't think you'd last this long," he said. "What's it been, three days?"

"Yup," I said.

The kettle turned itself off and I poured water in my mug and went back to watching the toaster. I heard Le Shadow's toilet flush so she

must have had an early night too. My toast popped up and I fanned the slices to cool them a bit. I smeared the toast with margarine and splotches of Marmite and went and sat in the armchair by the couch.

It took two slices of toast to get my brain in first gear.

“Nearly got the sack on the first night,” I said, cradling the coffee and staring at the remaining toast. “I stuffed up several orders but Jiminy said it’s always like that for beginners.”

“I thought you knew how to cook?” said Gerald. “It’s not like there’s anything fancy or complicated.”

“No, the cooking’s easy,” I said, putting my feet on the table. “It’s getting organised that’s the thing. Nothing happens for a long time then you suddenly get a whole bunch of orders through at the same time then it’s panic stations. I’m slowly learning to be prepared but the problem is knowing how much to prepare in advance. Jiminy doesn’t like it when there’s leftovers. Like on Thursday I put about ten portions of chips through the first cooking so they’d be ready then had a bunch of orders for salads. Ended up chucking out half the chips.”

“Oh, you’ll get the hang of it,” he said. “Just take a few days, that’s all.”

“Yeah,” I said. “I guess. I hadn’t realised just how physical it is though. And hot. Must be hell working in a proper kitchen doing hundreds of meals all day long.”

“Didn’t seem to do Jamie Oliver any harm,” he said.

“I guess,” I said. “Although he went to cooking school, didn’t he? They probably teach you how to sweat without dripping onto the food. There’s probably a whole module on it.”

“Oh gross,” he said, looking disgusted. “I’m never eating in that pub again if you’re going to sweat all over my chips.”

“I don’t anymore,” I said. “I wear a headband now and I tie a cloth round my neck so I can wipe my face quickly. I’m going to make some

more toast. Want some?"

"Got any marmalade?" he asked.

"No, only jam or Marmite," I said standing up.

"What kind of jam?"

"Plum," I said.

"OK, two thanks. No sweat."

"Coming right up," I said.

* * *

"I've done my application," said Gerald a while later.

Presumably he'd decided I was now in a sufficiently awake head space to be of some use. I wasn't convinced but since I had to go to work at the pub later I didn't want this to drag on too long.

"Let's have a look," I said and he passed it over. It seemed to be four pages of fairly conventional stuff, education, employment history, that sort of thing. The last page was a simple health questionnaire about things like heart attacks and diagnosed mental illnesses. Gerald had answered 'no' to everything, not entirely honestly since he did have a few allergies.

"OK," I said. "So what do you want me to do?"

"I've got to do a video," he said.

"About anything in particular?" I asked 'or something creatively free form?"

"About me and why I want to go to Titan," he said.

"OK," I said. "Give me your phone and go and stand against that wall or would you rather do it sitting down?"

“Umm, I don’t know what to say,” he said, not budging.

“That could be a problem,” I said. “Fancy some more coffee yet?”

“Later,” he said. “What do you think I should say?”

“Umm,” I said, “how about you tell them a bit about yourself and why you want to go to Titan?”

“Oh ha bloody ha,” he said. “The problem is what do I tell them about myself?”

“Well, I don’t know,” I said. “What do you think makes you different to everyone else?”

“Umm, well I’m analytical and have good people and conversational skills,” he said.

I tried not to laugh. Gerald had appalling people skills.

“Why do you want to tell them that?” I asked. “About the people skills, I mean.”

“Well, it seemed to me that if I’m going to have to be with the same group of people for ten years they’re going to expect good people skills,” he said.

“Yeah,” I said. “Maybe. But maybe they’re also looking for people who can be on their own for long stretches or let the others get on with whatever they have to get on with. They probably don’t want someone who’s going to chatter all the time and piss people off when they’re trying to work.”

“Fair point,” he said. “Maybe I should say that I work well on my own and with groups.”

“Well, maybe,” I said and he made a note of that on his pad. “What else?”

“How about a sense of humour?” he asked.

I wrinkled my nose. "You don't want them thinking you never take anything seriously," I said, "or that you're going to play endless practical jokes."

"I see," he said and frowned. "Should I tell them I like cats?"

"Probably not a good idea," I said, "unless they're planning on taking some cats on the trip. How about you tell them why you're single? I would think that's important since they'll probably be worried about people missing family and getting homesick and things."

"Umm, I can't tell them I'm single because I'm shy," he said. "They'll think I'm a loser or something."

"I suppose," I said. "It's a tricky one, isn't it. OK, let's leave that for the moment. How about why you want to go to Titan?"

"Oh, that's easy," he said. "It's because I don't think I fit in here on Earth any more."

"Oh," I said, a little taken aback. "Don't you think that makes you sound like a weirdo?"

"Oh god, do you think so?" he said, worriedly. "I thought it was the sort of thing they'd be looking for. People who just can't hack it here anymore."

"Probably not," I said. "They don't want to saddle themselves with a bunch of misfits. If you can't hack it here on Earth why would they think you'd do any better on Titan?"

Gerald doodled on his pad for a while and I gazed at Tyson wondering if I should varnish him this afternoon or leave it until Sunday. Then again, Akuchi was sending someone round on Monday and the varnish would need twenty four hours to fully dry.

"Maybe I should treat it more like an interview question," he said after a while.

"Worth a try," I said. "Hit me."

“Umm, I feel, with twenty years of systems analysis and design that I could greatly contribute to the ongoing success of the mission with particular regard to information flow and inter-personal communication in a non-Earth-bound environment,” he said, with a straight face.

“OK,” I said, slowly. I wasn’t too sure after that that I’d want to spend ten years in a tin can with him, and he was my best friend. I pondered for a few moments.

“How about saying something about how much you enjoy fresh challenges and expanding your horizons?” I asked.

“Ooooh, I like that,” he said busily writing it down. “How about saying that I relish the idea of boldly going where no man has gone before?”

“Nice,” I said, “it’s got a certain ring to it and makes you sound like a pioneer although it is a bit sexist. Say ‘where no one has gone before’, there might be women going. No, better make it ‘no human’, aliens might have already been there.”

“Got it,” he said, scribbling. “What else?”

“Ummm, how about talking about some challenges you’ve met in your life that you’ve overcome?” I said.

“I could talk about that system I designed for EmTec Plastics,” he said. “That was pretty radical.”

“They’re probably not that interested in technical stuff,” I said not wanting to listen to some crap about EmTec Plastics computers. “After all, they’ll have lots of high level techies already. Have you ever been on any Outward Bound courses or been in life threatening situations?”

“Umm, there was that time I nearly drowned at the beach,” he said.

“OK, sounds good,” I said. “So how did you overcome that challenge and survive?”

“I screamed and mum came and picked me up,” he said.

“Oh, perhaps something more recent,” I said. “Didn’t you used to go scuba diving or something?”

“Yes, but that was a long time ago,” he said. “Hey, what about when I was on that night diving course and someone crashed into me and knocked off my mask and mouthpiece?”

“Well you obviously survived that,” I said. “Put it in. Why did you stop diving anyway?”

“I got too scared,” he said. “I never really liked diving.”

“I wouldn’t mention that,” I said. “You want them to think you’re a mean mountain man type who can fight grizzly bears and shit.”

“I’ve got a checked shirt at home,” he said. “Do you want me to go and get it?”

“Nah,” I said, “I was being metaphorical, not literal. Hey, did you ever see that movie *The Martian*?”

“I don’t really like science fiction,” he said. “Was it any good?”

“It was about a guy who got stranded alone on Mars for several years and how he survived,” I said. “I thought you could mention how inspirational you found it but since you haven’t seen it there’s not a lot of point.”

“I could always say I found it inspirational and just not mention any of the details,” he said.

“But what if you get an interview and they ask you about it?” I said.

“I could get the DVD beforehand,” he said.

“OK, fair enough, put that in as well then,” I said. “How are we doing?”

“We’ve got some good points here,” he said. “Super.”

“Cool,” I said, getting up. “I’ve got some work I need to do so you string your ideas together into a script then we’ll start on those rolls you brought then do the video after we’ve got your blood sugar levels up.”

“It’s a plan,” he said, happy to have some instructions to follow. He wasn’t too good when it came to thinking outside the box.

I got out my can of high gloss varnish and the soft wide brush that I keep solely for varnishing and laid the painting of Tyson flat on my table. Slowly and carefully I went over it three times with the varnish, being very careful to make sure there were no little air bubbles. Finally I surrounded the painting with books and covered it with cling film. The books were there to keep the film off the surface. I left the brush soaking in turps to clean.

“How’s it going?” I asked, turning my attention to the bag of food Gerald had brought.

“I think I’m there,” he said, scratching something out on a heavily scribbled on piece of paper. “Just let me write this out neatly.”

“OK,” I said, “I’ll make some rolls.”

He’d brought half a dozen nice crusty rolls so I quickly slit them open and added marge and ham while the kettle boiled.

“OK,” I said, bringing the coffee and rolls over to the couch area, “let’s hear it.”

Gerald cleared his throat and read out what he’d written. It was a bit clichéd but sounded, I don’t know, plausible enough I suppose.

“Right,” I said, “give me your phone and we’ll give it a run through for real.”

“OK,” he said. “Is my hair OK?”

“You look gorgeous,” I said. “Stand over there, against the wall.”

He went over to the wall and stood there, stiffly, like a mannequin on a parade ground.

“And action!” I said, melodramatically, touching the Record button on the screen.

He stumbled through his little speech bringing about as much conviction to the role as a handleless glove puppet.

“Let’s try that again,” I said brightly, deleting Take One. “Just relax and be yourself. Take Two and action!”

“OK,” I said after deleting Take Three, “have something to eat and chill out a little. Maybe we’ll try the next one sitting down.”

“It’s not going too well, is it,” he said, sitting down and picking up a roll.

“You’re doing fine,” I said, “you’re just a little tense, that’s all.”

“That’s easy enough for you to say,” he said huffily. “My whole life’s hanging in the balance here.”

“You’re right,” I said. “Hey, do you want something to relax you? I’m sure Leshia next door could spare a little something.”

“No,” he said. “I don’t do stuff like that. I’ll nail it. Just need a little practice.”

I tried to be positive and encouraging while we ate some rolls then we tried again.

“That was much better,” I said after Take Four which we’d done with him sitting on the couch, “although we’ll have to do it again as you had crumbs down your front.”

“Let me see,” he said so I passed the phone over. “Jesus, I look like something out of Thunderbirds!”

“You just need to relax,” I said. “Try forgetting about the camera and

just talk to me, one on one.”

“How do you mean?” he asked.

“Umm, like this,” I said, “record me.”

I made myself comfortable and sat back in the armchair with one leg nonchalantly crossed over the other and smiled at Gerald behind the camera.

“Hi,” I said to him in my most relaxed drawl. “I’m Felipe Rocha. I’m an artist and I see the world in terms of visual metaphor. A trip to Titan would be the most outstanding metaphor I will ever experience, in this life at any rate although who knows about future lives I may have.”

“Hey, that was pretty impressive,” said Gerald. “Here, take the phone. I’ll just get these crumbs off.”

He stood up and deposited the crumbs on my carpet where they mixed with several weeks worth of other crumbs.

“Right,” he said sitting down and trying to nonchalantly cross his legs. “Don’t say ‘and action’, it makes me nervous.”

“OK,” I said, touching Record. “I won’t say anything.”

“That was pretty good,” I said when he’d finished. “I think it’s in the can. You wanna see it?”

“No,” he said. “I’m not sure I can do it any better anyway. I never was cut out to be an actor. I got dropped from the Nativity Play at Primary School because I was so bad. If you think that was OK I’ll just send it as is and to hell with it.”

“No problem,” I said. “Here’s your phone. Want some biscuits?”

Chapter Six

I despair of people sometimes.

My website for pet portraits says quite clearly that I only paint in oils. But, of the five email enquiries I had in the week, three were about prices for watercolours and one was for a charcoal drawing. Still I did get a commission for an oil painting from an American who wanted a nice eighteen inch square painting of his pet whose name was Pretzel.

Sometimes owners like me to meet their pets since they feel it helps me to capture the pet's deeper personality characteristics but fortunately the client, Randolph Zankowsky – the Third as he was at pains to point out in the email – didn't expect me to meet Pretzel. Not because he was in America, which wouldn't have been a problem if my travelling expenses had been paid, but because Pretzel was a python and I have an aversion to being lassoed by a snake and squeezed to a pulp. A ball python to be precise, or a royal python as the species is called in Europe. Ball pythons are called that because when they're alarmed they curl themselves into a ball with their heads sticking out of the centre although Pretzel had his own version which had led to his name.

Still, Pretzel was, in his photograph at least, gorgeous. He had an alert face and a wonderful pattern of brown-gold markings all over his black muscular body. In form and colouration he was a fascinating challenge. Something that intrigued me was that the colouration lines on his face continued through his eyes as if they weren't there. I'd never seen that in eyes before but it was probably an evolutionary trait that enhanced his camouflage.

Randolf Zankowsky III and I had a brief exchange of emails clarifying a few details, such as the cost of postage to Albuquerque, New Mexico as oil paintings shouldn't be rolled up as that can crack the paint and the varnish. Sending it flat makes the shipping is more expensive. Still Randolph Zankowsky III didn't balk at the cost and paid me up front. Two traits I admire in a client. It took me a week or so to complete the painting because every single one of Pretzel's thousands of scales had to be individually detailed. With cats and dogs, on the other hand, you can often get away with the impression of fur which is

quicker. Still, it was a fun change.

Anyway, because I had been engrossed in painting Pretzel and spending my evenings at the pub trying not to give customers food poisoning, I hadn't had a chance to catch up with Gerald. I varnished Pretzel roughly three weeks after we'd made the video and rang Pack And Send to order a suitable packing box the same day with collection of the painting the following Monday. After making some coffee I relaxed on my couch, rather proud of my first snake. Out of habit I checked my emails and found one from Border Force, Port of London, wanting me to phone them to make an appointment for a visitation.

My first reaction was, inevitably, panic. Border Force have powers over and above the Police and it occurred to me that they may have heard, though their various sources, that I was shipping a python to the USA and may well be under the impression that it was alive. I waited until my heart palpitations had died down then tried to think logically. Assuming it was the python, I hadn't done anything illegal yet and it shouldn't be too hard to prove that I was just shipping a painting of a python, not a real one. On the other hand, if it was anything more serious, such as Akuchi using my name for importing the various things he imported from time to time, they wouldn't be sending me polite emails. They'd be breaking down the door.

Just to be safe, I found the piece of paper where I'd noted down the shipping reference number given to me by Pack And Send. It would be easy enough for Border Force to contact them to check. I also took a photo of the painting lying on the table so I could send them that as well.

"Border Force, Port Of London, how may I help you?" said a brusque female voice when I rang.

"Can I speak to Superintendent Brent Squires please," I said in a thin, trembly voice.

"Putting you through," she said.

"I wonder if I should have phoned a lawyer first?" I wondered as I

waited while sad music played.

“Squires,” barked an authoritative male voice.

“Umm,” I said, feeling a definite urge to pee, “my name’s Felipe Rocha. You sent me an email asking me to ring you about some sort of visitation.”

I nearly added that whatever they thought I’d done it wasn’t me but figured they wouldn’t believe me. I sensed his brain changing gears while he switched from thoughts of searching shipping containers for drugs and illegal immigrants to why he might have emailed me.

“Ah Mr Rocha, I understand you are an artist specialising in animal portraiture, is that correct?” he said.

“More or less,” I said.

Actually I specialise in landscapes and seascapes, on the rare occasions I go to the seaside, and the pet portraits were just a commercial sideline that paid the bills but he didn’t sound the sort of person to be overly interested in the fine details. I sensed it was more of a guilty or not guilty type question and was largely rhetorical anyway since he must have got my email address from my website.

“I would like to commission you to produce a painting of a rather delicate nature,” he said, “and in a somewhat abbreviated time frame.”

OK, this didn’t sound like an arrest for illegal snake exporting.

“Oh yes,” I said, suffering from a mild attack of brain freeze.

“Indeed,” he said. “Is three weeks sufficient time in which to produce a painting?”

My brain started to defrost since I was now in comfortable territory.

“That depends on the size and complexity,” I said. “What is it you are looking for?”

“One of my dog handlers is retiring in three weeks and we want to give him a portrait of Dulce as a retirement present,” he said.

“I take it Dulce is a dog?” I said.

“Indeed,” he said. “A beagle detector hound.”

“That would be a lovely retirement gift,” I said. “If you want to send me a photograph I can easily reproduce it.”

“Therein lies the difficulty,” he said. “I do have three photographs of Dulce at various ages but we don’t want a direct copy. We would like a scene typical of Dulce’s working life.”

“So why don’t you just take a photograph of her at work?” I asked.

“Unfortunately Dulce was killed in the line of duty six weeks ago,” he said. “You may have read about it in the newspapers.”

Now that he mentioned it I did have a vague recollection of a Border Force dog who’d been killed while a group of drug smugglers were evading arrest after the discovery of a large quantity of crack inside a consignment of laptop computers.

“Ahh, yes,” I said. “That was a sad story.”

“Indeed,” he said. “I would like to meet with you to discuss a few ideas for the painting and, of course, your fee. Would you be willing to come here or shall I come to you?”

“Umm,” I said, thinking. “If you want a picture of Dulce at work it’s probably a good idea if I came to you. That way you can show me the kinds of locations you have in mind.”

“Excellent,” he said. “When would be convenient?”

“I don’t suppose you’re available on Sunday?” I asked, thinking that it would be difficult to get to Port of London and back in time for work at the pub.

“We operate twenty four seven,” he said. “I can certainly be available on Sunday.”

We agreed a time and he assured me that he would make the necessary arrangements for me to gain access to the Border Force office.

“By the way,” I asked, “how did you hear about me?”

“A colleague encountered a painting of a Rottweiler during the course of our enquires,” he said carefully, “and your name was mentioned. My colleague was impressed by the lifelike nature of the art work seeing as how he was familiar with the animal in question.”

“Oh,” I said, wondering if I ought to try to make it clear that I just paint pictures and don’t get involved with anything that Border Force might make enquiries about. On the whole I didn’t think he’d be impressed by ‘I’m innocent’ speeches and it might even make him suspicious. “Right, well I’ll see you on Sunday.”

“Good day to you, sir,” he said and hung up.

I sat back on the couch, relieved that it was another commission and not trouble then it slowly dawned on me that I had a bit of an ethical dilemma. Should I tell Akuchi that Border Force were making enquiries about him or should I side with Law And Order? Ethically, of course, one should always side with law and order but Akuchi did live not far away and, more importantly, not only knew me but knew where I lived. It was a good half an hour before it occurred to me that if Superintendent Squire’s colleague had seen both Tyson and the painting of Tyson then Akuchi undoubtedly already knew.

* * *

After Pack And Send had collected Pretzel on Monday afternoon I made some coffee and settled down at my table with my sketch pad to work though some ideas for Dulce. I had my notes from the meeting with Brent and the three photographs but they were all in fairly formal poses from various ceremonial events. The brief was for something that showed Dulce at work and I felt something more interesting than

Dulce's backside sticking out of a shipping container would be more appropriate. Something which showed her alert, intelligent face which tended to suggest that the viewer was the object being searched for. Artistically not a bad idea but realistically a dead end. As this was going to be a retirement present for her handler it seemed undesirable for him to be, even if subconsciously, the illegal goods and he'd probably never seen her from quite that angle anyway.

I was just sketching an idea for Dulce excitedly finding something and looking back over her shoulder at her handler when my phone rang.

"I've got a bloody interview," screeched Gerald excitedly.

"Good oh," I said, wondering if Dulce should be up on her hind legs investigating something tall or bent low on her front legs investigating something short. "What for?"

"BSpaceE," he crowed.

I looked up from my pad and gazed across the room. BSpaceE sounded familiar. Oh yeah.

"You're kidding," I said, disbelievingly. They seriously wanted to interview Gerald for a ten year space mission?

"I kid you not," he said, "I've got the letter here."

"Wow," I said, "good for you. When is it?"

"Next week," he said. "Thursday and Friday."

"Bloody long interview," I commented.

"They're doing some tests at the same time," he said. "They sent a programme as well. There's a short presentation on the Thursday morning followed by a medical and a preliminary interview then some physical tests to assess adaptability to space then some psychological tests on the Friday."

"Sounds like it's going to be a whale of a time," I said.

I rubbed out half of Dulce and tried her in a taut, on all four legs pose. That didn't look too good either.

"So you're still coming with me?" he asked.

"Where?" I said.

"Norfolk," he said.

"Why are you going to Norfolk?" I asked, scrunching up my sheet and starting a fresh one.

"That's where the interviews are being held," he said in exasperation.

"Oh right," I said, "gotcha. Umm, what about work?"

"I'll take a couple of days off," he said.

"No, I meant me," I said.

"Oh right," said Gerald. "Jiminy won't mind."

"Actually she will," I said. "And I'm only casual. She might sack me."

"So you are going to let her rule your life?" he asked. "What happened to the independent freedom loving 'no one will tie me down' Phil I've known for years? "

"He's got old and complacent," I said. "That's what happens when you eat regularly."

"Ohh, she'll never sack you," he said. "No one else will work there for those wages."

"Listen Gerry, I ..."

"Please?" he said.

I suddenly thought of another tack.

“Won’t they think it odd if you bring someone with you?” I asked.

“Actually they recommend it,” he said. “Some of the tests can be a little stressful apparently so it’s a good idea to bring a friend in support. They’re providing all the food and accommodation for the night.”

Bugger.

“You know, Gerry, I really don’t ...” I started.

“Ohh come on,” he said, interrupting. “It’ll be fun.”

“Bullshit,” I said. “The last thing it’ll be is fun. They’re going to take you apart mentally and physically and leave me to pick up the pieces. Doesn’t sound like fun to me.”

“Do you want me to beg?” he said.

“Yeah,” I said laughing, “get on your knees, bastard.”

“Please?” he begged.

“Oh all right, but you can pay me back for lost earnings,” I said.

“Deal,” he said happily. “Just one problem though. I’ve only got a tenner. Can you make change?”

“Like hell,” I said. “Seventy quid for two evenings.”

“I was joking,” he said. “Hey, thank you for this.”

“You owe me,” I said. “How are we getting there?”

“I thought we’d drive up in my car early on the Thursday,” he said. “You can sleep all the way.”

* * *

I was dimly aware of something repeatedly hitting my shoulder and

flapped my hand to try and stop it.

“Wake up,” said Gerald. “We’re nearly there.”

I slowly opened one eye and looked out of the car window. We were driving alongside a high metal link fence which seem to stretch endlessly behind and ahead. In the distance, on the other side of the fence was a long low building of some sort, pale yellow and featureless. It could have been a cliff face except that there weren’t any cliffs in Norfolk.

“What time is it?” I asked.

“Just gone half past nine,” he said. “I got you a coffee a few miles back.”

He pointed to a takeaway coffee cup sitting in the cup holder. I reached out and picked it up. It was still warm. Gratefully I sucked at the little slot in the cover.

“BSPace Entrance S12 ~ 3 miles” flashed past.

“Is that where we’re heading?” I asked.

“Yup.” he said tersely.

I stretched and adjusted my position in the seat. My backside seemed to have gone numb.

“Are you nervous?” I asked.

“God no,” he said. “Nervous doesn’t even begin to describe it.”

“It’ll be fine,” I said, rather pointlessly.

It had turned out that Gerald was right. Jiminy couldn’t get anyone else, at least not at short notice, so she capitulated albeit with poor grace after I reminded her that slavery had been abolished and that I had contacts inside Border Force in case she was thinking of importing a cook from overseas.

“BSpaceE Entrance S12 ~ 100m on left” appeared and Gerald started to slow down then turned on the indicator.

“Your name please,” said the uniformed guard at the barrier.

“Gerald Moreton,” said Gerald.

“And your companion?” he asked, ticking something on his clipboard.

“Felippe Rocha,” said Gerald.

“I don’t have that name on my list,” said the guard, looking unimpressed.

“But I said he was coming on the form,” said Gerald anxiously.

“I’m sorry, sir,” said the guard.

“Try under F,” I said, leaning over to look at the guard. “It’s spelt Felippe.”

“Ahh, right you are, sir,” he said. “And your registration number?”

Gerald told him and he moved round to the front of the car to check.

“If you just follow the signs to Car Park A, you’ll find Reception clearly signposted,” he said coming back. Another car pulled up behind.

“Thanks,” said Gerald and reluctantly pulled forward.

Reception was a structure the size of a portacabin tacked onto the side of the yellow building. Up close the main building was a good three stories high. It’s uniformity and lack of features had made it seem lower.

I went inside hoping to find a toilet while Gerald got his overnight bag out of the boot. I hadn’t brought a bag since I was comfortable with my jeans and jumper for two days and I didn’t own any pyjamas.

"Excuse me," I said to the smartly dressed lady sitting at a desk. "Is there a t ...?"

"Hello," she said, beaming at me. "Can I have your name?"

"Felippe Rocha," I said, "umm, a toi ..."

"Ahh, Mr Rocha," she said, finding me on her clipboard. "We appear to have lost your paperwork. Would you might awfully just filling out this form again?"

She looked very apologetic so I took the form.

"Sure," I said. "No problem, but is there a ...?"

"If you'll just sit over there and give me the form back as soon as you've completed it we can move things along," she said, waving at a row of armchairs against the far wall.

"Right," I said, "where's a ...?"

"Use this one," she said, handing me a pen. "Ahh and you must be Mr Moreton, Mr Rocha's companion." She turned away from me as Gerald came through the door. "Mr Rocha is just completing some paperwork. When he's done I'll have someone show you to your room. There's a preliminary seminar in room 122 at ten thirty where refreshments will be provided."

"Oh right, thanks," said Gerald and she bestowed another beam on us before turning away to talk to the people who'd come in after Gerald.

"I'm busting for a pee," I muttered, sitting down in one of the chairs. I jittered my leg to try to reduce the building pressure in my bladder.

"There'll be a loo in the room I would think," said Gerald, nervously hugging his overnight bag. "The sooner you fill out the form the sooner we can go to the room. What do you suppose she meant, I'm your companion?"

"No idea," I said. The form seemed similar to the one Gerald had had

to fill in but that was a while ago and I didn't really remember. I rapidly filled in the details that seemed to be relevant, although why they wanted to know about my Art degree or employment history I didn't know. I just put 'Professional artist with occasional casual menial jobs' and left the rest of the page blank.

"What the hell?" I muttered, staring at the last page. "My medical history? Jesus."

I couldn't be bothered with that page so I just scrawled 'no illnesses' across the page then signed at the bottom. I couldn't remember the date so I left that blank.

"There you go," I said, handing the clipboard back to the lady.

"Thank you," she beamed and quickly scanned it. She frowned when she saw the medical page but let it pass and wrote a date in the blank space.

"Janine will show you to your room," she said.

"Hi, I'm Janine," said Janine. She was dressed in a spotless tracksuit and gave every impression of being disgustingly fit. "This way."

"Here's your room," she said after a lengthy walk at high speed along seemingly endless corridors and up short flights of stairs. "I'm your coordinator and will be taking you through the procedures today. Get yourselves settled and I'll be back at 10:25 to take Mr Rocha through to the Facilitation area. Now, Mr Moreton, there is a television and internet linked computer in the room and a recreation area and cafeteria at the end of the corridor for all candidates' companions. Feel free to use the amenities and Mr Rocha will be rejoining you for lunch."

"Umm," I said, "there seems to have been a mistake. Gerald is the candidate, not me. I'm just here for the ride."

Chapter Seven

I left Janine and Gerald discussing the issue while I made a much needed trip to the bathroom. Disconcertingly the bathroom was a small featureless cubicle about the size of a double depth coffin whose translucent walls emitted a dim glow. The words ‘Say What You Want’ appeared at roughly eye level in a friendly cursive script.

“I want to pee.” I said, slightly urgently since ‘want’ was an understatement.

A small funnel popped out of the wall at slightly below crotch height. I jumped a little in surprise then peered in it. It seemed to be a tube of some sort.

“Umm, do I pee into that?” I said.

Out of the corner of my eye I sensed the message on the wall change and lifted my head to look. ‘Say What You Want’ had disappeared and there was an animation of a stylised man urinating into a funnel.

“OK,” I said. “I’ve got the message,” and the animation disappeared. I peed into the small funnel.

It was surprisingly difficult. Partly because it was different to what I was used to but more because there seemed to be something tracking me. The funnel moved with every twitch to ensure the stream continued to stay more or less centred.

“Weird,” I thought but didn’t stop.

Something was definitely tracking me as, about five seconds after I zipped my jeans, the funnel retracted back into the wall and was lost from sight. There didn’t even seem to be a mark on the cool, glass-like surface where it had been.

“Umm, how do I flush?” I asked.

“Fully Automated Recycler ~ No Flushing Required” flashed up on the wall.

“OK,” I said, wondering what my pee was being recycled into. “Umm, I want to wash my hands.”

A slot appeared in the wall at waist height and the toilet had clearly figured out I was a moron as the stylised man reappeared, this time making jabbing motions with its hands at a stylised slot, without any prompting. It wasn't wide enough for both hands so I stuck my right hand in, as I'm right handed, and felt a tiny waft of heat. I took it out and examined it. Whatever the process was it was pretty impressive since some paint stains I hadn't been able to get rid of had disappeared and my hand felt tingly clean. I went to put my left hand in the slot but it had disappeared.

“Umm, wash hands,” I said and the slot reappeared. The system clearly expected me to be a fast learner since the animated man didn't reappear.

“That's an awesome toilet,” I said, stepping back into the room. “Oh hello.”

“This is Jason, my supervisor,” said Janine, introducing me to an intense young man in a conventional business suit. Gerald was looking flushed and irritated.

“There seems to have been some sort of mix up,” said Jason, studying his executive style clipboard which had a pen holder on the side. “We only have Mr Rocha down for assessment, not Mr Moreton.”

“It's not a problem,” I said. “Just change my name to Moreton. Easy peasy.”

Jason looked at me contemplatively then turned to Janine.

“Positive attitude, signs of altruism. Make sure you note that in your report, Janine,” he said quietly and she nodded.

He turned back to Gerald and me.

“There is a simple solution,” he said. “You can both undergo the assessments. I will notify the relevant people.”

“Oh there’s no need,” I said. “I’m just here as Gerry’s friend.”

He ignored me and made some notes on his clipboard. I noticed that the pen wasn’t a pen. It was some sort of stylus and what looked like a clipboard was some sort of electronic pad.

“There,” he said after touching his clipboard pad thing in various places. “I’ve updated the system. You are both now expected in the Facilitation Area.”

“Great,” said Gerald, his irritation fading back to apprehension.

“Yeah, umm, I’m not supposed to be doing this,” I said.

“Of course you are,” said Janine.

“I’ll be off then,” said Jason, flipping a neat leather cover over the screen of his pad, “unless I can be of any further service?”

“Actually,” I said, and he paused mid turn and looked impassively at me. “That toilet, umm, it’s pretty impressive.”

“Indeed,” he said. “Zero water usage and reclaims 99% of expended water, proteins and hydrocarbons and is fully functional in a zero-g environment. We developed it ourselves.”

“Great, so, umm, is it uni-sex?” I asked, “or just for men?”

“Uni-sex,” said Janine.

“But the little funnel ...?” I asked.

“It’s just a question of angles,” she said. “The basic mechanics remains the same.”

“What about, umm, number twos?” I asked, intrigued.

“Again the same,” she said, “although a small support platform extends as well.”

“Right,” I said. No doubt I’d be testing that at some point before we left.

“Something we’re particularly proud of is the interface,” said Jason. “This particular installation is in a domestic environment but in a transport environment full ship-board functionality can be controlled seamlessly through its voice based interface with streaming 32 bit graphics.”

“Oh,” I said. “Sounds impressive. Umm, what does that mean?”

“It means you can run the ship while sitting on the lavvy,” said Gerald, “and still see where you’re going.”

“Oh great,” I said. “Useful in times of great stress then.” I thought that was very funny but Jason and Janine just stared blankly at me.

“Right, then,” said Jason when it became apparent that there was no punchline to my joke. “I believe you are expected in Facilitation. Janine.”

“Absolutely,” she said, “if you’ll both follow me?”

“Do we have to jog everywhere?” I asked a few minutes later. Gerald was several steps behind and beginning to puff a little.

“We weren’t jogging,” she said looking puzzled.

“Oh, OK,” I said. Actually it had felt more like a sprint but I guessed she walked everywhere at that speed.

“Rocha and Moreton,” said Janine to another person of indeterminate sex standing beside a sliding door labelled 122. The tracksuits hid most physical characteristics but Janine’s features and hairstyle were obviously feminine. This person’s were androgynous. “Have you got the update?”

“Yes,” said the androgynous person in a voice that could have been male or female. It checked its pad. “It’s fully propagated.”

“Makes life easier, John,” she said. “Come on in, guys.”

The room was quite large and had cheap folding chairs lined up in four rows facing a podium with a huge screen behind it. At a rough guess there were thirty or forty people already sitting and maybe another ten clustered around a couple of tables on the other side of the room. Over in the far corner were two men and a woman in identical suits although the woman wasn't wearing a tie.

“Refreshments are over there,” said Janine. “Help yourselves and then get seated. The seminar will begin in a few minutes. I'll come and get you when it's finished.”

“Thanks,” said Gerald and I almost simultaneously.

We wandered over to the tables which were now deserted, the people having gone to find seats.

“What's all this then?” I said, expecting to find urns of hot water and packets of limp sandwiches.

“I'm guessing these are space rations.” said a well built black man coming up behind us.

“Could be,” I said eyeing the row of plastic boxes. “Makes sense when you think about it. I'm Felipe and this is Gerald.”

“Angus,” he said and we shook hands.

Each box had identical silver sachets inside although on closer inspection the labels differed.

“You don't sound Scots,” I said turning back to the sachets.

“You don't sound South American,” he countered.

“Good morning,” came an amplified voice. “I am Dr Arjeev Khatri, Director of BSpaceE Titan Mission. Perhaps if the last few could take a seat?”

At least half the people seated turned to look at Gerald, myself and the man who'd joined us.

"Oh great," I muttered, feeling very conspicuous. "Centre of attention already."

I happened to see a sachet labelled 'Coffee with milk' and grabbed it together with a couple of others at random and followed Gerald to the few empty seats at the back. A few seconds later the other man sat next to me, carrying just one sachet.

"Let me begin by welcoming you all today," continued Dr Arjeev Khatri. "You are one of three groups selected from over two thousand applicants to undertake a broad spectrum of physical and psychological assessments designed to simulate the rigours of extended space travel and life in the harsh Titan environment."

He smiled, no doubt delighted that he wouldn't be going himself, and looked around at his audience. As far as I could tell they varied in age from someone who looked to be about ten but was probably twenty to a lady who looked to be a little older than Gerald. Gerald, incidentally was three years older than me although I flatter myself that I looked younger than that. There seemed to be an even balance between the genders and the backs of their heads looked like they were listening intently.

"As I said," resumed the Director, "there are three groups who have reached this stage. Out of the one hundred and forty of you, sixteen will be selected. Eight for the mission itself and eight backups. If at any stage during this process anyone feels they do not wish to continue, please notify a member of staff."

He paused and looked around as if expecting a rash of hands from people wanting to drop out already. No one did although I was already beginning to feel the lassitude I always got at Uni during lectures. I lifted the sachet labelled 'Coffee with milk'. It had a little nozzle in one corner which seemed to have a snap-off tab over it. I sniffed it and it had no discernable smell so I broke off the tab and squirted a thin jet of coffee over my jumper.

“Damn,” I muttered and wiped my jumper with my hand. I experimented gently and it seemed that the best way to hold the sachet was with a thumb and finger around the nozzle although that made it difficult to get my lips around it to suck the contents out. Still, it was indisputably coffee although not a particularly great blend. I noticed someone in the row in front, two or three seats away, lift a sachet to his lips and leaned forward to watch his technique. He seemed to have the sachet in the palm of his hand with the nozzle between thumb and finger and squeezed the sachet so that it squirted into his mouth. I tried it and it worked surprisingly well.

“... over to Dr Baneesh Hoffman who will talk about Titan itself,” said the Director.

There was a brief and hesitant smattering of applause and he walked off stage. The suited woman took the microphone from him and positioned herself to one side of the large screen which flickered into life.

“What did I miss?” I whispered to Gerald.

“Your mouth by the look of it,” he whispered back. “Shhhh.”

“Thank you, Arjeev,” she said and a large dirty white orb appeared on the screen.

“This is Titan,” she said. “Taken in 1981 by Voyager 2 on its approach. Titan is the largest of the 53 known moons orbiting Saturn. Despite its distance from the Sun, Titan is arguably one of the most Earth-like worlds we have found to date. With its thick atmosphere and complex, carbon-rich chemistry, Titan resembles a frozen version of Earth several billion years ago. These images were taken by the probe Cassini in 2004 ...”

Surreptitiously I put my now empty coffee sachet on the floor and looked at the other two I had picked up. One was labelled ‘Sandwich: Roast Beef and Tomato’ and the other ‘Soup: Chicken Noodle’.

“How’d they get a sandwich inside a plastic sachet?” I wondered. Worryingly this sachet also had a nozzle in one corner. Coffee and

soup, OK, but a liquid sandwich? I broke off the tab, holding the sachet carefully just in case it squirted as well. I gently squeezed the sachet and a thin, gruel like liquid oozed out. The smell reminded me vaguely of school dinners, nothing in particular and slightly dusty. I put the nozzle to my mouth and squirted. Well, I suppose it did taste more like beef than, say, a pina colada.

“ ... gravity is 13.8% that of Earth.” said Baneesh.

“Hey, looks like you’re going to lose some weight,” I whispered to Gerald.

“I’m trying to listen,” he whispered pointedly.

“Oh,” I said, “sorry.”

I looked around the room and noticed a woman in a white track suit standing against the wall on one side of the room looking directly at me. I gave her a smile and she noted something on her clipboard or pad. I couldn’t tell from this distance which it was. She didn’t smile back.

“Pffff,” I thought to myself and turned my attention to the chicken noodle soup. It didn’t have any noodles in it.

I looked over at the woman in the white track suit but she was watching someone else. In fact, there seemed to be several people in white track suits up against the walls. Janine’s had been blue. I nudged Gerald.

“You reckon those people in the white track suits are watching us?” I whispered.

He looked to see where I was looking then looked around the room.

“Could be,” he whispered back. “Maybe it’s part of the psychological assessment. For sure she doesn’t fancy you.”

The woman in white was watching me again and her unsmiling face suggested Gerald was right. Miss, Mrs or Ms Hoffman was still

droning on, this time about something that sounded like ‘nuclear tides’, whatever they are.

“What’s a nuclear tide?” I whispered to Angus since I knew Gerald wouldn’t know.

“It’s a nucleoside linked to a phosphate group,” he whispered back. “Nucleotides form the basic structural unit of nucleic acids such as DNA.”

“Oh, of course,” I said. “Silly me.”

I started to count the overhead lights in the room. There were sixteen. I double checked just to be sure. There were still sixteen. I wondered if anyone would mind if I got up and got some more coffee.

I didn’t catch the name of the third speaker. I was miles away when the changeover happened, in my own little zone. I’d photographed a couple of my preliminary sketches of Dulce that I’d liked and sent them to Superintendent Squires who’d chosen one of them. I was probably two thirds of the way through painting it but I was beginning to have doubts. What had seemed like a good background in the quick pencil sketch was beginning to look a bit cluttered and was detracting from the main subject, Dulce. I wanted to drop some of the background while keeping the logic of it and without leaving any gaping holes. It was an interesting problem in composition and I’d concentrated on Dulce the day before as I had to finish the painting in the next few days so it could be presented to her handler at his retirement do.

“There’s Janine,” said Gerald, nudging me.

“Oh!” I said, rapidly returning to this zone. “Are we done then?”

“That was very interesting,” said Angus. “What did you think?”

“Very,” I said. “So how come you know about nuclear tides?”

“I’ve a Masters in Bio-engineering,” he said. “How about you?”

“Oh, I’m an artist,” I said.

“Time for lunch,” said Janine coming over.

“Hi Wendy,” said Angus to another girl in a blue tracksuit who came up to him. She was, presumably, his coordinator.

“Great,” said Gerald. “More space rations?”

“Don’t you like them?” asked Wendy.

“They’re OK,” I said. “Is that typical of the food on the trip?”

“Oh no,” said Janine. “Those are just snacky things. You’ll have stomach and bowel problems if you live on a purely liquid diet. You could also have problems with your jaws and teeth.”

“Sounds nasty,” I said.

Slowly everyone in the room departed and we were taken to the cafeteria up near our rooms where most of them were joined by friends and relatives. Wendy and Angus disappeared.

“So what’s your role here?” asked Gerald as we stood in the queue.

“I’m your coordinator,” said Janine. “It’s my job to make sure you are where you ought to be when you ought to be and to answer any questions you might have. And, maybe help encourage and motivate you if you need it. Think of me as a personal trainer, you know, like at the gym.”

“Oh right,” I said, never having been to a gym. I was pretty sure Gerald hadn’t either.

I couldn’t think of anything else to say for the moment and Gerald seemed lost in thought.

“Jesus, fish and chips,” I said when we got to the head of the queue. “I’d have thought chips were a bit unhealthy for somewhere like this.”

We collected our rations and Janine led us to a vacant table.

“They’re not potato chips,” she said, sitting down and picking one up. “They’re reconstituted protein and vitamin supplements. Look.”

She broke the chip in half and showed us the pale green centre.

“They taste OK, though,” I said, eating one. “Not bad. So is the fish fish?”

“Oh no,” she said. “That would simply be too inefficient. Do the maths. If you take enough food for ten people for ten years you’re going to need at least ten tonnes of food which is a huge payload. By reconstituting amino acids, glycerides, vitamins and minerals with recycled water that can be reduced by almost 90%.”

“Oh right,” I said. “I thought there were only going to be eight people on the trip?”

“Plus the two pilots,” she said.

“Ohh,” I said. “Are they here too?”

“No, they’re ex-military,” she said. “They’re being trained at NASA at the moment.”

“That’s nice to know,” I said. “So what’s happening after lunch?”

“You’ve both got your preliminary interviews in twenty minutes,” she said, consulting her pad although I had a feeling she didn’t need to. “Then the rest of the afternoon will be assorted physicals although the Centrifuge Test won’t be until tomorrow morning, before breakfast.”

“What’s that then?” I asked, tucking into my fish. It tasted at least as good as the fish at the pub although, like the chips, it too was pale green inside which was a little disconcerting.

“You are basically spun around at high speed,” said Janine. “It’s to test your ability to handle high Gs.”

“So why is it before breakfast?” asked Gerald.

“Because everyone throws up during it,” she said cheerfully. “Waste of food to do it after breakfast.”

“Oh goody,” I said.

* * *

“Come on in,” said Kyrenia. “I’m Kyrenia. Have a seat.”

“Thanks,” I said, sitting down in the other armchair.

“So your name is Felipe Rocha?” she asked, looking at the pad that everyone seemed to use.

“Yes,” I said.

“You are British, though?” she asked.

“Sure,” I said. “Born and bred. Why?”

“Your name sounds South American,” she said. “Is that your ancestry?”

“Oh god no,” I said. “It’s just a pseudonym I use. My real name’s Phillip Roach.”

“How interesting,” she said. “Tell me, why do you feel the need for a pseudonym? Do you perhaps feel that the name Phillip Roach doesn’t fully express your inner identity?”

“Probably not,” I said cheerfully. “People seem to think that Spanish names are more exotic. Like Kyrenia.”

“That’s a Cypriot name,” she said, “and my parents were Cypriot immigrants.”

“Oh that’s nice,” I said. “Greek or Turkish?”

“We’re here to talk about you,” she said.

“Oh sorry,” I said. “Still, that’s my favourite subject.”

“Foreign names?” she asked, looking confused.

“No, me,” I said smiling. “I can talk about me for hours.”

She noted something on her pad. I watched as there wasn’t anything else to look at in the room.

“Let’s go back to your choice of name,” she said. “When did you feel the need to take on an alternate identity?”

“Umm, oh I think I was twenty five or so,” I said. “Why?”

“And thinking back to your childhood,” she said, ignoring my question, “did you often role play? Act out scenarios where you pretended to be someone else?”

“Well sure,” I said. After all, I had been in the drama society at school.

“And were any of those roles ones in which you were, for example, female?” she asked looking at me intently.

“Oh god no,” I said. “Although one or two were black guys.”

My biggest role had been the lead in the school production of Othello although it hadn’t been a critical success. My girlfriend at the time didn’t like me in black face paint as apparently it made her look too pale.

“I see,” she said and thought for a moment. “So do you think perhaps that your childhood fantasies of being black-skinned led to you choosing a Latino pseudonym in adulthood?”

“I don’t see the connection,” I said.

“Well, as an adult you would surely have understood that you cannot

change your skin colour,” she said, “so perhaps you chose the name Felipe Rocha as a way of compensating for your perceived colour deficiency. A compromise, if you will, between your intellectual whiteness and your emotional blackness.”

“God no,” I said. “It was just about money.”

“Money?” she said. “How interesting. So you feel that your skin colour is inherently a part of how you value yourself?”

“No,” I said, “it’s about how others value me, although my skin colour doesn’t really come into it. I’m happy being white and most of my customers don’t know what I look like anyway.”

“Your customers?” she said, looking confused. “What customers?”

“I’m an artist,” I said. “I discovered after I left Art College and went professional that no one wants to buy paintings by boring Phillip Roach so I changed my name around a bit to make it sound Spanish. Like Pablo Picasso, Dali, Goya, Velazquez and the rest.”

“You’re an artist,” she said flatly. “I see. So you are saying that your pseudonym was a purely commercial decision?”

“Absolutely,” I said. “So you see, I’m British, not Spanish or South American.”

“I see,” she said, scribbling furiously with her stylus on her pad. “So tell me more about your childhood fantasies of being a black person. Did you, for example, play those roles in terms of, perhaps, a black servant to a white authority figure? Perhaps an older boy or a man?”

“Oh god no,” I said. “Although maybe Shakespeare intended that, I wouldn’t know.”

“Shakespeare?” she said, looking puzzled. “You thought you were Shakespeare?”

“Why would I think I was Shakespeare?” I asked, looking puzzled as well.

“You tell me,” she said. “How did Shakespeare become conflated with your fantasies of being a black man?”

“I’ve never fantasised about being a black man,” I said. “Why would you think that?”

“I see,” she replied, tapping her pad with the stylus. “So how do you reconcile that denial with your earlier admission of role-playing black men?”

“There’s nothing to reconcile,” I said. “I played the lead in my school’s production of Othello. It wasn’t a fantasy. It was bloody hard work.”

“Are you making fun of me?” she asked, her eyes flashing angrily. “This interview is over!”

Chapter Eight

“That was quick,” said Janine when I came out of the interview room. “They’re supposed to last half an hour or so.”

“I don’t think we hit it off,” I said, smiling. “Pretty entertaining though.”

Janine looked around then read something on her pad. She leaned towards me conspiratorially. There were a number of other coordinators milling around and chatting quietly while their charges were in the various interview rooms.

“I shouldn’t tell you this,” she whispered, looking extremely guilty. If she just talked normally no one would take any notice but she looked suspicious even to me. “But Kyrenia has given you a good report.”

“How strange,” I said. “Oh well, what the hell. What’s next?”

“We have to wait for Gerald,” she said, “then it’s off to the physicals.”

“OK,” I said. “So didn’t you want to be part of this space thingy?”

“Not really,” she said. “I find it all quite fascinating but I don’t want to leave Earth. I couldn’t leave my family, especially my baby.”

“Ohh that’s nice,” I said. “How old’s your baby?”

“She’s nearly three,” said Janine. “Her name’s Bethany.”

“That’s a sweet name,” I said, sitting down on the floor of the corridor. “So are you married?”

After a couple of moments hesitation Janine squatted down beside me.

“Oh no,” she said. “I lived with this guy for a few months but it didn’t work out.”

“That’s a shame,” I said. “But at least you have Bethany.”

“You don’t have any children?” she asked as a silence started to develop.

“No,” I said. “I was married and we were going to but left it too long. Probably just as well really, I wouldn’t have made a good single parent.”

Janine nodded which tended to suggest that she’d read the brief details I’d put on the form about me being a widower. Rosalie, my wife, had died in a hang gliding accident some years previously and I still didn’t like to talk about it. Not least because I was the one who’d helped her assemble the glider that day and I still had some guilt issues over the possibility that I had somehow made a mistake in the assembly.

“So, umm, you work here full time?” I asked.

“No, most of us are here on a short term contract,” she said. “Mainly for the selection process although some of us will stay for the training.”

“Will you be staying?” I asked.

“I don’t know yet. We’ll be selected based on how we perform during this phase.” she said.

“Oh right,” I said. “So it’s not just the crew who are on display then.”

She laughed, perhaps a little self consciously. “No, as far as I can tell just about everyone is here on short term contracts, even the technical staff who’re designing, building and testing the equipment. I’m not sure but I think only Sergey Vanofov and a handful of the directors are permanent.”

“Who’s Sergey Vanofov?” I asked. “I’ve heard the name somewhere but ...”

“He owns BSpaceE,” she said. “Apparently he’s the third richest man in Europe and I was told he’s poured something like £17 billion into this since he set it up in 1994.”

“Nice work if you can get it,” I said. “How did he make his money then?”

“I don’t know,” she said. “How does anyone get that rich? I never will.”

“Me neither,” I said. “You have to be obsessed with it, I think. Personally I can’t be bothered with money so long as there’s enough to get by.”

“It would be nice to be able to just buy anything you wanted,” she said wistfully.

“I guess,” I said, “but then you wouldn’t have any sense of anticipation and no achievement when you do finally get it. Nothing would have any value because you’d just have everything on an idle whim.”

“Maybe,” she said, sounding totally unconvinced.

“So what would you do with your billions if you had any?” I asked.

“Oh easy,” she said. “I’d make sure Bethany got the best education so she can be whatever she wants to be. Oh, here’s Gerald.”

“Hey, Gerry,” I said, getting up. “How did it go?”

“OK, I think,” he said, “but you never know with these things. He did seem to dwell a lot on why I’ve never found someone after Angela.”

Gerald had met Angela, ohh, fifteen or sixteen years ago, and after a whirlwind romance they’d got married and four months later she’d walked out on him. After he’d cleared all her credit card debts, loans and other odds and ends. I don’t think he’d ever quite got over it.

“I’m sure everything went just swimmingly,” said Janine brightly. “Shall we move on to the next phase?”

“Any chance of a coffee first?” asked Gerald.

“Of course,” said Janine. “There’s a supply of ration packs just down the corridor or would you prefer to go back to the cafeteria for a few

minutes?”

“Oh the packs will be fine,” he said. “I just need some caffeine. I’m feeling a bit stressed.”

“We had three or four people in the last batch crying after their interviews,” said Janine, conversationally.

“I can believe it,” said Gerald. “Why do you suppose he wanted to know what I remembered about being breast fed?”

“He’s probably a bit kinky,” I said. “I’ve heard a lot of shrinks need therapy themselves. Hey Janine, can I ask you a technical question?”

“Of course,” she said. “I’m here to help.”

“Those coffee packs,” I said. “I had one during the presentation and it was quite hot. How do they do that?”

“The nozzle of the sachet contains chemicals which mix when you break the tab,” she said, “and the exothermic reaction heats the fluid as it passes through the nozzle. Would you like me to find out which chemicals are used?”

“Oh god no,” I said. “I wouldn’t understand anyway, chemistry’s not my strong point. I just wondered about the mechanism.”

“Gerald, you’re in cubical 4,” she said, as we’d arrived in what was probably a different part of the building although it looked exactly the same as where we’d been for the interviews. It smelled different though. A little like a vet’s surgery. “And you’re in cubical 1, at the end.”

“OK,” I said and headed off to cubical 1.

“Hello,” I said cheerfully, sticking my head around the door.

“Hello,” said the very attractive brunette sitting beside a machine that looked like something out of Star Wars. “Are you Phillip Roach? I’m Brenda.”

“Nice to meet you, Brenda,” I said.

“Now, first things first,” she said, picking up a rack of small tubes. “I need some samples. Blood, saliva, urine and stool plus a swab from inside your mouth.”

“Oh, OK,” I said. “I can probably manage the urine but I don’t need to do number twos just yet.”

“Oh, that’s not a problem,” she said, beaming. “I’ve got a probe. Remove your trousers, please.”

As it turned out I had to remove all my clothing and she proceeded poke me in various places, squeeze other places, listen to the bits she’d missed and stick things in whatever was left.

“Would you lie on the platform, please,” she ordered, when it looked as though she was done.

“Sure,” I said. “Are you joining me?”

She smiled bleakly so I guessed my humour had fallen flat. Hardly surprising since she was now thoroughly acquainted with my naked body and no doubt wasn’t impressed.

