

Zarathustra

Book III of the Ozymandias Series

By

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Chapter 1 – The mission

“The ability of humans to travel at faster than the speed of light is still largely theoretical, Alex,” Dr Rebecca Nairn reminded her son. “We have been able to test the physics on a number of small animals, but you will be the first intelligent beings to make such a journey.”

“Always provided that he counts as intelligent,” added Lizzie, his sister and one of the scientists who had been involved in the animal testing. As a biologist, she was working towards her doctorate and had been using this work as part of her research. She had an unusually close relationship with the fauna of their planet, a place called Home, which was the third habitation of the human race after Earth and Mars; nobody counted the Moon, because it was not really viable on its own, without the constant support of Earth. It had been inhabited for almost two hundred years by the time Alex and Lizzie’s parents had led the fifty-year mission that had taken the first settlers to the third planet of the Alpha Centauri system, landing some twenty five years earlier, just before her birth. Alex had been born shortly before planet-fall after a number of incidents on the journey resulted in his father, Charles Windsor having to spend the second half of the trip ‘awake’ rather than in stasis like the rest of the crew. While he had taken what he called the ‘slow route’ to Home, Rebecca had been returned to stasis as soon as she had carried her first baby for the first trimester of pregnancy. He was born when she had been revived a few years before planet fall, by which time Charles was already over seventy.

He had proved to be an excellent parent to Alex before the final act of sabotage that resulted in his apparent death. He did not, however know that Rebecca was by then carrying a second child; one whom he would not meet until she was eighteen years old. Charles should have died within an hour of having been transported off the space craft into the centre of the galactic black hole; something that had been done at his own suggestion in order to save the mission from the effects of a bomb that had been imbedded in his body decades earlier by the shadowy – and now defunct – Cult of Mithras. That Charles had been recovered alive after almost twenty years, when he should have died either from lack of oxygen in his spacesuit, or from the effects of a massive explosion, was due to the slowing down of time in the singularity – so that he only experienced the elapse of about three quarters of an hour – together with some brilliant developments by Rebecca and her colleagues in using a ‘string’ to target a signal into the heart of the black hole to recover him; dead or alive. Strings had been known about for centuries, but never before put to any practical use. Ultimately, Rebecca had managed to get him back just in time to see the daughter of whom he had been unaware becoming engaged to one of the other settlers, while his son found the woman who had been haunting his dreams since childhood; Aurora the last of her race – the original inhabitants of Home.

Faster than light travel was, of course, a ground-breaking scientific development. It was based on some work done early in the voyage by Charles – himself a passable engineer, as well as soldier and politician – in creating the facility whereby messages could be sent instantly over any distance by harnessing the ability of electrons to be directed into one small

singularity and out of another one, carrying a message. The difference in the case of moving a vehicle at faster than the speed of light – the holy grail of science for so long – was that the digitised information was not fired into a singularity but attached to one of the ‘strings’ that traverse the entire universe. Initially, the problem had been not how to digitise a spacecraft and all its contents, including the crew, but how to reassemble it at the other end. At the destination, there would be no equivalent of the compressor used to digitise the data for transmission at the starting point. This had been solved by including a compressor/decompressor on the spacecraft itself, which could be activated either automatically or by the crew when they had reached their destination. The potential direction – and distance – to be travelled had been a major issue until it was discovered that strings are more predictable than had initially been thought. The rate of travel had been determined in the early test, which had shown it to be very fast indeed.

By knowing where the string was going and the precise distance to be travelled, it was possible to activate the decompressor at the right time to ‘hop off’ the string near the target destination and then fly in the final distance by more conventional means. The initial tests had been based on an automated system that sent a small craft with a small rodent in it to Earth. The trip had taken four hours each way, to cover four light years – with one and a half days for the final landing and a brief stay on the home planet, to prove that it was not some sort of conjuring trick. In the full sized spacecraft, the crew would be able to manage all aspects of navigation.

It was Alex who would be responsible for the initial mission; he and his wife, Aurora, to whom had been entrusted a special mission by her father, Heraclitus, who had been the last leader of their people, before his death.

Lizzie’s good humoured jibe brought Alex out of his reverie – or was he simply ignoring his mother’s repeated warning of the dangers of his mission – to respond. They had always been a close and loving family not least because there had been no other children to play with for several years after Lizzie had been born; and even when there were some, the age difference, particularly with Alex, had turned them into a self-sufficient team.

“I may not have your brains, young lady,” he responded, “but I have the family’s good looks.” This was true in as far as it went. At just over twenty eight, he was a strikingly good looking man with light hair, broad shoulders and a ready smile that had captivated women since he was a toddler. Lizzie on the other hand was almost a carbon copy of her mother, a devastatingly attractive brunette who at twenty five could quieten a room full of men just by walking into it. On the other hand, Aurora made even Lizzie look like a pale imitation of womanhood with her long blond hair, perfect features and imposing height; only just shorter than the 1.9 metres that Alex had achieved. Aurora was also of an age with Alex, or five thousand years older, depending on how you counted her age. She had been placed in stasis by her father, that long ago, as the last child to have been born to a race that could no longer reproduce, to await the arrival of DNA compatible settlers who could reinvigorate their ancient people.

“If you think those are good looks,” rejoined his sister, “it is just as well you married a Centaurian. They must be less choosy than we humans.” At which point their mother decided to bring the discussion back to order.

“Will you pay attention, Alex!” she said, more sharply than the banter demanded of her. She was, after all, concerned about the safety of her son – and the others who would be going, of course. “I need to know that you fully understand the equipment you will be using. Andrea Faber and Luke Hill have given you a full briefing, but you need to know what to do if anything goes wrong.”

“Mother,” he replied, “If anything happens to the craft, we can call you over the ‘subwaive’ and you can give us any assistance we need. We can easily replicate any essential parts.”

“How did we start calling something as important as the black hole communication system, a ‘subwaive’?” she asked, rhetorically. “And what if the ‘subwaive’ isn’t working, what will you do then. You must get to grips with the science.”

“But you know that I am better with practical things than all that theory,” he replied. “Anyway, what is the likelihood that I will not be able to sort things out by trial and error? We will have computer schematics for everything on the ship, together with a 3D printer to replicate any components we need.”

“God help me,” replied Rebecca, “you are as bad as your father.”

“Mother, if you want a physicist there, why not let Ganesh go too,” asked Lizzie. Her husband was a first class scientist and a longstanding friend of Alex’s. In fact the three of them had been together on the rather dangerous expedition that had led to them finding Aurora in the first place and the four of them had subsequently shared many experiences together; including a double wedding.

“Because if I did that, you would want to go as well,” said Rebecca. “Can you imagine how your father and I would feel if something were to happen to the four of you? And there would be nothing we could do to help you.”

“Of course the mission is dangerous,” said a familiar and much-loved voice from behind her. She had been sitting in the office of their home with her back to the entrance, facing down her children as if they had been just back from school, rather than fully-fledged adults in their own right. “But so was the step we took into the unknown seventy five years ago, when we left our families back on Earth to make the journey here. I may have left my parents with another son to succeed them, but yours had no other children. Yet they made no attempt to prevent you from following your dreams. How can we do any less for our own children than to give them the freedom to spread their wings and take flight on their own?”

“That is rather different from allowing both our children – and their partners – to leave at the same time, using untried technology, and going to planets that we know to be inhabited by beings who may be nothing like us; who may have totally different moral codes – or none

at all – and could kill the children on sight,” Rebecca’s frustration led to a complicated sentence that took Charles moments to unravel, before he could respond.

“Becks,” he said quietly, adopting the name he only used when he wanted to make a special point; or when they were alone. “You know from what Heraclitus told his daughter before his death, that the inhabitants of each of the four planets will be humanoid and relatively close to us in physical development. Aurora herself explained that the Centaurians had been able to transfer DNA from themselves to us on Earth and also to the inhabitants of the other four planets. The very fact that Alex was able to re-inject some much-needed DNA back to Aurora as part of her revival from stasis after five thousand years of waiting shows that humans remain close to the original inhabitants of this planet. It follows that we must therefore be equally similar to those of the other four.

Rebecca was hardly mollified by the argument, which covered physical attributes, rather than social development, but was starting to recognise that there must have been some form of collusion between her children and her husband regarding the makeup of the crew and that she was unlikely to carry the day. This seemed to have become a leitmotif ever since she brought Charles back with the help of Anita Patel, a medical doctor and an old friend to both of them.

“You seem determined to leave your father and I here alone,” she said to her son, conveniently forgetting the fact that they were surrounded by hundreds of friends and thousands of other settlers and their children who had landed on Home after them. “We had better have a more proper meeting to set the formal parameters of the mission.”

Because there was no strict hierarchy on Home – one of the founding principles of the settlement was that there were no leaders, just people who from time to time formed a committee to make decisions on behalf of the community – the mission to find the four other planets visited by the Centaurians on at least two occasions many thousands of years earlier was being organised by the science faculty of the university. Access to unlimited energy made it unnecessary to consider any financial aspects of such a project.

Until a few years earlier, nobody had known of the existence of an advanced race of humanoids on Home, let alone the fact that they had been sufficiently advanced to achieve travel at almost the speed of light, allowing them to visit a number of planets seeking intelligent life. It was Alex’s discovery of Aurora – hidden away by her father as the last representative of a dying race to be found by whichever of those planets was able to follow the clues left for them – that had led to the revelation that humanity was most certainly not alone.

Aurora had no special status within the community either as the representative of the former ‘owners’ of the planet, or as a member of the Windsor-Nairn family, which was still unofficially one of the leaders of the settlement. She was invited to address the meeting of interested parties at the university simply because she had most to contribute towards the

subject. The meeting was, as usual within a community that espoused scientific principles of openness and an enquiring mind, followed via three dimensional video link by many members of the Catalian community who were interested, but unable to attend. Catalia had been adopted as a name for their settlement very early on, in celebration of an ancient town in what was later to become Turkey, called Catalhoyuk. What appealed to the latter-day settlers was that the ancient village had survived spectacularly well for more than fifteen hundred years with no social hierarchy, no money ... and no conflict of any sort.

“My father asked that we should find and make contact with the four other peoples whom our race visited so long before even his time, to discover what has happened to them,” Aurora told the meeting and those watching remotely. “He wanted us to discover whether, like the peoples of Earth, they have managed to survive the challenges that life offers and, if so, what the shape of their civilisation has become. Each planet was fairly similar to Home at the time we visited them. This was inevitable because we were looking for life forms similar to ourselves and these could only be found, amongst billions of potentially habitable planets within the galaxy, on those with a similar structure and distance from their respective stars as ours. Naturally the voyagers from Home visited a large number of planets and many of these had some forms of life. But few of these were considered likely to evolve with the requisite level of intelligence for billions of years and were therefore of little more than scientific interest. It may be that we missed many alternative life forms that did not comply with the rather limited parameters that we had set ourselves and this is something that we hoped humanity and its sister races might wish to investigate later on. That is a matter for you – and they – to discuss in the event that everyone wishes to cooperate.”

“This brings us to one of the major issues that we need to discuss now,” said Alex, taking over from his wife. He was, after all, someone that everyone in Catalia had known for decades, rather than the newcomer from an alien – albeit not too different – race. “If, as we believe, we are just about to make contact with other peoples – for want of a better term – should we identify ourselves as being from Earth, or Home, or not at all?”