“This is a combined CAT and MRI scanner,” she said. “It also picks up fungal growth. It’ll take about twenty minutes and I’ll have your samples analysed by then.”

“So this isn’t part of the NHS, then?” I said, getting onto the platform and making myself comfortable.

“The NHS doesn’t have equipment like this,” she said. “It’s proprietary to BSpaceE. If you start to feel claustrophobic or begin to panic, press this button.” She handed me something that looked like a car cigarette lighter.

“Ready?” she asked. I nodded and slowly glided inside a dimly lit tube. Some incredibly bland elevator music started playing. A few seconds later she was shaking me.

“Wake up,” she said.

“Sorry,” I said, “I didn’t get much sleep last night.”

“Quite understandable,” she said. “You can get dressed now.”

“So how did I do?” I asked pulling on my undies.

“When did you last see your GP?” she asked, doing things to the controls of the scanner.

“Ohh, a couple of years, I guess,” I said. “Why?”

“Your blood sugar is high, your LDL cholesterol is high, your white blood cell count is low, your thyroid stimulating hormone level is borderline low and your lipids could be better.”

“Oh, that doesn’t sound too good,” I said.

“On the other hand, your liver and kidneys are performing reasonably well. Might be a good idea to talk to your GP and perhaps re-evaluate your diet and lifestyle before anything serious develops,” she said.

“Will do,” I said, having no intention of doing anything of the sort. “Did I have any fungus?”

“A mild infestation between the toes of your left foot,” she said. “Some medicated talc will deal with that.”

When I rejoined Janine, Gerald was already there, looking miserable.

“How’d it go?” I asked.

“I don’t want to talk about it,” he said. “You?”

“She didn’t know how I was still alive,” I said. “She wants to write a paper on me.”

Janine raised an eyebrow but didn’t comment.

“Don’t you take anything seriously?” he asked, irritably.

“Sure,” I said, “but I don’t really see the point of any of this.”

“We need to make sure you’re healthy enough for an extended period in space,” said Janine.

“I guess,” I said, “but fungus between my toes? Anyway, I’m not going into space. I’m only here to keep him company.”

“That’s as may be,” said Janine, “but you’ve still got the physical stress tests. Are you ready?”

“Bring it on,” I said. “Whatever’s happening it’s still quite fun. That machine in there’s pretty impressive.”

Janine laughed. Quite why I have no idea.

“I’m Andre,” said Andre when we arrived in the next area.

It was a large open space with half a dozen or so people already there doing exercises of various sorts.

“This looks dire,” I said and Gerald curled his lip.

“Which of you is Phillip Roach?” he asked.

“I am,” I said.

He found out who Gerald was and checked his pad and gently pushed him off onto someone else.

“If you could just change into these, please,” he said, handing me what looked and felt like a blotting paper nappy.

Janine was off in one corner talking to the other coordinators so I did as he bid.

“I just need to connect these electrodes,” said Andre, swinging out a swinging arm festooned with wires. He attached about twenty to

various parts of my anatomy while I stood there with my legs apart and my arms outstretched like Leonardo da Vinci's Vitruvian Man.

"Excellent," he said. "Now we'll start with a few push ups, OK."

"OK," I said. "How many?"

I tried to sound confident although there was a good chance I couldn't do any. I hadn't really done much in the way of exercise since I'd left school.

"As many as you can," he said.

"Well, I can certainly do that," I said.

Angus was in the next area, already doing pushups and he seemed to be doing quite well. I got down on my hands and knees.

"Chest all the way to the floor," said Andre, "and keep your backside high."

"Right," I said.

I lifted my hips and my shoulders started to quiver.

"When you're ready," said Angus.

I lowered myself to the ground, which wasn't too hard. It was going back up that was difficult.

"One," said Andre. "Keep going."

I took a deep breath and lowered myself and, with a convulsive effort, forced myself up again.

"Two," said Andre, beginning to sound bored.

Sweat started to bead on my forehead and my arms started to shake. A muscle in one of my calves started to twitch and my toes hurt.

“Probably the fungus,” I thought.

Grimly I managed a third but when I lowered myself for the fourth I decided enough was enough.

“That’s it,” I said, going back onto my hands and knees. “I’m done.”

“Are you serious?” he asked incredulously.

“Fraid so,” I said.

He put this snippet of data into his pad.

“I think we’ll skip the rest of the floor work,” he said.

“Awesome,” I said. “Can I go now?”

“Of course not,” he said. “I still have to test your heart.”

“Oh, OK,” I said.

I saw Angus strain to squeeze out one more pushup then get to his feet, sweating copiously.

“Hey Angus,” I called, “how many did you do?”

“Oh hello, Felipe,” he said between gasps. “Seventy four, I think.”

“Great stuff,” I said, giving him a thumbs up. Seventy four? Jesus.

“If you don’t mind,” said Angus.

“Oh yeah, sure,” I said. “Heart stress, bring it on.”

“If you could sit on this bicycle?” he said, pointing to something that might have been a bicycle if it had wheels. “We’ll start you off on the flat, then the resistance will gradually increase. Get the speed up to twenty kilometres an hour and try to keep it there. Keep going for as long as you can but the moment you feel any chest pains let me know, OK?”

“OK,” I said confidently. After all, cycling was my main means of transport. This should be easy.

I grasped the handlebars and started to pedal.

“Damn, this is easy,” I thought, “I can do this all day.”

I brought the speed on the little display in front of me up to the required 20kph and smiled cheerfully at Andre who didn’t see me as he was watching another display that fluctuated between 92 and 94.

Maybe thirty seconds later the thing started to tilt upwards and I had to pedal harder to keep to 20kph. Andre’s display went to 99 or so.

“You’re 42?” asked Andre.

“Yes,” I said.

“We’ll stop when your heart rate reaches 180,” he said.

“OK,” I said as it tilted some more and I had to pedal harder still.

I gritted my teeth and focused on keeping at 20kph. It didn’t take long for my thighs to start screaming. Two more increases in the angle and I was out of the saddle, using my bodyweight to help and my breath came in ragged gasps.

Suddenly the bike tipped back down again as the peddling got easy again.

“Why’s it stopped?” I said, letting go of one of the grips to wipe the sweat off my face.

“Your heart reached 180,” he said. “Keep peddling slowly to warm down.”

“So how did I do?” I asked when my breathing was almost back to normal.

“2 minutes 48 seconds,” he said, “with the angle up to 4 degrees.”

“Is that good or bad?” I asked.

“Well, a hill climb would be around 20 degrees,” he said “but that doesn’t matter. What matters is that we got your heart rate up to 180 and there was no sign of angina.”

“Oh good,” I said. “So I’m not going to have a heart attack in the near future then?”

“Probably not,” he said, “but your fitness level should be a lot better. I’m not risking the rest of the tests.”

“Oh, bummer,” I said, getting off the bike. “Can I go now?”

“Yes,” he said. “Umm, good luck.”

“Thanks,” I said, getting changed back into my comfy jeans and jumper. “See you.”

I glanced over at Angus and he was doing some sort of complicated routine that involved lying face down on the floor then doing a press up then jumping to his feet then going back down again so I wandered over to watch.

His face was contorted when he finally ground to a halt.

“19,” said his assessor. “Impressive.”

“Have you been on the bike yet?” I asked.

“That’s next,” said his assessor. “Would you mind stepping away please, sir?”

“Oh sorry,” I said.

I spotted Gerald sitting with his back to the wall a little further down so I went and joined him.

“How’d it go?” I asked.

“Terrible,” he said. “I ache all over.”

“Yeah, it gets to you after a while,” I said, sitting next to him.

“You have to wonder if it’s all worth it,” he said.

“Well, only you can answer that,” I said. “You’re the one that wants to go to Titan.”

“Umm,” he said.

We sat there and watched Angus on the bike. He looked a little like cyclists I’d seen on TV doing the Alpine sections of the Tour de France. Mind you, he was a lot younger than I was. Mid thirties I’d say.

“Have we got anything on for the evening?” I asked.

“I don’t think so,” he said. “I think after this we’ve just got dinner and the evening’s free. Tomorrow should be pretty easy though. We’ve mostly got written tests.”

“What, like exams?” I asked. “What subjects? Astrophysics or something?”

“No, I think they’re personality tests and problem solving exercises,” he said.

I felt exhausted just watching Angus peddling away. Attach him to a generator and he could power a small town. In fact, looking around, everyone seemed to be intent and focussed, concentrating on whatever exercise they were supposed to be doing. I felt, I don’t know, out of place, I guess, since I wasn’t really supposed to be here.

“Let’s go find Janine and tell her we’re done for the day,” I said. “Maybe there’s a pub nearby where we could go for a drink after dinner.”

“I just want a hot bath and bed,” said Gerald. “Even my toes ache.”

I laughed and we sat and watched the other people for a while. It was

scary.

“Hey Janine,” I said when we eventually decided to go find her. “How many push ups can you do?”

“Ohh, about three hundred,” she said, “but I’ve always had a problem with my upper body strength. How did it go?”

“I didn’t manage quite that many,” I admitted.

She tapped away at her pad for a few moments.

“Thirty two’s perfectly respectable,” she said, “seeing as how you’re quite old and not trained.”

She must have been looking at my results and, to be honest, it hurt a bit to be called ‘quite old’. I decided not to invite her to join us at the pub, if there was one.

“There’s nothing else on after dinner, is there?” I asked.

“No, the evening’s free,” she said.

“Is there a pub round here?” I asked. “We were thinking of going for a drink then getting an early night.”

“I think the nearest is in North Walsham,” she said, “although I really wouldn’t go drinking alcohol, not with the Centrifuge Test first thing in the morning since alcohol increases your blood pressure. Best to get a good night’s sleep.”

“Yeah, I think that would be best,” said Gerald. “I could use some sleep to be honest.”

“Do you guys think you can find your own way to the cafeteria?” asked Janine. “Only Bethany’s at child care and I need to get back soon.”

“Hey no problem,” I said. “We can find our way. Have a great evening.”

“Thanks,” she said, “I’ll be round to wake you around 6.30. Sleep well.”

“Hey,” I called after her as a thought struck me.

“Yeah?” she called back, pausing her stride.

“You said just now thirty two was quite respectable. Thirty two what?” I asked.

“Thirty two push ups,” she said. “See you tomorrow. Bye.”

Chapter Nine

“Why does she think I did thirty two push ups?” I said.

“She probably looked up someone else’s records by mistake,” said Gerald.

“Must have done,” I said. “Hah, I didn’t do anything like that many. How many did you do?”

“Five,” he said, “but it was those burpees that really crucified me.”

“Oh nasty,” I said. “Probably that reconstituted fish for lunch.”

“You what?” he asked.

He started off, fairly slowly with a hesitancy in his step that suggested sore muscles, in the general direction of the cafeteria and I followed.

“The fish,” I said. “Gave you wind.”

“Burpees, not burps,” he said, “you know, those exercises where you lie on the floor then jump up then lie down again. How many did you manage?”

“I didn’t do any,” I said. “Andre let me off because he didn’t think I needed to prove my fitness.”

“Jammy sod,” he said. “Mine put me through the wringer. I think this is the cafeteria.”

Fortunately it was, although knowing Gerald’s sense of direction it could just as easily have been the Mission Control Centre or a ladies toilet. The servery was deserted so I chose a bowl of minestrone soup, some sort of chicken in a glutinous sauce and some ice cream and dumped them on a tray. Gerald elected to have a small steak and a slice of apple pie.

“Mind if we join you?” I asked the woman sitting alone at a table, reading a book.

“Help yourself,” she said.

“Thanks,” I said sitting down.

Gerald put down his tray opposite me.

“I’m going to look for some bread,” he said. “Back in a minute.”

“The food’s not bad here, is it,” I said conversationally to the woman.

“No, it’s quite nice,” she said, folding the corner of a page and closing the book. “I’m Klara.”

“Nice to meet you,” I said. “I’m Felipe and the chap looking for bread is Gerald.”

“Are you candidates or companions?” she asked.

“Candidates, I guess,” I said. “Well, Gerald is. I just seem to have got roped in somehow. How about you?”

“Oh, I’m waiting for my friend,” she said. “She’s doing her physicals at the moment.”

“We’ve just come from there,” I said. “I guess we’re the first to finish.

“How’s it going?” she asked.

“Not too well,” I said and started on my soup. It was quite good. “Why’s your friend doing this?”

“Just between you and me,” said Klara, “I think she’s trying to prove something. She finished her four years in the Army and didn’t want to go back but she can’t settle to anything in real life. She was planning to walk around the world for charity before she heard about this.”

“Who’s walking round the world?” asked Gerald coming back with a plate of rolls and a dish of butter.

“My friend,” said Klara. “This seemed to be more of a challenge. Why

are you here?”

“He’s having a mid-life crisis,” I said, taking a roll. “He can’t cope with the young people at work any more.”

“My dad had a mid-life crisis a few years ago,” she said. “He bought a whippet.”

“It was either this or get a sports car,” I said. “I reckon he should have gone for the sports car but there you go. Did your dad get over it?”

“He seemed to be over it when he came out of hospital,” she said, taking a roll as well.

“What, did the whippet bite him or something?” asked Gerald.

“No, my mum said either the whippet had to go or she would,” said Klara, ripping the roll in half, “and when my dad chose the whippet she hit him. Broke his jaw and cheekbone.”

“You see,” I said, pointing a spoonful of minestrone soup at Gerald. “That’s what you need, a strong woman to run your life.”

“You could be right,” he said, unexpectedly. “I don’t seem to be doing too well on my own.”

“Maybe Klara’s friend is single,” I said, using a piece of roll to wipe my soup bowl.

“He’s not her type,” said Klara. “So what about you?”

“Oh I’m probably not her type either,” I said.

“No, I meant are you having a mid-life crisis as well?” she said.

“God no,” I said. “I’m perfectly happy with my life.”

“So why do you want to do this space thing?” she asked.

“I don’t,” I said. “I’m just helping him out only there was some sort of

mix up and they've got me doing the tests as well. So what do you do when you're not supporting your friend?"

"Oh, I'm a games programmer," she said.

"Oh really?" said Gerald. "I'm a systems analyst myself. What sort of games do you write?"

"Mostly relationship games for teenage girls," she said. "That market's really opened up in the last few years."

I finished the rest of my meal in silence while the two nerds got all techie.

"I'm going to see what's on TV," I said some considerable time later.

"I'll see you later," said Gerald. "But wouldn't 8K graphics enhance the reality simulation significantly better than 4K?"

"Not in any meaningful way," said Klara, "it's more about the mindset paradigm than the visuals. Boys on the other hand need the visuals for their shoot 'em up games. Structurally the girl orientation is heavily situational emotion based."

"I see," said Gerald thoughtfully, "so this translates to smart phone capability via broadband how?"

"Have fun," I said getting up. They both ignored me so I left the trays for Gerald to tidy up.

I found my way back to our room and bounced on both beds to see which was more comfortable. There wasn't a lot in it but I chose the one nearer the window and dumped Gerald's overnight bag on the other. I tried to open the window and found it wasn't actually a window. It was just a window sized picture of the car park and surrounding flat Norfolk countryside.

"Jesus," I said. "What a crappy picture. They could have done a tropical scene for the window or something."

I turned round to survey the room.

“I don’t suppose there’s a bath in here,” I thought.

The room was a simple rectangle and contained two single beds, two bucket style easy chairs and a small desk. There were two doors on the wall opposite the beds, one of which was the coffin-like toilet I’d used earlier. I opened the other and found that it was the same size and held a single shelf and a rod with three coat hangers on it, but no bath.

I shut the door and went over to the toilet. “Say What You Want” flashed up when I went in.

“I want a bath,” I said, feeling it was a good moment for complete honesty.

“Remove Clothing” flashed up together with a little animated stylised man stripping off.

“Interesting,” I thought. “I wonder if it’s going to give me a vertical bath or just a shower.”

I stepped outside and stripped off, leaving my clothes on the floor then stepped back inside and closed the door.

“I want a bath,” I said.

“Stand with your legs apart and arms raised” flashed up on the wall and the little man did just that.

“OK,” I said and copied the little man.

There was a brief flash and a warm tingliness on my skin.

“Say What You Want” reappeared.

“Yeah,” I said. “I want a bath.”

“Further cleansing not recommended within two (2) hours” came up.

“You mean that was it?” I asked. “Jesus!”

“Say What You Want” appeared again.

I glowered at my reflection in the glassy wall and stomped out. It may be high tech and ultra efficient but psychologically it needed some improvement. Baths aren’t just about cleaning yourself. I kicked my clothes into a corner of the room and got on the bed. It had bedding but the room was air conditioned and comfortably warm so I just lay on top working on the precise wording of my complaint to management about the lack of bath facilities. I must have dozed off because Gerald coming in the room woke me with a jerk.

“Oh for god’s sake, get under the covers,” he said. “I don’t want to look at your naked body all night.”

“Oh sorry,” I mumbled and climbed off the bed and back on again, this time under the cover. “So what time is it?”

“About 10,” he said. “Dolores turned up so I left.”

“Who’s Dolores?” I asked, yawning.

“Klara’s friend,” he said. “So I guess I’m having this bed?”

“You’re not getting in with me,” I said.

I was starting to wake up a bit so I plumped up my pillows and sat up against the bare wall behind the bed.

“So why didn’t you stay with Klara and Dolores?” I asked.

“She scared me,” he said, picking up his overnight bag and looking around the room. “She had a shaved head and two front teeth were missing. Apparently she was the last to finish the physicals because they couldn’t get her heart rate up to 200. Where can I change?”

“Anywhere you want,” I said. “Don’t mind me.”

“Hmph,” he said and got his pyjamas out of his bag. “How do you

turn off the light?”

The room plunged into darkness.

“Must be a power cut,” said Gerald.

I looked out of the window to see if there were any other lights on then remembered it wasn’t a window.

“Hey,” I said. “That window isn’t a window by the way, it’s just a picture.”

“Makes no odds,” he said. “I can’t see it anyway. Too dark in here.”

“Hopefully the power will be back on soon enough,” I said. “With no window we won’t be able to find the switch to turn on the light.”

The room lit up.

“Hey,” said Gerald. “That didn’t last long. Why did you think that was a window?”

“It looks like a window,” I said.

“How many tropical beaches do you think there are in Norfolk?” he asked sarcastically.

“What do you mean” I asked.

“It’s obviously a picture of a beach in the Maldives or somewhere,” he said. “Not Norfolk.”

I twisted to look at the window and, sure enough, it was a tropical beach, complete with palm trees. There was even a breeze blowing and the palm fronds were gently waving.

“It was a frigging car park last time I looked,” I said. “How did that happen?”

“Must be a screen,” he said. “Look, it’s moving. Probably hooked into

the computer or maybe on a loop. Help me find the switch to turn off the light.”

The room went dark.

“Oh no,” said Gerald, “not again.”

“Turn on the light,” I said experimentally and the room lit up.

“That’s pretty cool,” I said. “It’s voice controlled. Turn off the light.”

We spent a few minutes like a couple of little kids telling the light to go on and off in different ways. It worked every time so long as we used the word ‘light’.

“Window display snow scene,” I said after a while. Sure enough the window started to show a countryside covered in lush white snow.

“Funny cat,” said Gerald.

Nothing happened.

“Pah,” he said.

“Try window display funny cat,” I suggested.

The display turned to a picture of a cat chasing a light across a floor.

“Nice cat,” said Gerald. “Looks like Samantha.”

We played with that for a while as well until we got bored with it.

“Ugh, I need some sleep,” said Gerald. “Light off and don’t turn it back on until I’m in my jammies.”

I counted to twenty then said ‘light on’ but nothing happened.

“Bastard,” said Gerald in the darkness.

I heard him getting into his pyjamas then suddenly the light came on.

“What the ... ?” he said. “Why did the light go on?”

“Interesting,” I said thoughtfully. “You said not to turn the light on until you were in your pyjamas and it didn’t. The room must be monitoring us.”

“That’s pretty sophisticated,” he said. “Umm, light off when I am in bed.”

The light stayed on so he slowly climbed into the bed. Then it went out.

“Light on when I get out of bed,” I said and lay there. It stayed dark so I counted to ten and got out of bed. The light came on.

“Light off when Felipe gets into bed,” said Gerald.

I got back into bed and the light went out.

“Light on when I click my fingers,” I said.

“Aren’t you going to click your fingers?” asked Gerald after a while.

“No,” I said. “You click yours.”

He clicked his fingers and the room stayed dark. Then I clicked mine and the lights came on.

“Shit,” said Gerald. “How does it know which of us clicked our fingers in the dark?”

“Light off when Gerald says ‘Dolores’” I said.

“Dolores,” said Gerald and the light went out.

“We need to be a little careful,” said Gerald after we’d lain in the dark for a while.

“How do you mean?” I asked.

“What if we tell it to do something with the light that will never happen?” he said. “We could be trapped in darkness forever.”

“Maybe there’s an over-ride,” I said. “Umm, light on when I click my fingers.”

I waited for a few moments then said “cancel light on” and clicked my fingers. Nothing happened.

“Light on,” said Gerald.

Nothing happened.

“Shit,” he said. “Looks like you’ve cancelled it permanently.”

“That’s no bloody good,” I said. “Light on now!”

Nothing happened.

“Enable light on,” said Gerald.

The light came on.

“Thank god for that,” I said, half expecting some religious music to start playing. It didn’t.

“I’ve had enough of this,” said Gerald. “I’m knackered, I need some sleep. Light off.”

I lay there in the dark for a while, listening to Gerald breathing.

“Are you still awake?” he whispered after a while.

“Yeah,” I whispered back. “Can’t you sleep?”

“No,” he whispered.

“Why are we whispering then?” I whispered.

“I don’t know,” he whispered. “It just seems right.”

“Are you worried about tomorrow?” I said.

“A little,” he said. “Today was shit.”

“Yeah,” I said. “Something tells me neither of us are cut out to be astronauts.”

He didn’t answer and after a while I figured he’d gone to sleep.

“What did you think of Klara?” he said after a while.

“She seemed all right,” I said. “Bit too nerdy for me but hey, whatever. You seemed to get along with her all right.”

“Yeah,” he said, “I thought so too.”

We lay there in silence for a while. There seemed to be the faintest of hums, right on the edge of my hearing. It must have been the air conditioner.

“She gave me her phone number,” he said. “What do you think that means?”

“I think she’s trying to fix you up with Dolores,” I said.

“Are you serious?” he asked, a touch of panic in his voice.

“No, I was joking,” I said. “Are you going to ring her?”

“I don’t know,” he said. “If I do, what should I say?”

“Ask her if she likes cats.”

“What for?”

“You’ve got a cat,” I reminded him.

“Oh yeah. What if she does?”

That was a tricky one so I thought about it for a while.

“Where does she live?” I asked.

“London.”

“Makes life easier. Why don’t you ask her out for a drink or something?”

“She doesn’t drink,” he said.

“Ahh, that makes things awkward,” I said. “Hey, isn’t there some computer show you could take her to? She’d probably like that.”

“That’s a thought,” he said. “I think there’s a Euro Gamer Expo at Earls Court in a couple of weeks.”

“There you go then,” I said, drowsily. “Take her to that.”

“Do you think she’d like that?” he asked.

“Probably not,” I said. “She’d most likely be the only girl there.”

He may have continued the conversation for a bit longer but I fell asleep and wasn’t listening so I don’t know for sure. Then a gong sounded and the light came on.

“Now what?” I said, coming out of a dream about camping in Canada. I think it was Canada. Somewhere cold and icy anyway. “Why’d you put the light on?”

“Wasn’t me,” said Gerald. “What was that noise?”

The gong sounded again.

“They must be having a party in the next room,” I said, burying my head in the pillow. “Light off.”

The light went off then the gong sounded again and the light went back on.

“I hate frigging computers,” I said. “You’re the computer expert, fix

the bloody thing.”

“I’d need to see the system specifications,” he said sleepily. “You can’t fix a computer problem if you don’t know how it’s configured.”

There were several sharp raps then the gong went again.

“Do you suppose they’ve got rats here?” I asked sleepily.

“I think that might be someone at the door,” said Gerald. “Go see.”

“Oh for crying out loud,” I said. With a supreme effort I threw back the thin cover and got out of bed. Something creaked loudly and I suspected it wasn’t the bed. I got up and went to the door.

“There’s no handle,” I said, looking stupidly at the door.

The rapping started again then the gong went twice.

“Try saying open door,” said Gerald and the door opened.

“Good morning!” said Janine brightly then raised an eyebrow and laughed.

“Oh sorry,” I said, suddenly realising I was naked. “Ummm.”

“Go put some clothes on,” she said.

It seemed a good idea so I went to get my jeans.

“Morning, Janine,” said Gerald.

“It’s Janine,” I said to him.

“I know,” he said. “I can see her in the doorway.”

“Right,” I said. “Just so you know. What time is it?”

“Six thirty,” she said, coming in. “Time to go for the Centrifuge Test.”

“You are kidding me,” I said, squinting at her. “It’s the bloody suicide hour.”

“Not on my watch,” she said. “I won’t let you.”

“We’ll be out in a minute,” said Gerald, keeping the bed cover over him.

“OK,” she said. “I’ll, umm, wait outside.”

“Why don’t you get us some coffee?” I asked.

“Bad idea,” she said. “Not until after.”

“Oh that’s right,” said Gerald. “People throw up.”

“Every time,” she said. “Two minutes, OK?”

She went back into the corridor and the door closed behind her.

“Must have been monitoring the conversation,” I thought.

We walked silently through the corridors and down stairs and up stairs and across a catwalk for what seemed like hours. There was hardly anyone else around although when we got to the destination there was a small group of people there.

“That’s the centrifuge,” said Janine, pointing through a large window.

It was basically a giant arm with a small cage at one end.

“So what happens?” I asked.

“They put you in the cage and spin the arm around,” she said.

“How fast?” asked Gerald nervously.

“Not fast,” said Janine and Gerald relaxed. “At least to begin with.” He tensed up again.

Someone in a white coat led one of the waiting people out to the cage and strapped him securely in then tied some sort of helmet over his head.

“So what’s the point of this?” I asked.

“The faster the arm spins,” said Janine, “the greater the forces acting on you. This centrifuge can get up to 12 G but don’t worry, you’re not fighter pilots. They have to go up to 9 G in these things.”

“What’ll we be going up to?” I asked.

“We need to ascertain the point at which you black out,” she said. “So probably only 4 G, maybe 5.”

The man in the white coat had disappeared and the arm was starting to spin. Each time the cage came near the window we could see the victim’s face dragging out to the side under the centrifugal forces. Then some vomit splattered against the window as he was sick.

“No way,” said Gerald.

I could see him vibrating.

“That’s it,” he said forcefully. “I’m done with this. No way am I going in that bloody thing!”

“Are you formally withdrawing from the selection process?” asked Janine, looking very serious.

“Yes,” he said. “I’m out of here.”

“OK,” she said. “If you’ll follow me, I’ll just get a signature then you can go. Felipe, would you wait here for a minute or two until I’m back?”

I looked over at the centrifuge. I had to admit that it did look kind of fun, rather like one of those things at a funfair.

“No,” I said. “I’ll be off too.”

Chapter Ten

Gerald dropped me back home around lunchtime and didn't come in for a coffee or anything. He just mooched off, lost in his own thoughts, much the way he had been the entire drive back. Maybe he was trying to forget the experience or reflecting on just how bad his mid-life crisis actually was. Hell, he could even have been thinking about Klara. My own thoughts were a mixture of things. Regret was in there, I confess. Their super Ferris Wheel looked like it could have been fun, despite the prospect of throwing up. Not that I'm a complete stranger to throwing up while having fun although I am older and supposedly more responsible than when I was a uni student. On the other hand, I also had the beginnings of a few ideas for paintings based around things I'd seen there and, inevitably, I had the problem of how to finish Dulce.

I daresay I should have paid more attention to Gerald's state of mind but, hey, he was a grown man and, despite his many personality defects, both real and imagined, he was quite capable of managing his own life. If he wanted to talk about whatever was on his mind I was happy enough to do that but, equally, if he didn't that was fine too.

I spent that Friday afternoon relaxing and, much to Jiminy's unexpressed delight, turned up for work. Some weeks previously she'd hired a band called The Cockroaches in an attempt to boost pub clientele in the belief that the band did cover versions of classic rock songs. This was true as far as it went but what she hadn't been told was that The Cockroaches applied their own distinctive style of death metal and neo-punk fusion to those classic rock songs with the result that their renditions of Queen's Bohemian Rhapsody and Springsteen's Born To Run sounded identical and bore no discernable resemblance to the originals. We also found out how the band got its name. At the end of their gig, with only one customer still remaining in the pub, they scuttled away in a frenzy the way cockroaches do when you turn on the light, their black guitar cases on their backs. Harry, the sole survivor, admitted that the batteries in his hearing aid had died although he had found the vibrations running up his legs from the floor 'stimulating'.

Jiminy had sworn she'd never get another live band again but had

fallen prey to a delightfully charming middle aged man called Mark. He'd dropped in for a beer one lunchtime and engaged Jiminy in conversation and let it be known he was a guitarist with a South London band called The Tributes. By amazing coincidence, The Tributes happened to have had a gig cancelled for the following Friday and Mark charmed his way into her Public Bar.

As it happened, Jiminy hadn't bothered to tell me this since The Tributes were booked for the Friday that I was going to be away but I turned up and was run off my feet. The Tributes turned out to be quite good and specialised in the more mellow classic tunes of the likes of Bobby Darin. More importantly, The Tributes had a loyal, if somewhat small, following who liked to make an evening of it with a hearty meal. As a result I fell into bed that Friday night with chip oil still on my hands and exhaustion in my brain and woke up early on Saturday afternoon with the background to Dulce fully formed in my mind.

As any artist will tell you, when they have the concept in their head they get caught up in the realisation of it and I worked solidly through the daylight hours and finished the painting to my satisfaction just before sunset on Sunday. This left just enough time for the paint to fully dry before the picture was presented to Mitch, the retiring Border Force dog handler. Admittedly it wouldn't be varnished but I figured Mitch wouldn't mind too much if I borrowed the painting after the presentation to varnish it. As it turned out he was overwhelmed by the painting of Dulce, which was something I should have anticipated since handlers and their dogs build a very strong bond and, with tears in his eyes, refused to part with it. Undaunted, I made arrangements to varnish the painting at his house instead, which was no problem. Anyway, that's neither here nor there. The point is, I forgot all about BSpaceE and Gerald. My life very quickly returned to its comfortable little rut.

Three things happened the Tuesday after Mitch's retirement party. One I found out about within minutes, one two days later and the third I didn't find out about for several years but I'll bring it into my little story around this point as what happened afterwards would make little sense otherwise. Just as it made no sense to me at the time.

The first was fairly normal and, although I anticipated far reaching consequences, none ever actually materialised.

I was sitting on my couch around five in the afternoon working on a preliminary sketch for a Siamese cat that had recently had kittens and the proud owner wanted a commemorative painting. It wasn't working as I couldn't get the four kittens to behave properly in the sketch. I wanted to capture that mixture of activity and instant falling asleep that two week old kittens have, especially when there's four of them, but no matter how I tried, one of the active kittens always seemed to end up squashing the one that had suddenly fallen asleep and I was getting irritated at my own inabilities. I'd just torn up yet another sketch when my phone pinged to say I had an email.

It was from Randolph Zankowsky III, saying he'd received the painting of his ball python and how over the top delighted he was with it and how he was going to tell all his friends and business associates and members of his snake appreciation society about me. I thanked him by reply and spent a few minutes fantasising about the life I would lead when all these commissions started flooding in from wealthy Americans. Then I went off to the pub for my evening job and the fantasy slowly drowned in hot chip oil and burger grease. Still, it was nice of him to let me know how much he liked it.

At roughly the same time that Randolph Zankowsky III was unpacking his snake and standing back to admire it, Gerald was picking up the keys to his new car. OK, it wasn't exactly new, since he couldn't afford a new Porsche, but the dealer had sweetened the deal on a six year old bottom of the range 911 with twenty four months warranty instead of his usual six months. The first I knew of it was on Thursday when Gerald rang me.

"It's me," he said when I answered the phone.

"I know," I said, since his name came up on the display, "come on up."

I pushed the button on the wall to open the front door.

"No," said Gerald, "you come down."

“What for?” I said. A not unreasonable question I thought since it was three flights down to the ground and, since I wasn’t due to leave for work for another hour or so, I’d probably have to come back up again before going back down. When you live on the top floor of a building without a lift such things get factored into your decision making. You tend not to ‘pop out’ on the spur of the moment.

“I’ve got something to show you,” he said.

“Bring it up then,” I said.

“It’s too big,” he said.

“Damn shame I’ll never see it, then,” I said. “Anything else you want to talk about?”

“You’ll like it,” he said.

“Don’t tell me you’ve brought Gisele Bündchen over?” I said. She’d been the, and I mean THE, supermodel when I was in my final year at uni and I had been completely besotted for a while. I’d even seriously considered working in the graphic art department of an advertising agency in the vague hope of meeting her. Then I met Rosalie and Gisele got on with her own life.

“Who?” he asked.

“Never mind,” I said. If it was Gisele Bündchen she’d probably have been OK to walk up the stairs anyway. Supermodels have to be pretty fit. “Anyway, shouldn’t you be at work?”

“I took the afternoon off,” he said. “I needed to practice.”

“Oh god,” I said. “You’ve bought a drum kit.”

“No I haven’t,” he said irritably. “It’s even better than that. Are you coming down or not?”

“I start work in, umm, 53 minutes,” I said. “If I come down now you’re going to come to the pub with me and buy me a beer.”

“OK,” he said. “See you in a couple of minutes.”

I'd expected him to balk at buying me a beer this early in the evening but what the hell, free drinks are one of my many weaknesses. I pulled on my trainers, grabbed my jacket and started the long haul down the stairs. There were, for some reason, 44 steps, two flights of fifteen then one of fourteen so presumably the floor below me had slightly lower ceilings than the bottom two floors or perhaps the builders had used slightly bigger steps.

“About bloody time,” he said when I emerged into the bright sunshine. “Come on, I'll drive you to work.”

“OK,” I said. “What did you want to show me?”

I looked up and down the road but there was no sign of his car. I figured he'd parked round the corner so I started off in that direction.

“This,” he said pointing to a venomous looking little sports car.

“Jesus, what a horrible colour,” I said. “What kind of idiot would buy an orange car?”

He looked mortified and just stared at me.

“Oh god,” I said when the truth finally dawned on me. “You did, didn't you.”

“I couldn't find a pink one,” he said, “and I can't afford a respray but orange is one of the factory colours so I thought it would be close enough.”

“It was just because it was unexpected,” I said, wishing I'd thought to bring down my sunglasses. “It's growing on me now. Yeah, it's pretty cool, actually. You don't see many orange cars on the road. It's distinctive. Yeah, you'll stand out from the crowd with this one. It's just, so ..., so you.”

I realised I was beginning to babble so I stopped and went over to pat it then kick one of the tyres. Apparently that's what men do with cars,

which was one of the few things my dad taught me. You don't do that with bicycles though since they fall over if you do. I learned that myself.

"It's got a stereo sound system," he said proudly, rushing over to open the door for me.

I got in, mostly so I didn't have to look at the body anymore. He got in the driver's seat and put on his seat belt then started the engine. Its throaty roar echoed down the narrow road.

"So you think this gives me street cred?" he asked. "Do you think people will think I'm a successful go-getter?"

Actually I thought people would want to peel it like any other orange but managed not to vocalise it.

"They'll certainly think you're an independent thinker," I said, "and not one to follow the crowd. Red and black are just so passé, so out moded."

"Awesome," he said with a little chuckle. "Let's go for a drive."

He put it into first gear and carefully pulled away from the curb.

"The clutch is a bit fierce," he admitted "and it's a little more powerful than I'm used to but I'm getting the hang of it."

He drove to the pub, never once exceeding the speed limit, or getting out of first gear for that matter.

"Do you think Klara will like it?" he asked.

My vague recollection of Klara was that she valued emotions and relationships more than graphics and visual stimuli so I crossed my fingers.

"She'll love it," I said, trying to sound positive. "So are you seeing her again?"

“I’m taking her to the Euro Gamer Expo at Earl’s Court on Saturday,” he said.

“Awesome,” I said. Actually that would probably mean she thought the car was some sort of advertisement for a computer game. Hopefully she’d be used to it before she found out it wasn’t.

The third thing that happened that Tuesday started while I was at work in the evening and continued after I got home although I wasn’t involved. I wasn’t there even though it was, to a large extent, about me. It was years before I found out though and I’ll probably never know the full conversation.

* * *

“Dr Arjeev Khatri,” said Elena, ushering him through the door into the dimly lit office. She softly closed the door behind him.

Sergey Vanofov was standing at the panorama window, gazing out across the Thames at the lights of Greenwich. From the Penthouse Office of Vanofov Tower, 47 stories up, the dubious delights of the Isle of Dogs had no meaning.

“Does this not delight you, Arjeev?” he asked without turning.

“Indeed, Sergey,” said Arjeev. “A magnificent view.”

“I was born in Vokhma,” said Sergey. “A little town in central Russia. Do you know what the tallest building was there?”

Arjeev knew since Sergey was fond of telling everyone who came to this office but he knew Sergey was going to tell him again anyway.

“It was my father’s house,” he said, making a chopping motion with his hand. “It was two stories high. Now look at me, at us.”

He laughed a deep belly laugh and turned to face Arjeev.

“Such a long time ago,” he said. “Raise the lights.”

The lights in the office brightened to a normal level.

“Come, sit,” he said. “You will have tea or vodka?”

“Tea, if I may,” said Arjeev.

Sergey touched a button on his intercom. “Tea,” he said simply when Elena appeared. She disappeared discreetly and Sergey and Arjeev retired to two comfortable armchairs.

“Your wife and children are well?” he asked.

Sergey made a point of always asking this when meeting with the heads of his various subordinate corporations although he himself had no wife, despite the seven children from seven women he had known. The children marked his progress and expansion as a businessman; his oldest son, Sasha now 37, was still in Moscow where Sergey had set up his first company, a small electronics business. Three years younger, Yulia lived in Minsk in Belarus where Sergey had set up a software development company. The others were in Warsaw, Prague, Frankfurt, Amsterdam and, Elizabeth, the youngest at a mere sixteen was here in London, home of his aerospace corporation and his other baby, BSpaceE.

“Quite well, thank you,” replied Arjeev.

Elena brought in a tray with two snow white porcelain cups and saucers, a small jug of fresh full cream milk and a squat teapot.

“Assam, as always,” said Sergey as Elena poured, milk first.

“How is the selection proceeding?” asked Sergey when she had gone.

The final crew selection for the Titan project wasn’t due for another week or so and Sergey had been intrigued when Arjeev had requested this early meeting. If there were any fresh technical problems they would have arrived on his desk in the normal manner.

“We have encountered a, shall we say, an anomaly,” said Arjeev.

Sergey remained expressionless and leaned forward to slide Arjeev's tea closer to him. Arjeev briefly inclined his head in acknowledgement and Sergey made a slight gesture with his hand for Arjeev to continue.

"A preliminary selection list was drawn up," said Arjeev. "The best twenty five from the one hundred and forty who went through the selection assessment. My attention fell on one. I have his file with me."

Arjeev lifted his slim briefcase and extracted a plain beige folder with the BSpaceE logo on the front. He returned the briefcase to the floor and proffered the file to Sergey.

"Tell me," said Sergey.

Arjeev opened the file on his knees.

"This man," he said, "Phillip Roach by name, has by no means the best results in any area but what piqued my curiosity is that he was consistently good in all areas. His biometrics, physical fitness and coordination, emotional and intellectual intelligence, personality balance, everything. It is highly unusual."

"Indeed?" said Sergey. "Would he not be the ideal candidate then?"

"You would think so," said Arjeev. "But I decided to investigate a little further. After all, no one is perfect in every respect. So, I spoke with his coordinator, a young woman by the name of Janine. As you know she spent the entire two day selection assessment with him and might well have formed impressions that would supplement the data we had collected."

"And what did you learn from her?" asked Sergey, wishing Arjeev would get to the point.

"Phillip Roach exited the selection assessment at the beginning of the second day," said Arjeev. "He did not complete many of the assessments and yet we have his results."

"How is this possible?" asked Sergey.

“My first thought was that the girl was mistaken,” confessed Arjeev. “So I sent an assistant to speak with each of the man’s assessors for the full two days. None of the recorded assessors for the second day recall the man in the photograph and, as most were psychological reports, none of the psychologists recall writing any of those reports which further suggests that data files have not become intermixed. But that is not all.” He paused, perhaps to sip his tea or perhaps for dramatic effect.

“Continue,” said Sergey, still expressionless. It was an ability that had served him well in countless negotiations.

“Phillip Roach was remembered by his assessors for the first day,” said Arjeev, referring to the file for the first time. “Dr Kyrenia Lakkotrypis remembered him well. She says he displayed a number of disturbing psychological issues which she detailed in her report and yet her report mentions none of them. Andre Walkman was so concerned about his physical fitness that he abandoned the assessment and yet this Phillip Roach has data recorded for activities he did not do.”

“How peculiar,” said Sergey.

“So I spoke with Janine again,” said Arjeev. “And this was most interesting. Phillip Roach was not even a candidate. When he arrived on the first day he was under the impression he was simply the companion for another man and his paperwork was completed that morning.”

“Have you checked this other man’s assessments?” asked Sergey.

“Naturally,” said Arjeev. “All his assessors recalled him and confirmed the records as correct.”

“Interesting,” said Sergey. “Do you think this man falsified his own records?”

“It is a possibility, of course,” said Arjeev. “In fact it is the most likely explanation, but for two things.”

Sergey’s face registered an expression for the first time. An eyebrow

lifted in query.

“I ordered a full audit of all one hundred and forty candidates,” said Arjeev. “Or one hundred and forty two, I should say, since there were two who have assessment records who were never called for assessment. This man, Phillip Roach and a woman by the name of Evie Farrell who was in the third and final group. Both arrived as companions to others and both have assessment results that were recorded but never actually taken. Moreover, there was another man in the first group who was also a companion that the system listed as a candidate but he refused to be involved in any way.”

“So each group had one additional person added after the preliminary selection invitations were assembled?” asked Sergey.

“Yes,” said Arjeev. “Two elected to undertake the assessments although both dropped out part way and the third did not. He has no results recorded other than his withdrawal.”

“Could there be any possibility that the assessors have made errors of recollection?” asked Sergey.

“No,” said Arjeev. “The system performs continuous logging of every keystroke, pad entry and voice recording. A full analysis shows that the assessment entries were made in accordance with the assessors’ recollections but within 350 milliseconds of each the record was changed. Where no assessment was undertaken, the entry was made at such a time as would reasonably be expected had the assessment been made.”

“So it would not be possible for these individuals to have altered the records themselves,” said Sergey thoughtfully.

“No,” said Arjeev. “Nor is it feasible for a third party to have done so. The timings make that likelihood vanishingly small. There remained the possibility of an automated process within the system, however. A block of code designed to perform this task, a virus if you like. IT have performed a detailed analysis of the logs of every process that ran on every processor within the time frame and were unable to identify any malware but I have ordered a full and thorough analysis

of the software code itself in case one or more of the developers embedded routines. That will take many weeks, however.”

“So what is your conclusion?” asked Sergey, his own tea going cold.

“My conclusion is that we have an infiltrator,” said Arjeev. “Most likely within the corporation itself as we have yet to find any evidence of external penetration.”

“A not unreasonable conclusion,” said Sergey. “But who would want to do such a thing?”

“I have pondered that,” said Arjeev. “There is no apparent military implication to this project that would attract the attention for a foreign government. After all, we have been quite transparent and it begs the question of why would a foreign government try to get three people in the team? Would it not be easier to subvert someone more suitable? Perhaps a terrorist group but again why get people into the program? A bomb at the launch site would be far more effective. A competitor perhaps? SpaceX or one of the other private ventures? Perhaps but what could they possibly hope to gain? They have their own projects and we have data sharing agreements anyway. NASA? That is just absurd. Every possibility fails because of the sheer pointlessness of it. Why hack the system to get individuals into a program that involves them leaving the planet for ten years? Neither I nor any of my staff can conceive of any viable reason.”

Sergey nodded, as impassive as ever.

“What do you propose?” he asked.

“One,” said Arjeev, “remove these two persons from the preliminary selection list. Two, fully audit the remaining people on the list. If necessary we can re-assess them again, the marginal cost would not be prohibitive. Three, continue checking the system logs and code and see what, if anything, we uncover through that and four, delay launch until we have completed all checks.”

Sergey got up and went to stand in front of his panoramic window. “Lower lights,” he said quietly and the office lights dimmed once

again so he could see the night vista from the window. He stood there for some minutes while Arjeev waited patiently.

Sergey reached out a hand and gently touched the window then abruptly turned and marched over to Arjeev. Arjeev stood up.

“No,” he said decisively. “Continue your checking by all means but do not delay the launch and ensure that these two people are selected for the primary team, not the backup.”

“But why?” asked Arjeev, looking puzzled.

“There is a reason why they are being infiltrated into my project,” said Sergey, his face all but lost in the dimness. “Let them infiltrate and we wait to see what happens.”

“As you wish,” said Arjeev. “But I fail to see how any possible benefit can derive from it.”

“Ahh, my friend,” said Sergey softly. “You may head my space division but your soul is firmly attached to the ground. There is one other possibility that you have overlooked. Let us send these two to Titan and see what is revealed to us.”

Chapter Eleven

“Hey, come on up,” I said and pushed the button to open the front door.

I hung up from Gerald and stood back to look at the picture. There was probably another half hour or so before sunset but already I felt it was finished.

“Put the kettle on,” I said absently when he came in, a little out of breath as always.

“New painting?” he asked going over to my kitchenette.

“Yeah,” I said.

I dumped my brush in the jam jar of turps and tipped a little on my hands. I wiped my hands together while I stood there, looking at it.

He came over and stood beside me.

“Oh, not another pet pic then?” he said.

“No, not another pet pic,” I said and moved away to wash my hands with hot water.

“That’s a bit unusual,” he said, looking at the painting. Then he went over to do the coffees.

“You won’t get this,” I said, knowing that he wouldn’t, “but I had a need to paint it.”

Actually, I’d woken up earlier than normal and my fingers had itched to get started while I was making my wake-up coffee and toast. The only canvas I’d had ready on a frame was a 14 inch by 12 inch one but that was big enough so I’d got started straight away.

“You’re right,” he said. “I don’t get it but hey, I’ve never figured you out anyway. For sure you’re not a nine to five career person. So what’s this one all about?”

"I'm not sure," I said. "The man is, I think, my father, but I'm not sure."

"Is that from when he was in hospital?" asked Gerald.

"I would think so," I said.

After all, the figure in the painting, although shown only from the waist down and from behind, was in one of those medical gowns that do up at the back. The man, and it was definitely a male bottom peeking through the gown, was pushing one of those stands on wheels that hold up those bottles of liquids that feed into your arm. I don't know what they are called. There'd been about a week between my dad's operation and his discharge when he'd had to stay in hospital but was allowed to move around a little and I'd seen him like that when I'd been to visit. It never seemed to bother him that his bum was hanging out although my mum had brought in his dressing gown. He'd said it was too hot to wear.

"Well, that's OK, I guess," said Gerald, taking the coffees over to the couch. "You want to paint a hospital scene, that's fine. But why is the whole place made of ice?"

"I don't know that it is," I said, drying my hands and getting a packet of biscuits out of the cupboard. "I was thinking about that when I was painting it. I can't decide if it's a normal hospital ward that happens to be frozen or if everything's made out of ice. That's why I made the ice a touch blue so you can't see if there's anything underneath or not. Want some biscuits?"

"Oh thanks," he said, grabbing a few from the packet. He got up to look at the picture again.

"So why's your father just from the waist down?" he asked.

"No idea," I said. "I just had that image in my head when I woke up. Maybe that's my clearest memory of him, pushing that thing around with his bum hanging out. I don't even know if it is my dad."

"Hmm, oh well," said Gerald, going back to the couch and starting to

dunk biscuits in his coffee. "It's pretty surreal whatever it means. What are you going to do with it?"

"I don't know," I said, leaning back in the arm chair and putting my feet up on the low table. "I might send it to my agent, I might not. See how I feel in the morning."

Most of my paintings were of people's pets but when I had a slack period or when the creative urge hit me, as it had that day, I painted what I thought of as Art and sent some of them to the person I notionally think of as my agent. She does occasionally sell a piece to an art gallery or private buyer but, to be honest, it was once in a blue moon. Actually, to be truly honest, it was once in every two or three blue moons. Hopefully she had better luck with the other artists she represented as she would have starved if her sole income was her commissions on my sales. Come to think of it, I hadn't heard from her in a while. Maybe she had starved.

"I suppose someone might like it," he said. "Not sure I'd want it on my wall though. Oh, I brought up your post. I left it over by the kettle."

"Oh cheers," I said. "I haven't been out today. I've been working on the pic."

"Didn't you go to work then?" he asked. "I'd have come round earlier if I'd known."

"I don't work Mondays," I said, dunking a biscuit myself.

"Yeah, I know," said Gerald. "But you do on Wednesdays."

I paused with the soggy biscuit halfway to my mouth.

"Oh shit," I said. "It's not Wednesday is it?"

"All day," he said as the soggy half of the biscuit fell onto my lap.

"Bugger," I said trying to pick up the half biscuit but succeeding only in turning it to mush. "I wonder why Jiminy didn't ring me?"

I edged forward on the armchair and tried to stand up in such a way that the mushy bits of biscuit fell onto the table. Some did, some didn't. Life's like that. I grabbed my phone and checked it. I had four missed calls, all from Jiminy.

"Ahh," I said, staring at my phone. "Looks like I'm going to have to do some serious arse licking tomorrow. Hey, I don't suppose you'd phone her and say you're picking me up from hospital or something?"

"Do you own dirty work," he said.

"Call yourself a friend," I said sarcastically. I tossed the phone onto the table and took a swig of coffee. "Actually, I've been there, what, two months now? Time I got the sack."

"I've never understood you," he said. "Why can't you hold a job like a normal person?"

"Must be my artistic temperament," I said.

"Must be," he said. "Normal people have jobs, answer their door bells and phones and read their mail. You don't do any of that."

"The door bell's out of order," I said. "You know that and anyway, I answered your call, didn't I?"

"But you didn't answer Jiminy's," he said "and she called four times."

"I honestly didn't hear the phone ring," I said. "I must have been in the zone. Tell you what though, I will look at my post since you so kindly brought it up. It'll be a bill though, that's all I get."

"Didn't feel like a bill," he said. "It was pretty thick."

"Probably a summons," I said, "for unpaid bills. Hey, didn't you see Klara the other day?"

"I was wondering if you'd remember," he said.

"Well, I did remember," I said getting up to get the envelope beside

the kettle. "How did it go?"

"So so," he said and grimaced.

Actually that sounded better than his usual, infrequent, dates. Usually he thought they went well but the girl would never see him again. The fact that this hadn't seemed to have gone well suggested hope for the future.

"Don't tell me," I said sitting down again. "She didn't like your car?"

"How the hell did you know that?" he demanded. "Have you been talking to Klara behind my back?"

"Just a lucky guess," I said. "And no, I haven't spoken to Klara since that day at the thing."

"Hmmm," he said grumpily. "I thought girls liked sports cars. Bet you can't guess why she didn't like it though."

"Umm, the colour?" I asked, innocently.

"You have been talking to her, haven't you," he said looking angrily at me.

"I promise you I haven't," I said. "It's just that, well, orange wouldn't have been my first choice."

"I thought you said you liked it," he said, subsiding.

"I don't really remember," I said, "but if I did I was lying."

"Oh well, it doesn't matter," he said. "I traded it in yesterday for a Renault Clio. Klara said she liked Renault Clios."

"What colour is it?" I asked, cautiously.

"Blue," he said. "Klara's favourite colour."

"Great choice," I said. "So how's it going with Klara?"

“I have no idea,” he said.

“But she’s going to see you again?” I asked.

“I don’t know,” he said. “She said she wouldn’t be seen dead in an orange Porsche which is how I found out what colours she likes and cars and so on but I haven’t told her about the Clio yet.”

“Why not?” I asked.

“In case she doesn’t like it,” he admitted.

“Oh for god’s sake,” I said. “Ring her now and tell her you’ve got the Clio and ask her if she wants to go for a drive in it.”

“Oh I couldn’t do that,” he said. “What if she says no?”

“You’re a wimp,” I said. “Did you know that?”

“Actually, I did,” he said, “to my credit, I think.”

“Ring her,” I said.

“I will,” he said, making no move.

“Now,” I said.

“It’s getting late,” he said. “She might be in bed.”

“It’s only just after nine,” I said. “Ring her,”

“How about I text her instead?” he said.

“OK,” I said, “only do it now, in front of me.”

“I can’t with you watching,” he said.

“I’ll read my post,” I said, waving the envelope, “but you don’t leave here until you’ve texted her.”