Jennifer Downey was one of the original crew from the Nelson Mandela that had landed a quarter of a century earlier. She had been an exobiologist with the United Nations Space Agency – a somewhat lonely occupation in a body that had evolved from the old NASA and several other space agencies and did not really expect to find extra-terrestrial life. She had joined the project in that capacity in the hope of finding a more open minded approach to science. She had done so beyond her most extravagant dreams, as well as finding love with another of the exobiologists, Michelle Huse. She was naturally interested in this new voyage of discovery and would have loved to go along had her age permitted. The truth was, however that she was now almost sixty and while not feeling her age, no longer wanted to be gadding about. Instead, she and Michelle had ensured that Elizabeth had learned all they could teach her about biology. And to be fair, the pupil had far outstripped the two Earth-born scientists with her innate ability and empathy with the life of Home. Nevertheless she had a contribution to make.

“Alex,” Jennifer said, “surely there is no chance of you *not* being immediately identified as off-worlders, as soon as you make first contact. There will inevitably be physiological differences, let alone the linguistic aspect, to set you apart. You will need to identify yourself as coming from Home, even if no reference is made to Earth.”

“That way, if there is any hostile intent on their behalf,” added Frank Field, Anita Patel’s husband and a former special forces operative on earth who had also travelled with Charles and Rebecca on the first ship, “They could only attack us, leaving Earth and Mars safely isolated from trouble.”

“You make a good point, Uncle Frank,” Aurora had adopted the honorary title for this man who, with Anita, had played such a large part in her husband’s upbringing. “But Lizzie will be able to manage the creation of any prosthetics that we might require to disguise ourselves and I have already learned your language; I believe I will be able quickly to do so again for the other peoples we come across.”

“That suggests that we can afford to keep our identity secret,” said Lizzie. “I think we should do so at least initially, until we know how news of our arrival might be reacted to. After all, some of the planets might not even be aware of the possibility of the existence of other civilisations. Our arrival might cause considerable consternation, if that were to be the case.”

“I agree,” said Alex. “We can decide what to say about Home later, when we know how our advent is received.”

“Nevertheless, I am concerned about your security,” replied Frank. “I would like to suggest that you take Charlie with you.” Charlie was his eldest son; named for his best friend, of course. “He has had the same combat training as you, but to a higher level. He is also a computer specialist, should you need someone to hack into alien systems.” Frank’s own expertise in this area was legendary and nobody doubted that his son had learned – or inherited – similar skills.

Alex had known Charlie since birth, having himself been six at the time. He was very pleased with the suggestion because he trusted Frank and knew he could rely on his son in the same way that his own father had always relied on Frank.

“Thank you Frank,” he replied. “If Charlie is up for it, we would welcome him. That brings us to the next main issue; the rest of the crew. Luke Hill, who designed the craft working to designs from my mother and Andrea Faber, has allowed for a crew of eight, plus the capacity for a number of passengers to be brought back in stasis, if required. He has also created plenty of living room for a comfortable voyage and replicators so that we can manufacture anything we might need. Energy is, of course, not an issue thanks to the fusion/singularity power plants that got us all here in the first place. If Charlie joins Lizzie, Ganesh, Aurora and me, that leaves three spaces up for grabs. Is anyone interested?”

As he expected, there was a clamour of excitement amongst the younger Catalians, many of whom had been born on Home, or come with their families as children. It had previously

been decided that selection for places would be at the discretion of the initial four members of the crew. Alex had been somewhat presumptuous in accepting Charlie, but knew that Ganesh would be happy to be joined by someone they had both grown up with. The girls would – in this limited respect – defer to what their husbands thought. It was not that they saw themselves as being subservient; such an idea was entirely outdated on Earth and would not even have occurred to Aurora, raised as she had been in the enlightened Centaurian culture. The girls would agree with their men because they had no preferences in this regard and were happy to allow them to think they were in control.

Alex announced that there would be a one week period during which people could apply to join the crew. There would then be an interview process – largely comprising copious drafts of coffee and social intercourse – before a decision was made. This rather ‘student-union’ approach to crew selection might have appeared haphazard, to say the least – and Rebecca was not the only person old-fashioned enough to feel it was wholly inappropriate – but Charles had backed his son and daughter in adopting this approach. He had been a politician on Earth, as well as an officer in the army and had long experience of judging people. He already knew almost everyone who might apply and would not allow the crew to include any cuckoos in the nest.

In addition to the ‘usual suspects’ amongst the inhabitants of Catalia – those who always craved adventure and were up for anything – there was one unexpected applicant for the voyage. Fiona Gillingham was a historian who had been awarded her doctorate while on the second ship to make the voyage from Earth to Home, the Julian Crichton. This followed research she had undertaken into the shadowy Cult of Mithras, which had been responsible for much of the trouble the settlers had faced before leaving Earth, as well as during each of the first three voyages. She had become embroiled in the aftermath of an attempt by the cult to destroy her ship, and it might have been expected that she would do anything rather than become involved in another potentially perilous journey. Of course, the cult itself had been effectively disbanded once the aged Centaurian Heraclitus had explained to all the peoples of Earth that it had been founded on a complete misunderstanding of the message left for the early people of Earth by their messenger, Zarathustra. While there was therefore no risk of another attack, Fiona’s request to be considered for this mission was a surprise to many for several reasons. Not least amongst these was that her husband had only recently died and she was felt still to be grieving for him. He had been some years older than she, and painfully shy but her arrival on the planet had given him a new lease of life, which he had enjoyed to the full. It was less than ten years into their marriage that he had developed a weakness in his heart. This should not have been a problem in such a technologically advanced culture. Not only could the doctors have cured him, but even had they lacked the skill, they could always have used the Panacea. This was the device that Frank Field had dug up during their very early years on Home and had quickly been discovered to have wonderful healing powers. It was this discovery that had eventually led Alex to find Aurora and the revelation of the

planet's true history and relationship with Earth. Unfortunately, Henry's natural reserve had prevented him from telling anyone about his condition – even his wife – and he had suffered a massive heart attack while out walking alone along the river bank. Even then, the technology existed to save him, had he not had the misfortune to fall into the river itself, which was currently full of a species of fish something like a cross between an alligator and a pike, which the young Alexander (as he had then universally been known) had christened a Crock. These were on their bi-yearly breeding migration and were always potentially dangerous. They had no legs to climb out of the water, but woe betide anything – or anyone – who entered their realm. By the time Fiona found Henry, he was beyond recognition, let alone surgery.