He sighed and looked worried.

“But what do I say?” he asked.

“Just tell her you’ve got rid of the Porsche and bought a blue Clio and would she like to come for a drive in it,” I said.

“OK,” he said reluctantly. “Well, here goes.”

I watched as he slowly turned pink keying in his message.

“OK,” he said, “done. Satisfied?”

“Did you send it?” I asked.

He just looked at me blankly for a few moments then sent it.

“Just read your frigging post,” he said.

I laughed and tore the end off the thick, white envelope. Inside was a quarter inch thick stack of paper.

“What the hell’s all this crap?” I said. I flicked through the paper. Every sheet seemed to be covered in dense type.

“Seems to be from BSpaceE,” I said.

I looked again at the envelope but there was nothing on it apart from my address and the franking.

“So what do they want?” asked Gerald.

“God knows,” I said. “Who can be bothered to read all this garbage?”

“Isn’t there a covering letter or something?” he asked.

I turned the pile of papers over and the one on top started with ‘Dear Phillip’ so I read it. It made no sense whatsoever.

“So what does it say?” asked Gerald.

"It's some sort of weird shit," I said. "Give me a moment, I need to read it again."

"There's been a balls up," I said a minute later. "Listen to this. Dear Phillip, further to your application for a place on the BSE Titan mission, I am delighted to inform you that you have been selected for the primary crew. Please confirm your acceptance, and they give a web address. Then it says they enclose two copies of a contract and ask me to send one of them back at my earliest convenience with my signature. What the hell?"

"Can I see?" asked Gerald so I handed the pile of papers over to him.

He read the letter carefully then thumbed through the pages.

"Looks like they've sent two copies of a contract," he said, laying them side by side on the table. "And a schedule of dates and things and what looks like a list of what you can and can't take with you."

"They must have got it wrong," I said. "I never really applied and anyway, I didn't finish the selection process, remember, we didn't do the second day."

"Yeah," he said, "I remember. I was there too, you know."

"So how could they have selected me?" I asked. "I tell you what, though, some poor sod is sitting somewhere hoping to be selected and they sent it to me by mistake." I started to laugh. "How the hell do they think they're going to find Titan when they can't even send a letter to the right person?"

"So what are you going to do?" he asked.

"I'll go to that website and reject it," I said. "With a bit of luck there'll be a comment section or an email address so I can explain they sent it to me in error. Tossers."

"There's an email address in the letter," he said. "akhatri@bspace.co.uk. That's the guy who sent the letter. He's the head of BSpaceE."

“OK, I’ll send him an email then,” I said. “What’s that web address? I’ll do that first.”

I was keying it in when Gerald’s phone dah-dah-da-dahed to say he had a message.

“Oh shit,” he said, staring at his phone.

“Tell me in a moment,” I said. “Is there a security code in that letter?”

He continued staring at his phone so I picked up the letter and found the security code myself. I typed it in the box on the web form and selected the ‘Decline’ option and ‘Submit’.

“There’s no option for a message,” I said. “I’ll do an email to that guy in a minute. Was that a message from Klara?”

“Yes,” he whispered, still staring at the phone.

“Oh god,” I said. “She’s turned you down hasn’t she. Hey, I’m sorry.”

“It’s worse than that,” he said. “Look.” He handed me his phone.

“I’d love to,” said the message. “When?”

“How about tomorrow?” I said.

“I can’t tomorrow,” he said. “I’m busy.”

“Bullshit,” I said. “You’re never busy in the evenings.”

“I’ve got something on,” he said.

“What?” I asked.

“A thing,” he said.

“How about tomorrow evening?” I typed into his phone and sent the message.

“What did you do?” he asked.

“I suggested tomorrow to her,” I said.

“You sod,” said Gerald and tried to grab his phone back but I wouldn’t let him have it.

The phone dah-dah-da-dahed again.

“She said great,” I reported, reading the message while holding Gerald at arm’s length. “Do you remember her address?”

“Yeah,” he said, giving up and starting to pace the room.

“Well, she’s given it again just in case,” I said, “and she said 7pm.”

“I can’t be there for 7,” said Gerald. “You sod, what did you just send?”

“I said ‘see you at 7, looking forward to it,’” I said. “Here’s your phone,” and I tossed it at him.

“You really are an evil bastard,” he said looking worried. The phone bounced off his chest and landed in his lap. Abstractedly he picked it up. “Oh lord, now what do I do?”

“You pick her up at 7,” I said. “And you ask her if she’s had dinner then you take her to a nice restaurant.”

“What if she’s had dinner?” he asked.

“She won’t have,” I said. “It wouldn’t occur to her that you might actually just be going round to show her the car. She’ll be expecting dinner. In fact, don’t be surprised if she sends you a message tomorrow morning suggesting you stay for dinner.”

“So what do I do if she does?” asked Gerald, looking perplexed.

“I sometimes wonder how you have managed to survive in this world this long,” I said. “You say ‘yes’ of course and you eat whatever she

gives you and you tell her how wonderful it was whatever she prepares. OK?”

“Oh,” he said. “OK. You really think she’ll do that?”

As if on cue his phone dah-dah-da-dahed again.

“She’s invited me to dinner tomorrow,” he said, looking at the message and going pale.

* * *

Two days later I had a phone call.

“Mr Roach?” asked the woman.

“Yeah,” I said. “Who are you?”

“Please hold for Dr Arjeev Khatri,” she said.

“OK,” I said, intrigued. I remembered that name from the letter from BSpaceE and the email I’d sent him.

“Mr Roach,” he said seconds later. “I’m delighted to speak with you again.”

“Have we spoken before?” I asked, wrong footed already.

“If we haven’t then it is entirely my fault,” he said evenly. “Now I am going to be in London tomorrow evening. I was wondering if I could take you to dinner?”

“I’m afraid not,” I said. “I work in the evenings.”

Jiminy hadn’t been overly pleased at my unscheduled absence earlier in the week but it turned out that she had a soft spot for people who were humble and apologetic which was useful to know. At any rate, I still had my part time job and a useful strategy for the next time it happened..

“Ahh,” he said, “perhaps lunch instead? Shall we say Kaspar’s at the Savoy at one o’clock?”

“Can I ask why?” I said.

He seemed a little taken aback by this, as though he were unused to people not jumping at the chance to dine with him.

“I was hoping we might have a little chat,” he said.

“Well, why don’t you come round to my place,” I said. “It’d be a lot easier than me farting around trying to find the Savoy.”

It would also be difficult for me to find something suitable to wear. I didn’t think the Savoy would appreciate jeans and a tatty sweater.

“If you would find that more convenient,” he said smoothly. “One o’clock?”

“Sure,” I said. “Oh, and give me a ring when you get here as the door bell isn’t working.”

“Indeed,” he said drily.

“I wonder what he wants to talk about?” I wondered. “Surely they can’t be that desperate for astronauts.”

As it turned out they were.

I’ll say this for him, he wasn’t in the least bit breathless when he reached the top landing.

“Interesting plant,” he said, when I opened the door. “What is it?”

“It’s a creeping fig plant,” I said, “Come on in.”

“Really?” he said, bending over to inspect it. “I’ve never seen one so ... profuse. What’s your secret?”

“Neglect mostly,” I said. “It gets watered whenever I remember which

isn't too often. Can I offer you a coffee or something?"

"That would be very nice," he said coming in.

"With or without?" I asked.

"With or without what?" he asked in reply, looking around my apartment.

"Milk and sugar," I said.

"Ahh, yes, milk no sugar, please," he said. "Delightful place you have here, bijou but really quite charming."

"It's home," I said. "Grab a seat, won't be a moment."

"This is your studio as well?" he asked, inspecting the couch and the arm chair and electing to take the arm chair.

"North facing window," I said. "Absolutely perfect."

"So I understand," he said. "Quality of light and so on."

"That's right," I said, bringing over the remaining biscuits.

"You are, I believe, a professional artist?" he said.

"Of sorts," I said. "I make money from portraits of pets although one day my true genius as an artist will be recognised. Probably not until I'm dead though. That's usually the way."

"Yes, I've heard that," he said. "Wasn't it Vincent Van Gogh who never sold anything while he was alive but now his paintings sell for millions?"

"That's right," I said, bringing over the coffee. "Although he did sell one while he was alive, to the sister of a friend of his."

"Ahh, I didn't know that," said Dr Khatri. "Which painting was it?"

“It’s called The Red Vineyards near Arles,” I said. “I doubt you’ll have seen it since it’s in the Pushkin Museum of Fine Arts in Moscow.”

“I’ve been there two or three times,” he said, “although I don’t recall a Van Gogh. They have a very fine collection of Byzantine Art, you know.”

“Oh really?” I said, sitting down. “I have to say I am curious, Dr Khatri. I’m assuming you’re here because of the BSpaceE thing and not because you want a portrait of your dog.”

“Call me Arjeev,” said Arjeev. “No, I don’t have any pets.”

“So what’s this all about?” I asked.

“I’m here to try to persuade you to change your mind,” he said.

“What on earth for?” I asked. “Surely there are thousands of people who are suitable and who actually want to go?”

“Yes and no,” he said, taking a sip of his drink and managing to hide his dislike of cheap instant coffee reasonably convincingly. “Yes, there are plenty of suitable candidates but we need to consider the balance of the group and their dynamics as well as individuals. You are one of very few who don’t have a scientific or technical background and we believe that we need someone with an artistic background to provide a counter perspective.”

“Well, I’m in no position to argue with you,” I said. “I’m guessing you’ve had a whole bunch of shrinks analyse the problem from every angle. But why me?”

“You’re right there,” he said. “We’ve spent several million pounds on psychological studies but can we assume, for the moment at least, that we want you on board?”

“OK,” I said. “I’ve no idea why, but let’s run with that.”

“Excellent,” he said smoothly. “So what would it take to get you to agree?”

"I'm an artist," I said. "That's what I love and that's what I do. I may never achieve any fame as an artist but that's the way life is. I've never particularly even wanted to travel and I've never been interested in space."

"But am I right in thinking that you would like to be renowned as an artist?" he asked.

"Well of course," I said. "What artist wouldn't want to be?"

"I take it, then, that it's never occurred to you that, by undertaking this expedition, you would become famous the world over?" he asked. "The moment you are known to be a member of the team your art will take on a new significance. You do appreciate that?"

"Well it's an interesting idea," I said. "But that would hardly make me a member of the Royal Academy, would it."

"And if you were to become a member of the Royal Academy, would you go?" he asked, putting down his coffee.

I laughed. "There are only eighty members of the Academy," I said, "and new members are elected by the other members when a vacancy occurs. I hardly think they're going to elect me just because I went into space."

"On the contrary," he said. "I think it would be highly likely that you would be elected. After all, the first professional artist to go into space would be a mark of some special distinction, would it not? You would be the artist who has produced truly original art, art from another world. Art beyond even the conception of other artists."

I had to admit he had a point there.

"But how likely would it be to happen though," I asked. "Just because someone is an original artist doesn't guarantee membership of the Royal Academy."

"How would it be if it were guaranteed?" he asked, quietly.

“Are you saying that could be on the cards?” I asked.

“We are not without some influence,” he said.

I just stared at him. It would be nice to be elected to membership of the Royal Academy through my own merits but in all honesty I simply would never move in those circles.

“Just a minute,” I said. “Janine said that you had to develop those space ration things because you simply couldn’t take the tonnage of normal food that would be needed. How would I be able to create all this original art you’re talking about? I’d need to take tons of paint and canvas to last for ten years. How would you be able to cope with that?”

“That could be an issue,” he conceded. “Whatever happens we are still bound by physics. However, is that your only objection? If we were able to develop a solution could we count on your commitment?”

“I don’t see how you can find a solution.” I said. “I’ve done a bit with computer graphics and I can’t stand it. I need to work with a paint brush in my hand and mix real paint. Not fart around with pixels using a mouse.”

“But if we were able to find a solution?” he said. “Would you join us?”

I sat back on the couch and gazed at him. I gazed at him for a long time. Since Rosalie had died, my life had shrunk to this small apartment and my art. Did it really matter if the apartment was in London or not? OK I had my job at the pub but these guys were going to pay me too, and probably a little more than Jiminy was. And, it had to be admitted, the publicity would get people looking at my work.

“Wouldn’t it be false?” I said after a while. “People would be interested in my art because I’d be a celebrity, not because it’s Art.”

“Yes, some would be like that,” he said. “But remember something else. Being a celebrity would get your art in front of a huge number of people but it would still have to stand on its own merits. All you’d be doing is getting a massively wide exposure.”

I continued to stare at him, my mind a confused mess of whirling thoughts.

“The last time I was in Rome,” he said softly, “I saw a man creating incredible drawings on the pavement with chalk for a handful of euros but very few people will ever get the opportunity to see his art. To be a great artist you need talent but you also need exposure. Here is a chance for you to gain a phenomenal amount of exposure. That man in Rome will never get an opportunity like this.”

“You bastard,” I said slowly and with feeling. “You frigging bastard.”

Chapter Twelve

I stepped back to get an overview of the painting. It was a long way off being finished, of course, but you need to retain the overview while working on detail so the composition stays consistent and perspective stays true. Not that perspective was a huge issue with this one. I was working on a Dali-esque dreamscape involving a warped space vessel draped over a distorted quasi-human figure, itself draped over an unevenly melting and dripping harmonica drifting in space. I wasn't entirely clear why I went for a harmonica rather than, say, a clarinet, but I had some vague idea that the square holes in it represented both parking bays for space vessels and square holes for round pegs to symbolically try to fit into. If I'd gone for the clarinet it would have been round holes and square pegs. Swings and roundabouts at the end of the day.

The quasi-human figure was me, of course, although I'd never admit that to anyone. Quasi being the decisive factor as it made me unrecognisable, especially as the features – nose, eyebrows and so on – floated some way away from what could reasonably be called the face and weren't in the normal alignment. Picasso put features on different perspectives of a face that were merged together. I was experimenting with rearranging the features and distorting the face to subtly not fit.

Anyway, it was turning out to be garbage. Maybe Picasso or Dali could salvage something from it but one of the keys to being a Great Artist is knowing what not to start in the first place. I stared at it critically and had one of those 'oh my god' moments, only in a bad way. I saved the painting to look at another day, just in case it was a matter of my mood, and wiped the screen.

As part of my ritual I went and washed my hands. It was both unnecessary and metaphorical but I did it anyway. Arjeev Khatri had got a bunch of his IT guys together and bullied them into creating the ultimate painting program just for me and my only complaint was that, as I didn't use real paint, I didn't get paint on my hands. But after years of painting and getting paint on my hands cleaning my hands was a massive part of my winding down ritual so I continued to wash my hands. Except that we didn't have water to wash with so,

being a creative sort of person, I made washing motions under an imaginary stream of water and dried my imaginarily wet hands on an imaginary towel. I may be mad but at least it was relaxing which is more than can be said for most forms of madness.

I gave a little laugh as I flicked imaginary droplets from my hands into the imaginary sink before drying them. Dali had once said, and I don't think he was joking, "the only difference between me and a mad man is that I am not mad." I could relate to that. I turned away then remembered I'd left the imaginary tap running so I turned it off. It would be a terrible thing if I ran out of imagination.

"Canvas, palette off," I said and the large canvas screen flickered and died while the small palette screen just went grey-black.

I felt the need for a little company so I climbed the wall ladder and jumped up through the door in the ceiling. All our apartments, communal rooms and store rooms were laid out on the rim of what was essentially a giant cartwheel which gently rolled its way through space and gave the impression of gravity. The corridor was made up of the roofs of our rooms with the occasional hole in the corridor's ceiling that led to the recreation rooms which were around the centre where it was almost weightless. Smack dab in the centre was our transporter which we'd used to get to the wheel and would use to land on Titan. Other than that it was fairly redundant.

The layout was pretty simple although no doubt designed by a team of psychologists. All twenty units on the rim were the same size and Gina and Oliver, the two ex-military, NASA trained pilots, lived in splendid isolation either side of the Control Room. Either side of them were two store rooms and the rest of us had our apartments in pairs, interspersed with the mess, or the 'Caf' as we called it, a communal meeting room, a laboratory, Medical Centre and three more store rooms. It had been designed that way so the Wheel stayed fairly balanced. My apartment was between a store and Talia's apartment.

I mention this mainly because, as I left my room and got into the corridor, I heard soft crying coming from Talia's.

The rooms had been deliberately designed not to be soundproof. The

psychologists had decided that soundproofing would be detrimental to our emotional well being as silence would be isolating. I'd yet to hear Talia fart but took some comfort in knowing that I was contributing to her emotional strength each time I did. Still, I hadn't heard her cry before either so maybe I wasn't as emotionally supportive as I could be.

I tapped gently on her door and her unit went silent. Undaunted I tapped again.

"Who is it?" she called out.

"Phil," I said. "Can I come in?"

There was a pause then her door slid open and I jumped in.

When we'd started out the Wheel had been wound up to spin fast enough to simulate Earth's gravity and each day one or other of our pilots nudged down the spin so that by the time we got to Titan we'd be comfortably living at Titan's gravity level, which was roughly 13% of Earth's. For the first couple of weeks we'd all assiduously tracked the days but by this stage only Gina and Oliver actually knew exactly where we were and no one ever bothered to ask them. The days passed in routine and knowing which day it was only made time seem to go slower. Importantly, though, when I dropped in through Talia's ceiling and landed on the floor, it was considerably less of an impact than it would have been at the start of the trip. If I wasn't so lazy I'd not bother to use the ladders to get out to the corridors, I'd just jump. Incidentally, we'd all learned very quickly not to leave anything in the rooms immediately under the doors.

"What's up?" she asked. She was sitting on her bed rather than in her chair. The bed sheet was disarrayed so I figured she'd been lying on the bed but she could also have just been lazy too and not made it recently. None of us went into each other's rooms much. Living as we did in such close proximity our rooms were private little sanctuaries.

"I'm sorry to intrude," I said, "but, umm, ... is everything all right?"

I was reluctant to say I'd heard her crying.

“Yeah, everything’s fine,” she said, giving me a broad smile as if to prove it.

I could see a shadow behind her eyes though and, although this isn’t conclusive, if someone is fine and you ask if everything is all right they usually want to know why you’re asking. If they don’t it’s because they know why you’re asking and don’t want you to pursue it.

“That’s great,” I said. “Well, I’ll leave you to it. I’m just on my way to see if anything’s happening anywhere.”

I started to climb her ladder.

“Hey, Phil,” she said then paused so I paused. “Do you ever feel you’re wasting your life here?”

That’s a pretty deep and meaningful question to be asked at the top of a ladder so I gracefully jumped down.

“Interesting question,” I said and sat in her chair. “I suppose I do in a way but since my life was a complete waste before this it doesn’t make a whole lot of difference. Do you?”

“Yeah, I do sometimes,” she said quietly. “I signed up for this full of enthusiasm. I was the youngest person to be selected and I was so proud. I was really going to go places. Hey, I was 22 and wow! I was an astronaut and I wasn’t just going to the moon or even Mars, I was going all the way to Saturn and Titan. It was just so incredible, I was so, I don’t know, so enthusiastic, it was going to be awesome.”

“I’m guessing things have changed,” I said.

“Yeah,” she said. “It was exciting at first but, for crying out loud, every day’s the same as every other frigging day. We’re just rolling along in this gigantic sardine tin and it seems like we’re just going nowhere, just on and on forever.”

“We’ll get there soon enough,” I said. “I’ve lost track of the days but HalleB’ll know. Want me to ask?”

HalleB was our computer system. Technically she was the computer's voice and officially designated 'Heuristic Audio Language Interface - Bidirectional' or HALI-B. She'd started off as a male, English voice known as 'Computer' but we'd found a female American voice that didn't annoy everyone and since I thought she sounded like the actress Halle Berry I started calling her Halle Berry and very quickly we all ended up calling her HalleB.

"Nah," said Talia, "makes no difference, I know we'll get there one day. It's just that, I don't know, recently I've been thinking I'm, like, 25 now but all I'm going to see is the inside of this shit then the inside of the Titan base then the inside of this shit again until we get back to Earth and I'll be in my mid thirties and I'll have missed out on everything. I'll be an old woman and I'll have just wasted my god damned life sitting in god awful tin cans."

She started to cry again so I went over to the bed, sat down and put my arm around her.

"Yes, you'll be in your early thirties," I said. "But you won't be old, you'll still be a hell of a lot younger than I am now and you'll be a huge celebrity. You're going to have a great time when we get back."

"I know that," she said, sniffing. "I know that in my head and I keep telling myself that but I still feel that it's all such a waste. I should have stayed on Earth and done things there, not be out here just waiting for something to happen."

"Is this about children?" I asked.

BSpaceE had arranged things so that there were five men and five women on board and then stressed at great length about the inability of the systems to cope with pregnancies and children. In fact, half the store room seemed to be given over to contraceptives of all kinds. God knows what kind of space orgies they'd been anticipating. I imagine that occasional liaisons were being enacted but there was nothing overt and, as I was in the unit next to Talia, I was fairly sure she was living a quiet life. I certainly was. Maybe her biological clock had cottoned on to the distinct possibility that she wasn't going to have kids for a good long time.

“God no,” she said, pulling away and wiping her eyes as though she thought I was about to propose we start making some there and then. “I’ve never wanted children. I just want to do more with my life.”

“OK,” I said, getting up and going back to the chair. “You just need to keep reminding yourself that you are a pioneer. Even now you are the furthest anyone has ever been from Earth and you’ve still got a fair way to go. You’re going to be achieving great things soon enough. You just have to wait a bit until you get there to start achieving.”

“That’s what everyone’s been telling me all my life,” she said irritably. “Be patient, it’ll happen, just be patient. Well I’m sick of being patient. Nothing’s ever going to happen! I’m just going to spend the rest of my life in this god damn awful little room surrounded by old people!”

“Well, OK,” I said. “Yeah, compared with you I’m old and so is Evie but Richard and Zaphir are almost your age. Zaf’s only 32 and Rik’s 28, 29, something like that.”

“Yeah but they seem so much older,” she said. “They’re so serious all the time. At least you know how to see the funny side of things, it makes you seem younger than either of them.”

“Well thanks,” I said, not quite sure whether I should be miffed that she thought 45 was old or pleased that she thought I seemed younger than a 28 year old.

“Oh you know what I mean,” she said. “All Rik ever thinks about are his organisms and how they’re surviving in space. I swear he’s named every single one of those damned spores.”

“Well, yes,” I said. “I admit he does seem a little over dedicated. Zaf, too, I suppose. He seems to live in his engineering lab. I’ve never been in there, I actually have no idea what he does all day.”

“I went in there once,” she said. “Early on, before we changed the Duty. He was trying to improve the efficiency of the methane-methanol converter.”

When we’d started out, BSpaceE had imposed a regime whereby there

were two people on duty at all times through a roster of staggered twelve hour shifts. We'd all got together after two or three weeks and voted to change that to a more normal routine whereby we had a 'day' and a 'night' and we pretty much kept the hours we wanted, much like we had on Earth. Gina, the nominal captain, had been the only one to vote in favour of the original staggered routine and she freely admitted it was only because she felt she ought to at least try to keep to the original plan.

"Did he succeed?" I asked.

"No one knows," she said. "He won't talk about it."

"Oh," I said. "I don't suppose it really matters much anyway. Titan's got plenty of methane."

I know little of chemistry but it was explained to me, in very simple terms, during training that we needed to convert the abundant frozen methane on Titan into methanol. Once it was methanol it could be easily converted into other things like water and breathable air. I was assured that the BSpaceE engineers had a method that worked and I was happy with that. If Zaf could make it more efficient then great but any method that works is fine by me.

A gong sounded, starting softly then swelling to a resonant tone then dying away quickly.

"Gina is hosting a party at 18:00 hours in the Meeting Room," said HalleB. "Everyone is invited."

"There you go," I said. "There's a party tonight. Perfect timing. It'll help cheer you up."

"I guess," she said. "Although I don't think anything will cheer me up at the moment. It's not like I'm going to meet anyone new at the party."

"Well, true," I said. "Anyway, it's up to you. You can join the rest of us or hide in here. No pressure."

I got up and headed for the ladder.

“Yeah, maybe that’s it,” she said. “There’s no pressure. Nothing to make anything even seem worth doing.”

“Jesus,” I said with a laugh. “You really are down, aren’t you. Maybe you should have a chat with our Morale Officer.”

“Oh ha bloody ha,” she said. “Don’t you have something else to do?”

“On my way,” I said, shinning up the ladder quickly. “See you at the party.”

I stopped by the Caf as it was right next door to get myself a coffee. It was deserted apart from Myf who was reading something on her notebook.

“Hey,” she said, looking up as I dropped in.

“Hey,” I said, heading for the coffee machine. “What are you reading?”

“The latest Miranda Moor novel,” she said. “They sent it up yesterday.”

“Any good?” I asked.

“Yeah, not bad,” she said. “Not as good as her last one, though.”

“I can’t get into them,” I said, “but then I’m not a great reader. Hey, can I ask you something?”

“Sure,” she said putting the notebook aside. “General or professional?”

“Professional,” I said, taking my coffee over and sitting at her table, “seeing as how you’re a psychologist. What would make someone feel that they’re living a wasted life?”

“Oh any number of reasons,” she said. “Is this an abstract question or are you talking about yourself?”

“Someone else,” I said. “One of us, but not me.”

“That’s easy, then,” she said. “We’re a bit like long term prisoners here. We’re becoming institutionalised through routine. Humans are inventive, creative creatures, we need constant challenges.”

“So you think that someone who’s thinking they’re wasting their lives would respond to a few challenges?” I asked.

“Definitely,” she said. “Ohhh, are you talking about Talia?”

“Why do you think that?” I asked.

“Well whoever it is it probably isn’t you or Evie,” she said. “You both live with the constant challenges of your creativity and the pilots have their daily challenges and the rest of us have our own projects within our specialities. Talia’s an anthropologist, she really doesn’t have a lot to do here. Give her a primitive society and she’ll be as happy as a pig in shit but as a group we’re just too culturally homogenised to be interesting. God knows why they made her the Morale Officer.”

“Well, yes, you’re right,” I said. “I was passing her place earlier and found her crying. She thinks she’s wasting her life and that she’ll be too old and decrepit to do much when she gets back to Earth.”

Myf snorted. “She’ll only be my age,” she said. “Does she seriously think I’m old and decrepit?”

“I doubt it,” I said. “She’s just depressed and not thinking properly. Maybe you could have a chat with her.”

“I could,” said Myf, “but she knows I’m a psychologist so if I approach her it’ll seem like I think she has a problem. It would be much better of she came and had a chat with me.”

“I doubt very much she’d do that if I suggested it,” I said. “I’m pretty sure she thinks I’m on the edge of senility as it is.”

“You know what would be best,” said Myf thoughtfully. “Something that challenges her. Not a game or anything like that but something

that she'd think was important and would force her into a high stress situation where she has to make decisions for herself."

"I can see that might help," I said. "About the most challenging thing we have at the moment though is the daily vacuuming."

Living in a tightly contained environment dust and parasites from our own bodies could potentially develop into a significant problem so for health reasons as well as the aesthetics of cleanliness we each had to thoroughly clean our own rooms each day with spray on detergent and vacuum every surface. We had a roster whereby two of us cleaned the rest of the Wheel daily. It was tedious but not challenging.

"I'll have a chat with Ollie," she said. "See if he can think up a challenge for her."

"Wouldn't Gina be better?" I asked. "Another woman and so on."

"Probably," said Myf, "but we're not speaking to each other at the moment."

"Ahh, right," I said.

It was a source of never ending fascination to me that cliques and factions grew, warred and dissipated constantly within our group of ten. At any given moment three people who had previously been sworn enemies would have banded together to war on another group of five while the remaining two were rejected by both groups. I never knew from one day to the next which group I'd be in and I didn't seem to have any say in the matter. Groups formed and included or excluded me but how and why was a mystery. Fortunately nothing particularly serious had arisen to solidify anything into any semblance of permanence. Gina and Myf might not be talking to each other today but tomorrow, or at the latest the day after, they would be best buddies. Tonight's party would be interesting if only to see who turned up or who sat with their backs to who else.

"Hiya, Phil" said Nagita, the Wheel's doctor, dropping in. "How are you?"

“I’m good,” I said. Myf picked up her notebook again without saying a word. “So why’s Gina throwing a party?”

“She’s got an announcement,” said Nag.

“Oh, is she resigning?” asked Myf sweetly, looking up.

“I’m going to find Angus,” I said, getting up. They both ignored me.

Chapter Thirteen

The meeting room was empty when I arrived but then I've always had a tendency to arrive early for parties and late for work. Apparently Libras love balance so I guess it's my way of balancing things so that, on average, I'm always on time.

The room was pristine. All the chairs neatly squared off and equally spaced. The tables lined up perfectly, notepads neatly stacked in a corner, no scraps of rubbish anywhere. I didn't need to look at the roster to know Ollie had been on duty today. He had a fetish for tidiness. When I was on cleaning duty the room was thoroughly cleaned and vacuumed but chairs, tables and everything else stayed where they ended up since I really couldn't see the point of lining things up. They would be moved as soon as anyone else came in. Still, Ollie was the co-pilot and navigator and when you have to navigate a path through a universe where your destination is moving in three dimensions relative to your departure point, and everywhere else come to that, it's probably a welcome change to have things line up neatly. It's one of life's little ironies that speeding up in space can actually mean you arrive at your destination later since your destination may be behind something else that you have to go around. To put it another way, we wanted to arrive at Titan when it was between us and Saturn, not when it was on the far side, which would not only mean going around Saturn but having to fight its gravity on the final leg. Ollie had probably been good at maths at school.

Gina came in a few moments later, closely followed by Nag who was carrying a carton of alcohol free Champagne Cocktails which was encouraging. It suggested Gina's announcement was good news and that the party would be a celebration.

"Hey, Phil," she said, "how's the picture going?"

"It's trash," I said, pushing a chair to the middle of the room.

"Yeah, I thought so too," she said. "Too weird for my taste."

"You should never look at them before they're finished," I said.

“Oh you know me,” she said. “I like to know what’s going on. Hey Rik, how’s it going?”

“What’s the announcement?” he asked, never being one for the social graces. “Why not just give it to HalleB?”

“Wait and see,” said Gina, “but it’s good news so we thought people would want to celebrate.”

He frowned and sat in the chair at the end of the row.

“How’re your spores doing?” I asked.

“The bacillus pumilus SAFR-032 are proving remarkably resilient to gamma photons at 10^5Ev ,” he said. “This mutation has the higher concentrations of proteins associated with UV radiation resistance and, in fact, shows elevated UV resistance when revived and re-exposed after repeated gamma treatments.”

“How interesting,” I said.

“Absolutely fascinating,” he replied, cheering up a little.

Our conversation waned after that.

“Got any strippers coming in for the party?” asked Angus, dropping in and narrowly missing Nag.

“Only you,” she said and Angus started to do a slow dance with his hands on his hips. She whacked him on the shoulder which threw him back a couple of feet. He dextrously flicked himself upright with one hand and grabbed a chair and plonked himself down directly in front of Gina.

“So what’s this all about, Gina?” he asked.

“I’ll tell you when the others get here,” she said.

“Bah,” he said. “So where’s the Ice Queen?” he asked me.

“She’s probably busy,” I said. “Anyway she’s only next door, she can probably hear through the wall.”

Myf and Talia appeared, deep in conversation, took a couple of chairs and sat in the corner furthest away from Gina. After a few moments, Rik got up and joined them although they didn’t break their conversation.

“Interesting picture you’re working on,” said Angus.

“Dammit,” I said slightly irritably, “can’t anyone wait until I finish a picture before looking at it?”

“I can,” said Rik. “In fact I try to avoid them then as well.”

“Philistine,” I said.

“If by that you mean I’m not Jewish,” he said, “then, yes, I am a Philistine.”

“What are you trying to say?” asked Angus.

“That he has no idea of what culture and aesthetics are,” I said.

“No, I mean the picture,” he said. “Why a harmonica?”

“Ahh,” I said, improvising rapidly. “The harmonica is symbolic of the resonance inherent in structural rigidity.”

“So it’s a political statement?” asked Myf.

“I think it’s more of a cultural conception,” said Talia, “as the simplicity of the harmonica suggests a pre-political system which is inherently more structurally rigid than a political system.”

“Surely the nature of political systems is that of the imposition of rigid institutions,” responded Myf.

“Politics, by definition, imposes fluidity through compromise,” said Talia. “Anthropologically speaking, primitive social structures suppress

individuality through custom and tradition.”

“So the harmonica represents a cave dwelling society, you think?” asked Zaf, who’d quietly arrived and was standing listening.

“Why cave dwelling?” asked Nag. “Surely a manufactured musical instrument implies a higher order of civilisation.”

“Because a harmonica is a series of vibrating reeds over resonant cavities,” he said. “Presumably the cavities represent caves and the sound is that of the wind outside.”

“That would make sense,” said Myf. “Phil’s picture shows the tension on the individual induced by the overlay of modern advanced technology, as shown by the space craft, on the primitive amygdala, which is the harmonica. No wonder the poor person trapped between is heavily distorted and torn apart.”

“Not everything is psychological,” said Gina, sarcastically.

“Of course it is,” said Myf. “All phenomena are perceived through our senses and interpreted by our brains. The psychological determinants within those brains define how the phenomena are interpreted.”

“You’re excluding the objective substance of physical reality,” said Zaf.

“Now see what you’ve done,” said Angus, grinning. “Go on, tell us what it’s really about.”

“It’s about whatever you want it to be about,” I said. “That’s what true Art is, the meaning of a painting lies in the meaning the viewer gives to it. A great painting draws its meaning out of the viewer rather than trying to impose a meaning on the viewer.”

“Oh, here we go again,” said Gina. “Another cop out.”

“Absolutely,” I said. “I just smear paint on a canvas. It has no intrinsic meaning beyond what you want to give it. In fact, I don’t even do that any more since it’s all computerised.”

“Enough!” said Gina. “Is everyone here?”

“Ollie’s not here,” said Nag.

“Ollie’s asleep,” said Gina. “He did the night duty but he already knows anyway. Where’s Evie?”

“She’s probably still in her unit,” I said.

Gina banged on the wall.

“Alright, I’m coming,” came a muffled reply. A few seconds later, Evie dropped in, looking irritated.

“This had better be worth listening to,” she said. “I was busy.”

She moved over and sat in the empty seat beside me.

“I think so,” said Gina. “In fact I think you’ll want to celebrate which is why I’ve got these out of stores.” She held up the champagne cocktails.

It’s a measure of the routine nature of our lives that the idea of alcohol free artificially champagne flavoured water from a thin silver coloured sachet was exciting. There were a couple of catcalls and some muted applause.

“So what’s the occasion?” asked Angus, reaching out to take a sachet.

“It’s the 6th of March 2023,” said Gina.

“So?” I asked. “My birthday isn’t until October.”

“Do the maths,” she said then held up a hand. “Actually don’t bother. I’ve done it already. It’s our thousandth day.”

There was a sudden silence.

“Jesus,” said Rik.

"You mean we've been on the Wheel for a thousand days?" asked Talia.

"Doesn't time fly when you're having fun," said Angus.

"Just a minute," said Myf. "A thousand days? You mean we're nearly there?"

"Absolutely," said Gina. "We're looking at a few hours under 70 days to go. Ten weeks, people."

"Holy shit," I said. "You mean we're landing on Titan in ten weeks?"

"Well, no," said Gina. "We won't actually land for a few more days since we need to determine an appropriate landing site. But, in 70 days we'll be moving into orbit around Titan."

I glanced over at Talia and her face had come alive. By the look of it her depression was lifting.

We continued sitting in silence for a while, absorbing this news. We'd all known it was coming but I guess we'd all got so entrenched in the everydayness of things that the next phase, the whole point of it actually, had got lost.

"Damn," I said to Evie, "so we're nearly there."

She didn't reply because she wasn't there. I looked around but she'd left the room.

"How strange," I muttered, but then Evie was a little strange at the best of times. Angus called her the Ice Queen and she didn't seem to mind.

"So it's nearly over then," said Rik, looking a little nervous.

Actually, I think most of us felt a little nervous. Even though we'd trained for this, Titan was still an unknown and it was going to be a massive transition from what we'd got used to.

“The outbound voyage is,” said Gina. “But we’ve still got three years on Titan then the trip back. The mission itself is far from over.”

“You know,” said Zaf, looking thoughtful. “I’m not sure I remember the details of what to do when we get there. You know, building a base.”

“Don’t worry,” said Gina. “Over the next ten weeks we’ll go over all the procedures. It’ll all come back very quickly. We’ll also spend some time in the Spare Wheel re-familiarising ourselves with the resources.”

The Wheel we lived in was only half the structure in which we were travelling. It was more like a yo-yo than a bicycle wheel. There were two Wheels, side by side and joined together through sixteen narrow pipes. We lived in one half, which we called the Wheel. The other half, the Spare Wheel, was detachable and was mostly full of water in a honeycomb of tanks plus a lot of tools and equipment. Some of the pipes carried water through to us and the others were passages for us to get through to the Spare Wheel.

The basic idea was that when we reached Titan we would use the transport to get to the surface then Gina and Ollie would remotely detach the Spare Wheel and land it. We would then use part of its structure together with the additional materials it carried to build the base, expanding the base as the water tanks became free. By the end of our stay we would have created a base living area large enough for some forty people, who would be further expanding the base. Our role was essentially to establish the first foothold for a permanent colony on Titan before going back to Earth in the one remaining Wheel.

As parties go, it wasn’t one of the better ones I’ve been to. After the initial surprise, the conversation turned to the Spare Wheel and where to site the base and mundane things like that. Even though we were, on the whole, cheered at the prospect of finishing this tedious phase of actually getting to Titan, no one except Angus actually drank their champagne cocktail.

After a while I made some excuses and left. Having no technical expertise I would be more of a gopher once we landed. I’d bolt things together and squeeze sealant and maybe even operate one of the

thermal diggers but I would have little or no role in the decision making. Others would tell me what to do and I'd do it.

I slowly wandered along the corridor in the direction of my suite, past Evie's apartment then Rik's and paused outside the Caf. I was feeling a little empty inside so I decided to drop in and have some dinner since it wasn't far off that time anyway. It's always good when comfort eating coincides with mealtimes.

"Hello," I said, a little surprised. "I thought you'd gone back to your rooms."

"Oh, hello," said Evie, looking up from the window. "I was going to but I felt disorientated and decided I needed some food."

Each of our rooms had a decent sized window but, because our rooms were on the rim of the Wheel and the centrifugal force that simulated gravity acted outwards from the centre to the rim, the windows were effectively in the floor, just as the entrances were in the ceiling. Most of us had had our windows open – not literally, of course, since it was a vacuum outside – in the early days but we'd all soon covered them with the hatches. It was a little disturbing to look down at your feet and find the emptiness of space or wake up and look over the side of the bed to find nothing but infinity. It was also pretty boring, too. When you first go into space it is a truly mind blowing experience but after a few days the view gets pretty old. Especially when Earth is so far away that you can't even make out England any more.

Evie was sitting curled up sideways on a chair, her head propped on one arm while she stared out of the unhatched window.

"Are you watching Saturn?" I asked.

"Yes," she said slowly. "When I can."

I pulled the lid off a packet of Sweet and Sour Prawns with Rice and Vegetables and squirted in a measure of water and put it in the microwave for 45 seconds. When it pinged I took it over to where she was sitting.

“Mind if I join you?” I asked.

Evie was a distinctive woman. She was tall and rather gaunt with jaw length black hair, going a little grey, outlining her face from a central parting. Her deep set brown eyes always seemed remote and her moderately thin lips rarely smiled although when they did her face was transformed. Angus had nicknamed her the Ice Queen even though her colouring was warm and earthy but the moniker seemed to fit. The ice was in her personality, not her visuals. She always seemed aloof, distant, an observer not a participant. After a thousand days of being within 300 metres of her I still didn’t know her well. I suppose it could have been because she was the oldest of us, but she was only three years older than me and I was, in turn, six years older than Ollie. One might have expected this age gap between us and the others to have given us some point of connection but it hadn’t.

“Sure,” she said, continuing to gaze out of the window.

I pulled over a chair and sat the other side of the window, my toes on the edge. For perhaps a second, a slice of Saturn appeared in the window and slid up the window then disappeared from view. I don’t know if there were technical reasons for it but the Wheel rotated roughly in line with Saturn, like a car wheel driving through space. It probably made steering easier.

“Do you know our spin?” I asked.

Near Earth we’d been rotating at about 3 rpm in order to simulate Earth’s gravity here at the rim. Now we were near Saturn we would be spinning more slowly since Titan’s gravity was lower. It certainly seemed slower.

“HalleB said 0.78 rpm,” said Evie distantly. “Saturn’s coming up every 75 seconds or so. You see that blob just there?” She pointed at a featureless white dot as part of Saturn came into view again. “HalleB says that’s another moon, called Rhea. Titan is still behind Saturn at the moment so we can’t see it.”

“It came as quite a shock,” I said. “I hadn’t realised we were so close. I’d got so used to being in the Wheel I’d half forgotten what we were

actually doing.”

“What are we actually doing, I wonder?” said Evie.

“We’re going to Titan to set up a base,” I said.

“Yes, I know that,” she said. “What I really meant to say was, what am I doing.”

I had some of my sweet and sour prawns while I pondered this.

“It’s a little late to be having doubts,” I said after a while.

“Yes, I suppose it is,” she said with a dry laugh. “Although I’ve had doubts from the beginning. I’m not like the rest of you, you know. You’re all committed to this. I fell into it by accident and when I tried to get out of it I found it almost impossible.”

“What do you mean?” I asked, finishing the prawns. I put the packet down on the floor beside me.

She didn’t say anything, just watched Saturn fly by again. It was almost hypnotic, like watching a washing machine, only slower.

“I never applied for the mission,” she said quietly after a couple more fly-bys. “I only went to the selection centre to support my friend but there was some sort of mix up and they thought I was the candidate. I decided to go along with it since I thought I could get a story out of it. I’m a writer, you know, so I like to follow up opportunities when they come along. You never know what may come of them, an article or maybe even a novel. Anyway, it was all too much for me and I pulled out halfway through the first day.”

“You’re joking,” I said, looking at her in astonishment.

“I never joke,” she said. “I don’t know how to.”

“The same thing happened with me,” I said. “I was there to support Gerald, my friend, but they made me do the selection process anyway, although I didn’t drop out until the end of the first day.”

Her dark brown eyes fixed on mine with an intensity that was a little scary.

“You didn’t want to come on this voyage?” she asked.

“God no,” I said. “I’m an artist, I don’t know anything about space or science.”

“An artist?” she said. “I thought that was just your hobby, something you do to pass the time. Aren’t you an engineer or something?”

“The only thing I can fix is my bicycle,” I said. “I used to have a car, years ago, but I couldn’t even change the spark plugs.”

“I’m pretty sure someone told me you were an engineer,” she said. “So why were you selected, then?” Her eyes never wavered. I don’t think she blinked either.

“I haven’t got a clue,” I said. “The head of BSpaceE came to see me and spouted something about needing me to balance the dynamics or something but I only agreed to do it because he promised to get me made a member of the Royal Academy of Arts and they wrote a fancy art program so I could paint in space.”

“Good god,” she said, finally dropping her eyes. “He came to see me too. He offered me a Fellowship with the Royal Society of Literature and guaranteed publication of all of my books with Harper-Collins.”

“Seems to be an influential sort of chap,” I said.

“Hmm, yes,” she said, and sat up straight in her chair. “So, umm, do you feel out of place here?”

“All the time,” I said. “I don’t fit in and the others don’t know why I’m here either. They’ve all got roles to play but I don’t. It’s not like I’m even keeping a visual record of things, like artists did in the days of the explorers to the New World. There’s endless cameras recording everything here. No need for an artist.”

“Yes, it’s the same for me,” she said. “I’m not here to write an account

of the voyage. Everything is logged, just like with you. You don't suppose anyone else is like us, do you?"

"No," I said. "I've got to know the others. They all applied and went through selection the way they should have. They're all scientists of one sort or another and Gina and Ollie trained at NASA. I didn't even know you were a writer."

"Well, I'm not like you," she said with a wry smile. "I've enabled the privacy controls on my writing since I don't want people up here to critique what I write. As soon as I finish a novel I send it down to Harper-Collins and they edit and publish it."

"I only do it for the fun of it," I said. "I keep my pictures public so they can all see what I'm up to then I sit and listen to the nonsense they spout while they try to out do each other explaining what the pictures mean. You should try it some time."

"I couldn't," she said. "My writing is too much a part of me. Any criticism of what I've written is a criticism of me as a person. I daresay I seem very aloof to you."

"Well, yes," I said. "You're the only one of the group I haven't got to know reasonably well. You never seem to stay around long enough for a conversation."

"That's my personality," she said. "I'm not the gregarious type. I'm more comfortable alone in my apartment than I am with other people, at least with other people so different to me."

"Well, maybe I'm not so different after all," I said. "I've no idea why I'm here either."

Chapter Fourteen

A few days later I was painting again when Evie tapped her foot on my door. I didn't know it was her until I opened it, of course, I'm not psychic, but I had a feeling it was.

"Come on in," I said when she hesitated to come in.

She stepped forward and landed gracefully with only a slight bending of her knees. I have a tendency to get a little off balance when I drop in to rooms but I put that down to a touch of tinnitus in my left ear.

"Hello," she said a little aggressively.

I was a touch put out by that until I realised she was probably being a little aggressive to compensate for her shyness and self-consciousness. After all, she'd never been in my unit before.

"Welcome to my lair," I said.

"It's very different to mine," she said, looking around. "I just assumed all the units were the same but this is quite different even though the structure is the same."

"We've all put our stamps on our places," I said. "Layout, colouration, possessions and so on. You must have noticed."

"I've not been in anyone else's unit before," she said. "Just the Caf, the meeting room and the gym. Oh and the control room, of course."

"Then this is indeed an honour," I said. "Would you like a coffee or something?"

"No, thank you," she said. "Did you do all those?"

I had a number of prints of artworks blu-tacked to the walls. Despite the hi-tech nature of where we were blu-tack was still the number one way of sticking things to walls. It wasn't like we could bang in a nail or anything like that, after all.

“God no,” I said. “I’m not that egotistical. No, these are some of my favourite pictures by other artists and photographers.”

She wandered around and studied a few without comment. I went to my little stash of coffee sachets. We weren’t supposed to keep foodstuffs in our rooms for some reason but we probably all did. I did, anyway, and if they did attract mice it would be a benefit. Not that there were any mice on board. The place was pretty sterile.

“Is that where you paint?” she asked, nodding at my canvas, propped on an easel.

“Yes,” I said.

“Surely it’s not a real canvas?” she asked.

“Oh I wish,” I said. “No, it’s just a large screen designed to look like canvas. Real canvases would have been too much of a weight problem.”

“Interesting,” she said. “So what are you working on now?”

“As you see,” I said.

I was still in something of a surreal rut at the moment even though this one wasn’t meant to be. It was essentially two heavily muffled human-like figures at the entrance to an ice cave which sounds straightforward enough but the ice cave was part of a row of ice cave entrances that bore a striking resemblance to a harmonica. Yes, that same harmonica that had been in the picture I’d abandoned although this scene was made surreal, in case the harmonica wasn’t surreal enough, by the entire picture being depicted in a swirling deep orange mist.

She stared at it for some time, almost motionless although a finger of one hand tapped irregularly on the seam of her jumpsuit leg.

I watched her for a minute or so then noticed some dirty underwear on the floor beyond the canvas. I’d tossed them at the laundry basket and missed when I’d been doing my daily room clean and had got

sidetracked. They say that in space no one can hear you scream but they can still see when you're embarrassed so I quickly went to pick them up and stuff them in the basket then stood there, trying to act natural.

Interestingly, Evie's eyes weren't looking over the canvas, taking in the whole image. She was focused on one area. I moved round casually and followed her eyes. She was focused on the figures at the entrance to the cave.

She noticed me, inevitably, and in a clear effort to make distracting conversation asked how the canvas worked.

"Actually, it's really very impressive," I said. "Arjeev Khatri got his technical guys to make it for me when I refused to go on this trip without proper paints and stuff. This is a standard screen but tweaked to look like a canvas and, of course, it can be set to different sizes. This is my own easel, I brought it with me from Earth. But the really cool part is this. Look."

I picked up my palette and a tube of paint.

"This isn't a palette either, it's another screen and this isn't a real tube of paint. It looks like a tube of paint but it's got a little sensor in the end so when I squeeze some paint onto the palette it looks like I'm putting paint on but really it's just a simulation and it never runs out."

I squeezed some of the Cadmium Yellow onto the palette and it looked exactly like real paint was going on.

"That's quite impressive," said Evie in a voice that didn't quite match the words.

"But that's just the beginning," I said and squeezed a little Vermilion beside the yellow. "The system lets me mix the paints exactly the way I would with a real palette."

I put down the tubes and picked up a brush and started to blend the edges of the hues.

“This is a real paint brush,” I said, “but it’s got another sensor inside the hairs which tracks what I’m doing and matches it on the palette screen. It’s just like I really am blending the paints. But the really cool part is this, look.”

I loaded the brush quite heavily with the deep orange blend on the palette and started to paint on a corner of the canvas.

“See the brush strokes in the paint? Exactly like if it was real paint on a real brush on real canvas. And look.” I put the non-paint end of the brush in my mouth and used the end of my thumb to smear and soften the edges of the area I’d just painted. I took the brush out of my mouth again and started to scrape at the paint with the hard end.

“You see? It can reproduce all of the things I would do if it were real,” I said.

“There’s a lot more to painting than I thought,” she said, looking closely at what I’d done. “I’ve seen brush strokes in pictures before, of course, but I never realised that they were a deliberate part of it. I just thought it was carelessness.”

I laughed. “No, it’s all part of the composition,” I said. “Have you seen any of Van Gogh’s paintings?”

“Probably,” she said. “Didn’t he do that one with a swirly night sky?”

“Yes,” I said. “That’s a good example, actually. He put the paint on very thick which adds to the image he was trying to create. With another of his, it’s called Bank Of The Seine, he used his fingers to do clouds in the sky. You can see his fingerprints in places.”

“OK,” she said thoughtfully. “But doesn’t it all disappear when you print it?”

“That’s the beauty of it,” I said. “When I finish a picture I send it back to Earth and it gets printed in a 3D printer with a paint-like resin so it comes out exactly as it would have done if I had painted it properly. That way the picture has a tactile reality as well as a visual one. That’s what’s missing with a print of a painting. Run your fingers over it and

it's smooth and featureless but with a real painting you can see it through your fingers as well as with your eyes."

"Well, OK," she said. "I'll take your word for that. But aren't there hundreds of painting programs on the market already? Why create one especially for you?"

"Oh loads," I said. "And most of them are pretty good but they're all designed to be used with a mouse and things like that which I've never been able to get the hang of. This one is designed to replicate all the art tools I've been using for years. It's designed just for me. Hey, it doesn't even have an 'undo' facility. If I make a mistake I have to sort it out the way I would with a real canvas which all adds to the unique originality of the creation. The paint even has to dry like real paint."

"Seems a lot of trouble to go to just to get you on board," she said.

"Didn't they do anything special for you?" I asked.

"No, not really," she said. "I just use an ordinary word processor although I've got a normal keyboard rather than voice recognition. It's what I'm used to and I brought my armchair with me. I struggle to write if I'm in a different chair. I've tried and it all comes out strangled."

"Oh right," I said. "Well, whatever the reason I doubt I was worth it. I'm pretty ordinary."

"Can I have that coffee now?" she asked.

"Sure," I said. "Grab a seat and I'll get you one."

She sat in my easy chair and I pulled over the spare so it was close but not too close then I grabbed a couple of coffee sachets from my stash and passed her one. It seemed a coldly formal thing to do. Back on Earth the act of boiling a kettle, putting coffee into carefully chosen mugs, pouring in the water and adding milk, and sugar if wanted, could be quite intimate and, under the right circumstances, even romantic but snapping a tab off a silver foil sachet was just plain mechanical. You can't even nurse the hot mug while paying close

attention to the other person and linger. The sachets stayed cold since the heating was done by the nozzle.

“So who are the people in the picture?” she asked.

“I don’t think they’re specific people,” I said. “Although one of them might be me. I had a dream about this scene and my viewpoint in the dream kept switching from looking at the people to being one of them looking out.”

“Really?” she said, looking mildly interested. “So why are you painting this view rather than the one looking out?”

“The one looking out was just patchy orange fog,” I said. “Pretty dull. This one was far more interesting.”

“So which one’s you?” she asked, getting up and going over for a closer look.

“The one on the left,” I said, “although it may not be me. It was a dream so I could have been looking out from someone else’s eyes.”

“And you’ve no idea who the one on the right is?” she asked.

“No,” I said. “Could be anyone, could even be me as well. You know what dreams are like.”

“Yes,” she said, peering intently at the two figures. “I know what dreams are like.”

There was something about the way she said that that caused me to stop and think, but I couldn’t quite grasp what I was thinking.