Fiona had been grief stricken. She was still young, but had hoped to enjoy many more years sharing her life with Henry and his quietly brilliant academic mind, not to mention the guidance that he had given to her research. She now wanted something new and felt that her skills in reading history from artefacts as well as from books and primary sources could make her a valuable addition to the team. Alex already knew her better than the others – Lizzie had always wondered how well – and she fitted in well at the 'interview'. She had always been a friendly person and found that being with the crew made her feel younger; more like her 'old' self from the voyage out from Earth, when she had dallied with several of her crewmates, making them vie for her attention. She had been unaware that despite the effects of her radiant smile, when she decided to use it, the main purpose of their attention had been to ensure her safety, after she uncovered the extent of the Mithras plot, which had been completely to destroy the mission to Home.

Geoff Harvey, a recently qualified physician, was a more obvious choice. He was the son of another medical man; in fact the latest in a very long line of scientists and doctors reaching back to the early seventeenth century when an ancestor had discovered the circulation of the blood. Having a medical officer was essential – given the scrapes that Alex and Ganesh were capable of getting into, according to Lizzie – so he also was accepted early on.

The remaining chair in the cabin represented something of a dilemma for the crew. There were three strong applicants and one outsider. The 'strong' applicants were all young and skilled in some aspect of science, but the outsider was another surprise. Brad Gregory was one of the original crew of the Nelson Mandela, so in chronological terms he was well over a hundred years old. Of course, he had spent much of the voyage out from Earth in stasis, so his 'body' age was nearer to fifty five – not that he felt anything like it. He had been a journalist on Earth and had retrained as one of the nurses for the voyage out; a task that involved also helping with the hydroponics system for two year stints, one at the start of the voyage and the other during the final two years. Other crews had each served more two-year rotations, but he was part of the "A" team that had been responsible for the overall project and therefore served only twice. Since then, Brad had held a number of posts within Catalia, including most recently as head of the Guardian Force. This post had become rather less

interesting to him, once they had eliminated the Mithras threat, and in any event two professional police officers had recently landed on the Confucius from Earth and he felt that he was now free to find a new challenge, while they took over managing security in the rapidly growing community. Going with the crew of the Anton Savasin, as the craft was to be called in memory of their first commander, to find four new worlds was just the sort of challenge that Brad craved. Alex – who had worked with him in the past – and the others decided that his age and experience were actually a bonus, rather than a hindrance and, much to his surprise, he was invited to join them as their final member.

Rebecca and Lizzie were preparing a meal for all the family the evening before the departure of the Anton Savasin, while the others sat in the spacious living area of the home that now accommodated not just Charles and Rebecca and their children, but their spouses, too. Space had never been a problem on Home; nor had building costs. When anyone wanted more room to live in, they could simply 3D print whatever they needed in terms of extra rooms and furniture. Cost was irrelevant because money did not exist. Everyone in Catalia simply contributed what they could and were given what they wanted. It sounded somewhat communistic to some new arrivals who were accustomed to the profit motive on Earth and Mars, but they soon realised that it was the perfect way of living; given that there were no resource constraints. Even the population growth was not a problem; people could easily move to the outskirts of Catalia or even go further and start a new settlement elsewhere on this, the smallest of three continents on Home. There was also the option, when needed, to move to one of the other two continents. The location of Heraclitus’s mausoleum, with its priceless store of data relating to the Centaurians, was well hidden on one of those continents, and there was no danger that anyone would stumble upon it. Only Rebecca and a few others knew where Aurora’s father was buried.

“I don’t feel a day older than when I was last on the Nelson Mandela,” said Charles. “That was almost eight years ago and I was already over seventy two, then. Why is that, I wonder?”

“That is obviously the effect of having me around,” replied Aurora, coquettishly, “I keep you young.”

“Better not let your husband hear you say that, my dear,” he said. “Or my wife, for that matter. She knows my reputation with pretty girls.”

“I happen to know that you never once took advantage of any of the ‘offers’ you received on the Nelson Mandela, even though you were there ‘alone’ for more than thirty years while Rebecca was in stasis, so don’t try to kid anyone, dad.” Aurora had adopted this title for Charles ever since the death of her own father, Heraclitus, shortly after he had been able to give her away in marriage, albeit holographically – he had been too infirm to travel for a long time. “Anyway, I was only half joking. As you know, my race was far more long-lived than humans, even though we eventually died out through our failure to reproduce. The planet has

always had the effect of extending life cycles and I believe you will start to see people living far longer than was once the case.”

“But some of our older friends have died, notably Anton Savasin, our former leader,” said Alex. Surely he should have lived to an even greater age if the planet is so healthy?”

“All the planet can do is to extend your natural lifespan,” replied Aurora. “If you are of a family that does not usually live beyond seventy, you might find that you now reach a hundred; families like that of you and dad who often exceed one hundred could easily live for four or even five more decades. And you can expect better health too. The problem with someone like Anton, from what I have been told, is that he had a very unhealthy lifestyle and there is nothing that could have extended his existence by very much. Even so, he probably gained five or ten years more than he could have survived on Earth. Dad has lived an active life and can expect to live a good few more years now, so can mother.”