“Does the picture have some significance to you?” I asked after a few moments.

It was a fairly safe question since you can ask it about pretty much any picture. When someone buys a painting, other than art investors, it’s invariably because that picture has some significance to them, even though they may be unaware of its significance. If asked, they may

simply say they 'like it' but that actually isn't much of an explanation. Why does someone 'like' this picture but not that picture which may be almost identical? I'd asked Myf about it but she'd shied away from the issue saying merely that likes and dislikes are one of the most complex areas of human psychology and no one really has any solid theories.

"Maybe," she said, "I don't know."

"You're just being evasive," I said.

She straightened up and looked at me.

"I suppose I am," she said. "But that's my nature."

"Why?" I asked, squirting some coffee in my mouth.

"Ahh," she said with a half smile, "that's a difficult question."

She went back to the chair and sat down and picked up her coffee sachet. She didn't break off the tab, just sat there, holding it loosely in her hands.

I let the silence grow for a while, expecting her to expand on that answer but she didn't.

"I suppose, since we don't really know each other, you don't particularly trust me," I said.

"I don't know that I really trust anyone," she said, looking at her sachet. "I've always been separate, even as a child."

"What do you mean separate?" I asked. "You don't like people?"

"Well, not particularly," she said, thoughtfully. "I like some people and I don't like others but I guess most people are like that. No, what I meant is that I see the world differently to most people. I don't fit in. I'm not, I don't know, conventional, I suppose."

"That's probably why you're a writer," I said. "I'm a bit like that too. I

prefer to hang back and watch.”

“Oh, that’s not really true, is it?” she said. “I remember during training you were always wandering off to talk to the trainers and technicians while the rest of us were getting on with whatever we were supposed to be doing.”

I had to laugh at that. “That was mostly to get out of the training,” I said. “I had no idea what was going on a lot of the time and to be honest I wasn’t really that interested either. The others seem so good at everything I figured I can just leave it all to them. Someone will tell me what I need to do when I need to do it. So, from that point of view you really shouldn’t be trusting me. In an emergency you’re better off on your own than expecting me to sort it out.”

“I was the same,” she said. “I was clueless too but it never occurred to me to talk to the technicians. I just thought you were keen.”

“Ahh, you’re wrong there,” I said. “Not that it matters. Although I did find out a lot about their families and their lives. You remember Audrey? That girl who worked on the Air Floor?”

The Air Floor was a huge floor full of tiny holes with air pumped through them so we could practice moving large heavy things around with no friction to stop them moving.

“Vaguely,” said Evie. “Wasn’t she the bad-tempered one?”

“Yes,” I said. “She’d split up with her husband the day before we came along which was why she was in a bad mood. He’d left her for another man.”

“Ouch,” said Evie, looking slightly shocked. “That must have been difficult for her.”

“Yeah, it was,” I said. “Which is why I spent a lot of time talking with her and not enough time moving things around. All I really learned was not to be in front of a two ton steel panel when it’s moving.”

“So you’re not going to be much use when we have to build the base

on Titan,” said Evie.

“I’ll be very useful pushing things,” I said. “I’ll leave it to you to catch them.”

“Gee thanks,” she said, looking wryly at me.

“I’m guessing that’s not the sort of trust you mean, though,” I said. “You probably do trust people to do their jobs. Like Ollie and Gina, you trust them to fly this thing, don’t you?”

“I have to,” she said. “No way could I fly it. No, you’re right, it’s my inner self I don’t trust people with. My thoughts, my fears, my feelings.”

“How can you be a good writer, then?” I asked. “Surely you have to expose those inner thoughts and feelings to your readers?”

“Yes and no,” she said. “Yes I do write about these things but I disguise them and have different characters say those things so that way no one knows it’s me. To find out about me a reader would have to combine the right bits of information from several different characters. Have you ever noticed how people in books always seem to be consistent in their characters when in real life people are often inconsistent?”

“I can’t say I have,” I said.

“Well, it’s one of the rules of writing,” said Evie. “Your characters should always stay in character. This means I can have different characters with different aspects of me and hide me away from the world.”

“Makes sense, I suppose,” I said. “But you seem to be remarkably consistent in your character. You’ve kept yourself to yourself since day one.”

“I know,” she said. “And that’s largely because I’ve never felt that I fitted in, that I belonged to this group.”

“Have you ever tried?” I asked.

She gave a hollow laugh. “Of course not. That would be out of character.”

“Maybe you should,” I said. “Seeing as we’ve got another six or seven years to go before we’ll see another human.”

She stared at her coffee sachet for a few moments then decisively put it on the floor, unopened.

“You’re right,” she said. “I ought to, oughtn’t I.”

“Is there anyone in the Wheel you feel more relaxed with?” I asked. “Maybe Myf?”

“There is someone,” she said, picking up the coffee sachet again and toying with it. “Maybe not more relaxed with but certainly someone I feel I have more in common with than the others.”

“Well that’s encouraging,” I said. “Maybe you should spend a little time with this person and open up a little. Get to know him or her and let him or her get to know you a little better. Let a little empathy build.”

“Oh god, you sound just like a relationship counsellor,” she said, breaking off the tab of her sachet and flicking it so it spun gracefully across the room. It took a long time to land since we were under about 14% of the gravity of Earth. It bounced off the wall mere inches from the recycling hatch. I got the impression she’d had a lot of practice at doing that.

“Sorry,” I said. “Although I’ve never been in relationship counselling so I wouldn’t know.”

“Trust me,” she said. “I have and they talk just like that.”

“Why should I trust you if you don’t trust me?” I asked.

“Fair point,” she said and squeezed some coffee into her mouth. “I

don't have an answer to that. So don't you want to know who this person is, then?"

"I thought it was Myf," I said.

"No, it was you that said Myf," said Evie.

"But you didn't say I was wrong," I said.

"That's because I was staying in character," she said.

"So are you going to step out of character and tell me?" I asked.

"I have already stepped out of character by opening up this much," she said. "But if you really want to know, it's you."

"Me?" I said in surprise. "Why me?"

"I could say that it's because we're more like each other than the rest of them," she said. "We're both anomalies, in our own ways. Neither of us wanted to go on this mission, neither of us fit the selection criteria and neither of us have much of a clue about what is going on."

"Well, yes," I said. "I suppose that's true but you've known that for the last three or four years. Why tell me now?"

"Because you've been painting me," she said.

"No I haven't," I said. "I don't do portraits, except pet portraits and you're nobody's pet."

"What are you talking about?" she asked, a little irritatedly which was understandable. She was trying to open up to me and I was changing the subject.

"Before joining up I earned a living painting portraits of people's pets," I said.

"Oh, right, I understand," said Evie. "No, you have painted me. I'm in that picture there. I'm the one on the right."

“What? That one?” I asked, feeling confused but pointing to the picture on the easel. “No, you’re not. They’re just generic people and I’ve painted them that way since I have no idea who they are. You can’t make out any features. You can’t even tell if they’re male or female. Why on earth would you think it’s you?”

“Because I had the same dream,” she said quietly, looking over at the painting. “And it was just like yours with the switching between two viewpoints. It’s just that I dreamt there was someone standing to my right but I didn’t see who it was. Turns out it was you.”

“But ...” I stuttered, “but ... how could you have had the same dream?”

“I don’t know,” she said. “But I had it last night and the night before and I had a very strong urge to come and see you today which is why I did.”

She looked back at me and leaned forward in the chair to stare at me intently with those dark brown eyes.

“Why are you painting my dreams?”

Chapter Fifteen

“Just hop on the pogo stick, would you?” asked Nag.

I didn’t know if she was being ironic or not. Even though she was a British citizen, as we all were, she was still of Indonesian origin and, despite her excellent English, didn’t always understand irony. The device in question, incidentally, was the Space Linear Acceleration Mass Measurement Device or SLAMMD. A fancy name for what was basically just a pogo stick with a small, very hard seat.

The thing is, or so it was explained to me in training, my weight as stated by normal bathroom scales is a fictitious thing. I’d always known that which is why I never bothered to diet when it seemed to creep up. Anyway, according to the physicists, the number on the bathroom scales is the result of the Earth’s gravity pulling down on my body mass. Put me on Titan and I’ll instantly lose 85% of my body weight because of the lower gravity, but my mass will stay the same. This is why space is called ‘weightless’ but objects still have mass even when there’s no gravity to pull it onto the scales. So, the clever people at NASA invented the SLAMMD and BSpaceE improved it. Basically, you sit on the little seat and cling on for dear life while the pogo stick bounces round a bit and some fancy optics and a calculator works out your body mass regardless of any gravitational forces that may be in the area.

That’s the theory. In reality you end up with a faint feeling of seasickness and a slightly sore coccyx. Fortunately it doesn’t take long or happen that often. Nag gave me a physical every six weeks and, I’ll be honest, I hadn’t been feeling so fit and healthy since I was a schoolboy. I hadn’t even had a cold since I left Earth. Actually none of us had, although Angus had had some problems with his teeth, Rik had sprained an ankle landing awkwardly in one of the low-G sports rooms and Zaf developed something never before encountered in the history of the world.

Most of us had had nosebleeds in the first day or two as this is common while people get used to being in space but, for some reason, after a year or so Zaf had started to develop recurrent nosebleeds. Nag had no idea why and after running a battery of tests and

consulting with otolaryngology specialists on Earth they'd thought it might be due to the reduced gravity as, by that point, the Wheel's spin was down to about 70% of Earth's gravity. Nag had ended up cauterising his nose which stopped the nosebleeds but didn't explain why he had been getting them in the first place.

A team on Earth made up of BSpaceE medics and some people from the National Institute of Aeronautical Medicine Research periodically sent her details of more tests to do and the condition was now known as Firman's Epistaxis, as Firman is Zaf's surname and epistaxis is the techie term for a nosebleed. They'd also got Myf involved since there was speculation it might be psychological as no one had been able to reproduce the condition in a variety of farmyard animals. But, so the thinking went, if one person can have whatever this problem is others can and as space exploration will expand in future these things need to be researched.

Anyway, no one named a condition after my sore coccyx. Apparently it was too commonplace.

"Hmm," said Nag looking at my results, "have you been eating your required units?"

Each packaged meal contained a precise number of calories and the right balance of proteins and things and we had to eat a certain number of them each day. How many depended on how big we were. Angus, for example, being, basically, fairly huge had to eat almost twice as many as Talia who was fairly small. We could have more or fewer on particular days but we had to average the right number.

"Yes," I said, although I had a mild tendency to eat more than I should do.

"How about your exercise program?" she asked.

"Yes, religiously," I said, although I had a mild tendency to cut it short from time to time or skip them once in a while.

"You seem to have lost a kilogram," said Nag, looking thoughtfully at me. "That's rather worrying. I think I'll do a DXA."

“Sounds painful,” I said, rubbing my coccyx.

“It isn’t,” she said. “Basically it’s just an x-ray.”

“An x-ray?” I asked. “Why? You think I’m missing something?”

“That’s what I’m worried about,” she said, standing up. “Come over here.”

She led me to a machine that looked similar to the CAT/MRI scanner that I’d slept in during the selection process.

“So what’s a DXA?” I asked.

“It’s short for Dual energy X-ray Absorptiometry,” she said. “Basically it fires two streams of x-rays at your hip and lumbar region. Lie down and make yourself comfortable.”

“So you want to check I still have a backbone?” I asked facetiously, getting on the platform.

“More or less,” she said. “A problem humans get in space is a reduction in bone density and no one is really sure of the cause but losing body mass is a symptom. Exercise and diet seem to work to counter it but if you are losing bone density we need to deal with the problem. We can’t have you breaking bones all the time because they’ve got brittle.”

“Ugh,” I said. “No we don’t want that. So this DXA thing checks the bone density?”

“Yes,” she said. “Your density was measured when you went through selection and I have a fair idea of what it should be now. Everyone loses density after the age of thirty or so but your weight loss is a little concerning, especially as everything else checks out normal.”

“OK,” I said, lying down. “Shouldn’t I take my clothes off or something?”

“No there’s no need,” she said, pushing a few buttons and twiddling

some knobs. "This will take about fifteen minutes so try not to move your hips too much."

Fifteen minutes later the machine pinged, like a microwave. It had been surprisingly difficult not to fidget since my bones getting brittle was a little worrying. I wanted to pace for a while to help build my bones back up and release some nervous energy.

"You're minus 0.3," she said, studying her screen. "You've definitely lost a little bone density. It's not a problem yet but we need to stop the loss and, if possible, build it back up again."

"So what do I do?" I asked.

"I'll give you some supplements to take," she said. "Just vitamins D and K2 and some calcium but the most important thing is to increase your exercises. Let's try a 10% increase in resistance to start with and we'll see how things are at the next physical."

"You think that'll work?" I asked.

"It's not an exact science," she said. "Under normal gravity your bones would probably be fine but because you're not working against Earth gravity twenty four seven any more the body tends to shift the nutrients needed for bone health to other areas and your bones lose density as a result. Much like muscles get smaller if you don't use them. Increasing your daily workouts should do the trick."

"By 10%?" I asked.

"For now," she said. "There's no point exhausting yourself but the extra resistance will be good for you regardless of your bone density. Plenty of exercise never hurt anyone."

"Yeah," I said dubiously. "I think a lot of people forced into slavery would disagree with you there."

"Plenty, I said not too much," she said. "Too much exercise can be worse than none at all. But I don't think we're going to run into that problem with you, are we?"

“Probably not,” I said with my best boyish grin, “but I’ll definitely make sure I increase the resistance.”

“And make sure you do your exercises every day,” she said. “You do have a tendency to skip them now and then.”

“Ahh,” I said. “Well I do sometimes get engrossed in what I’m doing and forget.”

“Then change your routine,” she said. “Make sure your exercise period comes before anything that might get you engrossed.”

“It doesn’t work that way,” I said. “I often wake up with a thought in my head and I have to work on it straight away.”

“We have to come up with strategies to get around that,” she said. “I’ll ask Myf to have a chat with you. After all, you won’t be any use to anyone, least of all yourself, if your bone density becomes critical.”

“Well, yeah, fair call,” I said. “I suppose I can always get HalleB to note the thoughts and come back to them later.”

“I’ll still have a chat with Myf,” she said. “We can all use motivational strategies from time to time.”

Such is the power of anxiety that I went straight to my unit after leaving the Medical Centre and got changed into my exercise shorts and singlet and headed for one of the gyms.

It’s ironic in a way that our gymnasias were almost zero gravity. 2.7% of Earth’s to be precise, since the floors were only forty metres away from the centre of the Wheel. The designers had decided that since we weren’t going to get full gravity why waste the space at the rim, so they put the gyms near the centre, out of the way. To compensate for the missing gravity, since a dumbbell is pretty useless for exercise if there’s no gravity, we had a range of exercise equipment that was based around electro-magnetic force since we had far more electrical power than we would ever need. All you had to do to exercise was set the level of magnetism on each device then get on with exercising. To use the treadmill we had belts which, when activated, pulled us down

to the machine with a certain amount of force. This made it easy to get 10% more exercise since you just dialled in 10% more electromagnetic resistance on the machines. A high tech version of adding another weight disk to a bar.

While we're on the subject of electricity, I ought to mention that we were nuclear powered. Each Wheel had its own independent Pebble Bed Reactor. When the Wheels separate, one will power operations on Titan and the other the main Wheel for its return trip to Earth. Apparently, although I don't pretend to understand these things, Pebble Bed Reactors are very safe, very efficient fission-fusion systems. The pebbles themselves are graphite balls the size of tennis balls and are filled with beads of uranium. During training we'd had an inspection tour of one of the reactors but since they went operational no one could go inside as the reactors were purged of oxygen to prevent the graphite catching fire.

When we'd first discovered we were going to be nuclear powered some of the group had expressed concerns about possible accidents. Zaphir, a true engineer, had pointed out that it didn't really matter. Any kind of accident, nuclear or otherwise, in space or on Titan would mean we died. Three years away from Earth there was nothing anyone could do to help us. We'd all shut up after that and slowly, each in our own way, come to terms with the idea. When one of a zillion things can kill you, after a while you stop worrying about whether or not it's nuclear. Still, one of the group had dropped out and Rik had taken his place from the backup team.

Our Pebble Bed Reactors also powered our thrusters, both the main thrusters and the directional ones, by ionising nitrogen and then accelerating those ions through an electrical field to provide the thrust. I don't understand the physics but I can tell you that the resulting plasma is a gorgeous shade of turquoise. One of the main benefits of these engines is that they use nitrogen which is readily available on Earth and Titan. About 80% of Earth's atmosphere and 95% of Titan's is nitrogen. If we should happen to run out of nitrogen we can easily switch to hydrogen which is in the frozen methane on Titan. No need to drill for it, like oil, just go outside and get a shovel full. And, yes, we did carry a few shovels.

"I've just been to the gym," I proudly told Nag when I'd done my required two hours plus a little bit extra since I didn't want floppy bones. I'd gone to the Caf to get some food to wash down my calcium and vitamin supplements and found her there.

"Great," she said. "I told Myf and she's going to have a chat with ... oh hi there."

With impeccable timing, Myf had come in for some lunch as well.

"Hey Nag, Phil, let me just get some food then I'll join you," she said.

"Great," I said, sitting down. My coccyx didn't hurt anymore but the rest of me was a little sore from the unaccustomed extra exercise. I surreptitiously felt the bones in my knee and they seemed pretty hard. I squashed the temptation to ask Nag for another DXA to see if the exercise was working already.

"Nag said you needed some strategies to help you get to the gym when you'd rather be doing something else," she said, joining us.

"That's right," I said. "Have you any suggestions?"

"Well, in my professional opinion," she said, stirring a packet of Pork with Rice and Vegetables, "you need to man up and stop being an asshole."

She looked up from stirring and beamed at me. Nag winced.

"Oh, right," I said, taken aback. "Well, I suppose that is a strategy."

"Too right," she said. "No point in mollycoddling you. If you don't do your exercises your bones will get brittle and you'll be breaking them all the time. You can't paint with a broken arm or stand at your easel with a broken leg or do anything much if your vertebrae are dissolving. Bullshit all you want but make sure you do your exercises. OK?"

"Umm, OK," I said. "But what if I wake up with an idea and ..."

“You’re bullshitting,” she said interrupting me. “Are you seriously telling me that an idea you have that you forget about in a couple of hours is worth worrying about?”

Rik gave a half laugh, half snort from the table where he was sitting with Zaf but I ignored him.

“Well, some ideas are fleeting,” I said, half-heartedly.

“They are indeed,” she said. “But if they are fleeting are they any good?”

“What’s fleeting?” asked Talia coming down from the doorway.

“Phil seems to think that an idea that disappears quickly is worth worrying about,” said Myf.

“No, I didn’t mean that,” I said. “I meant that a fleeting idea might be worth thinking about and developing before it gets forgotten.”

“HalleB, how many items in my miscellaneous thoughts file?” asked Zaf.

“Three hundred and twelve,” said HalleB.

“There you go,” said Zaf. “When you get a thought, tell HalleB or jot it down somewhere. Then you can go back and think about it at your leisure later.”

“But what if it’s a visual image?” I said. “How do I get HalleB to record my visual ideas?”

“Describe it,” said Rik.

“Sketch it on a pad,” said Talia.

“Can you draw with your finger on that canvas thing of yours?” asked Evie from a corner where she’d been sitting alone and unnoticed, at least by me.

“OK, OK,” I said, holding up my hands. “I’ll do my exercises every day, stop bugging me.”

“You should all do your exercises, every day,” said Ollie, coming in. “Oh good, looks like everyone’s here.”

“Angus and Gina aren’t,” said Myf, looking round.

“Ahh,” said Ollie, “HalleB, where’s Angus?”

“Gymnasium 2,” said HalleB.

“That’s a shame,” said Ollie. “I’ve got some news from Earth that might interest you all.”

“Update,” said HalleB. “Angus is now in Tube 7.”

“What news?” I asked.

“Tell him to come to the Caf,” said Ollie.

“What about Gina?” asked Nag.

“She already knows,” he said. “Actually she felt it was sufficiently important for an announcement.”

“Must be bad,” said Talia.

Actually, now that we were a billion kilometres or so from Earth, news seemed very distant and remote. Obviously we all craved news from family and friends and events local to where we’d lived but the latest happenings in the Middle East or a virus outbreak in China were now incredibly abstract and somewhat unreal.

“I’ll just get some food,” he said. “Angus will be here in a minute.”

Actually, given that nowhere on the Wheel was more than three hundred metres from anywhere else, it probably wouldn’t take as long as a minute for him to turn up although he might go to his apartment on the way.

“You should always take note of fleeting thoughts,” said Rik. “They’re the result of the brain’s subconscious processing of data.”

“There’s no such thing as the subconscious,” said Myf.

“Well, unconscious, if you prefer,” said Rik, getting up to put his empties in the recycling slot.

“There’s no unconscious either,” said Myf.

“Oh, don’t be absurd,” said Zaf. “We all do and think things without being consciously aware of them.”

“Absolutely,” said Myf. “You are aware of things and unaware of things depending on your focus of consciousness but people use subconscious and unconscious as though they are actual places. The brain is where the consciousness is but there’s no organ that is the unconscious. You can’t isolate it or cut it out. It’s like saying that when you photograph someone and leave the background out of focus that the background is somewhere else and separate. It’s not, it’s just out of focus.”

“Who’s out of focus?” asked Angus dropping in. He was sweating a little but then he was the type who enjoyed exercise.

“Ahh good, you’re here,” said Ollie.

“I was just explaining why there’s no such thing as the subconscious,” said Myf.

“Isn’t the subconscious everything you’re not conscious of?” asked Angus, going to get a drink.

“We’ve had a news bulletin from Earth,” said Ollie. “And Gina thought you all might be interested, whether consciously or not.”

“Ha, ha,” I said. “So what’s the news?”

BSpaceE sent us global news updates three times a day but usually it was down to each of us to review them and make our choices as to

what to be interested in or not.

“There’s been a major virus attack on some stock markets,” said Ollie.

“Is that all?” said Talia. “I thought it was going to be important.”

“It could be important if you have investments,” said Angus. “Do you know which stock markets?”

“The New York Stock Exchange, NASDAQ, the London Stock Exchange and Deutsche Börse,” said Ollie.

“Wow,” said Rik. “All at the same time?”

“That’s what the bulletin said,” said Ollie.

“So you’re saying it was a coordinated attack?” asked Nag. “What’s happened anyway? Was there a crash or something?”

“No,” said Ollie. “Those stock markets were taken out completely. Their computer systems wiped and all records destroyed. Apparently it could take weeks or even months to rebuild them.”

“Is there any threat to us?” asked Evie

“How do you mean?” asked Myf.

“A computer virus on our Wheel systems could be catastrophic,” she said. “What if our life support systems shut down or the reactor went haywire?”

“I didn’t think of that,” said Zaf.

“Our protocols are highly secure,” said Ollie, “and BSpaceE has isolated the systems that communicate with us so we shouldn’t be affected in any way.”

“Well, there’s nothing much we can do about it,” I said. “They’re a hell of a long way away and none of us are economists or financiers anyway. I’m going to take a nap.”

“Must be all that extra exercise making you tired,” said Myf with a grin.

“Must be,” I said, pretending to struggle to get up the ladder. Evie got up and followed me out.

“Why is news always bad news?” she asked. “We never seem to get good news bulletins.”

“I don’t think good news sells,” I said. “Still, it sounds like my investments are blown away.”

“Mine too,” said Evie. “Still, easy come easy go. Who looks after yours?”

“My friend Gerald,” I said. “He invests all of the sales of my artworks and manages the rental of my apartment in London and the place he bought in Kent as an investment for me. How about you?”

“My ex-husband,” she said. “He handles the rental of my house too, although it’s in Nottingham.”

“I’m surprised you trust him,” I said. “Being your ex and all.”

“I’ve always been able to trust him,” she said. “I just couldn’t live with him, that’s all. He’s not really my ex. We’re still married.”

“Ahh,” I said. “I’m a widower, myself.”

“I’m sorry to hear that,” she said. “Umm, was it long ago?”

“Ohh, fifteen years, no, sixteen now,” I said. “She was killed in a hang gliding accident.”

Evie stood there in silence for a few heartbeats.

“I’ve no idea what to say,” she said with a slight frown.

“Nothing much to say,” I replied. “It happened and the world moved on.”

“How very true,” she said. “And now you are losing bone density. That’s your current reality.”

“Yeah, it’s a bummer,” I said. “It’s just that I hate exercising and I’ve never really had much discipline.”

“Yes, it can often be an act of will power,” she said. “Why don’t you exercise with me? I’ve got will power to spare.”

Chapter Sixteen

avast there me hearties for i know not what we do in this our world of ice and cold where none but thee and me do dwell and lie then as ever nay never did come before nor will ever yet go after a brave affront to the chastity of human youthfulness in the cosmic tide that is now and will hence forwards be olde england that merry land of chaucer where pilgrims grin and gridders groan through lemonade at a beach where no water flows save only methane toast aboard a boat of meritocracy earned through salvation army ranks in accord nay a chord of sound soft swelling in the breeze that skirts the dappled sunlight where no trees thus grow save only the tree of life yet poor life it is unknown life except to itself as we are so unknown to the unknowers through orange brown deformities like lenses leafing through some desolate swamp a bolt hole through which no bolt will descend to the morass below and above and around and beside in consequence of nothing and everything a light such as none can see beneath a bushel free in captive bond whence all save we do fail and in failing succeed then spit the seed that seed that seeeth all my peaches and seethe like snakes trapped in the nectar of the blossom candy apple green is never seen except in dreams which none can dream for none do sleep in the dreaming way and curds and arabs ayrabs eyeties nayties neckties roam the dusty icebound streets that come from who knows where and go to no-one knows for reasons that surpasseth the understanding of all but god if such god should condescend to descend to this fiery pit of infinite torporous chill but on the positive side there are no insects which is just as well as ive had a gut full of butterflies and flies in the butter and there are no flies on you ...

“Oh yes,” I said. “Umm, jolly good. It’s, umm, unusual. Interesting but, umm, unusual.”

Evie laughed. “You hate it, don’t you.”

“I have to admit I prefer a good spy thriller,” I said. “Tom Clancy, maybe. But this would be literary, I’m guessing.”

“Well, you did want to read some of my writing,” she said. “Although this isn’t my usual style. Normally I have characters and a plot or at least a story and a fair amount of sex. My readers seem to like that.”

“Maybe some punctuation too?” I asked hopefully.

“On a good day,” she said dismissively, “although I usually leave that to the editor. They seem to care about such things.”

“So what’s it all about?” I asked.

“I was hoping you wouldn’t ask,” she said. “It’s not really about anything. I had an email from my agent a couple of weeks ago. She wants something radical, something she can sell to a publisher which they can put up for the Booker Prize or something highbrow like that. It isn’t really my style so I ignored her but this morning I thought I’d have a go at some stream of consciousness stuff.”

“That’s where you just write whatever comes into your head, isn’t it?” I asked, casually putting the pad on a table so I wouldn’t have to read any more.

“I think so,” said Evie, “although I’m not entirely sure. I think it’s about free association as well. I’m no Jack Kerouac or Virginia Wolfe but you think this has potential?”

“Umm,” I said, desperately not wanting to be honest but in a way that looked like I was being completely open. I couldn’t think of a way so I temporised. “How many words do they want?”

“Three or four hundred thousand,” she said. “Maybe a bit more if I can manage it. Apparently the people who decide who gets the prizes these days seem to want to break away from the convention of seventy to a hundred thousand words for a book. Janey said the more meaningless it is the more of their own meaning they can read into it and the more they’ll appreciate it since literary prize judges are more interested in pontificating about the books than actually reading them. If it says something in a clear and simple way they can’t rabbit on about its significance and sound clever.”

I had to laugh since that was a very similar view to the one I had about Art prize judges.

“So how many words have you done so far?” I asked.

“About three thousand,” she said. “It’s surprisingly difficult since you have to disconnect and stop thinking about what you are writing. Thank god for spell checkers or it would be gibberish.”

“Well, like I said, umm, it’s, umm, interesting,” I said. “How did you get started? After all, ‘Avast there, me hearties’ seems a strange starting point for a stream of consciousness thing. It sounds more like Treasure Island or Robinson Crusoe.”

“I wondered if you’d pick up on that,” she said, looking out through the window in her apartment at the stars an infinity away. “Anything else you picked up on?”

“A few things,” I said. “Umm, ice, cold, methane, two people, things like that.”

I hoped that was enough since I didn’t want to have to go through the little I’d read again.

“Do they have any significance to you?” she asked.

“Of course,” I said. “Titan.”

She glanced at me then returned her gaze to the window.

“You know your bone density problem?” she asked, apparently dropping the subject of her book.

“Yes,” I said, delighted to change the subject. “I’ve religiously exercised ever since as you know although I doubt the last three days will have made any difference. Nag says to keep it up until the next physical.”

“She said my vision is deteriorating,” said Evie. “Apparently it’s a common problem for people in space but it’s exacerbated for me because I spend a lot of time looking close up at screens. I have to

spend twenty minutes twice a day staring into deep space to develop my distance vision.”

“You’re not going blind, are you?” I asked, in some alarm. Aside from any concerns about Evie, it was going to be difficult to have a blind person on board.

“Oh no, apparently that’s not an issue,” she said. “Nag’s just concerned that I might become permanently short sighted if the muscles that change the shape of the lens or the ones that pull the eyeballs outwards don’t get used enough. She also thinks there’s a slight flattening of my eye balls themselves because of the reduced gravity and the long distance staring should help with that as well.”

“Well, make sure you do your eye exercises,” I said. “You’ve got lovely eyes and you don’t want to ruin them.”

I wasn’t entirely sure why I said that and, by the look of it, neither was Evie since she gave me a sideways glance with a quizzically raised eyebrow. Fortunately she wasn’t the type of woman who pursues that kind of off-the-cuff remark.

“I thought I’d call it ‘Unfurled’,” she said.

“Good name,” I said, sighing inwardly as it looked like we were back to the book again. I nearly asked why but thought better of it.

“Aren’t you going to ask why?” she asked.

“I was just about to,” I said.

She half turned to face me then remembered she had to look out of the window and turned back again.

“I had a dream last night,” she said. “I was on an old sailing ship, like a galleon, but it wasn’t sailing on water, it was sliding along on ice. It had three masts and it sat on giant skis and there was a loud swishy scraping sound as the ship sailed over the ice. At first there wasn’t anyone else on board then I saw another person, high up on one of the masts. He was unfurling one of the sails so the ship would go even

faster but we were heading for a mountain and I didn't know how to steer it. I kept shouting at him but he couldn't hear me over the sound of the skis so we just kept getting faster and faster and the mountain loomed larger and larger. Did you have that dream as well?"

"Yes," I said, "only it was the night before. Last night I don't think I dreamt at all. My ship only had two masts though and I was at a big wheel trying to steer around the mountain."

"Were you alone?" she asked.

"There was someone up in the sails, like you," I said, "although my ship was on wheels not skis. Actually, now I come to think of it, it had two tall skinny wheels, like a bicycle which would be no good. It would be unstable. How many skis did yours have, do you remember?"

"I don't know," she said. "What do you think these dreams mean?"

"Well, that's the big question, isn't it," I said. "I asked Myf what she knew about dreams a couple of days ago, seeing as how she's a psychologist, and she thinks they're just the brain organising information and memories although she did say that there's some evidence dreams are related to underlying neurological problems."

"Well that would make a bit of sense," said Evie. "Titan is a big thing for us all at the moment so inevitably we're going to be thinking about it a lot, unconsciously as well as consciously. Have you talked to any of the others about your dreams? Oh, it had three skis, two small ones at the front and one big one at the back."

"I did mention dreams to Rik but he swore blind he never dreams," I said, "and Angus dreams about sex most of the time, apparently."

"That's surprising," said Evie. "Considering how much he's getting."

"Really?" I said, going wide eyed and feeling intrigued. "Who with?"

"Who do you think?" she asked.

"Well, he seems to get along well with Talia," I said.

“Oh god no,” said Evie. “She’s far too intense for that sort of thing. Anyway, you’d have heard since you’re in the apartment next door. These interior walls are pretty thin.”

“It’s not Nag, surely?” I said. Nag was in the apartment next to Angus.

“Uh huh,” said Evie. “And they’re just the other side of the Meeting Room to me. Every time I stick my head out of my door one or other of them is going in or out the other’s door.”

“Well, well well,” I said, “who’d have thought our little doctor would be getting it on with that big lump. I would have thought Rik would have been more her type.”

“Yeah, right,” said Evie with a snort. “Maybe if she was a spore or a bacteria or had some interesting fungal growth.”

“Is anyone else up to, umm, a social life?” I asked.

“I wouldn’t know,” said Evie. “I only know about those two because of where their apartments are. Nothing goes on in Rik’s at all. I’d know since he’s right next to me and you and Talia the other side of the Caf never seem to have visitors but I’ve no idea what goes on further round. Could be a permanent shag fest for all I know.”

“I doubt it,” I said. “Maybe Gina and Ollie have something going but they don’t really mix with the rest of us and I can’t see Myf and Zaf getting too close. Him being a Muslim and her being Jewish.”

“I pity the man that gets involved with Myf,” she said as a timer pinged and she closed the window cover. “She’d probably analyse every aspect of his technique and give him updates on his neuroses. I bet she’d give any man a performance anxiety issue.”

I wanted to ask Evie about any entanglements she had but was too chicken so I asked the obvious question instead.

“So why do you think we both have the same dreams?”

“Are they the same?” she asked, pensively. “They’re certainly similar

but not identical.”

“There seems to be a lot of elements in common,” I said. “Maybe it’s just a coincidence but maybe we are having the same dreams but our minds are interpreting them slightly differently based on our own experiences and backgrounds. Do you like to ski?”

“Well, yes,” she admitted. “I’ve only been skiing the once but it was fun, even though it was on the baby slopes.”

“Well, there you go,” I said. “You like skiing so your ship had skis. I used to go everywhere on a bike so mine had bike wheels but we both dreamed of a ship on ice with only one other person on board.”

“So do you think we’re dreaming about each other?” she asked. “Like in that dream you painted a few days ago, outside the cave?”

“Could be,” I said. “Although I’ve never actually seen the face of the other person in any of them.”

“Neither have I,” she admitted, “although I’ve often had the feeling the other person is male.”

“I’ve not had a feeling either way,” I admitted in turn. “The other person is just a vague person.”

“Do you have any musical background?” she asked.

“Not particularly,” I said. “I listen to music, of course, but that’s all.”

“Same here,” she said. “So why do we both dream about harmonicas?”

“I have no idea,” I said. “That is a pretty weird thing to dream about.”

“Have you found your dreams are getting stronger and clearer the closer we get to Titan?” asked Evie.

“Evie? You there?” came Gina’s voice.

Evie got up and went to the communicator on her desk.

"I'm here Gina, what's up?"

"Your Forest Walk's arrived," said Gina. "I sent it through to your mailbox."

"Oh great, thanks," said Evie. "I'll have a look at it now. Ciao."

She came back to her chair looking excited.

"My movie's arrived," she said, "do you mind if I look at it now?"

"Of course," I said, getting up. "I'll see you at lunch."

"There's no need for you to go," she said. "It's just a walk through Sherwood Forest. Just a sec. HalleB, display mailbox."

Her main viewscreen lit up and a list of emails was displayed, mostly from BSpaceE but a couple were from someone called Edward and two or three were from Janey White to someone called Georgina Hewitt.

"Who's Georgina Hewitt?" I asked.

"That's my pen name," she said. "I've been using it for twenty five years and there didn't seem a lot of point reverting back to my real name once everyone knew that the writer Georgina Hewitt was also the Titan colonist Evie Farrell. Just like you and Felipe Rocha. HalleB, move attachment 20230403EFPsychNostalgic to Personal Videos and rename Forest Walk."

"Forest Walk already exists," said HalleB. "Rename as Forest Walk 19?"

"Umm, no, make it Sherwood Forest Walk," she said.

"Done," said HalleB. "Do you want to view the video?"

"Isn't that where Robin Hood was?" I asked.

"According to legend," she said, "but my house in Nottingham was just a couple of streets away from Sherwood Forest. I've got stacks of

videos of forest walks but I suddenly got nostalgic for one of Sherwood Forest a couple of weeks ago so I asked BSpaceE to send someone to walk the paths and do me a video. Do you think that's weird?"

"Not in the least," I said. "When we'd been gone six months or so I got them to send someone out on a bike to cycle from my old apartment to my bank then down to the supermarket then on to the pub where I used to work then over to my friend Gerald's place. I used to do that a lot and they send me another every three months. I love seeing how the place is changing, you know, shops shutting down and new ones opening and road works and little things like that. It's even nice to see an occasional new face in the bank and see how the new manager of the pub is getting on. Makes me feel more at home."

Jiminy had quit the pub six months or so after I'd blasted off into space and the new manager had given the outside of the pub a lick of paint and installed flower boxes and a neon sign to try to make it more attractive. Personally I didn't think it was but the new tables and chairs outside seemed to be getting some use which could only be good. I sometimes watched the videos on my headset when on the cycling machine in the gym.

"Play Sherwood Forest Walk," said Evie. "Ohhh, would you look at that?"

There was a semi surreal image of a large tree which looked to have some of its branches digging into the ground.

"What is it?" I asked.

"That's the Major Oak," she said. "It's a thousand years old and legend says it was where Robin Hood had his camp. Isn't it gorgeous? It's the biggest and oldest oak tree in Britain."

She was staring at the screen in rapt attention, our earlier conversation forgotten.

"What were all those things in the ground?" I asked as the video moved away to cover some other old gnarled trees nearby.

“Oh, it’s getting weak,” she said. “They’re to support the branches so they don’t fall down. Aren’t they beautiful?”

The video was an hour and a half long and covered two walks through Sherwood Forest, the Major Oak Walk and the Giants Walk. The email promised they’d be sending through videos of the other walks very soon. Much as I am a city boy and love my cycle ride videos through London I was as engrossed by these tree walks as Evie.

“It’s a crying shame we can’t have trees in the Wheel,” I said as we neared the end. “Even some pot plants would be nice. Maybe some bees too.”

“There is a meeting in the Meeting Room in five minutes,” said HalleB, freezing the video so a passerby got stuck mid-stride with a stupid expression on her face. “Gina would like everyone to attend.”

“Oh, now what?” said Evie, unimpressed at being interrupted.

I went to the doorway as Evie watched the last few seconds. Sure enough, Angus and Nag both appeared from the door of Angus’ apartment.

“Well, good for you,” I muttered, noticing Angus had his tee shirt on backwards. At that moment Nag noticed and said something and he stripped it off and put it back on the right way. She turned and marched to the Medical Room which was just the other side of her own apartment. Angus turned and saw me and gave me a small wave.

“Just coming,” he said then grinned as Evie appeared through her doorway right behind me. It occurred to me that just possibly Angus and Nag had been chatting and watching their own videos from home, just as it probably occurred to Angus that Evie and I were up to something. Oh well, probably good for my reputation, if not for Evie’s. Nag reappeared from the Medical Centre trying to look as though she’d been in there for hours.

“So any idea what this is about?” I asked, as they joined me and we headed off to the meeting room. Evie had already gone in.

“Maybe there’s a Mission Update,” he said. “You first.”

I dropped into the Meeting Room, closely followed by Nag and Angus. The others were already there. Gina was looking serious, but then she always looked serious. You don’t get to be Britain’s youngest female fighter pilot then selected to be the Captain of the world’s first Titan Mission by looking frivolous and carefree.

“As most of you know,” she said, “over the last three hours we’ve had a transmission from BSpaceE. Mostly it was software upgrades which Ollie is processing and most of the rest was personal emails which have been distributed to your mailboxes. At the end, however, there was an unscheduled news bulletin. I felt you all ought to know what it was.”

Even though none of us were talking the room went strangely quiet. Even the air conditioning system seemed to stop.

“You remember three days ago there was the attack against those stock exchanges in America, Britain and Germany?”

Several of us nodded.

“At 3am, Greenwich Mean Time this morning,” she said, “USCYBERCOM, that is, the United States Cyber Command within the Department of Defense, launched a computer based counter attack against the Shanghai, Tokyo, Shenzhen and Hong Kong stock exchanges in retaliation against the attacks on the NYSE and NASDAQ. The initiative was supported by the British National Cyber Security Centre and the German Cyber and Information Domain Service.”

She paused and looked at each of us in turn.

“So what does that mean?” asked Myf, looking puzzled.

“It means, people, that World War Three has begun,” said Gina. “God help us.”

Chapter Seventeen

There were a few moments of silence then a babble of noise as each of us reacted in our own ways according to our personalities.

Gina let us babble for a minute or so then held up a hand for quiet.

“One at a time,” she said. “Phil?”

“Aren’t you being a bit melodramatic?” I asked. “It’s just computers, isn’t it? Not like there’s any real fighting or nuclear bombs or anything?”

“That’s right,” echoed Nag.

“Yes, you’re right,” she said. “There’ve been no formal declarations of war and no troops are being deployed although I would think they’re all on alert. But this is 2023, people, wars aren’t fought the way they used to be.”

“A question,” butted in Zaf.

“Yes, Zaf?”

“If there have been no formal declarations, what then is your basis for saying World War Three has been declared?” he asked.

Gina sighed and put her hands flat on the table.

“Defence analysts play War Games,” she said. “Hypothetical situations played out in back rooms so that response initiatives are already in place should that scenario ever eventuate. Many form the basis of tactical manoeuvres for military personnel at various levels including international. There are plans for just about every conceivable attack on Britain, Commonwealth countries and allies, Europe and other NATO members, both conventional and nuclear. I was in the RAF for ten years before I took Premature Voluntary Retirement in order to join the BSpaceE program and I can tell you that the scenarios that worried the analysts the most were cyber based economic wars and the one that gave them sleepless nights was the taking out of multiple

stock exchanges with retaliatory cyber strikes against other stock exchanges.”

“But why?” I persisted. “Surely they just put in new computers and carry on as before?”

“Yes and no,” said Gina. “Yes, if just one or two stock exchanges are affected. It’s an irritation but business resumes fairly quickly and only a small number of investors get burned. But ...” and she lifted a finger to emphasise her point, “... when there are multiple exchanges and retaliatory strikes you are guaranteed to get further retaliation. Now, on the face of it, we are simply talking about the trading of shares in large corporations and, you would think that the corporations themselves wouldn’t be affected. After all, take BP for example, you would think that the buying and selling of their shares on the stock market would have nothing to do with their actual business of refining oil and selling petrol and diesel, wouldn’t you.”

“Exactly,” said Rik. “It doesn’t matter about the stock exchange, BP will carry on being BP.”

“Actually no,” said Myf. “It’s just occurred to me. BP will be trading in other company’s shares as well. Probably hedge funds and god knows what else. If the stock market is wiped out then their investments will be wiped out as well.”

“That’s right,” said Gina. “And if their investments are wiped out how are they going to pay their suppliers and employees?”

“But surely they will still have their income from their customers?” said Angus. “They can use that to keep going.”

“Hold on,” said Talia. “This isn’t about the share price of BP crashing, it’s about the share prices of everyone crashing. All of the companies who invest on that stock exchange will lose their investments which means BP’s customers won’t be able to pay them.”

“Absolutely,” said Gina. “And the pension funds, banks, local councils, private investors, everyone who has money in that exchange. But this isn’t just one exchange we’re talking about. We are talking about the

biggest exchanges in Britain, America, Germany, China and Japan and god knows where else if there is any retaliation against the Americans or anyone else. We're looking at attacks against the basis of those countries' economies. If the economies collapse business will grind to a halt, no one will get paid and no one will be able to buy any of the goods those companies can't make anymore."

"So it's pretty serious, then?" I asked, my mind in a whirl trying to follow the circular flow of global money in my head.

"Well, if you work for BP who can't pay you," said Gina, "how are you going to be able to buy food at Tesco's? And if Tesco's can't buy from their suppliers what would they be able to sell you even if you did have any money? And it's not like you can quickly move to another job since other companies won't be hiring because they can't pay you either and they won't be able to sell what you would have made. The entire global economy is one gigantic convoluted circle and you disrupt the flow through that circle badly enough at any one point and the whole thing collapses. The initial attack was very bad. The American counter attack was very, very bad. What the defence analysts would call an NCS. A Nightmare Catastrophic Scenario. To the best of my knowledge they've never come up with a winnable solution and if there are more retaliations it'll go beyond an NCS."

"But surely there aren't that many stock exchanges?" said Evie. "Surely there would be a period of adjustment, I don't know, bartering maybe, then things would return to normal? Plenty if businesses aren't traded on the stock market."

"Possibly," said Gina. "If it ends here. But what if there is a counter counter attack? What if the attack is not against stock exchanges but, say, specific large companies? What if there is an attack on, say, the Inland Revenue?"

"We don't have to pay our taxes?" said Angus with a grin.

"That's right," said Gina. "And what happens if you don't pay your taxes?"

"I'll have more to spend at Tesco's," he quipped and several people

laughed.

“True,” she said. “But who will pay the people working in hospitals, or the police or the fire brigade? How are pensioners going to get their pensions, or the unemployed, if the Inland Revenue isn’t getting its income? Who’s going to keep the trains and buses running so those people who can’t get petrol anymore can go to jobs that don’t exist anymore?”

“Ahh,” he said, suddenly looking serious. “Good point.”

“But ...,” said Rik then stopped and looked thoughtful. “But isn’t it all insured?” he asked.

“Sure,” said Gina. “There’s just one little problem. How are the insurance companies going to pay out when they’ve lost all their investments?”

“But doesn’t the government insure the insurers?” asked Nag.

“No taxes coming in,” said Angus. “How do they cover them?”

“Oh,” said Nag. “What about the banks then? Don’t they have plenty of money?”

“If only that were true,” said Gina. “First off, banks are major players on the stock exchanges so their investments have been lost anyway. Secondly, banks takes deposits then lend them out so whatever you think you have deposited at your bank isn’t there anymore because whoever borrowed it can’t repay it to the bank so they can’t repay it to you. Thirdly, banks can borrow money off other banks to lend so it works out that if no one can repay the loans the bank can’t give you the money you think you have deposited with them.”

“So we’re all bankrupt, then?” asked Talia.

“If the economy collapses,” said Gina.

“Isn’t this what happened to Germany after the First World War?” I asked. “I seem to remember reading they ended up with

hyperinflation. I remember seeing a photo of someone shoving bundles of banknotes into a fire because the money was worth less than the coal.”

“Actually, wasn’t that happening in Venezuela before we launched?” asked Rik. “I seem to remember reading in the papers that they’d hit 250,000% or something stupid.”

“Oh yeah,” said Zaf. “I remember reading that too. Didn’t they get it under control though?”

“I don’t remember,” said Rik. “Venezuela doesn’t get into the British papers very often, certainly not with good news anyway.”

“Oh shit,” said Evie suddenly.

“What?” I asked.

“BSpaceE is a company,” she said. “I’ve got shares in it myself and it’s part of the Vanofov Group which is a huge multinational. What the hell happens to us if it folds?”

“Yeah,” said Gina. “That’s why I used BP as my example instead. The answer is, I don’t know.”

“But if they fold, won’t we be stranded in space?” asked Myf.

“Isn’t Sergey Vanofov one of the richest people in the world?” asked Talia. “Isn’t he worth something like a trillion dollars or something?”

“I believe it’s more like \$75 billion,” said Rik.

“That’s still one hell of a lot,” said Talia. “Surely he wouldn’t let us become stranded?”

“What if he’s lost most of his money?” asked Nag. “And what if his money isn’t real money anyway, just the value of his companies which are now worthless?”

“He’d still find a way to get us back though, wouldn’t he?” asked Talia.

“You don’t get that rich by being charitable,” said Rik. “He must be a ruthless bastard.”

“So what are you saying?” asked Myf.

“I’m saying, if push comes to shove, we may end up like that dog the Russians sent into space in the fifties,” said Rik. “What was its name?”

“Laika,” said Gina. “In 1957. She was sent on the Sputnik 2 orbiter to see if it was possible to live in space.”

“So what happened to her?” asked Talia.

“She died,” said Gina.

“Well isn’t that just bloody typical of men!” said Myf. “They send a female into space to see if males can live there and let her die. Jesus.”

Gina shrugged and opened her hands a little.

“So you’re saying Sergey Vanofov will just write us off?” demanded Talia. “Along with his other investments?”

“No I’m not,” said Rik. “I’m just saying he might. And even if he does want to help, what can he do if all his businesses have folded?”

“Just a minute, hasn’t this happened before?” asked Evie. “I seem to remember when I was a teenager an astronaut got abandoned in space.”

“Ohh, you mean that Russian?” I said. “I vaguely remember hearing something about that. I must have been, ohh, thirteen or fourteen.”

“Do you mean Sergei Krikalev?” asked Gina.

“How the hell would I know?” asked Evie. “Who’s Sergei Krikalev?”

“He was a cosmonaut on the Mir Space Station when the Soviet Union collapsed in 1991,” she said.

“Oh god, did they leave him up there?” asked Evie.

“Sergey Vanofov is Russian, isn’t he?” asked Zaf of no one in particular. Gina gave him a dirty look.

“That was a political problem,” she said. “When he went to the Mir Space Station it was under the control of the Soviet Union but in December 1991 the Soviet Union fell apart and both the Baikonur Cosmodrome, which was controlling the Mir missions, and his landing area were in Kazakhstan. Unfortunately Kazakhstan had just become independent and they could not afford to send a replacement. Krikalev could have come back at any time in the Mir’s emergency re-entry capsule but that would have left the space station unmanned and it would have burnt up. He chose to stay.”

“So it wasn’t a political problem then,” said Angus. “They couldn’t afford it so that makes it a money problem.”

“No, the financial situation was the result of the political situation,” said Gina.

“Isn’t that the situation here?” asked Rik. “The initial attack on the stock markets would have been politically motivated.”

“It could have been terrorists,” said Zaf.

“Terrorism is political as well,” said Rik.

“Guys, you’re missing the point,” said Evie. “Is he still alive? Did he come back or did they leave him there?”

“He’s still alive,” said Gina. “Or he was four years ago. He’s vice-president of RSC Energia, the Russian spacecraft corporation. I’ve met him a couple of times.”

“So how did he get back?” asked Evie. “Did the Russians find the money? Or the Kazakhstanis?”

Gina sighed. She was clearly reluctant to continue talking about it.

“Sergei Krikalev was brought back to Earth in 1992,” she said. “Now, if we can move on?”

“Who by?” asked Zaf. “The Russians?”

“Does it really matter?” asked Gina.

“I think it does,” said Myf. “After all, Sergey Vanofov is Russian so it would be helpful to know the Russian mentality with regard to stranded cosmonauts.”

Gina stared at Myf, her lips tightly compressed.

“Oh god,” I said suddenly. “It was the bloody Americans, wasn’t it. The same ones who’ve just launched the counter cyber attack.”

“No,” said Gina. “It wasn’t the Americans.”

“Tell us,” said Myf. “Or I’ll ask HalleB. It’s probably in her history files somewhere.”

“It was the Germans,” said Gina. “They paid \$24 million to bring Sergei Krikalev back. Happy now?”

“You mean the country who’s Deutsche Börse stock exchange was blown away and who approved the American DoD retaliation?” I asked. “You think they’ll be able to afford to bring us back? After all there’s only ten of us not just the one and we’re only a billion miles away from Germany.”

“Kilometres,” said Gina. “A billion kilometres, not miles.”

“Right,” I said, a touch sarcastically. “675 million miles instead. My mistake. That’ll make all the difference.”

Gina didn’t answer. She didn’t flinch, but she didn’t answer either.

“So let me get this straight,” said Nag. “We’re looking at a likely global financial collapse while East and West try to destroy each other’s economies and we have no real idea what the consequences of that

will be. On the other hand, it is quite likely that the company which sent us here will be out of business any minute. That company, it's worth noting, being owned and run by a Russian. A race who not only left their dog to die in space but left their cosmonaut to die in space as well. The only reason said cosmonaut is still alive being due to the charity of the Germans who, it is worth noting, have been economically targeted and, due to their involvement in the American retaliation, may well be further targeted. I might add that the ultra wealthy, as a group, have a tendency to be ruthless where money is concerned, which is how they become ultra wealthy, and we have no idea how this Russian is going to react when his personal fortune is under direct threat, as it seems likely to be at this very moment. Is that a fair summary?"

No one answered. We just all looked at Gina. Gina looked at her hands, still flat on the table. The silence was almost palpable.

"Well?" asked Nag, after several achingly long moments.

"That seems like a succinct summary," said Gina, looking up. "Although we are not in possession of all the facts."

"Nor are we likely to be," said Rik. "The only information we will ever have is what BSpaceE chooses to send to us."

"I'm sure it will all work out for the best," I said brightly. That didn't seem to go down too well.

"I'm curious about something," said Evie. "Why did you tell us the news bulletin, Gina? And why did you tell us about the economic consequences? You could have simply kept it quiet or let us think it was a trivial computer problem back on Earth. You have experience of war games and things like that so you must have had a reason."

"Yes," said Gina. "As Captain of this mission I am responsible for operational matters but this is not an operational problem. I believe that we need to make a policy decision and in terms of policy we all have an equal vote, although I do have the power to make an additional casting vote in the event of a deadlock."

“So what’s the policy decision?” asked Myf.

“Quite simply, in the light of this information regarding the situation on Earth,” said Gina, “do we continue the mission with the distinct possibility of the cessation of support from Earth or do we abort the mission and return to Earth?”

“Ahh,” said Angus. “Shouldn’t Ollie be involved in this then?”

“Are you there, Ollie?” asked Gina.

“Yes, I am,” said Ollie. “I’ve been listening from the Control Room. I’ll be voting along with the rest of you after discussion.”

“I need some coffee,” I said. “Why don’t we take a break and think about this for a while? Or do we have to make an urgent decision?”

“No, we don’t need an immediate decision,” said Gina. “A break sounds like a good idea. Shall we say half an hour?”

No one had any objections so that motion was passed unanimously.

“I’m going back to my apartment,” I said. “You all look so solemn you’re giving me indigestion.”

“Me too,” said Evie.

“I’m going to the gym,” said Angus. “I need to work off some tensions.”

Evie joined me in the corridor and we walked slowly back to my apartment.

“Come on in for a coffee,” I said.

Evie watched Angus disappear up tube 7, heading for the gym. Nag walked past, deep in thought, heading for her apartment, or perhaps the Medical Centre next door.

“OK,” she said. “Thanks.”

I fetched a couple of coffee sachets and passed her one. She sat down and opened the window cover. I sat down as well then jumped up again.

"It's a bummer," I said and wandered over to my easel. In a fit of nostalgia I'd started a fresh painting of Tyson, Akuchi Zimbabwe's Rottweiler, but it was coming out wrong. It wasn't his eyes this time. It was just that Tyson was looking excessively friendly. My nostalgia must have been distorting my memories.

"Have you been dreaming about a dog?" asked Evie, coming over to join me at the easel.

"Hmm? Oh no," I said. "I woke up in the middle of the night and couldn't get back to sleep so I started to paint. I guess I thought a little nostalgia might help me get back to sleep. This is a dog I painted a while back."

"Looks like a nice dog," she said. "Happy, friendly."

"He wasn't really," I said. "His name's Tyson. He's the bodyguard of my local drug dealer back on Earth."

"You're an addict?" asked Evie sharply, turning to look directly at me and stepping back at the same time.

I laughed. "God, no," I said. "It's just that Akuchi Zimbabwe lived not far away and everyone in the neighbourhood knew him. He was a bit like the local godfather, if he liked you he'd help you out."

"Did he like you?" she asked.

"I think so," I said. "He commissioned me to paint a portrait of Tyson."

I picked up my brush and waggled it then picked up the palette then put them both down.

"So what do you think?" I asked.

"It's a dog," she said. "What do you want me to say? It's great Art?"

"Nooo," I said. "I mean about aborting the mission?"

"I couldn't sleep last night either," she said. "Interesting coincidence, isn't it."

"How do you mean?" I asked.

"Do you often have trouble sleeping?" she asked.

"Not since I left my apartment," I said. "The girl next door sometimes used to play weird punk music all night."

"Me neither," she said. "In fact as far as I remember last night was the only time I've had trouble sleeping here. Don't you think that's an interesting coincidence?"

"You mean not sleeping then getting this news today?" I asked.

She nodded.

"I suppose it is," I said. "But then it could simply be a coincidence. Coincidences do happen, after all."

"Yes, they do," she said. "So you were feeling nostalgic? Does that mean you want to go back to Earth?"

"I suppose so," I said. "I would like to go back but at the same time I have a strong feeling that it wouldn't be a good idea. I can't say why but it just feels wrong. Does that make any sense?"

"No, it doesn't," she said slowly, "but it's exactly how I feel as well. I'd like to go home but something inside me says it would be a bad thing, but I can't give any explanations, reasons."

"So how are you going to vote?" I asked.

"Keep going, I suppose," she said. "Unless someone comes up with an overwhelming reason to go back. You?"

“The same,” I said. “Going back would be a failure, I think. It’s like a painting, I’ve started so I’ll finish even if it doesn’t turn out quite how I expected.”

We met Angus in the corridor. He was sweating freely as though he’d given the exercise equipment a hard time. By the look of it his bones were going to be just fine.

“So,” said Gina, when we went back in. “We’re all here. Ollie’s listening in. Any thoughts, anyone?”

“Have you heard anything about the main group?” asked Rik.

Our role was primarily to establish a base on Titan for the main group of forty who were due to leave Earth around the time we arrived on Titan. When they arrived on Titan we would hand over and return to Earth.

“No,” said Gina. “As far as I know they are still operational.”

“Well, it seems to me that if BSpaceE collapses or there are major problems on Earth that they won’t be leaving,” said Rik. “Which makes our role rather redundant. I don’t see a lot of point setting up a base for a group who will never arrive.”

“They may still arrive,” said Ollie. “Just a little later than planned, or another group may be sent out.”

“Which would make our mission longer,” said Rik. “What if we end up having to stay for twenty or thirty years?”

“That’s a fair point,” said Gina. “Shall I ask the question in my next transmission?”

“Yes,” said Rik. “I think it’s an important point. I’m all for completing the mission so long as there actually is a mission. We need clarification.”

“OK,” said Gina. “Any other remarks in favour of aborting?”

“It does seem a little silly to continue if we know we’re not going to be getting any support from Earth,” said Talia.

“We’re 80 minutes away by radio,” said Gina. “We don’t get much support as it is since it takes nearly three hours to ask a question and get an answer, even if they know the answer right away.”

“And we’ve still got a three year journey back,” said Angus. “So the real issue is not whether or not we get support but whether we go for three years without support or seven years.”

“And if we go back we’ll be labelled as failures,” said Myf, “whatever the reasons.”

“OK,” said Gina. “Reasons to keep going?”

“I guess this is more of a reason for not going back rather than going ahead,” said Nag. “What would we gain by going back? We can’t help with whatever the situation is on Earth and we won’t be back for three years anyway, so what’s the point? It seems to me that if we finish the mission we’ll be giving them an extra four years to sort out whatever problems they’ve got. If we go back early we could end up slap in the middle of a crisis.”

“Actually,” said Zaf, “we’ve got enough food and water for at least fifteen years and that’s without setting up the hydroponics module. Is there any real need to go back before the powers that be sort out Earth’s problems?”

“OK,” said Gina. “Any other thoughts, anyone?”

No one said anything although we all looked so serious I wanted to giggle. I managed to contain myself though.

“OK, let’s vote,” said Gina. “We’ll do a closed vote. I got HalleB to print out some forms and I’ve got out some pencils.”

She handed out the forms and pencils. The form simply said “Abort Mission? Yes No”. I circled No and handed it back. Gina counted the forms.

“Just for the record,” she said, “I’m voting No. How about you, Ollie?”

“I’m No, too,” he said.

Gina counted out the forms.

“OK,” she said. “All ten have voted in favour of continuing, that seems pretty unanimous to me. I’ll log that result.”

The tension in the room dropped noticeably.

“So are we all done?” I asked. I was feeling a little light headed now that we had voted unanimously to keep going.

“Yes,” said Gina.

“No,” said Ollie. “We’ve just received an update from BSpaceE. It seems that the Man himself, Mr Sergey Vanofov, is sending us a transmission personally tomorrow at eleven hundred hours. Maybe we ought to wait and hear what he has to say?”

Chapter Eighteen

The tension that had dissipated after the vote came back with a vengeance.

“He’s going to abort the mission,” said Rik angrily. “What other possible reason could he have to contact us personally?”

“We don’t know that,” said Gina, as surprised as the rest of us. “Perhaps there are some final stage mission changes. We are, after all, only forty days away from our arrival.”

“Sergey Vanofov wouldn’t do that personally,” said Rik. “It would be one of the mission coordinators or possibly Arjeev if it was major but not Sergey. The only possible thing would be him cancelling the mission. Anything else would be delegated.”

“Actually, wouldn’t the cancellation of the mission be delegated as well?” asked Myf. “Sergey isn’t personally involved. Arjeev is the CEO of BSpaceE and Project Head. Sergey is a non-executive director.”

“I would have thought so,” said Nag. “But aborting the mission probably wouldn’t even involve Arjeev. After all, it would be simply an order to turn around. Any of the mission coordinators could do that.”

“Maybe he wants to give us a pep talk,” said Evie.

“Unlikely,” said Angus. “He’d only do that in order to get us to do something he wants but since we’re trapped here he doesn’t need to.”

“It’s too much of a coincidence with the cyber attacks,” said Talia. “There must be some connection. I agree with Rik, he’s going to abort the mission.”

“We can speculate endlessly,” said Gina, “but it won’t get us anywhere. Unless someone sends an explanatory transmission beforehand we’re just going to have to wait and see what he says.”

“Actually, it could be that he wants to reassure us,” I said. “After all, he’ll know we know about the cyber attacks so maybe he just wants to

let us know everything is under control at his end.”

“It’s too soon,” said Rik. “The retaliatory strikes were only a few hours ago. It’s too soon for Sergey to have assessed the implications and devised a counter strategy. He may not even know that we know yet. Doesn’t he get mission updates weekly?”

“If it’s too early for him to have devised a counter strategy surely it’s too soon for him to be aborting?” pointed out Angus.

“Stop, people,” said Gina, standing up. “This speculation is counter productive. We’ll find out in about twenty hours so until then contain yourselves. It’s business as usual. I’m bringing this meeting to an end.”

“Are you going to log it?” asked Talia.

Gina paused on her way to the door.

“Of course,” she said, perplexed. “Why would I not?”

“Umm, it just occurred to me that we might not want them to know how we voted before we find out what Sergey has to say,” said Talia.

“Why ever not?” asked Gina, coming back to the table.

Talia looked anxiously around the table as if uncertain of what she was about to say.

“Umm, well, maybe I’m just being too, I don’t know, cautious, maybe, but, umm, if he knows we had a vote and how we voted he might change what he’s going to say,” she said. “Particularly if he is going to abort. He may try to manipulate us or something.”

Gina stared at her. Actually I think we all did. This was certainly a new thought.

“Regulations require me to update the log and transmit it back,” said Gina slowly. “But I don’t think that’s what you are getting at, are you?”

“Umm,” said Talia, looking decidedly uncomfortable. “I’m not sure

what I'm getting at."

"I, er, think there might be a deeper issue here," said Nag, inspecting her fingernails. "I think what Talia is hinting at is that we wait to see what Sergey has to say without letting him know our position in advance and then make our own decision after that."

Gina let out a long, slow, breath then sat down. The rest of us held our breaths as the significance of what Talia and Nag were saying sank in.

"So you are suggesting that we take another vote tomorrow?" said Gina, visibly tense. "Even if we are given a direct and unambiguous directive?"

"Yes," said Talia, quietly, looking at the table.

"Wouldn't that constitute mutiny?" asked Zaf.

"Oh, don't be absurd," said Rik. "This is a civilian operation, not a military one. Worst case scenario is we'd be in breach of contract which is not, so far as I know, a hanging offence. We just might get docked some pay or something."

"Actually, that isn't entirely true," said Ollie from the Control Room. "Certain aspects of BSpaceE and this mission and subsequent missions come under the auspices of the Ministry of Defence and military law may well apply. It's an interesting legal point since under the Armed Forces Act 2006 we might well be deemed to be civilian contractors associated with a quasi-military operation."

"You are joking," said Angus in disgust.

"The press gang went out in the nineteenth century," said Myf. "I think you'll find that if we are currently under military law then it was done under false pretences and we can sue BSpaceE and the Government for breach of contract, misrepresentation, fraud and a whole bunch of other things."

"Oh for God's sake," said Gina. "This is getting ridiculous. People,

stop all this, right now. No one is going to disobey orders and no one has to worry about military jurisprudence.”

“Actually,” I said, “isn’t it all a bit academic anyway? If BSpaceE want us back all they have to do is take control over the Wheels.”

“Virtually impossible,” said Zaf. “At the moment we’re eighty minutes away with another eighty minutes for feedback. No way can they control things with a time lag like that. And, once we get to Titan, we’ll be out of contact half the time anyway. Don’t forget Titan orbits Saturn every fifteen days twenty two hours so we’ll be uncontactable for eight days at a time. We’re uncontrollable.”

“So we can more or less do what we want, then?” I asked.

“More or less,” he said. “At least as far as Earth is concerned, although they might get nasty when we get back.”

“OK,” I said. “Thanks.”

The meeting broke up soon after. I think all of us were feeling unsettled and disgruntled.

“So are you still feeling this trip is a waste?” I asked Talia outside her apartment, “or is it beginning to liven up a bit?”

“Jesus,” she said, running her fingers through her hair. “It’s one thing to be bored and depressed by the routine but a crisis on Earth and mutiny on board and no idea what’s going to happen wasn’t really the kind of excitement I wanted. This just pisses me off. Do you think we’re secretly working for the military? You think that’s what Sergey’s going to tell us? That we’re an interplanetary invasion force? Like frigging Star Wars?”

I had to laugh.

“Of course not,” I said. “If it was a military operation they’d have chosen military personnel not a bunch of civilians. Anyway, who are we going to invade? There’s nothing out here and we’re too far from Earth to attack the Chinese or the Russians from space. Don’t forget,

Gina's ex-military and the chain of command is stamped in her soul. So's Ollie."

"Yeah, I guess you're right," she said. "I don't expect I'll get much sleep tonight though. I've gone from being bored to being worried and I think I'd rather be bored."

I don't think I was worried, as such. But I was certainly unsettled and uneasy. I tried to do some painting but I just couldn't get into the zone and soon gave up. Then I tried reading some more of Evie's book and managed about five or six words, none of which made any sense. I got HalleB to play me some relaxing music while I lay on the bed and tried to let my mind drift but that didn't work either. In the end I went to the gym where I cycled for a couple of hours, going through some of my cycling videos on my headset then let Angus beat me hands down in a few games of low gravity squash. After dinner I tried to settle in my room with a movie from our extensive on-board collection but not even the strange *Loving Vincent* could hold my attention. It's the only film I've ever seen which is an oil-painted animation and done in the style of Vincent Van Gogh, which is probably appropriate since it's about Vincent Van Gogh but I watched long segments without seeing them.

When the dimly lit bedside time display slowly changed to 03:00 I gave up trying to sleep. It just wasn't happening. I pulled on a pair of shorts and a singlet and headed off to the Caf hoping someone would be in there but it was empty. I got out a sachet of Horlicks which I figured would help me sleep and made myself a peanut butter sandwich. Our sandwiches weren't as satisfying as on Earth because we didn't carry yeast or grow wheat. We made tortillas from dried kelp that we grew in a water tank in the Spare Wheel which sort of looked like brown bread although it was more the colour of beef jerky than wholemeal. It didn't taste a whole lot like bread either but, after three years I'd got used to it.

Wandering along the corridor I could make out Rik's faint snores and I paused outside Evie's room, wondering if she was still awake. I had a feeling she was, maybe even sitting there looking up at the ceiling wondering who was in the corridor but I felt a little nervous about disturbing her. If she'd been in the Caf that was one thing but in her

apartment? That felt like an intrusion so I moved on and did the full circuit of the Wheel back to my own place. No one else was out and about although the Control Room had its usual humming and clicking. I didn't go in. I wasn't in the mood to talk to Gina. I always had this faint feeling I ought to snap to attention when I talked to her.

Strangely enough the Horlicks did its work and I drifted off to sleep after a while although it was a restless sleep. No dreams but no deep relaxing sleep either. I woke up feeling tired and listless after only five or six hours sleep. Another couple of hours would have been nice but it wasn't going to happen. For want of anything better to do I listlessly sprayed my apartment with the anti-static antiseptic cleaner then vacuumed then remembered that today was my rostered day for cleaning the entire Wheel which shifted me into a moderately bad mood.

I got to the Meeting Room a couple of minutes early. I was the last to arrive which was unsurprising since this was work not a party. Everyone, apart from Ollie, was sitting silently, withdrawn, looking serious. No one greeted me and I didn't speak, just sat down next to Evie who gave me a faint half smile that didn't touch her eyes. Zaf had his eyes shut, seemingly asleep and Rik was reading something on his pad and making the occasional note. Gina was staring at the window although it was covered.

Sergey Vanofov appeared on the main screen. He was sitting at a desk. What looked like a part of London was visible through the windows behind him. I felt homesick.

"... is fully secured?" he said to someone off screen.

"Yes, Mr Vanofov," said a voice.

"How do I start the broadcast?" he asked, frowning at the camera.

"You are already broadcasting, Mr Vanofov," said the voice.

"Идиот," said Sergey, scowling off to the side of the camera. "Leave, now."

There was the sound of a door closing then Sergey turned to the camera and stared at it for a few heartbeats.

“Hello,” he said, his normally expressionless face staying expressionless. “I hope you are all well.”

He gave one of his dry laughs.

“But then I know you are. I have your bio-med reports here,” and he tapped a manilla folder on his desk.

“So, you are doubtless wondering why I am communicating with you rather than Arjeev Khatri or the mission coordinators.”

I half nodded, even though I knew he couldn’t see me. He didn’t even know if I was there. For all he knew we weren’t even receiving his transmission.

“Today is 4th April 2023. You are forty days from arriving at Titan. It is time you knew your true mission objectives.”

Well now, that woke me up. By the sudden rustle it sounded like it had woken the others up as well.

“A moment,” said Sergey and paused to pour himself a cup of tea from the squat teapot on his desk, then cleared his throat and lit a cigarette. A Benson and Hedges cigarette, not a Russian one.

“In 1996 I created BSpaceE. Its stated objectives were to develop space exploration in order to exploit mining resources on other worlds within the solar system and, within reason, explore those worlds and expand human knowledge. As an extension to the Vanofov terrestrial exploration and mining division it was a natural enough extension. Other companies are doing the same so it was quite plausible.”

He puffed on his cigarette and carefully stirred his cup of tea.

“It was a risky and expensive venture. To date I have invested some US\$38 billion in the company and while it does generate a small income from the sale of space hardware this is a small market and it is

unlikely to generate any significant income from mining in my lifetime. I knew this from the beginning but I was, even then, very wealthy and I could afford to indulge my passions.”

He puffed some more on his cigarette then tossed it, half finished, into an ashtray.

“Yes, my passions. That is right. You may be surprised to find I have passions beyond the making of money. But to explain, I was born in the small village of Vokhma in central Russia and it was there, as a young child, I first heard of Podkamennaya Tunguska River, in Eastern Siberia. In 1908 an object exploded over the river, flattening trees over 2000 square kilometres. Some say that this explosion was a meteorite, others a flying object of some kind. I was young when I first heard of this and it captured my imagination. As I grew older I heard of other events, such as the city of Petrozavodsk which was showered with rays from a glowing object hovering over the city. Sightings of such things were not widely publicised in the Soviet Union in those days but when I started to expand my business interests into the West I heard about other strange occurrences. Some of you may be familiar with them. Barney and Betty Hill, in America, for example, Rendelsham Forest in England. There are many such incidents and here in the West many people investigate and write books about them.”

He paused to sip his tea and got out another cigarette but didn't light it.

“Doubtless you think I am an old fool to believe in Unidentified Flying Objects. It does not matter. As a child my imagination was gripped, as a young man I collected reports. Do they exist? Who knows? But such things were my passion, my self-indulgence. But enough of that. As I said, in 1996 I established BSpaceE for the purpose of exploiting extra-terrestrial resources and the first few years were purely developmental with no specific planetary body in mind.”

He paused and reached across his desk to pick up another manilla folder.

“In 2005, I came across this paper¹ by Dr Christopher Makay of NASA

1 McKay, C.P. & Smith, HD. (2005). Possibilities for methanogenic life in liquid

and his student Helen Smith. It intrigued me. They proposed that it might be possible to identify possible life on a planet through biological signatures. The basis of their argument was that purely chemical processes produce all kinds of chemical structures that are randomly distributed whereas biological processes produce chemical structures that are highly selective. For example, amino acids might well arise naturally through random chemical processes but there is no reason why they should be left handed or right handed amino acids. Here on Earth, however, biology or life, produces left handed amino acids only. Similarly, if a planet produces carbon dioxide through purely chemical processes then you would expect to see a steady concentration or a steady rise of carbon dioxide. Again here on Earth, we find that carbon dioxide in the atmosphere drops during the spring and summer months as plants grow and rises again in the autumn and winter months as the plants die and decay. Biological processes are selective, chemical processes are not. Hence my interest turned to Titan.”

Having used the cigarette to gesture with, Sergey now lit it and inhaled deeply.

“The paper pointed out that Titan is a world with a rich atmosphere,” he continued, twin streams of smoke coming from his nostrils like a mythical dragon. “Although being heavy in methane, ethane and so on we should not expect any signatures in terms of oxygen but rather hydrogen. Be that as it may, the paper turned my thoughts to Titan. From a purely commercial perspective, Titan is as exploitable as any other planet or moon with a number of advantages. One being that other companies were already involved with the Moon and Mars. Titan however, could be exclusively mine. The planets further in, Mercury and Venus, are closer but they are hot and, as a general rule it is cheaper to warm something cold than to cool something hot. If it is cold you merely have to supply energy to warm it but if it is hot you have to supply energy to cool it and somehow dispose of the surplus energy as well. Titan’s distance was not an issue. After all, once you have invested the necessary money to build an aeroplane to fly from London to Paris it costs very little extra to fly on to Moscow. So, BSpaceE set its objective as Titan, the largest moon of Saturn.”

methane on the surface of Titan. *Icarus*. 178. 274-276. 10.1016/j.icarus.2005.05.018.

He disposed of his cigarette and finished his cup of tea then sat back in his chair.

“Have you wondered about the selection of personnel for this voyage? Of course you have. It was discussed during training. Some of you thought it strange that we selected an electrical engineer but no mining engineers. A strange choice when the apparent objective was the mining of Titan and the possible future mining of Saturn. Why no astrophysicists? Why no planetary scientists? During training we explained everything in terms of balance of personalities and interpersonal dynamics. It was plausible enough and you seemed to accept it.”

He leaned forward and picked up another paper from the manilla folder.

“At first mining and exploration were the objectives but in 2010, everything changed. Doubtless you all recall the Cassini-Huygens probe. You should do, it was discussed extensively during training. I have here a paper by Professor Darrell Strobel who analysed data from Cassini-Huygens². Apparently there is a flow of hydrogen from the upper atmosphere of Titan to the surface of the moon. Doubtless the immediate significance of that escapes you.”

“No it doesn’t,” said Rik, breaking our silence. “I’ve read that paper. The results were inconclusive.”

Sergey ignored him, as he had no way of knowing if Rik was even there, let alone that he had spoken.

“I will leave the detailed explanations to the biologists among you to explain but suffice it to say that in a methane based world, the apparent consumption of hydrogen is one of the signatures of biological activity predicted by Makay and Smith. Perhaps you now see why the crew includes a biologist and a bio-chemist? We will mine Titan, that is a given, but I am a very rich old man and I can afford to indulge my passions. And it is my passion to find life on Titan. The

2 Strobel, Darrell. (2010). Molecular hydrogen in Titan’s atmosphere: Implications of the measured tropospheric and thermospheric mole fractions. *Icarus*. 208. 878-886. 10.1016/j.icarus.2010.03.003.

mining engineers will come along later but first we must investigate the biology. Take a few moments to chew on that.”

He sat back in his chair with a happy smile, no doubt imagining the frenzied reaction he'd caused. In fact there was none. I don't know about the others but I was frozen in disbelief. I stared at Sergey on the screen, the words 'Life? Life on Titan?' going round on a continuous loop in my head.

Sergey leaned forward again and pushed a button on his intercom.

“Elena,” he said. “How do I pause this thing?”

A faint female voice said “You can't, Mr Vanofov, it's a live broadcast.”

“Oh,” he said, scowling again. “Very well. Bring me some fresh tea.”

He turned back to the camera.

“Fresh tea is coming,” he said, back to his lugubrious self. “I'd offer you all refreshments but ...” and he spread his hands.

“So,” he said. “Moving on.”

I couldn't immediately see where he could move on to after life on another planet? Was he going to get into religion now?

“Personnel selection. Obviously we needed pilots. A doctor because people get sick and a psychiatrist because, although we have a good understanding of the physical effects of extended space flight, the psychological effects are still largely unknown. A biologist and a biochemist to investigate any biological processes that you may encounter. An anthropologist? Well, that's an interesting one. What are your specialisms, Talia? Yes, cultural and linguistic anthropology. Not particularly useful for mining but potentially very useful if there does turn out to be life on Titan and that that life is intelligent, wouldn't you agree? And an engineer? Yes, an engineer is always useful when you have complex machines in space but what if there are machines, or perhaps traces of machines on Titan? An engineer could well be useful in working out what those machines do. So you see, the crew

was selected not with mining in mind but with finding and understanding alien life. An old man's dream? Perhaps. A foolish dream? Perhaps. Perhaps this is all just the beginnings of senility, the foolish dreams of a rich old man who believes in UFOs and is looking for new life as his own life is slowly drawing to an end."

He gave another of his characteristic dry laughs and, briefly, a woman's hip appeared in the frame and the teapot was replaced with another.

"Thank you, Elena," he said and touched the side of the pot. He watched Elena leave the room then turned back to the camera.

"You are a billion or so kilometres away but I can hear you asking, 'but what about the other two?'"

Actually none of us had asked that. I think we were all too stunned.

"Why send a fiction writer and an artist on a space voyage to discover new life forms? That is a very good question and it deserves a very good answer. Unfortunately I do not have a good answer as I did not send them. They were invited but not by me or anyone here on Earth. That is your true mission, your real objective. To get answers. Find out who or what wanted Evie Farrell and Phillip Roach to go to Titan. And why."

Chapter Nineteen

It took a couple of days for things to settle down and a new dynamic to evolve.

The big loser, if that's the right word, was Ollie. He alone of all of us knew the full story as he'd been fully briefed by Sergey before we departed and it fell to him to fill in the details after Sergey's transmission. As Sergey made his final remark about me and Evie, Ollie had made his way from the Control Room and appeared before us. He quietly waited while we angrily demanded Sergey be called back to explain himself, emotions conveniently forgetting the one hundred and sixty minute round trip delay. A question and answer session was never really on the cards. I don't think Gina ever really forgave Ollie for upstaging her. Mind you, none of us ever forgave him. I think we felt he had betrayed us, somehow creating a 'them and us' situation where there hadn't been one before.

Ollie explained about the selection days and even produced the records showing how well Evie and I had performed which we were both able to emphatically deny. He also explained about the weeks and months of investigative analysis of the log files, program code and so on which showed that data had changed without any record of what process made the changes. He even had documents about the exhaustive testing and retesting of hardware, power supplies, electromagnetic fields and whatever else the technical bods could conceive as possibly having the remotest chance of causing variations. Processor chips, memory chips, hard drives, backup tapes, even printer chips, notebook and cell phone processors had been pulled and tested to destruction. Apparently there were 149,000 pages of analysis results, although none of us felt the urge to count them to make sure and it never occurred to any of us to wonder if any of the analyses had been manipulated. The interim conclusion, itself 19 pages, could be summarised in just four words; 'we have no idea'. There was no final conclusion, of course. That would only come along when someone could say 'this happened because ...'

Simply being the custodian of the records didn't make Ollie the loser though. In a sense he was just a portal to the data which we poured over and discussed although few of us fully understood the

technicalities. Zaf more than most. What seemed to stick in our collective craw and resonate uncomfortably was that Ollie had been piggy-backing his own confidential reports back to Earth on top of Gina's routine log reports and status transmissions. Ollie had been quietly watching and making notes on all of us. He'd even reported back the gist of Evie and my discussions of our dreams and that no one else had had similar dreams.

Yes, Ollie was a spy.

HalleB was a co-conspirator but she was a faceless piece of software. Ollie was the face. Apparently his instructions were to wait until Sergey made his announcement and then come clean but who could trust him now? Maybe he'd been ordered to make it look as though he was coming clean but still had some other subterfuge going on in the background. When you're a billion kilometres from home and with only a handful of companions, trust becomes a major issue and we no longer trusted him. Oh we had to when it came to piloting and navigation but I'm not talking about his technical skills. We all, even Gina, stopped talking to him beyond the routine and the technical and Zaf quietly made a couple of little white noise generators in his lab which we could use to hold private conversations without HalleB listening in. We got bored with the inconvenience of using them very quickly but conversations went quiet when Ollie appeared and stayed guarded.

Ollie soon learned to keep himself to himself, something that wasn't at odds with his personality anyway since he was a quiet, self contained individual at the best of times. Gina, resentful no doubt at no longer being the primary focus of the team, also started to withdraw, fretting over her relegation to being 'just the taxi driver' as Rik had unkindly put it. The rest of us stopped our fluid forming of personality cliques and, by and large, formed stable pairs. I don't mean sexually, although Angus and Nag very probably continued their trysts but Angus now spent most of his time with Rik. In fact it was probably Angus and Rik who recovered from the initial shock the fastest. Tell a bio-chemist and a biologist they're on their way to investigate possible alien life and their professional and intellectual curiosity soon swamps all other concerns. Within hours of pitting their considerable combined IQ against the data Ollie had given us and heatedly decrying conclusions

drawn they were pulling every research paper they could find in HalleB's extensive database on Titan's biochemistry and were occasionally seen going in and out of each other's apartments or huddled in corners throwing around arcane phrases like 'PM3, AM1, MNDO and MINDO3 semi-empirical IR spectra analyses', 'magnetospheric electrons ionisation' and 'the conductive polymers, polypyrrole and polyaniline'. We left them to get on with it as no-one else, with the possible exception of Nag, had any idea what they were talking about.

Talia withdrew completely for several days. No one saw her and towards the end of the second day Myf tapped on her door and was told, in no uncertain terms, to make herself scarce. On the third day we found Talia in the Caf surrounded by empty food containers. Why she'd gone AWOL we never found out but I suspect it was either a crisis of confidence or she had simply shut down under the daunting prospect of trying to understand a possible alien culture all on her own. As she pointed out to me in one of our brief conversations, "how do you comprehend the elements of a culture if you can't even comprehend the creatures that have it?". Zaf probably had the same issues with possible alien engineering. In a methane based world at minus 180 degrees how would engineering even come about and how would you recognise an alien machine? Would they even have electricity or would they have developed something entirely and incomprehensibly different? Still, they started to spend a lot of time in each other's company pondering esoteric points such as how an alien life form could manipulate data in a computer without leaving any traces and the implications this raised about their understanding of the data and its meaning, as well as their understanding of human psychology.

Myf and Nag also paired up since their concerns were with the physical and mental health of the rest of us. Nagita's shortened name became very appropriate as she started to nag us all about our exercising and eating as our personal concerns started to take over. High level academic researchers tend to have high levels of focus and concentration and a low threshold for purely bodily concerns. Nag's normally placid features started to look harried as she hunted us down and, every now and then, stood over someone in the gym to make sure they exercised. Myf, on the other hand, started becoming

unusually sociable and found every opportunity to talk to people at length about their feelings. After a while I started to develop a twitch whenever Myf said “hey, how are you?” when I bumped into her in the corridor. She was the only person I’d met who really wanted to know.

Evie and I, though, had no other concerns. We knew nothing of biology, chemistry, engineering or even psychology. We had nothing to occupy us. Instead we came together as two lost individuals. We’d long felt different to the others but our sense of ‘otherness’ became sharply defined. We weren’t different because we weren’t skilled technicians, we were different because we were “chosen”. One or other of us would go into the Caf or a gym and others would grow silent and watch surreptitiously, trying to fathom what it was that made us “chosen”. Were we somehow aliens ourselves, perhaps? I don’t know what exactly went on in their minds but I soon noticed an unwillingness to touch me. People would step back unnecessarily far to avoid accidental contact when passing, for example. Food cartons we’d touched would be left rather than cleared away as though our touch had contaminated them. The chairs we usually sat in in the Caf or the Meeting Room became our exclusive chairs, no one else ever sat in them. Even on the rare occasions when someone other than Evie would sit with me, their chairs were kept further away than they had been in the past. A furtiveness developed, a ‘keep away from Evie and Phil’ kind of behaviour, ‘they’re different’. Even Myf, who often touched Evie’s hand when they were having a deep and meaningful, started to draw her hand away then stopped altogether.

It didn’t help our paranoia.

It’s one thing for a group to discover that a couple of its members are different, tainted, but it’s very different for those members themselves. Evie and I spent that first evening after Sergey’s announcement in her apartment, talking endlessly about the same thing. Why were we chosen? Who by? What for? Why us and not anyone else? What’s going to happen? What the hell is going on?

Few questions, no answers, endless repetition. Just an increasing anxiety, insecurity, fear.

We clung together, emotionally, spiritually and physically. More aware,

perhaps, of our separateness from the others than they were from us. They were as they had always been but we, suddenly, inexplicably, were different. Two artists in a world of scientists have a sense of difference anyway but I think we both felt we weren't just different in outlook, attitudes, knowledge. We were different at a deeper, much deeper, level. Were we even human? We talked about this at length, alone in Evie's room. On the surface we were the same but in some fundamental way we, and we alone, had been chosen.

So had Austin Bickerseth, the other person who had been chosen but who had refused to go through the selection procedures and disappeared from view. Ollie had told us about this third person and Evie and I had scoured what little was known about him and sent questions back to Earth. He was a 49 year old who ran a dry cleaning business in Truro and lived with his wife and four cats and played the saxophone in a local blues and rock band. Did the fact that he had refused to come along mean that we still had our independence? Or was it simply that whoever the puppet masters were had decided they didn't want him after all? How much say did we have in any of this? The fact that he was apparently alive and well was a little ray of sunshine. Perhaps these aliens weren't vindictive.

"Did you think of refusing?" I had asked Evie that night, as we lay on her bed, fully clothed but our bodies touching, our need for emotional contact immense.

She'd stayed silent for a long time.

"No," she'd said quietly. "It simply never occurred to me. Thinking back I just got carried along by what was happening."

"I remember I desperately needed to pee," I'd said. "The people there kept doing things and I just agreed hoping I'd be able to go pee and then after I had, it just seemed easier to go along. Almost like it would have been churlish to refuse by then. I remember Gerald pulled out when faced with that centrifuge thing so I did too although I really wanted to have a go in it myself. It looked fun."

"Linda pulled out after the first interview," Evie had replied. "The interviewer made her cry about something in her childhood so I

pulled out too. My interviewer annoyed me so I just froze him out and answered in monosyllables. I thought it was a complete waste of time. Did you see what was in the investigative report? That interviewer said he thought I was either schizophrenic or autistic and recommended further analysis and therapy. Bastard. At least the bloody aliens changed my profile to 'a well balanced and maturely rounded personality', although they could have dropped the mature bit."

"So what do you think this is all about?" I'd asked and we got back onto that treadmill of worried speculation again. It's a shame it didn't help with bone density although Evie's unfocussed eyes, filled with trepidation, were probably getting a good workout.

* * *

It was a good ten days before any of us started to regain any interest in the periodic news bulletins that we received. The attacks on the stock exchanges had, by then, continued with further retaliations on both sides and Gina's fears seemed to be coming true. There was another round of attacks on stock markets in the West then the assault changed to financial institutions. The Industrial & Commercial Bank of China was the first to fold, closely followed by JPMorgan Chase in America and HSBC in Britain, Mitsubishi UFJ in Japan and BNP Paribas in France. These five alone had combined assets of around US\$15 trillion. I think it was on the 12th day that someone coined the phrase 'cyber wars' and they became 'The Cyber Wars' when someone else started to number them and found we'd reached 7 already.

By the time we started to come out of our introspective period we were hearing that perhaps as much as 20% of the total global wealth had simply disappeared, without even a puff of smoke to mark its passing. Actually this is probably an exaggeration although when the poorer parts of the world started to rebel and riot most of them didn't have guns, smoking or otherwise. They used rocks, bricks, sticks, knives, fence posts and whatever else that came to hand to express their disapproval of the fact that food, water and healthcare was following the money trail and going to those with the remaining wealth rather than those who were hungry, thirsty or sick. This was only partly because of the taking out of the big finance houses. In part it was also because, from Cyber War 7 or 8 onwards, the attacks

moved over to government departments, hospitals, railways, food manufacturers and freight distribution. While the ultra wealthy in London, New York and Beijing bemoaned the shortage of fuel for their Ferraris or private jets, the ultra poor in Africa and Pakistan fought each other for scraps of food. By the time Gina made her announcement, the hunger riots had spread to Sydney, Milan, San Francisco and Frankfurt and around the world inflation had reached an average of 70% a month with two or three hundred percent in hotspots.

“At about midnight we’ll be starting our slow down procedures,” Gina informed us over dinner one evening. “Tomorrow morning we’ll be in orbit around Titan.”

We had come together for a communal meal as Gina had told us there was going to be a Situation Update although it wasn’t apparently important enough for a formal meeting. Actually we all knew we were close since Titan had expanded from a tiny dot and now loomed large in our windows, in a manner of speaking anyway. It was around twice the size of Earth’s moon when seen from Earth. Evie and I had taken to sitting and just watching Titan slide across the window every 78 seconds for extended periods, wondering what was there.

“You won’t notice anything, or at least you shouldn’t,” she added. “We’re bringing our speed down from 13,000 metres per second to approximately 900 metres per second to get us into a six hour orbit but we’ll be decelerating over twelve hours so you won’t feel it. Just to remind you of the procedure, once in orbit we will search for a suitable base site in the northern hemisphere between 68 and 73 degrees north then we’ll drop to a speed of approximately 14.5 metres per second to maintain an equatorial geosynchronous orbit over that longitude, approximately 600 km above the surface. At 20:00 I want everyone to assemble in the Transport Bay for Suit Drill and review of Transport Procedures.”

We had a drill every four weeks or so to ensure we were comfortable in our space suits and to make sure they still fitted reasonably well. We’d been measured up for our custom suits four years previously and I, at least, had changed my body shape a little since then, what with all the exercise. Fortunately I ate a lot as well so there had been no

need for the suit to be modified which was good as it was a complex procedure. Still, it was a little tighter in places and looser in others. We also drilled so we stayed comfortable breathing and operating inside the suit. It's not really a good idea to have a panic attack when you're standing on the surface of another planet. We'd probably get enough of those anyway without having to stress about being in a suit. It was also a good idea to be very familiar with what to do if the batteries or air gave out as they probably would at some point.

The region for our landing site had also been a matter for some discussion between our biologists, pilots and coordinators on Earth. The original plan had been for us to find a landing spot within a few degrees of the equator on the side facing Saturn but since we were no longer a mining expedition the plan changed. Rik and Angus, along with the coordinators, wanted to go to the North Pole where most of Titan's lakes were and where they thought life was most likely to exist. There were no lakes large enough to be identified from the Cassini-Huygens probe within 50 degrees of the equator and only one decent sized lake in the Southern Region. Around the North Pole though there were a lot of lakes, including one huge one of around 60 thousand square kilometres. Agreement had finally been reached on a narrow band roughly 20 degrees below the pole, putting us on the edge of the lakes. The decision almost had a holiday feel to it. Where shall we go for a holiday? – How about the edge of the Lake District? Maybe we could go for a swim?

We'd also had our first major equipment failure. Given that we had somewhere around a million components in the Wheels we had had any number of minor equipment failures and we carried plenty of spares. Most of the time Gina or Ollie, or occasionally Zaf, would swap out a component inside the Wheel and take the faulty one to the lab to try to fix it and perhaps ten times over the trip Gina or Ollie had gone outside to fix a problem there. Once it had been the primary radio dish's direction locking mechanism which had been hit by a tiny meteor and the dish had gradually lost track of the Earth. I'd gone out with Ollie on that occasion, my one and only time 'spacewalking'.

It was a shock. I'd seen videos of people spacewalking and, of course, practised in the deep pool on Earth but it's nothing like how it looks.

In the videos the astronauts gently float around making everything look effortless but it isn't really like that. The suit is a self-contained environment and very tough so it doesn't tear. This means every move you make involves some moderately heavy lifting to make the suit itself move and bend. It's not like you're wearing a flimsy piece of cloth. Also the suit is pressurised – since space is a vacuum – which means that when you grip something you're having to grip the air pressure inside the suit as well. It's not until you actually go outside into space itself that you really appreciate how much you have to grip things. Even something as simple as turning around means you have to grip something with your hand, you can't just twist around on your feet unthinkingly like you would on Earth since your feet are dangling uselessly.

Space walking – a misnomer if ever there was one since the most useless things to have in space are legs – is exhausting and your hands and forearms ache from the strain. And, of course, something you understand intellectually but don't appreciate until you actually have to work with it, is the frigging space suit. Mine weighed, on Earth, around 240 pounds; four stone more than I did. In a weightless environment it weighed nothing, which sounds great. But, it still had all its mass so when I used my hands to push myself along the side of the Wheel, or stop myself, my poor aching forearm muscles were having to work on 30 stones of man and suit. On the other hand, I had expected to suffer from vertigo. After all, I was a billion kilometres above the surface of the Earth and that's a long way to fall! I didn't though. It took me a while to understand this but in order to have vertigo you need to have some reference point. Something to tell you which way is down and how far away it is. If you lean over the top of a building, gravity tells you which way is down and the view of the ground tells you how far away it is but in space there is no gravity and nothing is close enough to be more than a dot of light. It's about as vertigo inducing as lying in bed with the light off and there's always two and a half million kilograms of Wheel within arm's reach as reassurance.

Space walking also brings Newton's Third Law of Motion into sharp relief. Every action has an equal and opposite reaction, according to the man. It's kind of academic on Earth since we're so used to it and gravity kind of swamps everything but in space you come to

understand it very quickly. You push off gently with your hands and go merrily floating along, happy as a lark, and then you bump into something sticking out with your shoulder or knee. On Earth it isn't a biggie but in space you quickly appreciate that when you bump into the Wheel, the two and a half million kilogram Wheel bumps right back into you and since it has a huge amount of inertia compared to the puny little 190 kg of man and spacesuit the reaction is more dramatic than you expect. The Wheel backs off an infinitesimal amount and the man and suit backs off a huge amount. It's like being hit, at low speed, by 2500 cars simultaneously.

Anyway, I digress. I was telling you about the major equipment failure we had, although major is a relative term. It was in no way life threatening, at least of itself. Three days before we started to slow down, Ollie fired off a science package inside a small, navigable probe intending to put it into orbit around Titan and start giving us some preliminary data on the region we were planning to investigate for a possible landing site. The plan was that once in the vicinity of Titan he would manoeuvre it into a suitable orbit and trigger the various sensors. Discouragingly, since it would be Ollie who was going to remotely pilot the Spare Wheel to the surface once we had a site, he managed to lose the probe. He made some mistake and instead of the probe settling into a nice orbit it sling-shotted around Titan, picked up a lot of speed and headed off in the general direction of the black hole at the centre of our galaxy where it would be swallowed up in about two hundred thousand years. Gina wasn't impressed

Chapter Twenty

“I dreamt about my wife last night,” I said.

I'd almost finished saying it when I realised it probably wasn't the best thing to say to the woman I was in bed with.

“Good dream or bad dream?” asked Evie.

We'd got into the habit of talking about our dreams when we woke up and often found we'd had very similar dreams.

“I don't know,” I said, lying on my side and stroking her back. “It didn't last very long but she seemed to be trying to say something to me but couldn't somehow which was strange. She never used to have a problem talking.”

I wondered whether to continue stroking Evie or get up and get some coffee. Being a romantic at heart I decided on coffee so I got up. My heart may be romantic but the rest of me wanted coffee. Evie rolled over to watch me, a strangely blank look on her face.

“I dreamed about my father,” she said in a conversational voice. “He was trying to talk to me too. Do you suppose we had the same dream again but you interpreted the person as your wife and me as my father?”

“Could be,” I said, getting back into bed with two coffee sachets. “Here.”

I sat up in bed with my back against the wall and Evie leaned against me.

“HalleB, open window E7,” she said while breaking off the tab of her coffee.

The cover slid back to reveal a section of Titan just coming into view at the bottom. We both sat there watching as the slice of Titan rolled by outside the window. I'd laboriously done the maths and worked out that, from 600km up, we were able to see roughly a 1200km wide strip

as the Wheel rolled its way around. Evie thought that was wrong so she had checked my maths. Then she decided I was definitely wrong but couldn't quite see where I'd made a mistake so we'd gone to Zaf. Zaf had glanced at my calculations and managed to refrain from laughing then pointed out that I'd multiplied by the distance from the viewpoint to the window instead of dividing and that the view of Titan, 2 metres away from the 1 metre high window, was in fact only 300km wide.

"Only 600km away," I said quietly. "That's about as far as from London to Edinburgh."

"Do you see where we're landing?" she asked.

"No," I said, "it all looks much the same to me. Gina said the landing site is on a flat plain about a kilometre from some cliffs but it could be anywhere. So, umm, was your father a major figure in your life?"

"Yes, I think he was," she said. "He died when I was 17 and I'd never thought we were close but it wasn't until, ohh, maybe when I turned 30 or so that I realised how influential he'd been on me."

"How do you mean?" I asked as Titan disappeared from the window. We were so close now that it was in the window for about 16 seconds of each 75 second revolution of the Wheel.

"He was an Associate Professor at Nottingham University," she said then paused to drink some coffee. "His field was Medieval Christendom. He always used to say that the only real truth was what you found out for yourself, not what you got from following everyone else. He always encouraged me to go my own way and not follow the crowd. We had a lot of disagreements."

"You wanted to follow the crowd?" I said, a little curious since Evie seemed to be someone who definitely did not follow the crowd.

"When you're a teenage girl," she said, twisting to look me in the face, "the last thing you want is to be different. You want to be in with the latest fashions and go where everyone else goes. You want to be popular with the boys and girls who think differently are never

popular.”

“So what made you change your mind?” I asked.

“I don’t think I ever did change my mind,” she said. “At least not in any conscious way. It’s just that not long after I turned thirty I met Edward and he was a little like my father and I realised that I’d never had a relationship longer than a few months because I did go my own way and not follow the crowd. Until then, umm, I don’t know if this makes sense, I’d been sort of following the crowd but in my own way and it hadn’t worked. I’d been acting at being conventional and failing without realising it. Edward gave me the freedom to fully be myself. That’s why I married him. And why I left him in the end.”

She started to get out of bed.

“No, that doesn’t really make sense,” I said. “Why did you leave him?”

She sat back on the edge of the bed. Not for the first time I admired the effect of reduced gravity on the female form.

“Freedom is a two edged sword,” she said thoughtfully. “Being a man you have no idea what pressures girls are under to conform to social expectations, far more so than men are, and when Edward gave me the freedom to be myself he also gave me the freedom not to be a wife and mother. He gave me the freedom to reject him and I did. We’re still great friends though and occasional lovers although that’s all over now.”

“How come?” I asked, fishing for a nice answer along the lines of me having replaced Edward as her friend and lover.

“He’s on Earth,” she said, standing up. “Too far away.”

“So I’m just convenient?” I nearly asked but held my tongue. The likely answer was ‘yes’ and Evie wasn’t the sort to fudge the issue. Sometimes she could be painfully direct.

“Are you looking forward to landing?” I asked wondering if Evie was coming back to bed. She’d put the coffee sachets in the recycle slot

and was lazily wandering round her apartment completely naked, just touching things. She straightened a notepad on her desk before looking over. We were due to depart this merry little island in space in about six hours.

“Yes and no,” she said. “Yes because I want the waiting to be over and no because I’m scared to death of what’s going to happen next.”

“Yeah, I’m the same,” I said. “Everyone’s afraid of the unknown but this is more unknown than anything anyone’s ever faced before. At least on Earth we had experience to guide us into the future but no one’s ever experienced anything like this before. I’ll be honest, these dreams bother me as well. I’m sure they mean something but god knows what. Myf thinks they’re just because we’re going through physiological changes because we’re in space but I’m not sure I buy that.”

“No, me neither,” said Evie, finishing the full circuit and getting back into bed again. “That doesn’t explain why our dreams are so similar but so different from the others.”

“She says that’s because we’re sharing the same life at the moment,” I said, “but that doesn’t really explain why we were having the same dreams before.”

It hadn’t taken long for the rest of the crew to figure out that I had more or less moved in with Evie and had communicated this with the occasional raised eyebrow and circumspect remark. Nag and Angus had also ‘come out’ about staying in together although as far as I knew the other six were still single. Gina, in her own efficient way, had sanctioned things by assigning Evie and me to one tent and Angus and Nag to another when we set up our base camp. She’d assigned Myf and Talia together as well as Rik and Zaf, with her and Ollie in the last tent. No one, as far as I know, had complained.

“So what are we going to do until departure time?” asked Evie. “I’m pretty well packed. I just have to get into my EVA suit.”

“Me too,” I said. “I stowed my box on the transport last night.”

We were due to be on the surface in thermal tents for seventy two to ninety six hours while Gina and Ollie sorted out and landed the Spare Wheel. If all went well we'd then move into the Spare Wheel while we built the base. If it didn't, we'd either go back up to the main Wheel, left in orbit, and return to Earth or spend the rest of eternity as frozen blobs of organic matter spattered over the Titan surface. It would be interesting to find out if the Titan environment made fossils possible. In fact, it would be interesting to know if organic matter rotted in the Titan atmosphere. I made a mental note to ask our biologists but Evie found something to keep us occupied in bed for a while and I forgot.

* * *

It took nearly two hours to land, almost twice as long as it took to land on the moon the first time. Most of the two hours was spent getting exactly the right angle for the transporter because, unlike the moon, Titan has an atmosphere and that atmosphere is denser than Earth's so the possibility of burn-up was greater. After circling down we then spent most of the rest of the time a couple of hundred metres up inspecting the proposed landing site thoroughly before landing. Disappointingly, although the ionised plasma from the engines was turquoise when we left orbit by the time we got to the ground it was a pale shade of grey-brown. I should have expected this since intellectually I knew that mixing slightly greenish blue with light orange would end up with grey brown but I felt that the turquoise would somehow make our arrival more significant. Landing in a shower of pale grey brown was definitely not impressive. Not that anyone was watching, of course, except us from inside.

The two pilots sat up the front and the rest of us in two rows of four behind. Evie got a window seat and I sat beside her with Zaf and Talia next to me. We had to wear our EVA suits since Gina insisted on protocol but I for one saw no real need. If anything went wrong it wasn't as though we could really walk back up to the Wheel. Evie held my hand, or perhaps it was the other way round, during much of the landing. Despite the thick material it was ... reassuring.

Not a lot happened on landing. It was actually a major anti-climax. At least with an aeroplane you get a sense of something happening. The cabin tilts, you can feel the deceleration then there's a thump and the

engines start to scream in reverse as they fight to slow the aeroplane down. With the transport, we just inched closer and closer to the surface, littered with small rocks, then when the tension was high and we were all wondering just when the hell we actually were going to land, Ollie said, in a flat, no nonsense, monotone, “We’ve landed, Captain,” as though we’d arrived at McDonald’s.

Then the fun part began, for Gina and Ollie anyway. The rest of us just there like so many suitcases while our Captain and Co-Pilot went through a seemingly endless array of Post-Landing Checks and turning switches on and off. When you fly somewhere for a holiday there’s that period after landing where you crane to look out of the window to catch a glimpse of your holiday destination while the aeroplane taxis to the Arrival Lounge. You can see other aircraft, patches of other runways, the occasional building and people running about doing things. Here we didn’t taxi anywhere. We just sat. There were no runways, no buildings, no people bringing up the steps for us to exit the plane, no one with a little electric car and trolleys to unload the bags. We just sat there.

So we looked out of the windows. It could have been anywhere desolate, except for the orangeish colour, and it was easy to imagine that that was a tint in the windows. On the other side of the transport we could see the cliffs, perhaps half a kilometre away. They looked like ... cliffs. Not desperately high and smoothed and rounded by the local erosion. Our side was just an expanse of fairly flat looking ground littered with rocks with a thin mist like a thick blanket over the ground. Strangely enough, it looked hot outside, like late twilight in the deserts of the middle east. It was cloudy too. Thick patchy cloud. In the distance the cloud reached to the ground as though it was raining.

“So where’s Saturn?” I asked aloud, peering through the window my side then the window past Zaf. “I can’t see it.”

“It’s behind us,” said Gina. “Slightly off to port.”

“Which is port, again?” I asked.

“Left,” she said. “Your side.”

I leaned over Evie craning to see where Saturn was until she slapped me away. I don't know why but I had a strong urge to see Saturn hovering just above the horizon of Titan but I wasn't destined to for a while. Not until we got to go outside the transport.

"When can we get out?" I asked, like a small kid in a car on holiday.

"When we've finished the Post-Landing Checks," said Gina. "Just as you were briefed."

"How much longer?" I asked.

"As long as they take," she said, not looking up from her control panel.

The transport rocked slightly.

"What was that?" asked Evie, anxiously.