This was to be their last meal together before the mission started. All the preparations were complete, the mission objectives clearly agreed and the crew fully trained. That the crew would serve for the entire mission was a departure from the journeys from Earth or Mars to Home. In that case, they had been rotated every two, and latterly five, years. The reason for this change was that the overall journey was not expected to last more than two or three years in total, including all travel, acclimatisation and contact time, so there was no need for the crew to go into stasis. It was for this reason that the crew had spent several week-long trips round the planet, touching down on the other continents, both to practice their flying skills and also to ensure that they got on well together.

Home was a strange planet in some respects. It was about the same size as Earth and had gravity 0.95 of that of Earth; it shared much of the diversity of life, both flora and fauna, although there were naturally some detailed differences. The principal variation was that it revolved round a star, Proxima Centauri, which was part of a triple star system, Alpha Centauri. It also had a slightly thicker atmosphere which tended to give the sky a pinkish hue, which some new arrivals found a bit disconcerting until they became accustomed to it. Travelling round the globe to land on the other continents was a strange experience for everyone other than Alex and Aurora, who had visited her father before his death. It gave them the opportunity to experience something different from the township of Catalia which, for the majority of them, was virtually all they knew. Only Fiona and Brad had been adults before leaving Earth, although Ganesh had been to school in India, before his mother, a professor and father, a psychologist, had decided to take them all to Home. His siblings had died on the journey as the result of an artificial infection created by the Cult of Mithras and only he and his parents had survived the journey amongst his family.

Alex was keen that his crew should be ready to see unfamiliar sights; none of them could have any concept of how different these would prove to be.

Chapter 2 – Leaving home

The Anton Savasin was much smaller than the vessels on which hundreds of settlers had travelled out from Earth during the past three quarters of a century. It was also of a more conventional ‘spacecraft’ shape than the ‘egg’ design that had served the mission to travel four light years; in this case, it would have to carry them through space as well as travelling through the atmosphere of alien planets. Not to mention being compressed to travel vast distances along the strings. When the settlers had first arrived, all they had to do was land in a single location, once they had identified a suitable landing place. There was therefore no need for a complicated configuration and the craft had been designed for optimal efficiency of design and build; and for long-term space flight. This was different. Not only would the craft have to fly conventionally, looking for a quiet place to land, but it must also do so in such a way that it was both as quiet as possible and virtually invisible. The technology for both these objectives was well tried and tested. Since ion drives were used in association with the main fusion/singularity engines to produce virtually limitless power, there was almost no running noise, although high speeds could result in wind noise and, of course, sonic booms when sound barriers were broken. The same engine design created the artificial gravity needed to make the journey comfortable as well as to provide inertial damping to protect the voyagers from the effects of rapid acceleration and deceleration, and course changes. Being virtually invisible was even older technology; so old that it predated the increased terrorist activity that had eventually led to the creation of a world defence force and the eventual hegemony of the United Nations as a world government, on Earth. In fact, the ability to arrive unnoticed at terrorist bases had been one of the things that had made Charles Windsor and his colleagues so effective in fighting insurrection. Stealth aircraft had their roots in the twentieth century, when they were made virtually invisible to radar; effective adaptive camouflage to make it more difficult for visual identification had come half a century later. Now the designers of the Anton Savasin had had no difficulty in incorporating both technologies – and several others – into the craft.

Its layout was rather different from that used to reach Home, too. As the shape was similar to a conventional aircraft designed to land vertically, with wings on either side, there was room for a spacious command cabin at the front, behind a more or less aerodynamic nose cone, with accommodation behind. Where it differed from traditional aeroplanes was that it had thrusters on all sides – in addition to the main propulsion at the rear – for manoeuvring rather than using ailerons and a rudder, which would, of course, have been useless in space.

The crew accommodation was comfortable, rather than generous, because the designers did not want to create a craft so large that it would stand out amongst other flying vehicles; the assumption had to be that broadly contemporaneous civilisations would also have the power of flight. Conversely, it could not be too cramped or a series of journeys taking as long as three years could have become uncomfortable. There were therefore eight cabins, each large enough to accommodate two people in reasonable comfort, with beds, easy chairs and

occasional tables, in addition to the inevitable computer array. Since four of the crew were actually married couples, it would have been possible to have fewer cabins; but it was felt that having one room per person was more appropriate in case the dynamics of the crew changed over time. In addition, it was necessary to allow for the possibility of taking on passengers at one or more of the planets visited; even if only on a temporary ‘guest accommodation’ basis. It was intended that, should the crew decide to take visitors back to Home, they should be placed in stasis for the journey; this was particularly important in respect of the earlier planets, because there was no desire to announce the existence of a total of five planets – six if you included Home itself, as the ‘parent’ of the other five – to each of the others before there was a secure plan in place to handle any fall-out from such a revelation, at each location. Even the peoples of Earth had not been told the entire story of their relationship with the Centaurians and the other planets. The remaining space was therefore taken up with stores, the inevitable array of 3D printers and the equally inevitable hydroponics bay for the provision of fresh food. Whether or not to use robotics for various functions on the craft had been an issue. Ever since the first voyage to Home, some robots had been used for routine tasks. There remained, however, the feeling amongst some people that using robots to undertake work that humans didn’t want to do was somehow dehumanising to them; if people felt above manual labour, were they somehow ‘less’ than their predecessors? More importantly, however, was the question of how the peoples of the planets they were visiting might react to those who had robotic slaves to work for them? Might they appear effete and weak or bombastic and overbearing? In the end it was decided that non-humanoid robots might be used extensively on the ship, but that they would not be capable of being deployed away from the vessel – and that *all* the crew would be expected to undertake some manual labour on the craft; if only to keep them fit and active. Not that they expected to be in flight for very long, on each stage of their odyssey.