"Just a wind gust," said Ollie. He twisted round to look at the External Atmosphere panel then consulted with the computer on the Wheel which was continuously monitoring the surface below it. "Hmm, looks like there is some weather coming our way."

"What sort of weather?" asked Angus.

"A light squall, by the look of it," said Ollie. "Nothing serious although it'll be a chance to see how the hull holds up to immersion in liquid methane."

"Why wouldn't it?" asked Talia. "They tested it, didn't they?"

"One thousand panels of hull polymer of varying thicknesses were immersed in liquid methane for periods in excess of five thousand hours at varying temperatures and pressures," said Zaf. "We covered all this during training."

"That was four years ago," I said. "Did any dissolve? I don't remember."

“If they had you would have remembered,” said Zaf.

“So why are we wondering if the hull will hold up?” asked Talia.

“Because Ollie doesn’t trust engineers,” said Zaf.

“Can you blame me?” asked Ollie. “I’m in the dog house for losing that probe but it wasn’t my fault. One of the Lateral Ionisation Thrusters failed to activate so the probe went into uncontrolled non-axial gyration. That was an engineering malfunction not a piloting error.”

“A bad workman always blames his tools,” said Zaf.

“And how exactly is a good workman supposed to make an Ionisation Thruster fire up half a million kilometres away?” fired back Ollie. “We rely on engineers ...”

“Enough, Ollie,” muttered Gina. “It worked when you tested it before launch, it didn’t work when you fired it during live orbital procedures. Leave it at that.”

“Faf,” said Ollie. “Ohhh, that’s interesting.”

“What is?” asked Gina.

“The SSP Accelerometer during the landing phase,” he said. “Have a look.”

Gina leaned over to look at Ollie’s screen and the rest of us peered over as best we could. It looked like there was some sort of graph on the screen.

“That is interesting,” said Gina sounding very interested. “It appears to confirm the Cassini-Huygens report.”

“What does it say?” asked Rik.

Gina put the display on the main overhead screen. It was a chart showing a line that went up sharply a long way then came back down

then went up a little before levelling off.

“Interesting!” said Zaf, leaning forward.

“What does it show?” asked Myf.

“G-force against time,” said Zaf.

“In English, please,” said Myf, thumping his shoulder from the seat behind him.

“It’s a chart of the gravitational force acting on the transport over the half second of our landing,” said Ollie. He pointed his stubby gloved finger at the point where the line went almost vertically upwards. “This is when we landed and sustained a momentary force of over 15G.”

“Isn’t that what you’d expect?” asked Nag. “That’s the force of landing.”

“Exactly,” he said. “But it’s what happened next that’s interesting.”

“Oh for god’s sake,” I said. “Just tell us what happened without the technical crap.”

“OK,” he said. “Umm, we landed with a splat, not a thump or a splash.”

“You what?” I said.

“We didn’t land on a solid surface,” he said. “If we had the accelerometer would show the peak then settle down to a steady state. On the other hand, we didn’t land in liquid. If we had it would show a long, slow decline as we sank into the liquid. This dip followed by a quick rise before reaching a steady state shows we landed in mud, with a splat. A fairly thick mud too by the look of it.”

“Oh,” I said. “So, er, what does that mean?”

“It means the ground’s wet,” said Rik. “Duh.”

“It means the ground is marshy,” said Angus. “It’s not solid soil of some sort nor is it frozen liquid.”

“But what about those rocks over there?” said Evie, pointing out of the window. “Are they solid or some sort of jelly?”

“They’re probably frozen,” said Angus. “We’re going to have to wait until we get out before we can say for certain.”

“Of course they’re frozen,” said Rik. “There’s zero evidence for any jelly-like matter on Titan.”

“You’re forgetting the Izmailova-Kapustina Conjecture,” said Angus.

“Oh that’s nonsense,” said Rik heatedly. “There is no possibility for methane and related hydrocarbons to convert into petroleum jelly at these temperatures. It is merely a conjecture and a flawed one at that.”

The two of them started getting technical and Zaf joined in with an engineering perspective.

“Anyone else interested in that conversation?” asked Gina.

There was a chorus of no’s then they went silent as she moved them into a three-way radio conference isolated from the rest of us.

“It’s darker than I expected,” said Evie.

“It’ll get darker,” said Gina. “We’re going behind Saturn in about eighty hours so the sun will be eclipsed.”

Actually we’d discussed this during training and it had taken me a while to get my head around it. For nearly half its orbit around Saturn, Saturn was between Titan and the sun. This meant that for seven or so days of the almost sixteen day orbit Titan was in darkness. But, because Titan always had the same side facing Saturn, the rest of the time the sun was going to be the other side of Titan to where we were going to be since we were going to be on the Saturn side. This meant we’d be in darkness then as well, only with the reflected sunlight from Saturn. There was only going to be a brief period of perhaps twelve

hours in every sixteen days when we were to one side of Saturn, where the sun would be above our horizon and that depended on our exact landing point. If we landed roughly in the centre we'd get some sunlight on each side of the orbit but, since our final landing point was well over to the east we'd only get sunlight before going behind Saturn but not coming out from behind it. So, in each sixteen day year, we'd have seven days of full night, eight and a half of semi-night when we'd have reflected light from Saturn and half a day of sunlight. And at this distance we'd only get about 1% of the sunlight that the Earth got. Fortunately I was a night person by nature. So was Evie. She rarely got up before I did.

"We're just about there," said Gina after a while. She flicked over to the three-way conference, which was still going. "Guys, are you joining us?"

"What's happening?" asked Angus.

"We've finished the Post-Landing Checks," she said. "Everything is looking good. Who wants to be first out?"

We all went quiet. Not because none of us wanted to get out. We all did. It's just that the breathing apparatus had never been tested in the actual Titan atmosphere. It had been tested in simulations of the Titan atmosphere but until we arrived no one actually knew exactly what the atmosphere was composed of so no one knew exactly how the breathing apparatus would perform.

It was impracticable for us to wear our EVA suits all the time on Titan, particularly as there was an atmosphere, since they were far too bulky and cumbersome. We had rather pretty suits for use on the surface which were basically like wet-suits made from electric blankets which were light and non-restrictive and would keep us reasonably warm in the minus 180 or thereabouts temperatures. For breathing, the BSpaceE technical whizz-kids came up with a nifty little box so we didn't have to carry large amounts of breathable air around. Because Earth's atmosphere was roughly 80% nitrogen and Titan's was 95% nitrogen it was fairly pointless carrying around bottles of breathable air which were mostly nitrogen. Their solution was a gizmo that stripped out the methane and other nasties and injected a small

amount of oxygen and a tiny amount of water vapour to keep the insides of our noses nicely wet. This meant we could carry a relatively small bottle of oxygen and breathe mostly from the actual atmosphere itself. The downside was that we would drip the waste methane from a pipe at the back of the gizmo which would be inelegant. Still, the gizmo had worked very well in the labs.

“Oh, I will,” I said. “I’m bored just sitting here.”

“Thanks, but no,” said Gina. “You and Evie have a special role in this mission. We can’t risk you on something trivial like this.”

Actually, being able to breathe didn’t seem that trivial but I took the point, not without a certain amount of relief.

“It shouldn’t be either of our biologists,” said Gina, “and it’s probably not prudent to risk either of the pilots.”

“OK, OK,” said Talia, “Zaf will volunteer then. If there’s a problem it’ll be an engineering one.”

“Evil child!” said Zaf when he realised what Talia had said, being almost seven years older than she was.

“Excellent,” said Gina. “Angus, would you help Zaf out of his EVA suit and into his TS suit.”

TS being ‘Titan Surface’ and endemic of the acronyms so beloved by technical bureaucrats. I preferred to think of mine as my overcoat. It had a more homely feel to it.

Chapter Twenty One

“It’s spectacular here, isn’t it,” said Evie looking around, “and yet so incredibly alien.”

We’d finished setting up our triple layered heated tent in the lee of the transporter in a line with the others. The tents were purely temporary until the Spare Wheel arrived but, once we’d moved into the Spare Wheel, the tents could be deflated and used on expeditions as and when they arose. There were a couple planned for later in the year but, along with a lot of our plans, they were flexible. The tents made it possible for us to strip off our TS suits and masks and get out of the Titan atmosphere.

I rocked back in my thick clogs as a strong gust of wind threatened to blow me over. The clogs were 7 inches thick and weighed about 18kg each, on Earth, and made it easier to walk and not get blown over in the low gravity. They also held the batteries that powered the TS suits and, supposedly, should last for four hours although we had yet to put that to the test. If anyone planned to be out for longer than four hours we also had belted batteries and could carry spare clogs in a backpack. After all, on Titan they only weighed 2½kg each.

“It pisses me off that we can’t see Saturn in the sky,” I said, looking up and scanning the horizon.

By rights, Saturn should be hanging there, ten degrees or so above the horizon and look magnificent. It should be somewhere around ten times the size of the moon as seen from the Earth and the rings should be taking up a quarter of the sky but it was not to be. The cloud cover and haziness of the air at the surface meant that Saturn was at best a faint glow in the twilight. I felt cheated. This wasn’t how I’d painted it.

“I know what you mean,” said Evie. “I was expecting it too. Maybe we’ll see it when there’s a break in the clouds. No one knows what the seasons are like here so maybe at certain times there are clear skies.”

“I doubt it,” I said. “But yeah, it’s very alien looking isn’t it. We’ve got a lake and a shore and some cliffs not far away, much like on Earth

but nothing looks quite right. The dim grey-orangeness doesn't help either. Look at those columns over there."

I pointed off to the left where a buttress of the cliff protruded and the weather had eroded the end down to rock-like columns. OK, technically they were frozen water but they were harder than granite. More importantly, the low gravity had let them stay upright when they looked too spindly to stand. On Earth such thin columns would have fallen over aeons ago. Some had, by the look of the boulders strewn around.

After setting up our tent and making sure the heating and air supply were working properly we'd decided to go for a walk down to the lake, like we were on holiday. The ground was squelchy but generally firm and sloped gently down to the lake from the transporter. There was even a beach. At least it looked like a beach because there were none of the rocks of assorted sizes on it. Presumably the level of the lake rose and fell and washed away any rocks although there wasn't any seaweed or discarded Coke cans.

"It's difficult not to look at the lake and think it's water, isn't it," said Evie, going up to the edge. "That's what probably makes it look so strange. I'm expecting it to move like water but it doesn't. It's too thick and oily, almost like liquid wax. It's kind of eerie."

The wind was making the surface ripple but there were no waves. The liquid, methane and ethane according to the techie people, sluggishly flopped onto the shore rather like wet blankets. Even in the dimness it glistened and the surface was perfectly smooth. There wasn't a bubble in sight. Titan wouldn't get much of a tourism industry from the surfing brigade.

"Do you suppose there are any fish in there?" I asked, dipping the sole of my clog in the liquid. I half expected to find it solid enough to stand on but my foot sank in. I lifted it up and it took a discernable time for the hole to refill. Disconcertingly the liquid didn't drip off my foot. It just slid around and formed a big ball then dropped back into the lake as a lump. It didn't even splash. It just merged back in to the lake like oil.

"I doubt it," said Evie. "It'd be a bitch to swim in."

"Phil, Evie, come back to camp, now," came Gina's voice over the radio. She sounded irritated.

We both turned to look back at the transporter and there was a figure this side of it, facing in our direction. Even from two hundred metres in an orange twilight I could see her glaring at us so I gave her a friendly wave.

"We're going for a swim!" I said. "Why don't you join us?"

"You are breaching protocols," she said, angrily. "This is a hostile environment. All personnel absolutely must inform myself or Ollie of their movements at all times."

"You were all so busy," I said. "We didn't want to disturb you."

"Report back to base immediately!" she said.

"OK," I said. "This is Phil, reporting to base. Me and Evie've gone for a walk by the lake. Happy now?"

"You shouldn't talk to her like that," whispered Evie. "She's just worried about us getting lost."

"Damned right, I am," said Gina and Evie gave a little gaspy sigh. She'd forgotten that with radios you can't whisper. Everyone in radio range can hear. "Get back here."

"We'd better go back," I said so we started walking back, Gina watching our every move.

We were less than half way back when a movement off to my right caught my eye so I turned to look.

"Jesus," I said, stopping.

Rosalie, my deceased wife, was walking parallel to me maybe five metres away. She was wearing a floral print summer dress and her

long hair was being blown in the opposite direction to the breeze.

“What?” asked Evie, also stopping and looking over at Rosalie.

“Do you see that?” I asked.

“See what?” she said, sounding puzzled.

“What are you two looking at?” demanded Gina.

I stepped towards Rosalie and she turned to face me and smiled then dissolved into a yellowy-brown mist and blew away.

“What did you see?” asked Evie, coming over to stand beside me.

“Umm,” I said. “Are you sure you didn’t see anything?”

“No, I didn’t,” she said.

“OK,” I said, “let’s get back to the transporter.”

I could sense Gina’s clenched jaw behind her face mask when we got back. She made us go inside the transporter like naughty children sent to their rooms then gathered the others. Inside we were able to take off our face masks and turn off the suit heating.

“Two things, people,” she said, radiating more authority unconsciously than my old headmaster ever had. “Firstly, it seems I have to repeat my instructions about not straying from base camp and keeping myself or Ollie informed of your locations at all times. This is absolutely essential. Anyone absenting themselves from the base is at risk of accident and injury and if we do not know your location we may not be able to find you before your batteries run out. You not only put yourselves at risk but you put the rest of us at risk. This is not only a hostile environment but an unknown one. Do I make myself clear?”

“Yes Gina,” we chorused.

“Secondly, there is a possibility that there is life on this moon,” she

continued. "Until such time as we determine what form it takes we must assume that it is potentially dangerous. Moreover, the chemistry of this moon is substantially different to that of Earth therefore it is distinctly possible that at this stage we may not even be able to recognise an organism as being alive let alone assess its intentions. We may be seen on friendly terms but we may be seen as invaders or simply as a meal ..."

"Oh, that's a highly unlikely scenario," interrupted Rik. "The chemistry of this environment makes the consumption of oxygen based life such as ourselves virtually impossible, just as we cannot consume methane based life."

Gina sighed.

"I think it's a pretty fair assumption that any life form on this moon will not have encountered oxygen based life before," she said. "Which means it may well eat one of us before realising it can't digest us."

"Well, yes, I suppose so," said Rik. "Few, if any, poisons are obvious as such. We learn from experience."

"Quite," said Gina. "So until we know there is no life on this moon we don't want the native organisms to gain any experience."

"But surely you don't think there are any large creatures here capable of eating us?" asked Talia.

"It's not just tigers that can eat you," said Rik, grinning happily at her. "Bacteria and viruses can do a pretty good job as well. Have you heard of *Mycobacterium Ulcerans*?"

"Umm, no" she said.

"It's known as the flesh-eating bug in Australia," he said. "It's a nasty little bacterium which eats the sub-cutaneous fat and causes massive skin ulceration as a secondary event."

"Can I just mention that something doesn't need to be alive to cause you serious harm," said Angus. "It could be simply corrosive, and we

don't know enough of the local chemistry to be certain. There is definitely hydrogen present so there may well be acids in localised concentrations."

"Thank you for making my point," said Gina. "Now there is also another aspect to this. Phil, you saw something out there. What was it?"

"It was nothing," I said. "Just my mind playing tricks."

"And that is another serious danger," said Gina. "This is a very alien place and we have no idea how our minds will be affected. It is possible that the strangeness of the environment may cause misperceptions and it is also possible that there may be chemicals in the atmosphere that are not removed by the breathing apparatus that could be hallucinogenic."

"Actually it would be a good idea if you told us what you saw, Phil," said Myf. "There may be recurrent patterns that we can isolate in the future, either psychological or physiological."

"It was nothing," I repeated. "Just at trick of the light. Evie didn't see anything."

"We really ought to know," said Myf. "Whatever it was may affect all of us at some time or another and it may become worse if we can't attribute a cause."

"Oh phooey," I said. "OK, I saw my dead wife walking along beside me wearing a summer frock."

"Interesting," she said. "Nag, I think we ought to do some blood analyses. It's probably psychological but it could be chemically induced."

"Oh goody," I said. "So I'm either a fruitcake or a druggie. Bring it on."

* * *

We spent the next two days clearing the bigger rocks away from the main flat area of the plain while Gina and Ollie did extensive system checks so that the Spare Wheel could be brought down. It was quite laborious since virtually all of our construction equipment was inside the Spare Wheel but it had to be done. Until we had the almost infinite resources of the Spare Wheel we were very limited in what we could do. Our tents provided the most basic of accommodation and the transporter had next to no scientific equipment for research or even much in the way of power. Without the Wheel we could perhaps survive for a month while still leaving enough power to get the transporter back up so, despite the tedium we buckled down to the job. Usefully the TS suits had thermostats so when we got sweaty we just turned down the internal temperature.

“We’ll initiate the Wheel Landing Sequence tomorrow morning,” said Gina on the evening of our third day on Titan.

I ought to mention that for convenience, for body clocks if nothing else, we still operated on Earth time. Because Titan’s day and year were the same and the same side always faced Saturn trying to get some simple local time system was nigh on impossible and ‘evening’ had no real meaning. After millions of years of evolution our bodies operated on Earth time and to change that would have disrupted any number of human biological processes. So, ‘the evening of the third day’ meant not long before we went to bed for the third time on Titan regardless of anything that was intrinsically Titanian.

“Landing will be controlled from the transporter,” she said, “and I need you all on board in full EVA gear by 10:30 hours, ready for launch. Wheel separation will begin at 11:00 and transporter launch at 11.15.”

No one, including me, argued with this. If the Spare Wheel crashed during landing there was a possibility that the Pebble Bed Reactor could be compromised and the entire area irradiated. If that happened we would already be half way back to the main Wheel and out of danger. We were going to leave the tents behind since we wouldn’t need them if we had to go back to the Wheel but, assuming the Spare Wheel landed successfully, we might need to spend another day or two camping depending on whether there was any other damage. BSpaceE

had gone to great pains to point out that not only had no one ever attempted to land such a large object before, but that no one had attempted to land a Wheel flat on its side. One and a quarter million kilograms of spinning Wheel had to stop spinning and be tipped onto its side and gently lowered to the ground without even scraping the paint.

The fact that the Spare Wheel would start its journey from 600km up in the air and 1000km to the South was incidental. The real fun would be when it landed when we would be a hundred kilometres up in the air and two or three hundred kilometres to the East and at no time in its journey would any of us actually see it until it had landed. It was a shame but I'd already done a painting of it from my imagination although the plasma exhausts had been turquoise. Still, people like drama in Art. If you want technical accuracy, take a photograph.

Gina would be flying the transporter as Ollie was considerably better at piloting things remotely from a moving platform. I, on the other hand, couldn't even manage to get the little bar of chocolate with the grab in the machine outside my local supermarket where neither the chocolate nor the winch above the grab was moving. Ollie was probably banned from those machines. He could probably empty the machine before his £1 coin ran out. Blindfolded.

During the night I woke with a start. Evie was sitting up in her bed staring at the airlock. The light was on but dimmed, probably so as not to wake me.

"What's up?" I asked, sleepily

"My father is standing beside the airlock," she said.

"That's nice," I said, settling back down. It was probably a good five breaths before what she'd said trickled into my brain and stimulated a few neurons, making me sit up as well.

"Where?" I asked.

"Over by the airlock," she said. "Look."

I looked at the airlock and there was no one there. I looked carefully around the tent and there was no sign of Rosalie either. I was tempted to look under the bed but thought I'd probably seem stupid.

"What's he doing?" I asked.

"He's wagging his head around and making strange noises," she said, watching the airlock intently. "Can't you hear?"

All I could hear was some whistles and groans from the wind outside. They were much like the sounds wind makes on Earth, only a little deeper since the atmosphere here was denser.

"You're sure it's not the wind?" I asked.

"I can hear the wind as well," she said. "Can't you see or hear him?"

"No," I said.

"He's gone now," she said, relaxing a little.

"He wasn't wearing a floral dress, was he?" I asked.

"No, he was wearing his old corduroy jacket with the elbow patches," she said. "You think this was like Rosalie?"

"Yeah," I said. "I think we're both starting to have dreams while we're awake. Were you awake when he arrived or did you wake up to find him there?"

"I'd got up to have a pee," she said. "I noticed him after I got back into bed. Do you think I should tell Myf?"

"I guess so," I said. "Although she'll probably want to do some blood tests."

We lay back down in our beds separately. We'd pushed them together but there was a hard ridge where they met and neither of us liked lying on it.

“What sort of strange noises?” I asked.

“Screeches and groans and weird sounds,” she said. “I never heard him make noises like that when he was alive.”

“Did he smile or anything?” I asked.

“No, he was completely expressionless,” she said. “Shall I turn the light off?”

“Might as well,” I said. “It’s all very strange, isn’t it.”

Evie turned off the light and we lay there, side by side, neither of us drifting back to sleep.

“You don’t suppose he was trying to talk to me?” she asked after a while.

“Why the screeches and groans?” I asked. “Why not just talk to you the way he used to?”

“Maybe he’s forgotten how,” she said thoughtfully. “After all, he’s been dead for 30 years.”

“Maybe,” I said slowly. “And maybe he’s not your father and doesn’t know how to talk.”

Chapter Twenty Two

This was the bit I was most looking forward to, the construction work.

Not that I have any construction skills myself. I can handle a screwdriver but that's about it. I can't even redecorate which is probably a sorry admission for an artist but the act of painting a picture is a very different skill-set to that of painting a room, unless it's murals of course but most people don't want murals on their walls.

Anyway, once the Spare Wheel had landed our job was to start to construct the base that would be used by the main colonists when they arrived in a little over three years. We had deliberately set up our base less than a kilometre from some cliffs as the plan was to dig into the cliff, hollow out a decent sized space and built the base and hydroponics farm inside. Phase One was to construct our own short term base near where we were going to dig into the cliff from sections of the Spare Wheel. The rest of the Spare Wheel would stay where it was and gradually get moved but since the bulk of it was water tanks this wasn't much of an issue. The Pebble Bed Reactor, of course, would stay where it was. We'd just run a cable from it to our temporary base and the main base, or the Wheelbase and the Cliffbase as we started to call them.

Phase One is a misleading term though since it implies that as soon as the Spare Wheel landed we were going to start the construction work. This was far from reality. The first step was to do a thorough review of the grounded Spare Wheel from a hundred kilometres up to make sure there were no signs of leaking radioactivity and a check of systems. The next step was to land and do more systems checks and a close up visual inspection. That was when we discovered that three of the water tanks had ruptured on impact. Each tank held 5,000 litres of water but it wasn't as big a deal as it sounds since the air temperature where we were was minus 167 degrees centigrade most of the time. This meant that the instant the tanks had ruptured the water inside had frozen like granite so Gina decided not to worry about those tanks. If at any point we got low enough on water to need those 15,000 litres we could just heat them until they melted. We had another half million or so litres in the Spare Wheel just in case and preliminary tests by Rik and Angus had shown that many of the rocks

and the cliff we were going to burrow into were, on average, about 98% frozen water and the other 2% were, by and large, chemicals that could be removed. The key words there being 'on average'. So long as we were selective we'd be able to get reasonably pure water. Get it wrong though and we could be drinking nasty little cocktails. Angus had found one small deposit of frozen hydrochloric acid.

The systems checks took almost a day longer than expected since there had been a number of minor equipment failures due to the impact of landing and a discrepancy in the data banks. Each wheel had two computer systems that processed all data independently and all storage was on RAID 6 protected storage devices which meant that every single bit of information was stored in four places with eight ways of working out what it should be if it got lost. When the Spare Wheel's data store was checked we discovered that, probably due to the impact, the two data stores were inconsistent. This meant that one or possibly both of the stores had wrong information in it or them. The two stores on the main Wheel were consistent with each other and checking discovered that one of the Spare Wheel's stores was consistent with the main Wheel's stores so the one inconsistent store was completely wiped and rebuilt. This would probably take ten minutes on a home computer or maybe a couple of hours on a large corporate computer but, despite our having ultra-fast mainframes it still took nine hours to rebuild. Then it had to be checked for consistency again since some of the data could have become corrupted during the rebuild. Fortunately it hadn't been since there are few things more boring than watching a computer check itself.

Eventually Gina pronounced all was well in our little world and we could proceed with turning on the lights. Now, on Earth this is done by flicking a switch or telling your automated system to turn the lights on. That's because the infrastructure is already in place. The simple act of flicking a light switch requires you to have lights and switches installed and connected to a power supply which means someone must have built a power station. Well, we had the power station, bubbling away in the centre of the Wheel but we had no other infrastructure. We had to build it. This meant hauling out large lighting grids, similar to the ones used for lighting evening sporting events at stadiums only about half the size, and shifting them over to the Wheelbase site then laying cables.

We were helped in this task by having ten two seater quad-bikes which could tow trailers. The bikes had been designed like those Transformers toys so that they packed nice and small but with just a few simple movements unpacked into fully functional quad-bikes that only needed charging to work. Well, that was the theory. Only eight of them worked so Zaf got lumbered with the job of fixing the two faulty ones while the rest of us built the lights. Engineers have their uses.

However, before we could set up the lights we had to decide where to put them. This was dictated to a large extent by where we were going to dig into the cliff and that was decided by setting up some geophysics equipment to look at the internal structure. During training Nag had shown a particular aptitude for this, most likely because the geophysical output looked similar to MRI scans so she did the analysis and made some recommendations to Gina who said “Put the lights there, there, there and over there,” so we did. It’s called teamwork, apparently.

Once the Spare Wheel had been pronounced trustworthy again we’d had the option to take down our tents and move into it but we’d elected not to bother. The tents were working well and we’d only be on the Wheel for two or three nights so it didn’t seem worth the effort although it was nice to know we could shelter inside it if one of the mega-storms came along. Zaf sorted the two quad-bikes while the rest of us put up the lights and then we attacked the Wheel with power tools. We had to dismount several of the prebuild modular cabins, tow them out to the Wheelbase site and bolt them back together. That done we had ourselves a nice little compound of ten cabins with a science lab, a common room and a gym, since we all had to get back to our low gravity exercise regimes again. All very cosy. Not as spacious as the apartments we’d had on the main Wheel but cosy none the less.

And we did it just in time. We’d been on Titan for nine days by that point and the moon was due to go behind Saturn the next day, plunging us into total darkness for the next fifteen days or so. The lights were essential. We were still able to communicate with Earth though. In the hours before we moved into orbit around Titan we had put three communications satellites into orbit around Saturn, on the same orbit as Titan itself. They were separated by 120 degrees so that

one of them would always be in contact with Earth regardless of where Titan itself happened to be and the others could relay communications.

This was useful to me because I got occasional emails from Gerald telling me about sales of my paintings and how my investments were going and, the sad part I never wanted to know about, how much I had to pay in taxes. The last few had been a bit depressing since the Cyber Wars had caused global hyperinflation and the small fortune I appeared to have been building was rapidly disappearing. Soon after we'd set up the lights and moved into our new accommodation I had another email from him telling me that the British Government was devaluing the pound and that my £1.2m in cash funds were now worth N£1200, the N£ being 'new pounds' apparently, and were sufficient to buy me a new bicycle if I wanted one.

It was worse for some of the others though. Emails over the last few days had told Ollie that his 64 year old mother had died from a bout of flu because her hospital had refused to admit her. Apparently decisions had been made at the highest levels and no one over the age of 50 was now getting treatment because medical supplies were drying up. Talia's ex-boyfriend, a policeman, had sustained several broken bones battling with rioters in North London over food shortages but, being in his early thirties had received treatment although the NHS were planning to bill him. Angus' parents, who owned a sheep farm in Scotland, were facing destitution as all their sheep had been stolen and their insurance company wasn't paying out because it was in the process of going into liquidation.

On the other hand, Myf's younger sister had just had another baby and mother and child were doing as well as could be expected under the circumstances although no explanation was given of what the circumstances were.

In some ways though, the most unsettling news was that BSpaceE had postponed the second group. They'd been due to launch in three or four days, now that we had safely landed and established our tenuous foothold on Titan but, due to financial and logistical problems, the launch had been delayed indefinitely. What was happening to the forty people selected to be sent they didn't say.

“So is there much point in continuing with the Cliffbase construction?” asked Nag when Gina broke this news to us.

“That’s a valid question,” answered Gina. “Thoughts, anyone?”

“If the launch had been cancelled it might be a reason,” said Zaf. “But it’s only been postponed, which means that it could still happen in a month or a year. If we don’t build the Cliffbase we may have to later on and it could delay our return to Earth.”

“Fair point,” said Gina. “Counter arguments?”

“If no one is coming, it seems like a waste of time,” said Talia. “Maybe we should concentrate on searching for life and the scientific and mining work and return to Earth sooner and not bother with the construction work. After all, BSpaceE haven’t given us any revised instructions on when to have the work completed.”

“That probably means they expect us to finish the construction work on schedule,” said Ollie. “I don’t see that it’s a reason to stop. We have a mission and, as yet, no instructions to change it, despite asking for clarifying instructions.”

“If the launch is delayed, is it still possible for them to arrive here by the planned date?” asked Myf.

“At a rough guess they’ve a launch window of three months,” said Ollie. “I’d have to do the maths if you want it more accurate than that. On the other hand they may also be developing a better propulsion system which would get them here quicker which would allow for an even later launch. Who knows, maybe they’re developing warp drive and will be able to get here in a matter of hours.” He grinned happily.

“How likely is that?” asked Rik. “Given the economic situation on Earth. I wouldn’t be surprised if BSpaceE has run out of money and can’t afford to send anyone else here. That’s probably why they’re not sending any clarification. All of the decision makers are looking for other jobs.”

We tossed around a few more random thoughts, none of which were

convincing then Gina put it to a vote.

“Four each way and two abstentions,” she said. “It’s a tie so it’s down to me as the tie-breaker. Hmmm.”

She drummed her fingers on the table, lost in thought.

“OK, people,” she said after an unusually long delay. Normally she was very decisive. “I voted in favour of completing the construction and the rest of our mission parameters. However, I am sympathetic to the fact that four of you voted to return and two others are happy to and that the situation on Earth is undoubtedly a factor. I therefore propose that we wait for thirty days during which we will seek clarification and await instructions. In the meantime we continue as planned.”

“What happens at the end of thirty days?” asked Angus.

“If we haven’t resolved the issue we abandon the construction work and focus on the science then return to Earth,” said Gina.

“So what do we do in the meantime?” I asked.

“Carry on as planned,” she said.

“Awesome,” I said happily, rubbing my hands gleefully.

They all looked at me like I was mad.

“I’m fascinated by the constructors,” I said. “I’ll be seriously pissed off if I don’t get to watch them at work.”

And that, you see, was the bit I was looking forward to. Not the building of the lights or the Wheelbase compound but the Cliffbase and the constructors.

I’d seen the constructors just once, as we all had, during a demonstration while training. We’d all spent a while being trained in how to operate them but that had been on the controller software and not with the actual units themselves.

BSpaceE had developed any number of new technologies for this voyage but, in my humble opinion, they'd excelled themselves with the constructors. Conceptually they were both simple and radical. Each constructor was a cube, 50cm on each side, and they packed together neatly so that eight of them made a cubic metre. We had 5000 of them, all neatly stacked and waiting. What made them simple was that each cube was designed to do just one task and was fully self contained. It had everything it needed to fully perform that function. For example, some of them were wheels. So a wheel constructor box held a wheel, a motor to drive it and a power supply and it was self balancing so, if you wanted to, you could simply drive the box along all on its own. The shovel constructor box, on the other hand, held a mechanical shovel, as well as the motor and gearing to operate it and a power supply. You could put the box down somewhere and let it shovel things all day.

What made them impressive though was that they were also interlocking modules so you could easily link a shovel to a wheel and get a wheeled shovel. Or you could put two wheels on the shovel or two shovels on one wheel or any number of any combination of any of the boxes and there were boxes for just about everything. Some were drills, some were lasers, some were mechanical grabs, some were simply buckets, others were refiners and some were 3D printers. Some were just plain weird and only Zaf knew what they did. You need a three-wheeled laser with a bucket and a grab? Just link the right modules together and you've got one. Need a bigger bucket? Just add an extra bucket box. Need to weld something too? Just add a welder box. Need a high crane? They stacked vertically as well. Think of them as Lego for space engineers.

That wasn't what made them radical though. What made them radical was that they were intelligent. Each box had its own computer processor, wireless networking and location tracker and they all linked back to the central control unit. The operator used a graphical display to build the final unit on the screen and specify the details of where and how the task was to be performed then pushed the GO button and the system's AI handled the rest. The right boxes assembled themselves into the right configuration, went where they had to go and did what they were supposed to do with the AI system controlling everything so that they didn't go too far or not far enough or scoop

out too much or weld things they weren't supposed to weld or drill holes in the side of the Wheel rather than the cliff. They also knew when their power was low and plugged themselves into the rechargers and finished the job later when they'd recharged.

They blew my mind.

They were almost alive themselves and I could sit for hours watching them come together as a team, go off and do something, rearrange themselves to do something else and recharge themselves when they needed to. The system was even able to optimise so that if one or two boxes were running low on power but the others still had plenty, replacement boxes would come swooping out to replace them so the whole assembly didn't have to go back for recharging. You might, for example, have a grab sitting on top of two wheels picking things up and putting them in a bucket. When the bucket was full it would go off to empty itself and another bucket would be ready so the grab didn't have to pause for a moment. If the power level on the grab got too low another would have already arrived on top of another wheel to seamlessly take over while the first went back for refreshments.

And we had 5000 of them which meant we could have hundreds of assemblies all working independently of each other. A massive construction site of almost infinitely flexible robots. When we launched BSpaceE were working on a box that would be able to repair the other boxes but since it was some way off in the future we left without it. After all, we had Zaf. Maybe they'd finally got it working. Anyway, there were only two downsides that we knew of, or three if you included breakdowns but breakdowns can happen to anything, including people. One downside was that, for some technical reason, the boxes had to be stored with fully discharged batteries which meant that we had to charge all 5000 of them. Still, we had 250 charging points and they only took half an hour or so but someone had to plug each one in to start with. The other downside was that although the boxes knew when they'd fallen over, which they did from time to time, they couldn't right themselves. Mind you, it was easy enough to build a little assembly with a couple of grabs which could go and pick up a fallen over assembly. It's just that the software wasn't clever enough to do that on its own. Someone had to set it up and tell it where to go and what to turn the right way up.

What was cute though was that you could build an assembly from just three boxes that would take a fresh box out of storage and bring it to the recharging point for the human to plug in the recharger for the box's first charge and someone with a high emotional intelligence, as opposed to a high intellectual intelligence, had thought to make those three boxes the first in line for unpacking. This meant we didn't have to go searching among all 5000 to find the right three.

The really cool part though was that Gina, being a sweetie at heart despite her tough outer and inner shells, let me build and program the first assembly. Bless her little heart.

Mind you, she had to make full use of her tough shells two days later when she had to announce that Talia was missing, presumed dead.

Chapter Twenty Three

We found Talia eventually, alive and unwell. It looked like she'd been caught in a small rockfall, knocked unconscious and dislocated her shoulder in the process. When we got her back to the Wheelbase Nag sorted out her arm, gave her some painkillers and pronounced her 'well enough'. More to the point though, Gina had a long talk with her, then spoke to Zaf and then me and Evie. Then she called a meeting.

Rik and Angus declined to attend. They'd shut themselves away in the Science Lab and couldn't be bothered with anything so trivial as someone else suffering a dislocated shoulder. They were working on something important although they declined to tell anyone else what it was.

"Far too early," said Angus, "we're only in the very preliminary stages. Go away."

Rik didn't even condescend to give that much of an explanation and simply shut the door. Uncharacteristically Gina let it ride.

"I've called this meeting," she told us when she came back from her abortive visit to the Science Lab, "because of the very strange circumstances surrounding Talia's failure to follow procedure. I've talked to the people involved and find myself conflicted so I want each person to explain to the group their version of what happened so we are all cognizant of each others', umm, experiences and to consider any implications that may arise. Angus and Rik are engrossed in a project of their own but no doubt we can manage without them."

"So there's more to this than Talia just going off alone and being rescued?" asked Myf.

"Most definitely," said Gina. "Are we all good for coffees and so on?"

There was a chorus of nods and yeses.

"HalleB, record this discussion," said Gina.

“Recording,” said HalleB. “To end recording say ‘End Recording’.”

“Gina Fraley, Captain, BSE Titan. I’m recording this so that a full record is kept,” said Gina, “and it will form part of the log of the incident. To get the ball rolling, I arose at 07:01 and, after performing my ablutions, I checked the overnight log at 07:19. At 03:04 Talia had logged that she was exiting the compound for an unspecified location and at 03:06 Bike 6 logged its departure. There were no subsequent log entries for communications between Talia and another member of the team nor the compound. I feel obliged to point out that Talia was in breach of protocols by failing to specify her destination, by failing to be accompanied by another member of the team and by failing to record any of the required fifteen minute status updates.”

Talia nodded acceptance of those points but didn’t seem particularly contrite. But then, she was dosed to the eyeballs on opiates.

“At 07:20 I checked Talia’s quarters to see if she had returned without logging that fact then checked the remaining quarters and other rooms. At this point most of you became aware of Talia’s absence. At 07:23 I attempted, unsuccessfully, to contact Talia by radio and, after several failed attempts, connected to Bike 6 to ascertain its status and location. Bike 6 identified its location as 7.3km distance on a bearing of 284.3 degrees, that it was unattended and had switched to Standby Mode as its battery level was down to 6%, indicating that it had insufficient power to return to the compound. At 07:24 I made a further, unsuccessful, attempt to contact Talia. I then went to the storeroom and ascertained that all belt and foot battery backs were accounted for. At 07:29 I called all team members together to inform you all that Talia was missing. As Talia appeared to have only her normal foot batteries, with a capacity of four hours, I also expressed the likelihood that she had consequently died of exposure. After a further search of the compound, at 07:38 I requested Nagita, Evie and Phillip to make their way to Bike 6’s location with an emergency medical pack and two sets of belt batteries in an attempt to locate Talia. At 08:01 and 08:17 status updates from the Recovery Team were received. At 08:22 the Recovery Team reported locating Bike 6 with no indications of Talia’s whereabouts. No further status updates were received until 09:09 when the Recovery Team reported that Talia had been located, 1.2km from Bike 6. Her status was recorded as

unconscious and with minor injuries and that the Recovery Team were returning. Regular status updates were received from both Nagita, returning with Talia and Evie and from Phillip returning on Bike 6. Nagita returned to the compound at 10:12 and Phillip at 10:15. Nagita reported that Talia was alive, had regained consciousness and that she was taking Talia to the Medical Centre for assessment.”

Gina had these timings on the viewer for us all to see.

“At that point I had several questions that I wanted answering,” she continued. “Why had Talia gone out in the first place? Why did she abandon her Bike? What were the circumstances of the injuries? Why did the Recovery Team locate the Bike then fail to update their progress for 47 minutes? Why was Talia still alive when she had been reliant upon a single set of batteries for at least six hours and five minutes?”

She paused and looked at each of us in turn. Ollie and Myf were looking particularly puzzled as they’d been in the compound throughout.

“After Nagita had taken Talia to the Medical Centre and removed her TS suit,” said Gina, “I checked the power level of her foot batteries. They were at 41% capacity which, frankly, I found unbelievable. The batteries, as you know, have a capacity for approximately four hours of continuous use and had been in use for over six hours, possibly longer. As Talia has been remiss on so many protocols it was distinctly possible that she had not recharged the foot batteries after her last usage. How could they possibly have so much power still left? I suspected the TS suit monitoring system was faulty and asked Zaf to double check. Zaf?”

“Indeed,” said Zaf, startled at being suddenly called upon to say something. “I checked the batteries with a multimeter and confirmed that the foot batteries had 40.69% of their capacity remaining and, using another pair of foot batteries I confirmed that Talia’s TS suit was monitoring battery performance to within 0.1% percent. I have also checked the literature and found that throughout exhaustive testing such batteries have a mean operating life of 4 hours 9 minutes with a variability of ± 22 minutes.”

“Have you any thoughts on how these lasted six hours?” asked Gina.

“We could do a chemical composition test, I suppose,” said Zaf. “It is possible that a manufacturing error resulted in an extended life but given that extensive research went into these batteries it is unlikely that that would be the case. If it were then the batteries would be designed that way to get the higher capacity. Other than that though, the only suggestions I have are that either the TS suit was drawing little or no power for several hours or the batteries were recharged and to be honest neither of those are feasible. If the suit had drawn no power, Talia would have frozen solid very quickly and there is nowhere out there to recharge.”

“Is it possible that the foot batteries could have been recharged from the Bike’s battery?” asked Ollie.

“It’s possible,” said Zaf, “but the power level on the Bike is consistent with its usage. If it had been used to recharge the foot batteries it would have switched to standby several hours before it did.”

“I didn’t recharge the batteries,” said Talia. “Stupidly I didn’t even check the batteries before I set off on foot.”

“That’s mystery number one,” said Gina. “So why, Talia, did you go out in the first place?”

“Umm, well, after Mr, umm, Sergey told us about the possibility of life on Titan I’ve been thinking about it,” she said. “As an anthropologist. Now, if there is life it can only be in one of three places. In the air, on the surface or below the surface. If it’s below the surface then we’ll not find any traces until we start seriously investigating mining operations so that’s a no go at the moment. But, if it is air or surface based and sufficiently complex to have what could be described as a culture then there would likely be some sort of indication on the surface.”

“But what if it’s wholly air based?” asked Nag.

“I suppose it could be,” said Talia, “but I struggle to believe anything large enough and complex enough to have a culture could live through generation after generation without ever touching the ground. Anyway,

what I've been wanting to do is look through the mid-res aerial imaging to see if I could spot anything that might not be completely natural in origin. I know it's too much to hope for images of buildings or agriculture but there might be something."

"Wouldn't we have spotted it when we did the high-res imaging looking for a landing site?" asked Ollie.

"No," said Talia. "That's too detailed. For this sort of thing you need to back off and get an overview. Too close and you can't see the artefact for the detail. Archaeologists do aerial searches all the time on Earth. Anyway, we've been too busy since we arrived but last night I couldn't sleep so I made a start on looking at the imaging from the meteorological satellite we put up."

"I'm guessing you found something," said Myf, leaning forward intently.

"Yes," said Talia. "Do you want to see it?"

She didn't wait for an answer, just told HalleB to bring up the meteorological image she had tagged. As far as I could see it looked much like any other mid-res picture of the surface of Titan.

"This is about seven kilometres East North East of here," she said. "Basically the other side of these cliffs, you can see the edge here," and she traced the line of the cliff with her finger. "This is a valley cut by this river," again pointing with her finger, "and you can see that here the river veers off North North East leaving this flattish area between the cliff and the river. Now, do you see these?"

She pointed to an area that had, as far as I could see, no particular characteristics other than the usual boulders lying around at random. At this resolution you couldn't see the smaller rocks.

"Here," she said, waving her finger diagonally. "There looks to be two parallel lines."

Now that she'd pointed them out I suppose I could see two parallel lines but the human eye is phenomenally good at inventing patterns

where there are none.

“What are they like on the high-res images?” asked Zaf. His expression suggested he was thinking much the same way I was.

“They’re not there,” said Talia. “Look.”

She got HalleB to display the high-res images of sections of the same area. She was right, insofar as the closer view got lost in greater detail.

“Anyway,” said Talia going back to the mid-res images. “On Earth, parallel lines don’t exist in nature, at least not on this scale. It could be different on Titan but I thought it was worth investigating. After all, the lines are about eight metres apart and intersect with the cliff right here where they disappear.”

“So you decided to go and have a look for yourself?” asked Gina.

“Yes,” said Talia, a slightly defiant look appearing in her eyes.

“Without following protocol?” asked Gina.

“I was excited,” said Talia. “I kind of thought I’d maybe found traces of a road or perhaps the remains of some walls or possibly the edges of some kind of field or something. I was sure I’d found something that wouldn’t have naturally occurred, so I went to have a look for myself.”

“But why not tell someone?” asked Ollie. “Or better still, follow protocol and take someone with you.”

“You were all asleep,” she said, “and anyway, if I’d told anyone we’d have had to have endless meetings to review the images and discuss what it could be and all that crap. I wanted to go see if there was something there so I could tell you all when I got back and if there wasn’t then it wouldn’t be a big deal and we wouldn’t have got all tied up about it. After all, it’s only seven kilometres away. I figured I could be there and back in an hour and a half or so.”

“Was there anything there?” I asked.

“Umm, I’m not sure,” she said, looking a little dubious. “All I had was my torch but I searched around and found what just might have been a line and, umm, I, errm, well, I started to follow it.”

“On foot?” asked Ollie.

“Yes,” she said. “I know I should have radioed in but I forgot. I was intent on following the line. It was very difficult to see in the dark with just a torch and I was concentrating. Anyway, I followed it almost all the way to the cliff then it disappeared.”

“So why didn’t you follow it back to the Bike?” asked Myf. “Then come back here and tell us so we could go out with a light array and surveying equipment?”

“I started to,” said Talia. “I followed the line back for maybe ten metres or so then I looked back and it seemed to me that the line was pointing straight at something on the cliff.”

“On the top of the cliff, you mean?” asked Ollie, looking intent.

“No, maybe a third of the way up,” said Talia, “or even lower, so I just had to go and investigate.”

“Did you check your battery level at any time?” asked Zaf.

“Never occurred to me,” said Talia. “Anyway, there’s that alarm at 30% so I wasn’t worried.”

“So what was the mark?” asked Myf.

“It was a cave in the cliff,” said Talia then gave a wry grin. “I just had to go inside, didn’t I.”

“What was inside?” asked Myf, no doubt worrying at Talia’s impetuosity.

“I don’t know,” said Talia. “When I went in something fell on me and the next thing I knew was Nag and Phil bending over me.”

“And that’s mysteries two and three,” said Gina. “What are these lines and what fell on Talia?”

“I’d say the bigger mystery is how the hell Nag and the others ever found Talia,” said Zaf. “1.2km away from the Bike, unconscious and inside a cave? Unbelievable.”

“Well, yes,” said Myf. “Now you mention it it does seem pretty incredible. How’d you do it, Nag?”

“I had nothing to do with it,” said Nag. “It was these two,” and she waved at Evie and me.

I looked at Evie and she looked at me, each of us wondering which of us would speak but Gina got in first.

“We’ll hear from them in a minute,” she said. “First let’s hear from Nag.”

“OK,” said Nag. “Well, we set off from here on the two bikes with a trailer just in case we did find Talia and headed off in the direction you gave us. We had to skirt the tail end of the cliff but we found Bike 6 easily enough. When I estimated we were a kilometre or so away I triggered its transponder so we could home in on that. When we reached it there was no sign of Talia.”

“Did you see the lines?” asked Gina.

“No,” said Nag, “but then we weren’t looking for lines.”

“OK,” said Gina. “So how did you find Talia?”

“That was strange,” said Nag, “and I’m looking forward to what Phil and Evie have to say. But, for my part, when we found her Bike we tried to make radio contact, unsuccessfully, then spread out and started searching for footprints or other indications of which way she’d gone. Then, after a couple of minutes Phil and Evie started to have a strange conversation which I didn’t understand. Things like ‘can you see him?’, ‘what are you trying to say?’, ‘what’s she doing?’ and things like that. I was about to ask for an explanation when they stopped

searching and came together then Evie cried out ‘oh god, it’s Talia, it’s Talia’ and I ran over but there was no sign of Talia. Then Phil turned to me and grabbed my arm and shouted ‘she’s over there, we’ve got to follow her’ and dragged me back to where we’d left our bikes. I kept asking what they were talking about but they both kept telling me to hurry and, well, I think I got caught up in the moment. Phil and Evie went off on one of the bikes and, well, I followed them. I kept asking where they were going but, I can’t remember if it was just Evie or both of them, but they kept telling me to follow. Anyway, we came to a cave in the cliff and just inside we found Talia.”

“Could you see the cliff from where the Bike was?” asked Ollie.

“You mean Talia’s bike or mine?” asked Nag.

“Talia’s,” said Ollie.

“Of course not,” said Nag. “Our torches won’t reach a kilometre, you know that. A hundred yards at most, and that’s only if the haze is thin.”

“So how ... ?” asked Zaf. “I think we need to hear from you guys.”

“Do you want to or shall I?” asked Evie, quietly.

“I will, if you like,” I said and cleared my throat.

“Phil was driving the bike,” said Evie, “and we followed Nag out to Talia’s bike.”

“She wasn’t there,” I said, “so we all started searching for any sort of sign and, umm, ...”

“I don’t know which of us saw it first,” said Evie.

“I caught a glimpse out of the corner of my eye,” I said. “I was looking at the ground then I saw my wife Rosalie again and ...”

“And I saw my father,” said Evie, “and I called over to Phil to ask if he could see him and ...”

"I couldn't see Evie's father," I said, "and Evie couldn't see my wife. But it wasn't like that last time. That time Rosalie was standing and she quietly smiled at me. This time she was making a lot of jerky movements and getting smaller then bigger again and ..."

"My father was doing the same," said Evie. "I didn't know what he was doing but he seemed to be trying to tell me something, ..."

"Oh Jesus," I said suddenly. "I've just realised. Rosalie wasn't getting smaller then bigger, she was moving away then coming back when I didn't follow her. Shit, I should have realised."

"Oh my god, you're right," said Evie, staring at me. "It's obvious, now."

"Anyway, they were trying to tell us something but we were too dumb to understand," I said, looking back at the others. Nag, Zaf and Ollie were staring at us, wide eyed, and Myf was frowning.

"Then Talia appeared," said Evie. "Phil could see her too ..."

"Yes," I said, "but it wasn't Talia in her TS suit, it was Talia in her exercise shorts and crop top from the Wheel,"

"No it wasn't," said Evie, "she was in that striped frock she wore for her birthday last year."

"She was definitely in her shorts and top," I said, turning to look at Evie.

"No, it was that green and white one, with the sweetheart neckline," said Evie. "And she had her hair loose."

"No, her hair was in a pony tail," I said.

"Enough!" said Gina. "Let's just agree that you both saw Talia, whatever she was wearing."

"OK," I said. "Anyway, I had this strong urge that we had to follow Talia so I grabbed Nag."

“Actually, it was pretty obvious,” said Evie. “We were looking for Talia and she suddenly appeared so we had to go to her.”

“And Talia led you to the cave?” asked Ollie.

“Yes,” said Evie.

“Did you know the cave was there?” he asked. “Could you see it from where you were?”

“No,” I said. “At least I couldn’t, it was too far away.”

“Me neither,” said Evie. “We didn’t see the cave until we were maybe fifty metres away and only then in the stronger light of the bike.”

“Jesus,” said Myf, sitting back and staring at the ceiling. “Jesus!”

“So let me get this straight,” said Zaf, ignoring Myf and leaning forward. “You’re saying that you had a waking dream about your father and Phil had a similar dream about his wife then you both dreamt you saw Talia and she led you over a kilometre to where she was lying unconscious, hidden inside a cave?”

Evie and I looked at each other then she turned back to Zaf and gave a half shrug.

Zaf jumped up and went to stand with his forehead against the wall and groaned.

“And that’s mystery number four,” said Gina, looking sympathetically at Zaf. “How could waking dreams lead the Recovery Team to Talia’s location? OK, just for the record, what happened after you found Talia?”

“She was unconscious,” said Nag. “I examined her and found she had a dislocated shoulder but no major bones were broken. I couldn’t examine her fully because that would have entailed removing her TS suit but there were no signs of extensive bleeding nor any blood on her face plate. We loaded her onto the trailer then we headed back to where she’d left her bike. Evie and I then returned to the compound

leaving Phil to connect the spare battery to Talia's bike which he drove back himself."

"What injuries did you find when you were able to properly examine Talia?" asked Ollie.

"Other than the dislocated shoulder, there was a significant cranial hematoma and superficial abrasions around the dislocation," said Nag.

"That's a lump on her head?" I asked.

"Yes," said Nag. "No sign of any brain injury however."

"And were there any indications of what may have caused these injuries?" asked Gina.

"There were some large fragments of ice in her immediate vicinity," said Nag. "I can't say for certain but her injuries are consistent with a section of the roof of the cave falling on her head and shoulder and likely breaking apart either on impact with Talia or the floor of the cave."

"Mystery five," said Gina, "although it's a relatively minor one, I think. Why would a section of ice, frozen to the extent of being almost as strong as diamond, break away from the roof of the cave at the moment Talia entered the cave? Is it possible that her entrance could have set up some sort of sympathetic resonance? Do we need to establish any protocols for entering this or any other caves we may encounter? Right, I suggest we pause for a few minutes to reflect on what we have heard. Does anyone have any questions?"

"I've got one," said Evie to me, quietly, as we watched the others. "How come you're dreaming about Talia in shorts and a crop top?"

Chapter Twenty Four

“Seems to me,” said Zaf coming back just in time to prevent me from answering Evie and inevitably saying the wrong thing. He had some food with him which he put on the table then ignored. “Seems to me that the business with the lines and the cave is relatively straightforward. We just go out and have a look with some geophys equipment. Same with the batteries. Admittedly it’ll be difficult to replicate the exact conditions but we can do some experiments. There’s undoubtedly a rational explanation if we look hard enough.”

“I agree,” said Ollie. “In fact it doesn’t really matter if there are lines or not, the thing is Talia thought there were and that was the driving factor. Even if we can’t locate the cave again there’s no reason to doubt its existence and no doubt we’ll find other caves. It’s the, umm, other business ...”

“Yes,” said Zaf. “The non-tangibles.”

They both fell silent and looked at Myf. Myf ignored them. Evie and I just sat, waiting. Nag had stayed over by the microwave, nursing some coffee and Talia was sitting nursing her arm with her eyes closed. The silence started to get strained.

“OK,” said Gina. “Myf, Nag, any possibility that Evie and Phil were hallucinating?”

“There’s no medical reason that I’m aware of,” said Nag slowly. “However, they were both under stress and in a difficult environment.”

“That wouldn’t account for the dreams we’ve both had before,” said Evie.

“No,” said Myf, “and no hallucination is actually going to direct you to the right place. Could it be that the image of Talia was a physical manifestation of some sort?”

“No,” said Zaf. “Even if we knew of any mechanism for doing that you would expect the manifestation to have been visible to Nag. Oh, Nag, did you see Talia at any point before reaching the cave? Did you see

her with Phil or Evie?”

“No,” said Nag. “But I was some way away to begin with then I simply followed. There could have been something ahead but out of my sight. After all, it was dark and the lights are fairly narrow beam.”

“I think it’s safe to say there was no physical manifestation,” said Ollie. “If there was then Phil and Evie would have seen the same thing, which they didn’t. They both saw Talia but in different clothing. A green and white striped dress and a gym outfit.”

“Hold on,” said Zaf. “Phil, what colour was the gym outfit?”

“White,” I said. “They’re all white.”

“But did you see her outfit as white or are you just assuming it was?” he asked.

“Ahh, ...” I thought back. “No, it was definitely white. I saw her as clear as day.”

“Exactly,” said Zaf, nodding. “As clear as day.”

“Your point?” asked Gina.

“It’s dark outside,” he said, “and anything visible in the lights would be orangish from the atmosphere. That goes for the dress as well. It wouldn’t look green it would be whatever colour green mixed with orange is. I’m guessing Evie actually saw the green.”

“Brown,” I said. “Green and orange give brown.”

“It was definitely green,” said Evie. “It was quite distinct. So were the white parts.”

“So it definitely wasn’t a physical manifestation,” said Zaf. “Therefore it must have been psychological.” He sat back with an air of fait accompli, as though the matter had been satisfactorily resolved. I suppose, from an engineering point of view, it had been.

“Well, I really can’t see how a hallucination or vision or whatever you want to call it would be able to lead us to the right place,” said Nag. “And there’s no question of us stumbling on Talia. We went straight to the cave.”

“There is another possibility,” said Ollie slowly, “although I’m probably clutching at straws. Myf, is it possible for someone’s, I don’t know, mind, psyche, soul maybe, to reach out and make contact with others?”

“There is some anecdotal evidence of that,” said Myf, “although it isn’t taken seriously as the little research on the subject has found no solid evidence. It’s very much a fringe area and few serious psychologists are even willing to get involved.”

“But is it possible, do you think, that in an emergency situation Talia could have projected herself to Phil and Evie?”

“Based on our current understanding of the human mind, notwithstanding the supposed connectedness of twins, I’m going to have to say no,” said Myf, “especially as she was unconscious.” Then she sighed. “You know, there is an explanation that fits all the facts.”

She paused and looked around. I think we all must have known what she was going to say since no one asked.

“Evie has a clear memory of Talia in the dress she wore on her birthday. Phil has a clear memory of Talia in her gym outfit. Evie has a clear memory of her father. Phil has a clear memory of his wife. They have both had dreams involving these memories. None of the rest of us have had any similar dreams even though we all will have clear memories of people and things in our pasts. Both Phil and Evie were, as Sergey put it, invited on this mission. None of the rest of us were.”

She paused, whether to collect her thoughts or for dramatic effect I couldn’t say.

“I think we have to at least acknowledge the possibility that whatever manipulated the BSpaceE computer records to ensure Phil and Evie

were selected have also, somehow, been accessing their memories. I think we have to at least acknowledge the possibility that whatever it was, when Talia was in a life threatening situation, manipulated Phil and Evie's memories in order to guide the Recovery Party to where Talia was. I also think it's no coincidence that the one time we find a battery that is over-performing is the one time that the battery needed to over-perform. I think Sergey is right, there is life on this moon. I think it has some element of telepathic power and I think it somehow kept Talia's batteries alive until we could help her ourselves."

* * *

Gina organised an expedition for the next day. She proposed to lead it herself and to take me, as I'd been to the cave before, and Zaf, since he could monitor the batteries for any more signs of extended life. There was a mutiny.

Talia flatly rejected any suggestion that she might not be physically up to it.

"It's my discovery," she raged. "I'll be damned if I let any of you take over."

Gina relented and let her go along when Talia swore she'd go anyway. "You can't bloody well stop me!" was how Talia phrased it. Short of putting Talia under house arrest, and we had no facilities for doing that, Gina didn't have much option.

In many ways, Gina was in a difficult and unenviable position. Her years in the RAF and the basic structure of our Titan mission gave her an element of disciplinary control but it wasn't backed by any formal disciplinary structure the way a military project would be. None of us could be court martialled, for example. She ruled in her position of Captain by consent, not by right. We were all happy to let her run the Wheel but when it came to something like this she didn't have a chance.

The cliff where we had set up our compound was actually a promontory. About twenty kilometres to the West there was a fork in a river and, over the aeons, the two tributaries had carved wide valleys

either side of a promontory. We were on the Southern fork and Talia's cave was, in fact, in the same promontory, only on the other side. As the crow flies, if a crow could fly in this atmosphere, we were only seven kilometres away but, since we had to use the bikes, we had to go round the end of the promontory making the driving distance about thirty kilometres. We could have used the transporter to fly across but there was nowhere suitable to land which was why our base was this side. Still, the bikes could do 35kph if the ground wasn't too rough and the low gravity meant we could quite easily take a shortcut over the tail end of the promontory where the cliff was down to a metre or two. At the Cliffbase, the cliff soared to just over thirty metres. Not much by Everest standards but too high to drive a quad-bike over.

It took a while for us to find the cave again. Evie and I had been led there by Talia's image the previous morning but even though we had its position from the bikes' logs the geo-locators were only accurate to thirty metres or so and in the dark it was difficult to spot a small cave entrance. Still, we'd brought a couple of high powered hand-held lights in addition to our normal torches and with the bikes' headlights we found the cave without too much trouble.

The entrance was irregular and barely two metres up from the valley floor. Talia had thought it was a third of the way up but it's easy to make mistakes, especially when it's dark and you aren't focused on such details. We were able to reach the lip of the entrance simply by jumping. Gina went first and knelt on the lip, peering in through the small hole.

"Looks quite large inside," she reported back. "High enough to stand upright, seems to go back a fair way but it's difficult to tell from here. Looks wide enough for two people to stand side by side. Ahh, I can see a section of the roof has come away and there's rubble on the floor. I'd say that's what hit Talia. She's lucky she wasn't hit by one of the stalactites or stalagmites, I can never remember which is which, but they look quite sharp. I'm going inside and I'll test the structure of the roof. Phil, come up to the entrance in case I'm hit by more falling ice."

She squeezed over to one side and I jumped up to join her. I wasn't as fit as she was and had to scramble a little but I made it.

“You hold the light,” she said, passing the high-power light to me. “Keep it on the roof.”

She took her hand torch off her belt and made her way inside. In the white light of the high-powered beam I could see her stand upright, the top of her helmet almost brushing the ice over her head. She turned to face me and inspected a hole in the roof then played her hand torch over it. She reached out to feel around inside the hole than took a hammer from her belt and started tapping.

“Seems solid enough,” she reported. “Although ... that’s strange,”

“What’s strange?” asked Talia a fraction before Zaf and I did.

“The base of the hole where the chunk came from seems to be unnaturally smooth,” she said. “Just a sec.”

She pushed the largest chunk of ice on the floor of the cave underneath the hole and stood on it so she could reach inside.

“Yes, it’s definitely smooth,” she said. “I ran my fingers over the surface. Seems to be very flat and very smooth and it doesn’t look like the ice. It’s difficult to tell in this light but it looks more yellow brown than grey.”

Some slivers of ice fell as she probed with her fingers.

“Hmm, OK, well, we’ll investigate further in a minute. The important thing is that the roof seems to be stable.”

“Hang on,” said Zaf. “Did you say stalagmites just now?”

“Yes,” said Gina. “Phil, shine the light down the length of the cave.”

Obediently I did as I was told. Disappointingly the cave looked much like any other cave on Earth although it didn’t seem to get narrower, although it might do further in. After all, plenty of caves on Earth get bigger past the entrance and become caverns.

“They’re stalactites,” I said. “There don’t seem to be any stalagmites.”

“How do you know which is which?” asked Gina.

“It’s about the woman who sat on an ants nest,” I said, looking round the cave from the entrance. “The mites go up and the tights come down.”

“Yeah, you’re missing the point,” said Zaf. “I need to get up there.”

There was a squawk then Talia said “me first,” and moments later appeared beside me.

“Can I come in, Gina?” I asked.

“Yes,” she said. “There’s plenty of room.”

She backed off down the cave and I climbed in to join her, followed by Talia who immediately inspected the hole in the roof and the lumps of ice on the ground.

“Yes, that’s probably what hit me,” she said, trying to touch the lump on her head through her helmet.

Zaf appeared in the entrance then came inside.

“Impossible,” he said, playing the second high powered light around the roof of the cave.

“What is?” asked Gina.

“Stalactites,” he said, going over to inspect one of them.

“Plenty of caves have stalactites,” said Gina. “They’re caused by water seeping through the soil above the cave and in through the roof. Ahh, I see what you mean.”

“What does he mean?” I asked.

“It’s around minus one hundred and seventy degrees,” said Zaf. “Water doesn’t seep or drip at these temperatures. It’s frozen as hard as granite.”

“Maybe they’re not water,” I said.

“I’ll take a sample back for testing,” he said, “but I bet they are water ice. These cliffs are almost entirely water.”

He took his hammer from his belt and hit the end of one of the stalactites with a thud. It broke off and fell slowly to the floor and he put it in a plastic sample bag and labelled it.

“So if they are water,” said Talia, “how did they get here?”

“You notice there are no stalagmites?” said Zaf. “On Earth, water drips through the roof of the cave and on to the floor. Over time the minerals in the water drips from the roof form the stalactite and the drips landing on the floor form the stalagmite. Here we have no stalagmites, only stalactites. Assuming these are water then I’d say that at some point the roof of this cave was heated enough to melt some of the water so it started to drip but froze again before the drip fell. Still, it may not be water. We’ll have to wait and see.”

“What could have caused it?” I asked. “Maybe a lightening strike or a crashing meteor?”

“I doubt it,” he said. “If the roof had stayed hot for a period of time there’d be stalagmites. If this is water I’d say the roof has been heated many many times so the stalactites grew down but only for very brief periods so no drips made it to the floor.”

“Well what could have caused that?” asked Gina.

“No idea,” said Zaf. “That’s the puzzle. Most likely they aren’t water, although I don’t see how that could be either but then, I’m not a geologist.”

“OK, we’ll leave that problem for now,” said Gina. “Zaf, have a look in the hole and see what you make of the roof under the ice. Talia and Phil, you explore the cave. See how far back it goes and what’s inside, if anything. Stay in radio contact. If you lose contact, come back immediately.”

“It’s only about fifteen metres long,” said Talia when we rejoined them moments later. “It seems to be the same width and height all the way then ends abruptly although it’s difficult to tell with all these stalactites.”

Zaf was standing on the lump of ice with his head in the hole.

“This is very strange,” he said. “It doesn’t seem like ice at all. I’m going to get the drill.”

He nimbly stepped off the lump and wormed his way out of the cave and reappeared a few moments later with the portable thermal drill in his hands. It was considerably smaller and less powerful than the ones on the constructor boxes but no less effective, just slower to melt the ice.

“I’d stand outside, if I were you,” he said, brandishing it like a light sabre.

“What are you going to do?” asked Gina.

“Drill some holes in the roof,” he said. “See if I can get more of this section to come down so I can get a better look at it.”

“OK,” said Gina. “You two go back to the bikes, I’ll stay at the entrance in case any of the roof lands on Zaf. We don’t want another accident.”

Talia and I climbed out of the cave and dropped to the ground.

“Check your batteries,” said Gina. “We’ve been over two hours already.”

“51%,” I reported.

“Much the same,” said Talia. “50 dead.”

“Bad choice of words,” I commented and she laughed.

“49%” said Zaf.

“I’m 52%” said Gina. “We give this no more than 20 minutes then we have to leave. We’ve an hour’s drive back. Phil, give base a status update and let them know we’re planning to start back in about 20 minutes. When you’re ready, Zaf.”

Watching from the ground, we could see very little although I imagined I could hear the hiss of the thermal drill as it melted its way into the ice. Unlikely, since my helmet blocked a lot of the external sounds.

“Interesting,” said Zaf after a couple of minutes. “There’s something stopping the drill. It goes about 30 centimetres then stops. I’ll try another hole here.”

A couple of minutes later there was an unmistakable crash.

“Did that get you, Zaf?” asked Gina.

“Nearly,” he replied.

“What happened?” asked Talia.

“Another section of the roof fell in,” said Gina.

“Look at this, Gina,” said Zaf and she disappeared from the entrance.

“What’s happening?” I asked. There was no reply.

I looked at Talia then jumped up to the cave entrance and peered in. Gina and Zaf were studying a large section of the roof. Perhaps a couple of square metres had given way, exposing a smooth, flat yellowy brown expanse. Talia joined me.

“This is definitely not ice,” said Zaf. “I’m not sure what it is. It’s not metal. Looks like some sort of ceramic. Here, hold the light for me, I’m going to try and get a sample. Hmm, it’s very hard.”

He scraped for a few moments with the ice pick end of his hammer and managed to get a fine sliver of the material to drop into another sample bag.

“I wonder if it’s just the roof,” I said.

“Good point,” said Zaf. “I’ll try drilling one of the walls.”

He drilled into a wall and reported the same thing. The drill wouldn’t go in more than about 30 centimetres. He tried in the wall the other side. 25 centimetres there. Beyond that the drill wouldn’t melt any further into the ice.

“Try the floor,” said Gina. He did. 11 centimetres.

“Very strange,” said Gina. “It’s almost like we’re inside a box of this ceramic stuff.”

“We definitely need to get the geophysics out on this,” said Zaf. “There’s definitely some sort of structure here.

“I’m down to 38% power,” said Gina. “We need to return to the compound. Phil, let base know we’re heading back now.”

“OK, Gina,” I said. I switched over from our local channel to the network channel. “You there, Ollie?”

“Hey, Phil,” said Ollie. “How’s it going?”

“We’re heading back now,” I said. “It’s been very interesting.”

“Good,” he said. “Tell Gina Rik and Angus have emerged from hiding. They’ve found something but won’t say what it is until you’re back.”

“What have they found?” I asked.

“How would I know?” he said. “They’re not talking so hurry back, we’re dying of curiosity here.”

Chapter Twenty Five

“You’re not going to believe this,” said Angus when we’d all collected in the meeting room. “After all the years of research and development and billions of pounds that went into this project the mass spectrometer we were given had the wrong cable connector.”

“That’s right,” said Rik. “The data cable had a USB type B connector but the computers are all USB type A connectors.”

“So you’ve both spent six days sorting out the cables?” said Gina incredulously.

“God no,” said Angus. “We just rewired it. Took about twenty minutes, I just wanted to bitch about it, that’s all. It always pisses me off when companies send out the wrong cables.”

“How come you’ve only just found out?” asked Nag. “Didn’t anyone test the spectrometer?”

“Sure it was tested,” said Rik. “But the data was sent direct to printer. No one thought to plug it into a computer and we haven’t had to use it until now.”

“Anyway,” said Angus, “what we’ve been doing for the last six days, actually for a lot longer, ...”

“Since Sergey’s announcement, in fact” said Rik. “We’ve had to do a lot of background research since we’re both terrestrial biologists. Which isn’t to say that neither of us haven’t speculated ...”

“Absolutely,” said Angus, “any biologist worth his or her salt has speculated but I, for one, have always been constrained by the circumstellar habitable zone, you see.”

“What’s the circumstellar habitable zone?” asked Evie.

“You probably know it as the Goldilocks zone,” said Rik.

Evie shook her head.

“Oh, right,” said Angus looking at Rik incredulously. “How could anyone not know about the Goldilocks zone?” he seemed to be asking.

“Umm, the circumstellar habitable zone or CHZ is the range of orbits around a star within which a planetary surface can support liquid water given an appropriate atmospheric pressure. The bounds of such a CHZ are based on Earth’s position in the Solar System and the amount of radiant energy it receives from the Sun.”

“You mean that for any planet to be like Earth it must be like Earth?” said Nag dryly.

“Umm, well, yes, I suppose so,” said Rik. “If it isn’t like Earth it couldn’t be like Earth, could it.”

“But that’s the thing,” said Angus. “It’s based on the fundamental assumption that all life is derived from the same principles as Earth life, namely carbon and water. Water in particular being presumed to be the primary indicator for a possible life bearing planet.”

“Didn’t Sergey say that wasn’t the case?” said Gina.

“That’s right,” said Rik. “I’ve heard about other possibilities in Science Fiction, of course, such as silicone based life but as a biologist I always dismissed it as just fantasy.”

“OK,” said Gina. “So what did you want to tell us? You’ve changed your mind?”

“Absolutely,” said Angus. “Since Sergey’s announcement we’ve been researching the literature. I don’t know if any of you knew this; I certainly didn’t and I think it’s a fascinating point and I do wonder why no one has drawn my attention to this in the past ...”

“Oh get on with it, man,” said Rik impatiently.

“Oh, yes,” said Angus, startled. “Umm, where was I? Oh yes, Class M stars are the most common stars in the solar neighbourhood. In fact about 75% are Class M whereas Class G only make up about a tenth of that, at 7.5%.”

“What are Class M and Class G stars?” asked Myf.

“Oh sorry,” said Angus. “Class G stars are like our sun and Class M are low luminosity, in fact most Class M stars are red dwarf stars, although some are red giants.”

“I’m guessing this has something to do with the Goldilocks zone,” said Zaf, fidgeting.

In the warmth of the compound, the piece of stalactite he had in one of his sample bags had melted and he probably wanted to get to the lab to find out what it was.

“Of course,” said Rik, looking puzzled. “Why else would we mention it?”

“Then you really need to explain,” said Gina.

“That’s what we’re trying to do,” said Rik, fingering his glasses and looking at Angus.

“Well?” said Nag. “Get on with it.”

“Class M stars can’t have a Goldilocks zone,” he said as though it was obvious.

“Why not?” asked Myf, just as Talia said “so what?”

“Because a planet orbiting a Class M star close enough to have liquid water would be tidally locked meaning it can’t have liquid water,” said Angus.

“You what?” I said, deciding it was high time I contributed something to the discussion.

“What’s tidally locked?” asked Nag.

“It’s when the orbiting body’s spin and orbit coincide,” said Rik. “Like the moon around Earth or Titan around Saturn. The same side always faces the star and, because it is a star the facing side would be too hot

for liquid water and the opposite side would be too cold for liquid water.”

“Yeah, guys, is this really getting us anywhere?” asked Ollie. “All you’re really saying is that most stars can’t have Earth-like planets. You’ve shut yourselves away for nearly a week to figure that out?”

“Noooo,” said Angus. “That’s the whole point. The most common stars can’t have Earth-like planets, which means that if life is common in the universe it probably isn’t Earth-like life. It probably isn’t based on water.”

“Well, isn’t that what Sergey said?” said Gina.

“He was talking about Titan,” said Rik. “Titan doesn’t orbit a star, but ...” and he held up a finger and peered over his glasses in a way that made him look a considerably older than his 29 years, “... this is the essential point. Planets orbiting a Class M star are vastly more likely to be like Titan than Earth.”

“Great,” said Nag. “I’m sure that’s a relief to us all. Can we move on to what Gina and the others found at the ... ?”

“You’re not getting it, are you?” said Angus.

“Why don’t you just spit it out?” I said.

“I thought we had,” said Rik.

“Just give us your conclusions,” said Myf. “Concisely.”

“Oh, right,” said Angus. “Well, we can confirm it.”

“Great,” said Ollie. “Awesome. Confirm what exactly?”

“Non terrestrial, non water based life,” said Rik.

“I don’t understand,” said Talia.

“Neither do I,” said Evie.

Rik and Angus looked at each other helplessly.

“You know what we’ve been working on for the last few days,” said Angus, slowly and clearly as though talking to a room full of idiots. “We can confirm that the initial hypothesis is, in fact, correct.”

“Actually we don’t know,” said Gina. “You’ve both refused to say anything other than ‘go away’.”

“Oh, don’t be absurd,” said Angus. “I distinctly remember telling someone that I suspected there was life in the sample.”

“Actually I think that was me,” said Rik. “Don’t you remember? I demanded you produced some valid data for that assertion which is what we’ve been doing.”

“Are you sure?” said Angus looking puzzled.

“Stop!” said Gina, holding up her hands. “Are you telling me that you two have identified actual life here?”

“Haven’t you been listening?” complained Rik.

“You’ve been rambling on about computer cables and Class M stars,” she said. “What’s all this about life?”

“But that’s the whole point,” said Angus. “Titan-like planets are most likely to be orbiting the most common stars so widespread life in the universe is most likely to be non-water based and develop in environments similar to those on Titan.”

“Forget the rest of the universe,” said Gina. “What have you found on Titan?”

“Multi-celled methane-based organisms,” said Rik. “Look.”

Oblivious to our gaping, Rik brought up an image on the viewscreen.

“We have here five individuals,” he said, looking at the screen, “taken from a sample of the top-soil in the vicinity of the compound.”

On the screen were five things that looked like Michelin men with six legs and snouts.

“Just a minute,” I said. “I’ve seen them before in a documentary on TV. Aren’t they water bears or something?”

“That’s what I thought when Angus first showed me,” said Rik. “They look very similar to Earth tardigrades so I presumed that he simply had a sample contaminated with tardigrades brought with us from Earth. There are over thirteen hundred known species so a six legged variant is quite possible.”

“So how do you know they aren’t from Earth?” asked Nag.

“These are tiny,” he said. “Earth tardigrades are generally around 0.5 millimetres long and contain approximately 4000 cells on average. These are less than a tenth of the length, around 0.04 millimetres and average 430 cells. More significantly, mass spectroscopy reveals that they are primarily methane based and contain not a single molecule of water. They cannot be from Earth as all Earth based life, without exception, is water based.”

“Shouldn’t they be moving?” I asked, “Or are these dead ones?”

“Ahh, this is a still photograph. Angus, put up the live imaging,” said Rik.

The image changed to one where the five creatures were slowly wriggling around.

“Being an extremely cold environment,” said Angus, “they are slow moving.”

“Isn’t the heat in the lab harmful?” asked Nag.

“Actually, like Earth tardigrades, they seem to be extremely hardy,” said Rik. “They’re almost indestructible in fact. The heat of the lab merely makes them more energetic.”

“What do they eat?” asked Talia. “Are there other organisms that they

live off?”

“Not that we’ve found so far,” said Angus. “We’ve found these in every sample we’ve taken but no other life forms as yet. We speculate that they feed on the organic matter that is created in the upper atmosphere by the sun which rains down to the surface. It’s not conclusive as yet but that would certainly support Strobel’s theory of a hydrogen flux.”

“Just a moment,” I said. “Didn’t you say there were five of them?”

“Yes,” said Rik with a strange smile. “How many do you see?”

“Four,” I said. “Oh, my mistake, there are five.”

“Keep watching,” he said. “And counting.”

We all stared hard at the screen while he continued.

“They seem, from the few samples we’ve taken, to be quite widespread,” he said. “Obviously we can’t extrapolate from those samples with any validity but there do seem to be approximately ten million per square metre at the surface. We’ve yet to take any sub-surface samples.”

There was a collective gasp as one of the creatures disappeared then reappeared on the other side of the display.

“What the ...?” said Nag. “Did it just disappear and reappear?”

“Yes,” said Rik happily. “Fascinating, isn’t it. They seem to have the ability to move instantaneously in addition to their normal limb based locomotion. We have filmed them at 100,000 frames per second which is the highest recording speed we have available and there is no intermediate position. The organism seems to disappear from one position instantaneously and reappear after an interval in another position.”

“How do you know it’s the same one each time?” asked Zaf, watching intently.

“We’ve used an irradiated triarylmethane dye as a marker,” said Angus. “There is no detectable intermediate location with that either.”

“How far can they move?” asked Evie.

“We’ve yet to record one move more than seven body lengths,” said Rik. “At least through space. They may, umm, well, they may be moving through time as well.”

“That’s pure speculation,” said Angus.

“What are you talking about?” asked Ollie.

“Well, the period between, shall we say, departure and arrival, can be as long as 5 seconds,” said Rik. “As we’re unable to locate them in space during that interval it is conceivable that they are moving through time instantaneously.”

“You’re saying they’re time travelling?” asked Zaf.

“He’s not saying anything of the sort,” said Angus firmly. “All he is saying is that we note the location of the organism at one time and its location at another time. It is erroneous to conclude that the organism jumped through time as well as space. All we can say for certain is that we don’t know where it was in the interval. Certainly we have observed no occasion when an organism has arrived before it has departed which would certainly be implicit in the notion of time travel, if it were valid.”

“Maybe they can’t go backwards,” I said. “Like birds.”

“Some can,” said Rik. “Hummingbirds, for example, but I take your point. Certainly extensive research needs to be performed before we can reach any solid conclusions.”

“Do they have brains?” asked Myf.

“As far as we know so far,” said Angus, “and we’ve barely begun to study them, they have a small number of neurons running the length of the back which coordinate movements.

“So they’re unlikely to be intelligent?” she asked.

“Depends what you mean by intelligent,” he said, “but in the human sense, no.”

“OK,” she said. “You said they don’t eat other organisms. Are there any that eat these?”

“You mean predators?” asked Rik.

Myf nodded.

“Not that we’ve found,” he replied. “Mind you we’ve taken very few samples. It’s quite possible that there are predators.”

“Hold on,” said Evie. “Didn’t you say that these things are very similar to those other things on Earth?”

“Tardigrades? Yes,” said Rik. “Although these are obviously adapted to the Titan environment.”

“Don’t you find that an interesting coincidence?” she asked.

“We don’t really have enough information yet to start thinking about coincidences,” he said. “We don’t even know if these organisms reproduce or have an equivalent to DNA. They may have evolved in a broadly similar environment to the tardigrades of Earth but there may not be any evolutionary process on Titan at all.”

“Exactly,” said Evie. “So if they didn’t evolve, how did they get here?”

“What are you getting at?” I asked.

“I don’t really know,” she said. “I was just thinking how unlikely it would be for two different planets to have produced very similar organisms.”

“It’s far too early to start thinking about a common ancestor,” said Rik. “We simply don’t know enough to even begin to speculate.”

“A common ancestor?” said Zaf. “What? You’re saying that these and the ones on Earth could have come from somewhere else originally?”

“It’s just a thought,” said Evie. “I don’t know what I expected but I always thought that if we ever found life on another planet it would be very alien, not something very similar to what’s on Earth. It’s like in SciFi movies, the aliens are just humans with funny lumps on their heads.”

“These are very alien,” said Angus. “Life based on methane rather than water? How much more alien can you get?”

“If you’ve found these, though,” said Myf, “how likely is it that you’ll find other life here?”

“Impossible to say,” said Angus. “It is possible that these organisms are the only ones. Since there is abundant food falling from the sky there’s no need for competition so if there is any form of evolution here there’d be no need for any other organism to evolve. Evolution is driven by scarcity to a large extent. Certainly we’ve seen no signs of anything that isn’t microscopic.”

“So these little creatures couldn’t be communicating with Evie and Phil?” asked Myf.

“Virtually impossible, I’d say,” said Rik. “I’m not entirely sure they can even communicate with each other.”

“So what could have led Evie and Phil to the cave when Talia had her accident?” asked Nag.

“What accident?” asked Rik. “What’s happened?”

“You’ve been out of the loop,” said Gina. “Talia went out yesterday on her own and found a cave and was knocked unconscious by falling ice. Evie and Phil were part of a search party and were led to the cave by some sort of projected image of Talia. Could these organisms have done that?”

“Who knows what they can do,” said Angus. “There’s years of research

needed just to unravel their biochemistry but I really don't see how an organism with so few neurons could make the necessary judgements to aid a search party. I'd be astonished if they are even aware of our existence. Their level of consciousness would be remarkably low."

"You know what these disappearances and reappearances remind me of?" said Zaf suddenly, watching the screen. "They remind me of the transition of electrons between energy levels around the nucleus of an atom. They seem to be instantaneous as well although at the quantum level they're actually a continuous movement along another dimension."

"I have no idea what you're all talking about," I said. "But I've got a question for you and I'd like an answer in English, not technospeak."

Angus laughed. "Fire away, Phil, although we probably have no idea what the answer is though."

I smiled wryly. "These water bears, are they capable of building a structure?"

"How big a structure?" he asked frowning.

"Ohh, a couple of metres square," I said.

"God no," he said. "They're only 0.04 millimetres long. They couldn't possibly build something as big as that. You'd need hundreds of millions of them working cooperatively and we've seen absolutely no sign of any social structure. They don't even seem to mate let alone form groups. Why?"

"Just wondering," I said. "Something built that cave Talia found."

"A cave?" he said. "In the ice cliff?"

"Yeah," I said. "The other side of the promontory."

"Oh, that's quite different," he said. "I thought you meant 'build' as in put something together. A cave is just a hollowing out, an eating away. That could have been a chemical process but it's entirely possible that

billions of these organisms over time could have eaten their way into the ice and created a cave.”

“Oh no,” I said. “The cave wasn’t eaten away, at least I don’t think so. It’s been lined with some ceramics. I was wondering if these organisms could have done that?”

“Ceramics?” he said. “What are you talking about? How could there possibly be ceramics on this planet? I’m not even sure the base chemicals are here but ceramics have to be fired otherwise they’re just clay.”

“Zaf said it was ceramic,” I said.

“I said it looked like ceramic,” he said. “It might not be. I need to analyse the sample to be sure.”

“What the hell’s been going on?” asked Rik. “We go in the lab for a couple of hours and the rest of you start babbling on about projected images and ceramic lined caves. Has Nag been handing out too many opiates?”

“Yes, I wouldn’t mind hearing about this cave,” said Nag. “Ceramics? Seriously?”

“And stalactites,” I said, standing up. “Gina, you update them while I get some coffee. My head’s about to explode. Anyone else want one?”

A shrill alarm started to sound, making us all jump.

“Communications failure,” said HalleB, a faint touch of panic in her normally placid synthetic voice. “Status alert, communications failure.”

“Too bloody right,” I said, heading for the door. “We’ve got a definite failure to communicate here.”

Chapter Twenty Six

It was bitterly cold, dark and raining outside. The streets, if you could call the alley between the two rows of cabins in our compound ‘streets’, were deserted and the place was infested with tiny bugs. Actually it was a bit like being back in England. A perfect night for a take-away and a video, except there weren’t any take-aways and none of us were in the mood for a movie.

Ollie had announced within seconds of HalleB’s alert that ComSat 3, the one currently in direct communication with Earth, had lost contact with Earth and he and Gina had disappeared to the Control Room to play with their equipment to try to decide whether it was an equipment problem or whether the carrier signal had actually stopped. Rik disappeared to get some much needed sleep. Angus disappeared to get some much needed relaxation, with Nag following very closely behind. Now the lab was free Zaf seized the moment and hurried off to analyse his samples. Talia went off to have a nap and rest her shoulder and Myf went to do her Tai Chi in the gym. Evie just disappeared.

I spent most of my time with Evie in her cabin these days so I went there but it was empty so I went to my own cabin wondering what to do. There was a strange feeling in my head that I ought to be feeling more, ... significant, I suppose. It was one of those “I know I’m supposed to be hyper but I’m not” type feelings. It’s a little hard to explain and I imagine most people, when confronted with an alien life form, would expect to experience an “Oh my god” moment but when that moment has passed, what happens next? I suppose if a flying saucer had landed in the middle of Trafalgar Square I’d be avidly scanning the news to find out what was going on but in all honesty, these Titan organisms looked much like those little tardigrades on Earth and were so small as to be invisible to the naked eye. It’s not like I could even go and talk to one or give it a saucer of milk, like a cat. OK they were bigger than bacteria but not by much and the fact that they were methane based rather than water based was a bit esoteric. Maybe it was a significant point to a biologist but to me, a layman, it was a polite “oh yes” and nothing more. A bit like an interesting snippet in a documentary on TV – all very interesting but so what? Star Trek was never like this. Aliens are supposed to look

alien, like Klingons or Borg, not like cute microscopic teddy bears.

I wandered around my room, fiddling with things, picking them up and putting them down. I'd brought my easel and paints down from the Wheel but I was too out of sorts to attempt to do any painting. Just before we'd arrived Evie had had an email from her agent asking if I would be willing to do a painting of her for the back cover of one of her books. I'd agreed but hadn't got around to it yet. We'd had a minor disagreement over the composition. I'd suggested a tasteful nude and Evie had taken me seriously and refused point blank so I'd sketched a few other ideas, such as Evie sitting in her writing chair looking creative, but she hadn't liked those either so we'd more or less reached an impasse. It's difficult to do a good portrait when the subject is hostile.

A while later I heard sounds in Evie's cabin, which was next to mine, again due to the diplomacy of Gina, so I wandered next door.

"How's it going?" I asked.

"Mmmm," she said, non-committally.

"Where'd you go?" I asked, rather bravely I thought. If she was in a good mood she'd probably tell me but Evie wasn't always in a good mood and sometimes saw idle chat as an invasion of her privacy and an assault on her independence.

"Out," she said.

"OK," I said, sitting down. She hadn't bitten my head off so it was safe to stay but her tone suggested it probably wasn't a good idea to ask what the weather was like.

"I'm going to have a wash," she said.

"Chuck me your jumper and I'll do the laundry," I said. "I've got some to do myself."

Our TS suits were heated so in principle we could have worn them with nothing underneath but no matter how good the thermostats

were there were times when we sweated. It's generally not a good idea to sweat right next to the electrical wiring in the suit so we wore thin one piece jumpsuits as well and, like underwear, they also kept the TS suits cleaner. Since they were comfortable we often wore them inside the compound as well as outside. It was irritating calling them Titan Surface Inner Absorbent Lining Garments so we just called them jumpers instead since they were more or less jumpsuits and 'onesies' is just plain twee. Fine for babies but not self-important astronauts.

"OK," she said, stripping off. "I'll get some food for when you get back."

She tossed me her jumper and stepped into the bathroom. I checked her laundry box and took out the other jumper in there and a few other odds and ends of clothing then went back to my room to get my laundry. I loved doing the laundry, even after years in space, having spent too much of my life in launderettes.

One of the issues with ordinary washing machines is that the water, detergent and the tumbling around are actually pretty bad for clothes. Back on Earth this is a good thing since it encourages people to buy more clothes but when you're a billion kilometres from the nearest retail outlet this can be a bit of a hassle, especially when many of your clothes contain electrical equipment or highly specialised fabrics. BSpaceE had developed a rather nifty zero damage waterless washing machine which they'd been planning to develop commercially although I don't know if they ever did. Basically you hung the clothes in a wardrobe-like box and pushed a button. Six minutes later the clothes were clean, dry and smelling 'daisy fresh'. Apparently the clothes were sprayed with a fine mist of solvent to loosen grease and whatever then they were hit with low-frequency sound waves which dislodged the dirt then squirted with a fragrance so they smelled nice. The machines fascinated me, especially as they even cleaned footwear and helmets, although you had to remember to put them with the opening down so the dirt could fall out.

I dumped my clothes in my room then took Evie's into hers. For some deep psychological reason she was happy for me to wash them but not put them back in her closet so I left them on a table for her to stow away later. She came in moments later with dinner, Chicken with

Vegetables and Rice in Black Bean Sauce for me and Beef Lasagne for herself with Rhubarb Crumble and Custard for us both for dessert.

“Smells good,” I said, sitting at the table. “Thanks.”

She didn’t reply, just sat down opposite me and we both started to eat.

“So what did you make of all that earlier?” I asked, after a while.

“I don’t know,” she said so we carried on eating in silence.

I was scraping the last of my crumble from the carton when she broke the silence.

“I had to go outside, after,” she said. “I had a need to feel the ground. Make contact, I suppose.”

“Did it work?” I asked.

“I don’t know,” she said. “Yes, I suppose it did. At least I felt better. I knelt down on the ice for a while, just staring, on my hands and knees, trying to see those things but I couldn’t. Then I lay down with my face plate pressed against the ice. I don’t know for how long but then I rolled over and stared up at the sky.”

“Did you see any stars?” I asked, pushing my empty carton away.

“No, it was raining and dark,” she said. “It felt strange knowing I was lying on alien life. It’s funny really. I’ve lain on grass and beaches and rocks and never thought about the life underneath me but this time I could almost feel them moving, carrying me along on their backs. It was very strange.”

“Did they move you?” I asked, intrigued.

“Oh no,” she said. “It was just my imagination. I suppose it’s the strangeness of it all. I never thought I’d encounter aliens but somehow, if I did, I guess I thought they’d be wookies or something like that, you know, big and scary.”

“Yeah, I know what you mean,” I said. “What were you getting at when you asked Rik where they came from?”

“Oh, that,” she said. “I don’t really know. I guess I just find it incredible that two planets have produced the same organism. I know Rik says they’re completely different and that they just look similar because their environments are similar but it doesn’t feel right to me. I suppose I was wondering if they both came from somewhere else and adapted to fit the planets they arrived on.”

I gazed at her for a while, thinking about this.

“So you’re saying that there’s other life somewhere else in the galaxy?” I said. “And somehow these little water bears managed to cross space and colonise Earth and Titan?”

“I suppose I am,” she said.

She got up abruptly and walked across the room then came back.

“I suppose it is possible that life only ever developed in one place,” she said, staying standing but leaning her hip against the table. “But now that we’ve found life here, I suppose that means there could be life in all sorts of places. After all, Titan isn’t that far from Earth when you think how big the galaxy is. We’re both in the same neighbourhood. What the hell is there in other neighbourhoods?”

“Well, yeah,” I said. “I don’t know how many stars there are in our galaxy but if life exists in at least two very different places in this solar system it makes sense to think that there must be life in other solar systems. And not just those Goldilocks ones either. I wonder why they call it the Goldilocks zone?”

“It’s probably from that fairy story,” said Evie. “You know, Goldilocks went into the house of the three bears and everything she tried was either too small or too big or just right.”

“You’re probably right,” I said. “Hey, you don’t suppose that somewhere else there are giant bears, do you?”

“What do you mean?” she asked, looking askance at me.

“Well, if we say the water bears on Earth are just the right size,” I said, “then the ones here are too small so somewhere else they’ll be too big. The three bears, you see, Goldilocks.”

“Trust you to think of something stupid like that,” she said. “Getting me all worried for a moment. I thought you mean giant bears on Titan.”

“Like in a cave?” I asked.

“Hey yeah, what was all that about ceramics in the cave?” she asked. “I was suffering from overload by that point.”

“Zaf tried using a thermal drill to drill into the ice inside the cave,” I said. “Wherever he tried he couldn’t go more than twenty or thirty centimetres and when he looked at a section he said it looked like some sort of ceramic. He said it was a different colour too, not like the ice.”

“What colour was it?” asked Evie, sitting down again.

“I don’t know,” I said. “I didn’t get a chance to look at the stuff. But whatever it was it seemed to line the whole cave.”

“There has to be other life on Titan,” said Evie thoughtfully. “How on earth could those little buggy things build a ceramic lined cave?”

“If there were big creatures, surely we’d have seen some sign of them?” I said.

“We get foxes in Nottingham,” she said. “Do you get them in London?”

“Yes,” I said, “or so I’ve heard. I’ve never actually seen one though.”

“There you are then,” she said. “Foxes are quite big but you still haven’t seen one even though they were all around you.”

“OK, fair point,” I said. “And thinking about it, a cave would be a

pretty good sign, wouldn't it. Like finding a fox's den in your back garden."

"How big a cave was it?" she asked.

"Ohh, wide enough for two people," I said. "And I could stand upright and it seemed to go back fifteen metres or so. That's a pretty big cave."

"Was there any sign of anything living in it?" she asked. "I don't know, bones or poo or anything?"

"Not that I saw but who knows what was covered by the ice," I said. "Hey, maybe the creatures here have ceramic bones and the cave was lined with them."

"Oh god, I hope not," she said. "Stop it, you're scaring me."

"Well, whatever is here," I said, "and however big it is, we mustn't forget that it's benevolent. After all, it did somehow guide us to Talia when she was injured. It could just have eaten her."

"Yes, that's true," she said. "Oh my word, I've just had a thought."

"What?" I asked.

"If it knew Talia was injured and needed help," she said, "it must have been in the cave. Oh god, do you suppose it was inside the cave when we were in there?"

"Surely we would have seen it?" I said.

"We weren't looking for anything," said Evie. "We were concentrating on finding Talia and when we found her we just quickly checked she was OK then bundled her out as quick as. Maybe it was sitting at the back of the cave watching us?"

"I'm sure we'd have noticed," I said. "It's not like its a huge cave with hidden corners and things. It's more of a big shoebox really."

"I'll tell you what probably was in the cave," said Evie. "A whole bunch of those little bugs Rik showed us. Billions of them probably."

"I guess," I said. "Although Rik doesn't think they're even aware of us, and even if they were they wouldn't have the brain power to do anything about it."

"Hmm, I suppose," she said. "I daresay we'll find out more in time. We've only been here a couple of weeks. Assuming we don't go home early we've got another three years yet."

"Yeah," I said, "although what do we do if we've lost communications with Earth permanently? Do you think we should go back or stay?"

"Oh, it'll just be an equipment problem," said Evie. "Why would Earth stop the signal?"

"Who knows what trouble the world's in with those Cyber Wars," I said. "Maybe there was an attack on BSpaceE, maybe word got round that they had lots of food ready for the main colonists and a bunch of starving people went after it. You've heard about those food riots in London and I'm sure they're happening in other places."

Evie screwed up her face and shook her head.

"I can't really imagine it," she said. "Every time I try to I end up imagining old war movies. I was born in 1974, just before the end of the Vietnam War. I've never been involved in a proper war. I can't really imagine what it's like except from movies."

"I don't think it's a fighting war," I said. "From what I understand it's economic. Like the Global Financial Crisis and the years of austerity."

"I suppose," she said, "although the GFC was a long time ago too. Oh sod it, let's go to bed."

"If you insist," I said, "although I thought you'd rather discuss political economics."

"You know even less about political economics than you do about

making love,” she said. “Going to bed is the lesser of two evils.”

“So you think I’m evil?” I said, getting up and collecting the empty food cartons ready for recycling.

“No,” she said. “But I am. Stop that and get into bed.”

“Aye, aye, cap’n,” I said, dropping the cartons and saluting. “Be gentle with me though, I’m an old man.”

“You know,” she said a while later when we were relaxed and snuggling, “I was thinking about a book I once read.”

“You were thinking about books during that?” I asked, too comfortable to feel insulted.

“I’m always thinking about books,” she said. “Just as you’re always thinking about images.”

“Hmm, OK,” I said. “I tend not to think at all in these situations but never mind.”

“That’s because you’re a man,” she said, “and you think with your dick. I’m a woman and we can multi-task.”

“Fair enough,” I said. “What book was it? I hope it wasn’t Great Expectations?”

“Oh I gave up on that years ago,” she said with a laugh. “No, it was Science Fiction.”

“Oh right,” I said. “Probably The Incredible Shrinking Man then.”

“I don’t know about the incredible bit,” she said, “but no, it wasn’t that either. I’ve forgotten what it was called but it was by Isaac Asimov.”

“I’ve read some of his,” I said. “Didn’t he write about robots?”

“I don’t know,” she said. “I’m not a fan of Science Fiction. Anyway,

this one was about a planet called Gaia.³”

“Was there life on Gaia?” I asked.

“That’s the thing,” she said. “The whole planet was alive. It was a single consciousness. All the people, animals, plants, rocks, clouds and everything were all part of this one single conscious entity.”

“It’s nice that there were people on it,” I said drowsily. “So was it a good story?”

“I don’t really remember,” she said. “All I remember is that the hero spent some time there then had to go off and save the universe or something.”

“So it had a happy ending, then?” I said.

I was just dozing off when she shook me awake again.

“Oh not again,” I muttered. “I’m getting too old for this.”

“Yes, you are,” she said. “I’m going to get Nag to make you spend more time in the gym. No, I’ve just had a thought.”

“Can’t it wait until morning?” I groaned.

“No,” she said, rolling on her side so I rolled over too and took her in my arms so she couldn’t see my eyes were still shut.

“OK,” I said. “Tell me your thought.”

“Rik thinks there are trillions and trillions of these little bug things on Titan,” she said, giving me an elbow in the chest to help me stay alert.

“Uh huh,” I said, yawning.

“And he thinks there may not be any other creatures since there’s no competition for resources,” she continued.

3 Actually Isaac Asimov wrote two books about Gaia, *Foundation's Edge* (1982) and *Foundation and Earth* (1986)

“Yeah, something like that,” I said, rubbing my chest. “So?”

“So what has been giving us these dreams and did that thing with Talia?” she said.

“No idea,” I said. “Why don’t we think about it in the morning? Owww.”

She’d elbowed me again.

“What if all these little bugs are interconnected?” she said. “What if they are all part of a single, vast consciousness, like Gaia. What if each of these bugs is just a single cell inside part of a gigantic conscious brain? A planet sized brain with zillions and zillions of brain cells working together? Maybe with that kind of power it can get inside our brains and rummage around inside our memories? Maybe it’s even powerful enough to connect to the Earth and do things with computers there?”

“That’s an interesting idea,” I said thoughtfully.

I let go of her and sat up in bed, my back against the wall, and forced my eyes open.

“Tell you what,” I said, “why don’t you ask your father? He’s sitting over there, next to Rosalie.”

Chapter Twenty Seven

“So that’s Rosalie,” said Evie quietly, levering herself up and sitting forward to lean on her knees. “Funny, I thought she’d be prettier.”

Rosalie was sitting in her faded pink dressing gown, curled up on the couch she’d always sat in most evenings. Evie’s father, on the other hand was sitting in a Captain’s chair, his elbows resting on a non-existent desk. He was twisted round, looking at us with a distracted, faintly bemused expression over his half-moon glasses. Rosalie was doing her nails.

“What’s your father’s name?” I whispered to Evie after we’d all stared at each other for several moments.

“Dad,” she whispered back. “Oh, umm, Rodney.”

I cleared my throat and checked the bed sheet was appropriately covering my modesty.

“Hello Rodney, Rosalie,” I said. “Umm, how are you?”

“Heergh,” said Rodney and Rosalie simultaneously. “Yamvel.”

“Do you suppose that Titanian?” whispered Evie, “or am I dreaming?”

I pinched her and she slapped me, hard.

“Hero,” said Rodney and Rosalie simultaneously. “Ayeam varl.”

“I don’t understand,” I said. “Are you trying to talk English or is that your own language?”

“I suppose I’m not dreaming,” said Evie, “and I guess you’re not either. Can you see what I see?”

“Your father’s in his mid-forties,” I said, “at least I’m assuming he’s your father. He’s got a goatee and half-moon glasses and he’s wearing a brown corduroy jacket with leather patches on the elbows.”

“So you can see him?” she said, twisting to look at me for confirmation.

“Yes,” I said.

“Hello,” said Rodney and Rosalie simultaneously. “I am all.”

“Jesus,” said Evie. “They’re talking English.”

“Did he say he is all?” I asked

“I think she said ‘I am well’,” said Evie.

“Umm, OK,” I said. “Umm, Rosalie, Rodney, umm, obviously you aren’t Rosalie and Rodney, so who are you?”

“Gyyargh,” said Rodney and Rosalie simultaneously.

Neither of them had moved. Rosalie’s nail file hadn’t shifted a millimetre and neither of them had even blinked.

“Gyyargh?” I asked, glancing at Evie.

“Gaa yah,” said Rodney and Rosalie simultaneously.

“You mean Gaia?” asked Evie.

“I am Gaia,” said Rodney and Rosalie simultaneously.

There was a knock on the door and Talia’s voice called softly, “are you awake, Evie?”

Rodney and Rosalie faded and disappeared.

“Wow,” said Evie, looking at me. “Oh, come on in, Talia,” she called.

The door opened and Talia appeared.

“Oh sorry,” she said noticing me in bed with Evie. “I’ll come back later.” She made no move to go though, just stood there in the

doorway.

“Come in, Talia,” said Evie. “What can I do for you?”

“Umm, I wanted to talk to you about your dreams,” said Talia. “Umm, yours too, Phil, I guess.”

“I guess we’d better get up, then,” I said. “Umm, Talia?”

“Oh, right,” she said then pulled back through the doorway. “I’ll just be outside.”

Evie and I quickly threw on jumpers, Evie a clean one and me the dirty one I’d been wearing earlier.

“You can come in now,” she called and Talia came back in the room.

“I, err, brought some coffee,” she said, holding out three sachets. Obviously she’d been expecting me to be there, despite her pretence at surprise.

“Have a seat,” I said, pulling over the two chairs from the table. I looked at Evie and she sat on the bed so I sat on one of the chairs.

“So what about our dreams?” asked Evie.

“Umm, you know you’ve both been having funny dreams for a long time,” she said, “and then you both started having dreams while you were awake?”

“Yes,” said Evie.

“And, umm, no one else does,” she said, “and Myf thinks they’re related to you both being invited?”

“Yes,” said Evie.

For a writer she could use remarkably few words when she didn’t know what to say.

“Woah, hold on,” I said, as a little light suddenly flashed in my head. “You’ve been having dreams too?”

Talia nodded.

“You went through the selection process though, didn’t you?” I asked. “Your results weren’t altered?”

“No,” she said in a thin voice. “Umm, no.”

“So what sort of dreams have you been having?” I asked.

“About my dog,” she said. “I’ve had her since I was twelve. I’ve often dreamt about her since I left home to go to Uni. Even more since we left Earth”

“Is she still alive?” asked Evie.

“Yes,” said Talia. “At least no one’s told me she’s died, although she’ll be fourteen now.”

“That seems quite normal to me,” I said. “You were close with your dog and since you left you’ve been dreaming about her. Quite understandable.”

“That’s what I thought,” said Talia, “which is why I never bothered to mention the dreams to Myf. It’s just that, well, umm, ...”

“You’ve seen her while you were awake, haven’t you,” said Evie.

“Yes,” said Talia. “That’s why I couldn’t sleep on Wednesday. I saw her sitting in the corner of the room but she vanished and later, when I went to bed she was lying on the bed the way she used to back when I was still living at home with my mum and dad. That’s why I started to look at the satellite images, I was scared to get into bed.”

“But why did you decide to go out on your own to look for the lines?” I asked.

“I just had an incredibly strong need to find them,” she said, turning

her coffee sachet nervously in her hands. I noticed it was actually hot chocolate, not coffee. "It was overpowering."

"OK," said Evie. "Well, there's no reason I can imagine why you wouldn't be as susceptible to these dreams as we are. Maybe you were going to pass the selection process anyway so your data didn't need to be changed."

"Or maybe whatever is doing this only picked up on Talia recently," I commented. "Have you had any other dreams? Ones that are maybe related to Titan or just plain strange?"

"Well, I had a few since we started slowing down to come into orbit," she said. "But you'd expect that, wouldn't you?"

"Yes," I said. "But nothing strange or unusual?"

"Not really," she said, "although ..."

"Although ...?" Evie said encouragingly.

"I've had a few dreams, well, the same dream several times," said Talia. "Umm, in the Anthropology Department at Uni we had a row of pigeon holes in the Post-Grad area for messages and returned assignments and things. I keep dreaming about that, god knows why."

"A row of pigeon holes?" I asked. "Interesting. Are they trays or boxes or what?"

"Boxes," she said. "Like shoe boxes in a pile only lying flat. Why?"

"So if you stretched your imagination a little," I said, "the pigeon holes could maybe look a little like a harmonica?"

"You what?" said Evie, looking at me.

"Think in images," I said, "not words. Imagine a harmonica and imagine a row of pigeon holes. Can you see any similarities?"

Evie curled her lip at me so I guessed she balked at comparing shoe

boxes to harmonicas.

“What does a harmonica look like?” asked Talia. “I’ve sort of heard of them but I’ve never seen one.”