The day of the launch was something of an event for the entire population of Home. Even those families who had decided to settle away from Catalia and start semi-autonomous communities of their own – still following the basic tenets of the founding fathers, there was no reason to do otherwise – either attended the event, or watched it in three-dimensional representations. Anita Patel and Rebecca Nairn were not the only wet-eyed people watching the departure of eight of their number. Ganesh’s parents, Indira and Nabhas were naturally sad to see their son depart for such a long time, as were Geoff’s parents. Amongst the crew, only Fiona and Brad had no real ties. Both were popular, but the former was a recent widow, which seemed to make some people uncomfortable – they never knew what to say to her – while the latter had spent his entire time steadfastly refusing to settle into any relationship; so while he would be missed by many friends, there were no lovers’ farewells for him. The closest he had been to anyone was to one of his former assistants, who had been killed by the last of the Cult of Mithras insurgents, when Alex had taken a team to find Aurora; and that was some years ago now.

Unlike the departures from Earth, which had all taken place from geostationary orbit, this launch was from near what was now becoming the ‘capital city’ of Home, Catalia. After the final farewells and the inevitable speech from the current secretary of the council – who happened by coincidence to be Geoff’s father, Bill Harvey – wishing them well, the crew boarded the Anton Savasin via the steps built into the rear of the vessel and disappeared.

“Just as well Luke and his colleagues thought to incorporate some steps,” joked Charlie, “We don’t know if the airports at our various destinations would have stairs to fit our portal!”

“No,” responded Brad, reverting almost a quarter of a century to his former role as joint humourist of the mission, although in the former case, it had been in concert with Charlie’s father, Frank. “We don’t even know if they will have the same number of legs as us. They may have evolved with three or four, for greater stability. I have always thought that two legs are rather inadequate.” The others laughed, knowing from what Heraclitus had told Aurora, that physiologically, the five races should be similar to the Centaurians, as having been a selection criterion in the first place.

The take-off itself was a wholly unexceptional event, no different from the departure of the occasional plane visiting an outpost or even one of the other continents. It lifted off vertically for a few metres and then soared at an increasing – but still relatively leisurely – rate towards the skies. Rebecca watched it silently holding on to Charles’s hand, thinking that this was significant not only by virtue of it taking her son and daughter away from her for their first real separation, but also because it was the first manned vessel to leave the surface of Home since they had landed. Indeed, the first since the last Centaurian vessel had left at just under the speed of light – and that must have been more than five thousand years ago. The settlers had, of course launched a number of communications and observational satellites over the past twenty five years, but nothing of this significance – and nothing so heart wrenching.

Aboard the Anton Savasin, Alex was having no such thoughts. He was entirely focussed on remembering his hours of training at the hands of his mother, Andrea Faber and Luke Hill; training which, in his view, qualified him to oversee the operations of the computer control system and little else. Nevertheless, he recognised that the training had not been for this routine, but for when things went wrong; as they inevitably would at some point during any lengthy mission. And if there were any problems, he always had Ganesh there with him. Alex relaxed slightly as he allowed the craft to be guided up into a low orbit; well beyond the planet’s atmosphere, but easily inside the height of a geostationary orbit.

“Well,” he said to the crew, all of whom had comfortable seats in the control cabin; an area that would be their communal living area, as well as where they would plan each stage of the mission. “If anyone wants to change their minds and stay at home, I have packed a few parachutes. But please remember that the first step is now rather large. And you may have to hold your breath for a little while before you reach breathable air. About fifteen minutes

should do it.” Without waiting for a response – what could anyone say – he nodded to Ganesh to operate the control that would commence the search for a string heading in the direction they wanted to go. The direction of travel had been determined by the coordinates that Heraclitus had given Aurora for the location of the first planet, Agriphon, allowing for galactic drift during the thousands of years since it had last been directly observed by the Centaurians. The scanner devised by Andrea and Rebecca quickly identified a number of strings in the area and calculated which was most likely to pass by Agriphon. The words ‘most likely’ had always slightly worried Alex, but Ganesh had explained that in quantum theory there was always a degree of uncertainty.

“Particles can appear anywhere and everywhere at the same time,” he had told Alex. “But the work your mother and Professor Savasin did many years ago revealed that it was possible to predict with 99.9% certainty where a particle would actually be at any one time. She and Dr Faber used this to extrapolate a formula whereby they could calculate the direction of travel of a string. Unfortunately, strings are not straight lines but wavy ones, so we could use one to get close to our target and still be many millions of miles away.”

“Hence the need to be able to fly in space more conventionally,” Alex finished the thought for him, as they had done for each other since meeting as children.

“Time to activate the compressor, captain,” said Ganesh, from the co-pilot’s chair, when they were sufficiently far from the planet’s surface to ensure that should anything go wrong, the people on Home would be safe. He was not actually co-pilot, any more than Alex was really the captain. In the event of decisions being required, there would be a general discussion and a choice made on a simple majority vote. Only in the case of a split decision, or where there was no time for reasonable debate, would Alex assume command.

“Right,” said Alex. “If everyone is sitting comfortably, then we will begin.” Nobody was really sure what to expect during this phase. The animals that Lizzie and her supervisors had sent through the procedure had all survived perfectly well, returning after increasingly long periods with their brain and bodily functions unimpaired. What they could not do, of course – nor could any recording machinery – was to explain what they had actually experienced during the compression, transit and decompression. At one extreme, it was possible that they would experience nothing at all, but would simply disappear at one point and reappear at another with no perception of time having passed. This seemed slightly unlikely, given that the internal timers on the test vessels had recorded the expected elapse of time. It was also slightly inconsistent with the experience that Charles had undergone during the time he had been trapped in the massive black hole at the centre of the galaxy. For him, less than an hour had passed, while in the outside world more than fifteen years had passed. The reason for the discrepancy appeared to be that while the normal time-space laws of physics broke down in a singularity, the same was not true when travelling through a string at faster than the speed of light. The apparently ‘normal’ passage of time during the experiments with animals tended to suggest that an alternative explanation for what they could expect to experience was likely to be the case; that they would sense the passage of time in some way.