“That’s why she’d see pigeon holes,” said Evie. “No memories of harmonicas.”

“Makes sense, I suppose,” I said.

“What’s the significance of harmonicas?” asked Talia.

“No idea,” I said. “It’s just that we’ve both dreamt about harmonicas. So why are you telling us?”

“I saw Beauty a few minutes ago,” she said. “That’s my dog. I went to get back into bed after using the bathroom and she was lying there then she jumped off the bed and wanted to get out of my room so I opened the door and she ran here.”

“Is she in here?” asked Evie, looking around.

“No,” said Talia. “She disappeared when I heard that funny voice.”

“What funny voice?” I asked.

“Umm, I was going to knock on your door when I heard you both talking,” said Talia. “Then I heard another voice saying something like ‘yammel’ and I didn’t know whether to knock or not so I just stood there feeling stupid then I heard the voice saying ‘I am Gaia’, and I felt I had to talk to you.”

“Do you know what Gaia is?” I asked, surprised that Talia would read old Science Fiction books.

“Of course,” she said looking puzzled. “The Gaia Hypothesis was proposed by the chemist James Lovelock in the seventies as a complex self-regulating feedback system between living organic entities and their inorganic environment. We had a seminar at Uni on whether primitive tribal cultures embodied the principles of Gaia. Modern

Western cultures like to think that animistic and shamanistic cultures were somehow more in touch with the natural world but realistically it's simply a projection of their religiosity overlaid on their limited understanding of nature rather than any deeper integration."

"Oh right," I said, a little mystified.

"The thing is," said Evie, "I think those little water bear things Rik found are part of a bigger organism and that organism is somehow communicating with us through dreams and waking images."

"And sounds," I said. "Rosalie and Rodney were trying to talk to us."

"Who are Rosalie and Rodney?" asked Talia.

"My wife and Evie's father," I said. "It was Rosalie that led us to the cave where we found you."

"Well, thank her for me, would you," said Talia.

"Sure," I said. "It's interesting though that Beauty led you to Evie's room just at the same moment that Rosalie and Rodney were trying to talk to us, don't you think?"

"I guess," said Evie, "although I think something more interesting happened just now."

"What were they saying?" asked Talia.

"It was mostly nonsense," I said. "I don't get it. If whatever it is is accessing our memories to get the images why wasn't it able to talk properly?"

"You think it's working through memories?" Talia asked.

"Sure," I said. "I dream of my wife, Evie dreams of her father and you dream of your dog."

"Hmmm," said Talia.

“Don’t you want to know what I think?” asked Evie with that edge to her voice that suggested if we knew what was good for us we would want to know.

“What do you think?” I asked.

“Something very different happened this evening,” she said. “Up until now we’ve only seen our own memories. I’ve only seen my father, never Rosalie. But tonight I saw Rosalie and you saw my father and we all three of us heard them.”

Jesus,” I said. “You’re right. Did you see Rosalie sitting on a couch in a pink dressing gown doing her nails?”

“Yes,” said Evie. “Which makes it different from when we both saw Talia. That time we both saw our own memories of Talia, now we’re seeing each others’ memories and god knows what we’re hearing.”

“Actually, we could be hearing memories as well,” said Talia thoughtfully.

“How do you mean?” I asked.

“Well, Myf might know better but I’m pretty sure we have no real idea how the brain stores memories,” she said. “I’m willing to bet that if someone or something is going through the memories in someone’s brain it would be a hell of a lot easier to understand a strong image of something well remembered than it would be to learn a language from memories of learning it. Just think about the chaotic way we started to learn to talk and understand when we were babies.”

“Right,” said Evie. “That would explain why it was saying things that sounded a bit like ‘hello I am well’. It’s trying to learn to speak English from our memories of learning to speak English. And it must be an ‘it’ not a ‘them’ since both my father and Rosalie were saying the exact same thing at the exact same time.”

“But why would it call itself Gaia?” I asked. “Why wouldn’t it use its own name?”

“Buggered if I know,” said Evie, frowning.

“Oh that’s obvious,” said Talia. “None of us could possibly have any memory of what its name is, even if it has a name which it might not. After all, names could be a purely human construct.”

“OK,” I said, “but why Gaia?”

“Because that’s something all three of us have heard off,” said Talia. “It’s probably the closest memory, conceptually, we all have to what this thing actually is. As far as we are concerned it is Gaia.”

* * *

“Good morning, people,” said Gina at breakfast the next morning. “I’m glad you’re all here. I’ve got some news for you. Let me just get some coffee and muesli.”

“Some bad news to start the day with,” Myf said. “My toilet’s not working again.”

“Use mine,” said Nag.

“I did,” said Myf, “since you aren’t using your room.”

“I’ll have a look at it this morning,” promised Zaf. “It’s probably that seal I told you about. The joint is outside tolerances so I’ll try a double seal.”

“Good news or bad news, Gina?” I asked.

“Good and I don’t know,” said Gina, sitting down.

She opened a carton of muesli and started to stir it.

“First the good news. There’s been a component failure on ComSat 3 which is why we’ve lost communications with Earth. There’s still a signal being received by ComSat 2 although it’s too weak to be of any use as ComSat 2 is currently right on the edge of the signal cone.”

“Can it be fixed?” asked Nag.

“Absolutely,” said Gina. “Just not easily. We’ve got the spares but Zaf and I are going to have to take the transporter out to ComSat 3 and Zaf’ll go EVA to swap it. It’s irritating but not life threatening.”

“When are you going to do that?” asked Angus.

“There’s no rush,” said Gina. “Titan will be coming out of Saturn’s shadow in two days so we’ll have direct communications restored. This means we’ll have about twelve days in which to repair ComSat 3 so we don’t need to rush things.”

“OK, so that’s the good news,” said Talia. “What’s the ‘don’t know’ news?”

“Over to you, Zaf,” said Gina.

“This is absolutely fascinating,” said Zaf, bubbling with enthusiasm. “I’ve analysed the sample of the ceramic I took from the cave. It’s definitely a ceramic. In fact it’s bismuth strontium calcium copper oxide, or ‘bisko’ as it’s usually known. Its chemical formula is $\text{Bi}_2\text{Sr}_2\text{CaCu}_2\text{O}_8$. What makes it interesting is a couple of things. Firstly, we’ve not found any traces of strontium or calcium anywhere on Titan before, either in the atmosphere or on the surface.”

“So you’re saying it’s come from somewhere else?” asked Nag.

“Not necessarily,” said Zaf. “We have no real understanding of the interior of Titan so it could simply be a sub-surface extrusion. It’s possible that there is a fault line running under this ice cliff.”

“What’s the other interesting thing?” asked Angus.

“Bisko’s a superconductor,” said Zaf. “It’s the highest temperature superconductor we know of, in fact.”

“What’s a superconductor?” asked Evie.

“I’m glad you asked me that,” said Zaf, beaming. “As you know, most

materials conduct electricity but they have some resistance to the flow known, appropriately enough, as the resistance. This amounts to a loss of electrical energy and the longer the cable the more energy is lost. Now, resistance is also related to temperature, the higher the temperature the higher the resistance but it never entirely goes away. Except for superconductors. Certain materials have a resistance of zero when you cool them to the right temperature. Aluminium, for example, becomes a superconductor if you can cool it down to minus two hundred and seventy one degrees.”

“So what temperature is bisko a superconductor?” asked Rik.

“Minus one hundred and sixty three degrees,” said Zaf. “That’s why we love it on Earth. It’s a superconductor at much higher temperatures than anything else. And do you know what?”

“What?” asked Talia obligingly.

“The temperature outside is a balmy minus one hundred and sixty nine,” he said. “That means the bisko is superconducting all the time.”

“That sounds very interesting,” said Gina, “but does it have any practical benefits or disadvantages to us?”

“Well,” said Zaf. “This is just a thought and I have no idea what the mechanism is if it turns out to be the case but you remember Talia’s boot batteries still had 41% power after six hours of usage when she was found in the cave? It’s a remarkable coincidence that the cave was constructed of a superconducting material. I wonder if, somehow, the bisko channelled Titan’s electric field into Talia’s batteries, thus keeping them charged. This may also be why there were stalactites in the cave. The charging of the boots generated sufficient heat to melt some of the roof ice long enough to form stalactites. Conceivably also long enough to melt any stalagmites that may have formed so that they merged into the floor of the cave. The sample of stalactite that I took, incidentally, proved to be 99% water with traces of other common Titan elements. Nothing out of the ordinary there.”

“But surely a superconductor wouldn’t generate any heat?” said Angus. “That’s actually the point of a superconductor.”

“True,” said Zaf, “but the boot batteries aren’t superconductors so the heat could have come from there. Anyway, I’m not putting this forward as a theory, merely as a possible line of research.”

“You said the cave was constructed out of bisko,” said Evie.

“Bisko,” said Zaf.

“Yeah, so, umm, what do you think may have constructed it?”

“Ahh, bad choice of words,” said Zaf. “I should have said ‘composed of’. I can’t possibly comment at the moment on whether the bisko was naturally formed or created by some external agency.”

“Does bisko occur naturally on Earth?” I asked.

“No,” said Zaf. “It needs a fairly complex manufacturing process but that’s on Earth. We know very little of the natural processes on Titan so it is entirely possible that bisko could be created here naturally. It might even be possible that all we have to do is mine it. If that’s the case then this discovery alone would pay for this expedition several times over.”

“I think we’re getting ahead of ourselves,” said Gina. “Although clearly we need to do extensive surveying. I think the first thing we need to do is establish the extent of the bisko deposit in and around Talia’s cave. Incidentally, Talia, as Captain I have the prerogative to name newly discovered geographic sites and I propose to name that cave after you. Henceforth it will be known officially as Talia’s Cave, or at least it will be as soon as we restore communications with Earth. Unless you’d prefer Kelley’s Cave?”

“Hey, that’s pretty cool,” said Talia, beaming. “Neat, thanks. Umm, I think Talia’s Cave has more of a ring to it. Kelley’s Cave sounds more like a hideout, you know the Kelly Gang in Australia.”

“Talia’s Cave it is,” said Gina. “Right. Nag, could you undertake a preliminary geophys survey?”

“Certainly,” said Nag. “When shall I start?”

“One moment,” said Gina. “Zaf, could you start investigations into your idea of the bisko recharging the batteries? That could potentially be extremely useful. If there are more such deposits we can create a map of recharging points which would greatly facilitate exploration.”

“No problem,” said Zaf.

“Excellent,” said Gina. “We will therefore establish a temporary base beside Talia’s Cave using the tents and establish a supply chain. Rik and Angus will continue studying the organisms and Ollie and myself will be based here to manage the Cliffbase and systems. Therefore we’ll have two teams providing support for Zaf and Nag. Talia, you and Myf be Team 1 and Phil and Evie you be Team 2, operating two four hour shifts a day. We need answers, people, let’s get onto it.”

Chapter Twenty Eight

“Do you know anything about Gaia?” I asked Angus.

I sought him out rather than Rik because Rik could be a little caustic over things he didn’t agree with.

“Of course,” said Angus. “It’s a pretty straightforward idea, nothing particularly radical.”

“Oh really?” I asked, “I thought it was quite contentious.”

I had vague feelings of guilt because Evie was helping Nag load her geophys equipment, some supplies and one of the tents onto a trailer. There wasn’t enough work for three of us but even so. Still, Angus and Rik were engrossed in their work on the little organisms so I really needed to grab him when I could.

“The basic idea isn’t,” said Angus, “it’s some of the more esoteric aspects that a few people want to read into it that’s up in the air. It seems pretty obvious to me that nothing exists in isolation so everything must, to some extent, influence other things and they in turn influence back.”

“How about a for instance?” I asked.

“Oh, I don’t know,” said Angus. “Umm, OK, plants take in carbon dioxide and expel oxygen and mammals take in oxygen and expel carbon dioxide. If one or the other does too much then there’ll be a surfeit of carbon dioxide or oxygen.”

“I see that,” I said. “But what’s that got to do with Gaia?”

“Feedback,” he said. “Too much carbon dioxide and the mammals start to die off. On the other hand, too much oxygen and bush fires become bigger and worse, killing off the trees and plants. Then the levels drop back down again and things return to a new equilibrium. Climate change on Earth is a great example. We’re pumping too much carbon dioxide into the atmosphere and the climate is warming up to compensate and it’ll carry on until we stop doing it or die off.”

“Hey, I see what you mean,” I said. “It’s really quite simple, isn’t it.”

Angus laughed. “No, it’s actually phenomenally complex. It’s bad enough with just the bio-physics but when you try to factor in the political, economic and psychological dimensions it becomes a nightmare. Still, the basic concept is simple.”

“So what’s the contentious side of Gaia?” I asked.

“Consciousness,” he said. “Some people on the, umm, fringe ...” I had a feeling he was going to say ‘lunatic fringe’ but had managed to restrain himself, “... have extended the simple feedback system of the Gaia Hypothesis into a global consciousness involving everything on the planet, living and non-living. They somehow contend that oceans, mountains, even the atmosphere are consciously involved in a decision making process as though the entire planet is a single living organism.”

“Couldn’t it be?” I asked. “After all a bone in isolation isn’t alive but it’s part of the structure that makes up a living person.”

“Depends what you mean by alive, at the end of the day,” said Angus. “That bone in your leg isn’t capable of living on its own though. It can’t reproduce, for example.”

“Can any part of a human live wholly on its own?” I asked. “If you take a brain or a heart away from the body it’ll die too. And brains can’t reproduce, well not directly. They need a body to do that.”

“A moot point,” he said, “but surely you don’t think a thigh bone is conscious, do you?”

“I doubt it,” I said, “although I have no idea what consciousness actually is. I leave that to the philosophers and biologists.”

Angus found that highly amusing.

“A lot of biologists say that consciousness arises from a stream of unified mental constructs that occur spontaneously in a material structure,” he said, “which is a bit circular and is very humanistic,

since the mental constructs would be what we, as humans, define to be a mental construct. You could argue, if you wanted to be contentious, that the radiation coming from, say, plutonium, is a stream of mental constructs occurring spontaneously in a material structure but that we simply don't recognise the stream as mental constructs. Can't be proved either way. After all, human thoughts are basically just electro-magnetic constructs."

"I have no idea what you are talking about," I said. "I'm just an artist."

"Well, there you go then," he said. "Can plutonium create a painting?"

"I don't know," I said, "but I do know I can't create a snowflake or the landscape that I'm trying to paint."

"Touché," he said. "I can see we could have a lot of fun debating the origin of aesthetics."

"Maybe some other time," I said. "I have to go do some work in a minute, but I've got another question for you, if that's OK?"

"Fire away," he said.

"Is it possible that those little bugs you've found could combine to form a bigger organism," I asked, "like a giant consciousness?"

"You mean like the individual cells in the human brain?" he asked.

"Yes," I said.

He sighed.

"You know, if you asked me that on Earth, I'd say 'no, of course not'," he said.

"But here?" I persisted.

"Things are different here," he said. "That ceramic Zaf found in the cave, it's a superconductor, yeah?"

“Yes,” I said.

“Well, it’s so damned cold here that everything is close to being a superconductor, even the methane in the atmosphere. That said, whereas on Earth you’d need very close proximity for an electrical signal to jump from one neuron to another, here the gap could be considerably wider. I’d be very reluctant to say they could form a single consciousness but I’d be reluctant to say it’s impossible either. In fact, since each individual seems to have ten or so neurons you’d actually have the basis for a potentially efficient hierarchical processing system since you’re not talking about connecting individual cells you’re talking about connecting clusters of ten or so cells which would make the local processing magnitudes more efficient than for single cells.”

“So you think it’s possible?” I asked.

“I suppose,” he said, “but I have to say as a biologist I’m struggling with the idea.”

“Would it be possible to find out?” I asked.

“Jesus,” he said and scratched his nose. “I suppose we could see if the organisms generate any kind of electrical field and whether it extends far enough to interact with another organism. That shouldn’t be too hard. Of course if it does that wouldn’t prove anything beyond the beasties having an electric field but if they don’t it would make it fairly certain that they aren’t part of a greater consciousness. I’ll run it by Rik.”

“OK, cheers,” I said. “I’ve got to run now, I’m supposed to be helping Nag do some geophys on the cave.”

“Bring me back a few samples of the floor ice of the cave, would you?” asked Angus. “I’m curious to see if the organisms live in the cave as well or if there’s anything else in there.”

“Will do,” I said.

“You just missed it,” said Evie when I joined her and Nag outside a

few minutes later.

“Missed what?” I asked.

“Zaf assembled some constructor units,” she said. “He left a minute ago at the head of a convoy. He’s planning to get rid of as much ice as possible from inside the cave so he can get a visual of the internal structure.”

“Awesome,” I said. “Talía and Myf went with him?”

We caught up with Zaf and his convoy within a few minutes since the constructor units weren’t as fast over the terrain as we were. Their controlling AI system wasn’t as skilled at driving as humans although it would be soon, with a little more experience. The whole point of AI is that it learns.

We set up two tents, mostly to store supplies and batteries but also to give us toilet facilities and sleeping accommodation if the need arose. After all we might get caught in a sudden storm and the tents could sleep three at a pinch. After that, Zaf set about building a ramp for the constructors to use to get to the cave while Nag did a very quick, superficial ultrasound scan around the entrance. She wasn’t certain what effect the bisko ceramic superconductor would have on the electromagnetic radar she normally used. I quickly grabbed a few samples of floor ice from the cave for Angus.

“The area immediately around the hole is thin and uniform,” she said on the local network so the five of us could hear, “which suggests that it’s just ice but beyond it there is definitely a structure although it’s unclear. Its density seems to be similar to the ice so it doesn’t produce good pattern layering.”

“What are the dimensions of the structure?” asked Zaf.

“Difficult to be precise,” she said, “as this is just a rough and ready scan but I’ll mark it out for you approximately.”

Using a glorified magic marker, specially designed for use on ice, she roughed out the outline of the structure around the cave, buried under

the ice. It looked to be about two metres square.

“Interesting,” said Zaf. “Can you tell how deep it goes?”

“No,” said Nag, “ultrasound only goes a metre or so but now I know what the basic structure looks like I’ll do a more precise survey with the GPR. Could you not clear the entrance just yet so I can see how the bisko responds to the pulse?”

“No problem,” he said. “Let’s have a coffee, ladies.”

Myf and Talia joined him in their tent while Evie and I helped Nag get out the Ground Penetrating Radar equipment and set it up.

“I was afraid of that,” said Nag an hour or so later.

She was bent over her computer screen in our tent, studying the results of the first GPR scan.

“What’s the problem?” asked Evie.

“The GPR uses electromagnetic pulses,” she said. “Normally they bounce off the layers of whatever materials are under the surface so the computer can build a three dimensional image but this superconducting material is just absorbing the EM. It’s like there’s nothing there. We’re going to have to stick with the ultrasound, I’m afraid.”

“That’s a nuisance,” said Zaf. “The ultrasound only goes a metre or so deep. I was hoping we could go the full extent of the GPR.”

The GPR could penetrate at least a hundred and fifty metres and even I could see how useful it would be to find out if there was anything behind the ceramic cave.

“That’s the way it goes,” said Nag. “Still, if there’s no opening at the back of the cave the odds are that there’s nothing behind it.”

“That’s not really a valid assumption,” said Zaf. “The bisko could be hundreds of metres deep. The cave could actually be a cave in a huge

bisko deposit.”

“Sorry,” said Nag. “I was focused on the cave not the bisko. While you get the ice out of the cave I’ll do an ultrasound survey around the cave so we can see how far the bisko extends. Then when we find the edge we can excavate around it and come at the depth that way. The height’s going to have to wait. I’ll need an elevating platform if it goes above arms length.”

* * *

“Are you able to give a preliminary report?” Gina asked that evening.

She could tell we were a little excited although she’d refrained from asking any questions until we’d changed, washed and were in the mess getting some food and hot drinks. Rik and Angus were, presumably, in the lab but she and Ollie were with us.

“It’s definitely constructed,” said Zaf. “No doubt in my mind.”

“Explain,” said Gina, frowning.

We’d all frowned in disbelief to begin with. It’s one thing to speculate and another thing to find microscopic organisms but large scale proof was a whole different ball game.

“Well, some preliminary facts to begin with,” said Nag. “Zaf cleared the entrance of ice and the cave structure is rectangular, 2.31 metres high internally and 1.93 metres wide and its internal corners are smoothly rounded. He hasn’t cleared to the back yet so we can only estimate the depth at around 16 metres.”

“OK,” said Gina. “You must have uncovered something else though, since a smooth rectangle doesn’t necessarily mean anything of itself.”

“That’s true,” said Nag. “So while Zaf was clearing the cave we started surveying further over to the right to try to ascertain the extent of the ceramic structure. The structure extends another eight metres or so with two more identical looking entrances, each with the same dimensions as far as I can tell although the ultrasound isn’t that

accurate. The entrances are around 75 centimetres apart and past the last entrance is a solid looking block about three metres long.”

Really?” said Gina. “How strange. So you’re saying the bisko is, what, eleven metres long with three identical caves in it?”

“No,” said Nag. “Once we’d found the right end, we started surveying off to the left. We didn’t get far because we decided to call it quits for the day, but there is at least one more entrance over to the left as well. So there’s at least four, all in a level row and all apparently identical.”

“Yes, I can see how you’d think that’s constructed,” said Gina, frowning even harder. “After all, regular structures don’t occur in nature.”

“Typical layman’s nonsense,” said Rik, joining us. “Nature is full of regular structures. Quartz, for example, forms very precise six sided crystals and the pupils of octopuses are rectangular. What regular structure have you found?”

“Shouldn’t it be octopi, not octopuses?” I asked.

“It’s from the Greek, not Latin,” he said. “Octopuses.”

Nag repeated what she’d told Gina and Ollie.

“Interesting,” said Rik, sitting down. “Very interesting. Have you done any surveying above or below?”

“Not yet,” she said.

“This could still be a naturally occurring structure, though. Bisko is a crystal. These so called caves could simply be part of a honeycomb.”

“You mean like in a bee hive?” asked Evie.

“Yes,” said Rik.

“They’re manufactured,” said Evie. “By the bees. You think there are giant bees on Titan making two metre holes in a honeycomb?”

“Bad example,” said Rik. “Graphite would be a better example.”

“What would methane honey taste like?” I asked of no one in particular.

“Disgusting, I would think,” said Rik. “Oh, Phil, we did some preliminary work on your idea this afternoon.”

“Great,” I said. “What idea was that?”

“About the electrical fields between the Titan tardigrades,” he said.

“Oh right,” I said. “And?”

“This can wait until later,” said Gina. “I want to know more about these caves and why you think they are constructed.”

“Well, yes,” said Zaf. “We’re going to have to show her, aren’t we.”

There was a pronounced tension in the room since six of us knew and were bursting to tell the other three who had no idea. Zaf and Nag were enjoying themselves.

Slowly Zaf opened up his laptop.

“HalleB, Talia’s Cave image TC00017 on main screen,” he said.

“What’s that?” asked Ollie, staring intently at the picture which showed an oval shape with a number of curved, interlocking lines with a few blobs here and there.

“It’s a sign,” said Nag.

“A sign of what?” asked Gina.

“A sign that it’s constructed,” said Nag.

“What are you talking about?” asked Rik.

“When we cleared the entrance to the cave,” said Zaf, “I also got the

constructors to clear a little of the outside edge as well. We found this on the surface of the bisko immediately above the cave, in the exact centre. It looks to be a sign or plaque of some sort.”

“Probably corrosion,” said Rik.

“Could be,” said Nag, “but you have to admit the oval is suspiciously regular and the lines and blobs are raised not sunken. More like embossing than engraving. Would corrosion do that?”

“Possibly,” said Rik. “Although if it’s raised it’s more likely to be a growth or deposit of some kind. Perhaps a worm trail.”

“Actually Talia suggested that,” said Zaf. “But worm trails don’t light up, do they?”

“You what?” said Gina, momentarily loosing her aplomb. “You what?”

“After we found it we discussed it for a while,” said Myf, “as you can imagine. We all peered at it and prodded it. Then Nag got a camera to photograph it. She was standing on one of the constructor boxes to take the photograph and lost her balance and fell against the sign and at that moment it lit up.”

“Actually the whole cave lit up,” I said. “A faint but very dark blue, more like violet.”

“We don’t know the whole cave lit up,” said Zaf. “Only the parts we’d uncovered were visible.”

“Did you get a photograph?” asked Ollie.

“No, unfortunately,” said Nag. “The light went out again after a second or so. I was too surprised to take a photo while it was lit.”

“She fell off the constructor box,” said Talia.

“I’m not ashamed to admit that,” said Nag. “I seem to remember you screamed.”

“I think we all did,” said Evie. “It was one hell of a surprise. I thought it was going to explode.”

“It could be some sort of bioluminescence,” said Rik doggedly.

“Yes, it could be,” said Talia, “but it isn’t. Come on, Rik, look at the thing. We’ve got a row of at least four identical rectangular openings in a large block of rare superconducting ceramic with a clearly manufactured written sign positioned in the exact centre of the one rectangular opening we’ve uncovered and I’m willing to bet there’ll be one over each of them. You want to know what it looks like to me? Speaking as an anthropologist?”

Rik just looked at her.

“What?” he said after a while.

“It’s a machine,” she said. “I’ve no idea how old or what it does but it’s clearly a machine, manufactured by an intelligence and deposited here. This is indisputably a cultural artefact and a highly advanced one at that. You’re looking at the wrong organisms. These little tardigrade things couldn’t build something like this.”

“So where are they, then?” asked Rik.

“No idea,” she said. “Conceivably they could be extinct. That might even explain why the thing only lit up for a second or so. Even though it’s a superconductor it may be down to its last amp of power.”

“Watt,” said Zaf. “Amps are current, power is watts.”

“Whatever,” said Talia. “It’s definitely a machine, that’s for sure. Maybe the creatures that built it live in the depths of the caves or maybe they live on the other side of Titan.”

“I wonder what the sign says,” said Ollie, staring at it.

By the sound of it he was a convert. Rik still looked a little dubious, though.

“There’s no way of knowing,” said Talia. “As a linguist I can tell you we need a lot more examples of the writing before we can begin to even think of deciphering it and ideally a few concrete examples of meanings. For all we know at the moment the sign could say ‘Do Not Touch’ or ‘This Way To Heaven’ or even ‘Cook On Max For Ten Minutes For Best Results’.”

“You haven’t found any other of these signs?” asked Gina.

“No,” said Nag.

“Make that a priority tomorrow,” said Gina. “See if there are similar signs over the other openings.”

“There could be some inside,” said Talia.

“Indeed,” said Gina. “Make that a priority as well.”

“There could also be more openings,” said Nag. “I haven’t found the left end of the block yet.”

“Ah, yes,” said Gina. “Make that a priority, too.”

“Actually, I want to take a photometer tomorrow,” said Zaf. “I have a gut feeling that the dim dark blue light we saw was actually just the edge of a brighter ultraviolet outside our visible range.”

“Ohh, there you all are,” said Angus, coming in. “I was wondering where everyone was. Hey Phil, did Rik tell you about our research this afternoon?”

“He was about to,” I said, “only he got interrupted.”

“It’s pretty exciting,” said Angus, getting some coffee. “We measured the electrical field around some of the tardigrades. Not only did the fields extend well beyond the average separation of the organisms but they fluctuated in strength and those fluctuations seem, on a preliminary reading, to be replicated by the organisms in the immediate vicinity.”

“So what does that mean?” I asked.

“Too early to say,” he said, “but it looks to me like they’re talking to each other. So what have you lot been talking about? What’s that picture on the view screen?”

Chapter Twenty Nine

“I was talking to Angus about Gaia and a collective consciousness this morning,” I told Evie when we got some alone time that evening.

For some reason I wasn’t keen to discuss it in front of the others, even though we’d touched on it as a group. I guess I had a feeling that Evie and I were already considered part of the fringe by the others for our lack of scientific knowledge and didn’t want to make that last step over into the ‘lunatic’ camp.

“What did he say?” she asked, stopping what she was doing to concentrate.

I gave her the gist of what Angus has said and that he couldn’t wholeheartedly accept it or reject it.

“OK,” she said. “Well, I still think there’s a consciousness behind all of this. Maybe more than one but certainly not those little water bears, unless they are acting together. I just find it frustrating, that’s all. I’m going to the gym for a bit. Work off some of those frustrations.”

“Want some company?” I asked.

“No, I need some chill time,” she said. “I’m feeling a little, ohh, inundated, overwhelmed.”

“No problem,” I said. “I’ll give the room a clean.”

Just because we were on Titan it didn’t mean our space hygiene procedures had ended. I was spraying the antibacterial on the surfaces of our room when someone knocked on the door.

“It’s Zaf,” said Zaf.

“It’s open,” I called.

“Hey,” he said opening the door and coming in.

“Social or business?” I asked, closing the door and giving it a spray.

“Business, I suppose,” he said. “Do you know how to use either of these?”

He held up the spectrometer and a geiger counter.

“I do the geiger counter,” I said. “Just turn it on and wave the wand around, but not the other one. Why?”

“In a little under an hour we’ll be out of Saturn’s shadow,” he said. “Gina’s hoping to restore communications with Earth as soon as she can and will check with them about taking the transporter up to fix ComSat 3. Assuming they OK it and there’s no reason why they won’t she wants to go up tomorrow afternoon.”

“Great,” I said. “Be nice to see what new movies they’ve sent us. So what about these?”

“I’m going up with Gina to work on the satellite,” he said, “which means I won’t be going to the cave tomorrow. Could you check the background radioactivity and, if that light comes back on, get a spectral reading?”

“Oh that’s right,” I said, “you think it’s mostly ultraviolet, don’t you.”

“Yes,” he said. “There’s a high level of ultraviolet in the upper atmosphere. I’m curious to know if whatever constructed that cave is sensitive to ultraviolet.”

“OK,” I said. “So how do I operate it?”

“It’s very simple,” he said. “Just turn it on, like this, then point it at the light while holding this button down. When you let go it will give you a visual of the strengths across the spectrum. If you need to increase the sensitivity just push that, or that one to decrease it.”

I fiddled with it a few times to make sure I had the hang of it. It seemed simple enough.

“And where in the display is ultraviolet?” I asked.

“Anything below 380 nano metres,” he said. “That’s the bottom end of what our eyes can see, which is violet. Thanks for that.”

“No probs,” I said showing him out.

I finished cleaning the room and was playing with the spectrometer when Evie came back.

“What’s that?” she asked, stripping off her gym outfit and putting on a fresh jumper.

“It’s Zaf’s tricorder,” I said. “I get to be Spock tomorrow.”

“Who’s Spock?” she said.

“The Vulcan from Star Trek,” I said, measuring the light bouncing off her.

“Oh,” she said derisively so I turned off the spectrometer.

“Now,” she said, sitting down at the table opposite me. “It struck me in the gym that we are being controlled.”

“Oh yes,” I said. “I’m guessing you mean by whatever this thing is on Titan?”

“So you know what I’m talking about, then?” she said.

“Sure,” I said. “It manipulated the computers at BSpaceE on Earth and has been feeding us dreams ever since. Is that really control, though? I mean, we could both of us have walked away, like Austin Bickersteth did.”

“I mean when we see my father and Rosalie,” she said. “They appear when it wants them to appear, not when we want them to appear.”

“I don’t know that I’ve ever wanted them to appear,” I said. “What’s your point?”

“My point is that I think we should try to contact ‘it’ and get some

answers,” she said. “Like why us? Why are we here? What’s it all about? What is it or them? Do they even have bodies?”

“I don’t know that it or them can speak good enough English for those sorts of questions,” I said. “You saw how much trouble they had just saying ‘hello’.”

“That’s another thing,” she said. “How can they alter the data in the computers on Earth but have to rely on our memories to communicate with us? It doesn’t make a lot of sense.”

“Good point,” I said. “I hadn’t thought of that. They must have a good grasp of abstract concepts to be able to understand the ins and out of the selection criteria in order to change our results to fit. Unless they were accessing the memories of the people who set the criteria.”

“Maybe,” she said. “But how did they know who set the criteria? How did they find out about us? How did they even know the Titan mission was planned?”

“I suppose you want to ask them?” I said.

“Yes,” she said quite simply.

“Any ideas how?” I asked.

“How about we concentrate our minds on asking them to join us?” she said. “If they can read our memories they must surely be able to sense when we want to talk to them.”

“Worth a try,” I said. “Umm, so shall we both try calling them or do you want to do it?”

“You do it,” she said. “I’ll watch to see what happens.

“You’re scared,” I said teasingly.

“Too bloody right I am,” she said.

I laughed. “Awful lot of trouble to go to if it was going to hurt us,” I

said. "You should be more sociable."

I turned in the chair to look into the empty part of the room.

"Are you there, Gaia?" I asked. "We want to talk to you. Are you there, Gaia?"

"Why are you calling it Gaia?" asked Evie. "Why not Rosalie?"

"It said it was Gaia," I said, "and I don't particularly want to talk to Rosalie, not with you here."

"OK," she said. "Makes sense. Try again."

"Are you there, Gaia?" I asked again.

There was a knock on the door.

"Jesus," I said, looking at Evie looking at me. "It worked!"

"Why is it knocking on the door?" she asked, frowning. "Come in."

Talia peered round the door.

"Hi," she said. "Did you want me?"

"Umm," I said. It seemed rude to say 'no'. "We were trying to contact this Gaia thing."

"OK," she said, coming in. "Only I had a sudden feeling you wanted me so I came over. Is it working?"

"Doesn't seem to be," I said. "Unless you are Gaia."

"Yeah, right," she said. "As if."

"Umm," said Evie, "in the corner."

Talia and I looked over and there, in the corner, was Rodney, still sitting at his desk, Rosalie, still filing her nails on the couch, and a

labrador, lying on the floor.

“I am Gaia,” they said.

“Umm, hello,” I said. “Umm, we wanted to ask you some questions.”

There was no response.

“Umm, what shall I ask first?” I asked, glancing at Evie.

“Ask what it is,” she said.

“What are you, Gaia?” I asked, turning back.

The three of them morphed into an orange ball against a black background.

“Is it saying it’s Titan?” asked Talia.

“Are you all of Titan?” I asked, “or something on Titan?”

The image morphed into the picture Rik and Angus had showed us of the tardigrades then it pulled backwards to show some ice then the landscape then the whole moon again.

“I think it’s trying to say it’s all of Titan,” said Evie, “but it’s still using our memories.”

“It probably doesn’t understand English well enough to explain yet,” said Talia.

A small red tick appeared beside the image of Titan.

“What’s that?” asked Evie.

“It’s probably a tick for getting something right,” I said. “Must be one of yours or Talia’s memories, I never got anything right at school.”

“Are you a fish?” asked Talia.

An image of a trout appeared, thrashing at the end of a fishing line, with a small red X beside it.

“Cool,” she said, looking pleased with herself. “I’m guessing a tick means yes and a cross means no.”

“Could be,” I said. “That makes as much sense as anything else around here does. Umm, how did Gaia influence the computers on Earth?”

The fish disappeared and an image of the primary data centre at BSpaceE’s headquarters in Norfolk appeared. We’d had a tour of the entire site when we’d been training and had been allowed to look through the windows of the data centre. It was environmentally controlled and completely dust free so we hadn’t been allowed in.

“Yes,” I said. “The computers, how did Gaia alter the computers?”

An image of Sergey Vanofov appeared.

“Yes,” said Evie, “his computers. How did you alter them?”

“Do you mean Sergey altered the computers himself?” asked Talia.

The image of Sergey was joined by the image of the data centre and a red tick.

“Wow,” said Talia. “So Sergey set all this up just to bring us here?”

The tick appeared again.

“This is pretty cool,” I said. “So did you make contact with Sergey? Did you tell him to do this?”

The data centre disappeared and Sergey said “Sergey is Gaia.”

“What do you mean? Sergey is Gaia?” asked Evie. “Sergey is from Titan?”

An image of Earth appeared underneath Sergey.

“Looks like Sergey is from Earth,” said Talia. “So why Sergey and not, say the Prime Minister of Britain?”

The images disappeared and Rosalie, Rodney and Beauty reappeared.

“I wonder what that means?” I said.

“I’m guessing Gaia either doesn’t want to tell us,” said Talia, “or doesn’t know how to using our memories.”

Sergey on top of the Earth appeared again with Titan a little way to the left. A line snaked out from Titan and connected with another line snaking out from Sergey.

“Two lines?” said Evie. “You mean Sergey’s been to Titan?”

“No,” said Talia, “those are two lines reaching out to each other and joining, I think Gaia is trying to say there was a connection, maybe Gaia sensed something in Sergey and made the connection.”

“Maybe Sergey sensed Gaia and he made the connection,” I said.

The line disappeared and was replaced by a single line moving out from Titan to Sergey.

“No, Gaia found Sergey,” said Evie. The red tick appeared.

“I was never any good at Charades,” I said. “This is exhausting.”

“So why us?” asked Evie, watching intently.

The images disappeared and an image of crowds of people milling about appeared.

“Isn’t that Paddington Station?” I asked.

“Do you mean you connected with a lot of people?” asked Talia.

The red tick appeared again.

“But only we three got to go on the BSETitan?” asked Evie.

An animation of the Wheel appeared, slowly rotating in space. I recognised it from one of our first training lectures.

“So why us?” asked Evie. “Why do you only appear to us three and not the others?”

“You are Gaia,” said Rodney appearing on his own then fading from sight.

“Why are we here?” asked Evie.

There was no response; no images, no people or dogs, no ticks or crosses, just an empty corner of the room.

“Come back Gaia,” I said. It didn’t.

“Well I guess that’s all we’re getting for the moment,” said Talia. “What did you make of that?”

“HalleB, what entities were in this room during the last five minutes?” I asked.

“Evie Farrell, Phillip Roach, Talia Kelley,” said HalleB.

“I don’t expect HalleB has anything in its data banks to cover Gaia,” said Talia, “even if it did detect anything.”

“It was worth a try,” I said. “By the sound of it, Gaia had some sort of connection with people on Earth.”

“One of them being Sergey,” said Evie. “And he was in a position to do something about it. Do you suppose Gaia made him set up BSpaceE? Do you think Gaia helped him make the money to do it?”

“No way of knowing,” said Talia. “I’m guessing that there were a lot of people who could have come on this trip.”

“Could it have been everyone?” I asked. “Or even the entire planet,

not just the people?”

“I don’t think so,” said Talia. “We got an image of a crowd of people, not Planet Earth. I’d say Gaia could only connect with people who had some sort of empathy or sensitivity.”

“Well, Sergey certainly did,” I said. “Remember that video? He’s been into UFOs and stuff all his life.”

“Well, maybe,” said Evie. “But we’re still no nearer knowing what’s going to happen to us. Or to the others, who don’t have this empathy.”

“Well, no,” I said. “And what do you suppose that cave thing has to do with any of this?”

“You should have asked,” said Talia.

“I didn’t think of it,” I admitted. “But I bet Nag finds another eight entrances tomorrow.”

“Eight?” said Evie. “Why eight?”

“Because harmonicas have twelve slots,” I said. “I just bet that the harmonicas we’ve been dreaming about are that thing in the cave.”

“I didn’t dream about harmonicas,” said Talia. “I dreamt about pigeon holes.”

“Twelve of them?” I asked.

“No,” said Talia, frowning in concentration. “I’m pretty sure there were only ten.”

* * *

As it turned out, Nag only identified another seven entrances, making eleven in all. A superficial scan suggested there were none above or below so it was rather like a harmonica, or a row of pigeon holes.

“That’s all we can do for today,” she said. “Zaf needs to clear the ice

around the sides then I can start to scan how far they go back and what's behind them. Let's go back to the Cliffbase and report in. Earth needs to know about this as well."

"I'm going to stay for a bit longer," I said. "I want to try to get the light to come back on so I can get some readings for Zaf."

Actually, I just wanted to be alone with the harmonica to try to get some sense of what it was and why I'd dreamt about it.

"We can't leave you on your own," said Myf.

"I'll stay too," said Talia. "An alien artefact is fascinating. I want to study it some more."

"Me too," said Evie.

I liked the idea that she didn't want to leave me alone with Talia but it was more likely that she wanted to explore it as well. After all, she'd dreamt about it too.

"OK," said Nag. "Myf and I will go back. You three come back later."

They packed up the geophys equipment and stowed it in one of the tents.

"See you later," called Myf as they waved goodbye. We watched them go, the orange gloom swallowing them up.

"I want to find out if there are any more of those sign objects," said Talia. "Would you guys give me a hand?"

"Sure," said Evie. "Come on Phil."

"I'll be with you in a minute," I said. "I just want to explore the cave again. See if I can get the light to come on."

Talia and Evie stood on a couple of constructors and attacked the ice with thermal drills in the general area of where they expected another sign to be for the next entrance to the right. I went up to the entrance

of the one cave that had been cleared. Going in I tried to open my mind to any energies that may have been in there.

“Turn on the light, Gaia,” I muttered but nothing happened.

I slowly made my way the full length of the cave, running my hand along the wall.

“Just a minute,” I said to myself. “I thought Zaf had cleared only the first few meters.”

“Hey Talia,” I said, over the radio, “didn’t you and Zaf only clear the first few metres of the cave yesterday?”

“That’s right,” she said.

“Well, it’s all clear now,” I said. “I’ve followed it all the way back to the wall at the end. There’s no ice at all.”

“Hang on,” she said.

A moment later she and Evie were standing beside me.

“This isn’t how we left it,” she said. “Where’s all the ice gone?”

“Maybe the constructors kept working all night?” said Evie.

“No, we left them stacked outside,” said Talia. “They were still there when we arrived earlier.”

“Another one of the mysteries of Titan,” I said. “How’s it going with the search for signs?”

“There’s one over the entrance next door,” said Talia. “Similar design to this one but different. We were working on the one next to that.”

“Let’s get back to it,” said Evie. “Come on.”

We walked back the length of the cave to the entrance.

“Wow,” I said, stepping out onto the narrow ledge just outside.

“What?” asked Talia.

“Deja vu,” I said. “I’ve seen this in a dream.”

“Sure,” she said. “The harmonica, right?”

“No,” I said, “I mean this exact scene, people standing on the ledge in front of the harmonica.”

“There were only two people,” said Evie. “I had that dream too, but it was just you and me. At least I assumed it was just you and me.”

“Maybe it was before I started to get involved,” said Talia. “Was it before we got into Titan orbit?”

“Whoa,” I said, staggering. “Did you feel that?”

“It felt like a minor tremor,” said Evie, looking around. “I thought this area was geologically stable?”

“Look at the cave,” said Talia.

Evie and I both turned quickly and bumped into each other in the low gravity. The entire cave was bathed in a dim, dark blue-violet light.

“Oh shit,” I said. “I left the spectrometer down at the tents. I’ll be back in a moment.”

I jumped off the ledge and bounded towards the tents and grabbed the spectrometer.

“It’s gone off again,” said Talia.

“Bugger,” I said. “Did either of you touch anything?”

I jumped back up onto the ledge.

“No,” said Evie. “We were both just looking down the length of the

cave. I was wondering what was going to come out of it.”

“Me too,” said Talia. “It was a little scary, wasn’t it.”

“Do you suppose it was related to that tremor?” I asked. “Did the light come on before or after the tremor?”

“I don’t know,” said Talia. “You two were talking about that dream then there was the tremor then I happened to look behind and saw the light was on. It could have been on for a while.”

“I’d better check the radiation,” I said. “You never know.”

I wandered round the cave checking the radiation levels but it seemed to be much the same as outside.

“Seems pretty normal,” I said. “Shall we go back or do you two want to cut some more ice?”

“We’ve been an hour or so,” said Evie. “Nag and Myf will be back. Come on, let’s go back too. I’m nervous about this light.”

“Yeah, OK,” said Talia.

We jumped down and made our way to the bikes. I stowed away the geiger counter and spectrometer and we set off. Me riding pillion behind Evie and Talia on her bike.

“This doesn’t look right,” said Talia, fifteen metres or so in front of Evie and me as we neared the Cliffbase. The orange gloom made things difficult to see clearly in the distance.

“Oh my god,” she said moments later. “Oh sweet Jesus.”

She slowed to a stop and jumped off the quad-bike and stood there staring.

“Oh my god,” she kept repeating.

We pulled up alongside and when I got off I could see what she could

see. The Cliffbase was a shattered, twisted mess.

Chapter Thirty

Evie started slowly walking forward while Talia sank to her knees. I was frozen in shock. Someone kept saying “oh my god,” over and over again.

“What the hell?” I said after an eternity. “What the hell?”

The enormity of it couldn’t begin to sink in. Slowly I became aware of someone crying. Evie started to walk faster then she broke into a bounding run. Talia turned to look at me. Her face was screwed up and tears were flowing freely from her eyes. She tried to wipe them away but her face plate got in the way. Stupidly I fumbled in a pocket for a handkerchief before remembering I had no pockets or handkerchiefs.

Instead I went over and held her.

Evie screamed and I dropped Talia and started to run over as best I could.

“Where are you Evie?” I cried.

“They’re all dead,” she said quietly back. “I think.”

I found her in the one remaining cabin that was still partially standing. It was Myf’s room and Myf was still inside. Frozen solid in just her jumper. All the other cabins had been flattened and burnt and there were large scorched pieces of the transporter all over the place. We searched among the ruins and found a few body parts, all frozen rock hard. In the main fuselage of the transporter we found Gina and Zaf. Well, probably Gina and Zaf. The burnt remains of their space suits held things that are best not described, let alone imagined.

“I thought you couldn’t have a fire on Titan,” I said quietly as we sat on the ice over by the cliff, staring at the remains. “You need oxygen.”

“There was oxygen in all the cabins,” said Talia, the tear streaks now dry on her face. “The transporter had tanks of the stuff.”

“So what the hell happened?” I asked, for the thousandth time.

“I’m guessing Gina took off in the transporter and there was some sort of accident,” said Evie, her voice very calm and flat. She must have been exercising every last ounce of her self-control.

“So what do we do now?” asked Talia.

Evie reached over to the control panel on her right sleeve. She was left handed so BSpaceE had made a left handed TS suit for her. Mine was on the left sleeve since I’m right handed.

“I’ve 39% battery power and just over a half litre of oxygen,” she said.

I checked mine and the levels were similar. Talia continued staring at the wreckage.

“We’d better go back to the tents,” I said. “I wouldn’t think there’s any batteries or oxygen here for us. Not now.”

Evie nodded and Talia started crying again, silently. We stood up and I put my arm around her and Evie took my hand and we slowly made our way back to the bikes.

“Do you see that?” said Evie, looking up at the cliff.

There was a deep jagged scar in the ice near the top. Perhaps thirty metres up.

“Looks like the transporter went into the cliff,” I said. “Maybe there was a sudden strong gust of wind or one of the thrusters failed.”

“Gina was too good a pilot for that,” said Talia. “She’d never have taken the transporter near the base just in case something like that happened.”

“I wonder if that’s what the tremor was?” I said. “The cave’s just the other side of this cliff. Maybe we felt the impact. Should we say a prayer?”

Neither of the girls answered me so I just said a silent prayer to my seven companions and after a few moments we climbed on the bikes.

Back at the tents we put on fresh foot batteries and got out three full oxygen bottles for our breathing equipment. There was no point in swapping them just yet. No point in wasting what little remained in the old bottles.

“Not that it matters,” said Evie. “They were the lucky ones.”

“What do you mean?” I asked.

“Just look,” said Evie aggressively. “We’ve got food here for probably three days, batteries for maybe two and about the same for the oxygen. There’s nothing left at the base although there’s food and some oxygen back at the Spare Wheel. But we’ve no way of getting back to the Wheel in orbit and no way of communicating with Earth. Sooner or later we’re going to run out, oxygen first most likely and then we’ll die. We’re just going to sit around in this god forsaken place until we die. They even cancelled the next lot. It could be decades before anyone else comes here, if anyone ever does.”

It’s my nature to try to look on the bright side of things but I couldn’t. Not right now. So I didn’t answer.

“It’s that fucking Gaia,” said Talia. “That fucking Gaia killed them, I know it. Gina wouldn’t have flown the transporter like that. Gaia made her fly into the cliff and made the transporter crash into the base.”

She started crying again. This time though she could get her hands to her face.

“Oh Jesus,” said Evie suddenly, closing her eyes and bunching her muscles in tension. “I’ve got to get outside. I’m going mad in here. I’ve got to get outside.”

She jumped up and quickly climbed into her TS suit and disappeared through the tent’s airlock.

“We don’t know what happened,” I said quietly to Talia.

She just looked at me then put her arms around her legs and dropped her head to her knees.

“Just leave me alone,” she said. “just ... leave me alone.”

“OK,” I said and got up and put on my TS suit. I grabbed a couple of oxygen bottles and went outside. Evie was over near the cave, looking up at it.

“I suppose it’s too late to wish we’d never come here,” I said.

“Do you suppose they’ll have a memorial service for us back on Earth?” she asked. “Or will they just turn off the radio receivers when they realise we’re not answering anymore? Just write us off?”

“We’ll figure something out,” I said.

“Sure we will,” she said. “A second rate fiction writer, an artist and an anthropologist will build a rocket out of the bits that are left. Shouldn’t take more than a couple of days, then we can fly back to Earth. After all, any fool can build an ion thrust engine from scrap and attach an atomic pile to it.”

She had a point there so I stayed silent.

“Maybe Gaia will help,” I said after a while. “Maybe it can get a message through to Sergey.”

“Of course,” she said. “Brilliant solution. Why don’t you talk to Gaia?”

“Why not?” asked Talia.

“Where did you come from?” I asked turning around.

“I didn’t like being alone,” she said, “so I got dressed and came to find you.”

“OK,” I said. “You think we should talk to Gaia?”

“Might as well,” she said. “Not like we have many other options.”

“Look,” said Evie, “over by the cave.”

“It’s that image of Titan again,” I said. “It must be Gaia.”

“Can you help us?” asked Talia.

“Gaia looks after its own,” came a thick whistling voice, like a wind blowing through an ice cavern. “Come.”

“Come where?” said Evie.

The cave lit up, violet and inviting in the dim orange atmosphere.

“What’s in the cave?” I asked.

“The other worlds of Gaia,” said the voice.

There was a crashing sound as ice fell from the front of another entrance. That cave lit up violet as well. One by one the other nine caves cleared and lit. A row of violet entrances.

“Which one?” asked Talia.

“Any or all,” said the voice.

“But what about oxygen?” said Evie. “We’ll die soon without oxygen.”

“Gaia looks after its own,” said the voice.

“How can Gaia look after us?” I said. “We are completely different to you. We need oxygen and warmth and food. We cannot survive here.”

Evie looked down at her control panel on her right sleeve.

“There’s something wrong with my suit,” she said. “I’m getting very hot.”

“So am I,” I said, starting to sweat.

“Our suits are over heating,” said Talia.

“How can all three malfunction at the same time?” said Evie.

“Take off your suits,” said Gaia. “Gaia looks after its own.”

“Are you heating things up?” I asked.

“Take off your suits,” said Gaia. “Gaia looks after its own.”

“Oh to hell with it,” said Evie. “I’m going to die very soon anyway. Might as well get it over with. Freezing is quicker than roasting.”

“No, Evie!” I said jumping over to stop her but I was too late. She’d already taken off her helmet.

I scrambled to put her helmet back on but she wouldn’t let me.

“I can breathe,” she cried, a surprised look on her face. “Look at me, I can breathe!”

Her voice seemed deeper than before, which was probably due to the denser atmosphere. She suddenly scowled and started to unfasten her TS suit then stood there. On the surface of Titan, surrounded by a thick methane atmosphere at minus one hundred and seventy degrees or thereabouts. In nothing but her jumper.

“Oh shit,” said Talia and took off her helmet as well. She cautiously sniffed the air then stripped off her TS suit as well.

It felt like the inside of my suit was fast approaching two hundred degrees and the sweat was pumping out of me and accumulating inside my helmet. At this rate I was going to drown in my own sweat within seconds.

“In for a penny, in for a pound,” I muttered and took off my helmet. I was so hot inside the suit that I didn’t bother to breathe, I just ripped the suit off.

“It’s still the orange atmosphere and everywhere is ice,” said Evie. “Titan isn’t changing, it must be us.”

“Gaia has changed your immediate environment,” said Gaia, “but there is no need to change the rest. Gaia looks after its own.”

“So we can live here like this?” asked Talia.

“Yes,” said Gaia.

“Pretty crappy view,” said Evie. “Why don’t we see what’s in the caves? Gaia said there’s the other worlds of Gaia.”

“Which one?” I asked, cooling down rapidly to a more comfortable level. Strangely the air seemed breathable. Thicker than usual, but otherwise fine.

“How about that one?” said Talia, pointing to the third from the right. “Talia’s Cave.”

“OK,” said Evie.

“We’re probably dead already,” I said. “Just hallucinating or something.”

“In that case it doesn’t matter either way,” said Evie with a little laugh. “Let’s go.”

So we did. Holding hands, just in case it wasn’t a dream.