Alex entered the command that would initiate the compression field and slip them into the string which would point them towards their first target, Agriphon. This was some six light years away from Home. The journey would have taken the Centaurians more than 75 months at 95% of the speed of light. For the crew of the Anton Savasin, the transit time should be six hours during which they would be the first intelligent beings of which they were aware to experience such rapid travel. The system engaged the program that would compress them and convert them into particles capable of travelling through a string. Initially, they experienced nothing at all, each looking at the others wondering who would be the first to say that the control must have failed, because they witnessed nothing different. The planet, far beneath them looked no different from a few moments earlier; it had not moved or altered in appearance.

Suddenly, and quite without warning, everything outside the spacecraft ceased to exist; or at least, that was how it seemed to the crew. Home disappeared in the space of less than a second and the stars were replaced by a spectacular lightshow that could have been a gigantic version of the fairy lights on an old Christmas tree –and flashing past at an incalculable speed. Fiona was the first to comment.

“How wonderful,” she cried out, showing the first real sight of pleasure that anyone had seen in her since Henry’s death. “I have never seen anything so beautiful. It is almost as if we were close to the stars, but travelling at many times the speed of light.”

“Well, as far as our speed is concerned, you are right, Fiona” replied Ganesh, as pleased to see the almost child-like delight in her face as anyone; in fact they were all overawed by the sight, to be honest. “But those are not stars; they are photons within the string in which we are travelling. Elizabeth, your mother’s science works. Of course,” he added quickly, “we already knew that it would, from the experiments. But to be inside a string and moving at more than eight and a half thousand times the speed of light itself is something that scientists a few years ago, let alone when man left Earth for the first time to colonise the moon, would have considered absolutely impossible.”

“Shut up,” responded his wife fondly, “and enjoy the spectacle. Will it last for the entire eight hours, do you think?”

“Almost certainly,” said Alex, on his behalf. “In fact if we stop seeing the lights flash, we can assume that something has gone wrong.”

“Thanks for those few words of reassurance,” said Brad, who had appointed himself responsible for keeping up morale. “Hopefully, everything your mother and her colleagues made for us will work as efficiently as ever.”

“Am I the only person who is hungry?” asked Aurora, thinking that a distraction was needed before everyone became mesmerised by the view through the windows at the front of the craft.

“You are at the moment,” groaned Geoff, the medical officer, who had made the mistake of looking out of a side window and felt very travel sick. “Alex, can you blank out the side

view ports, please? The effect of the flashing lights from that angle are likely to make us feel travel sick. That is probably the first lesson of this voyage; I must record it now.” And he went to his own cabin to make some notes and recover his poise. After a few minutes alone, during which time he injected himself with cinnarizine, to combat the effects of travel sickness, he returned to the main cabin to join the others in a light – for him – meal. Alex had taken the hint and screened off all but the forward windows. They had monitors on which they could view their surroundings from any angle, of course, so they were in no sense ‘flying’ blind, but in designing the craft, Luke Hill had known that they would require clear visibility when they were flying in the atmosphere of the planets they were visiting, so the viewing configuration was conventional as well as electronic.

After the meal, Geoff insisted on examining everyone to ensure that they had suffered no ill effects from the compression process. Theoretically, they should have been altered in some way by the experience. After all, if their molecules were now much smaller than they had been – unimaginably so – the atoms should therefore be much closer together, with the distance between the neutrons and proton that made up their nucleus to the electrons that circled them much less than before. This should have an effect on their bodies, possibly making them denser. But even the vast comparative distances between the different parts of their atoms, if compressed a million times, would not be sufficient to allow them to pass along a string. Was it possible, Geoff wondered, that the process of compression had not simply pressed everything closer together, but had actually reduced the scale of everything, so that the relationship between their molecules and overall bodies had remained the same? This would mean that being compressed into a string probably involved moving into another dimension. As with so much experimental science, the theory would probably follow the observations they were able to report on their return. If, that is, Geoff thought to himself, they were able to return to their normal size without any adverse effects – and then get back to Home in order to report at all!

The six hours of expected travel passed relatively uneventfully, once they had become accustomed to the monotony of not being able to observe anything other than a forwards view without feeling sick from the effects of lights flashing past them sideways. Brad suggested that they might safely view backwards, using the screens and this proved to be possible for a short period. Unfortunately, after a while, even that became disconcerting, unless you simultaneously looked through the forwards windows, or had the forward view on another screen. This was because seeing the universe – or whatever it was – flying away from you at such a fast rate without knowing that you were not just about to bump into anything was enough to make anyone uncomfortable. The problem was that, while there was no reason to think that there was anything substantial inside a string, it was known that they were bidirectional, so it was at least theoretically possible to meet something coming the other way. Or perhaps to bump into the back of something heading in the same direction. Probably not the latter, since their rate of progress was determined by the string itself so everything in it should be progressing at the same speed.

They had plenty of time to eat and digest the meal that Aurora had suggested, as well as to consider some of the possibilities implied by their current situation, before Ganesh announced the countdown to recompression that would skip them out of the string and back into real space. This was a potentially risky part of the journey – but then so was everything else, given its still experimental nature – because they had no idea where they would actually emerge. They would know that they were sufficiently distant along a string that was heading broadly in the direction they wanted to go, but there was no guarantee that they would not emerge inside a planet, or a comet, or something. They at least would not come out of the string inside a star, because the predictions suggested that their mass would probably divert a string round them, in the same way that it bent light. Ganesh hoped the science was right as he gave Alex the count-down to activating the control.

“Good luck everyone,” he managed to fit in between ‘five’ and ‘four’. “Three ... two ... one ... now, Alex.” Suddenly – and just as without warning as when they entered the string – the apparently fixed stars of space appeared, replacing the streaking lights that they had been avoiding a side view of. Alex raised the side screens and they all looked out to get a view of their target planet.

There was nothing in sight.

“We should not be too surprised at that,” Aurora told them. “We know where Agriphon should be, but mother said that the string could leave us millions of miles from it. Now all we have to do is find it in relation to our current position and use our fusion/singularity engines to fly there,” she added, showing that she had learned at least some of the terminology for their propulsion system.

“Sorry, but I cannot help feeling a childish sense of disappointment that we did not get within at least viewing distance of the planet on our first attempt,” said Alex, probably speaking for all the others, too. “Never mind, let’s scan for the right direction and then fly in.” The word flight was still used to describe almost any mode of travel that did not involve physical contact with land or water, even though flight in space was very different from that in an atmosphere. In any case the Anton Savasin, while primarily a spacecraft, was also designed for atmospheric flight, so the term seemed appropriate.

It was Charlie Field who spotted the planet. As a computer wizard, he was accustomed to staring at display screens in a way that most people seldom did, most preferring to use alternative computer interfaces such as voice and three-dimensional images instead.

“There is it, Aurora,” he said. “Not too bad, after all. “Allowing for acceleration and deceleration, I suspect that we can make it in three or four days.” As navigator, she checked his figures and agreed.

“Something over 82 hours, I believe,” she replied, smiling at Alex in anticipation of the adventure to come. Aurora was about the same age as her husband, but had lived most of her life up until she had been sixteen in relative seclusion with no other children to play with and highly protected from danger by her father, who had special plans for her. She had then

passed five thousand years in stasis, physically aging less than five years during that time, before being awakened to a new era by Alex, Lizzie and Ganesh. For her, moving beyond the protective sphere of a loving new family was something to be relished. “We can settle in for a more conventional trip now. Charlie, can you pick up any transmissions from the planet’s surface, yet? I want to start work on their language as soon as I can.”

“There are only occasional bursts of radio waves, so far, Aurora” he replied. “Some music and what sounds like speech. I am also scanning for broader bandwidth transmissions that might include visual images. I will keep on it,” he promised.

During the routine of the next few days, while Aurora was studying the transmissions with a rising sense of excitement, as she started to understand them more and more easily, Brad broached a potentially sensitive question with Alex.

“I don’t want to pry into your private life with Aurora,” he started diffidently, “but why did the Centaurians stop having children after she was born?” Sitting in the main cabin, they were not alone and the other six – leaving Aurora to her work – quietened down to listen. They were all interested, but even Lizzie had never summoned the courage to ask this question of her brother, or Aurora, with whom she – like Alex – had shared a psychic link for most of her life. Alex decided that they deserved an answer.

“Of course, we have discussed this,” he started, “particularly in the context of when – or whether – we could start a family of our own. No, Lizzie, you are not going to be an auntie yet; we have decided to wait until this mission is well and truly over. The answer is simply that they ‘ran out of steam’. Well, to be more precise, their genetic material started to weaken to the extent that they found it increasingly difficult to produce fertile eggs. It was partly a deterioration in the quality of eggs that the women were producing, but far more so the strength and survival of the sperm generated by their men. They had ceased to need to strive for survival over a period of ten thousand years and this somehow reduced the fertility of the race; it was as if they no longer needed to reproduce to survive, so they simply didn’t. By the time of Heraclitus’s birth, the birth rate was down to just over one per ten thousand and during his lifetime, the rate fell to almost zero. Aurora was the last child born to her people and then only because of careful intervention by their medical professionals. She is capable of having children, but could not have been impregnated by any of their males, so she was placed in stasis for one of the ‘children’ races to come to the planet and inject fresh DNA into the race. The term ‘children’ does not imply that the Centaurians were actually our progenitors, of course. It is simply that they knew we were compatible and that they had donated some of their DNA to us, early in our development; well before they started to die out.

“I told you that you needed to give her the right sort of DNA,” said Lizzie, referring to a very rude private joke that she had shared with Alex when they had first found the naked Aurora in her stasis pod. It had shocked him then, coming from his little sister, but now each

was married, they occasionally shared the joke; at the expense of the others - except Aurora, whose psychic link had enabled her to hear it at the time. That psychic link still existed between the three of them and even, on occasions, included Ganesh. But it was seldom used, for fear of it becoming intrusive – or excluding other people. Such considerations characterised Aurora even more than the sensitive Lizzie and generous Alex.

“I think I have cracked the language,” said Aurora, after two days studying. “It may seem quick, but I have already done it once with your language – although it took longer then, because I was new to languages. What surprised me is that there is only one language coming from the planet which either means that they all speak the same tongue ...”

“... or else the nation with the ability to transmit radio has a monopoly on the facility,” concluded Alex. “Are there any visual images, Charlie?” he asked.

“Very few, they appear to be still images rather than television,” he replied, “so we might be dealing with a more primitive people than ourselves.”

“Or simply one that has developed differently,” offered Geoff, who preferred this mode of flight infinitely to being inside a string. It was not just the flashing lights that had upset him but, as a doctor, the thought of having been miniaturised.

“Anyway,” said Aurora, “We now know what they are talking about and with whom. It all seems fairly basic, but it is not sufficient for me to be able to converse with them; if we are to pass amongst them, at least initially, we must all have the basics of their speech.”

“I think I have the answer to that problem,” suggested Charlie. “I have been working on it for some time and have developed a device that can – given some input from Aurora – provide an instant translation of everything we hear. It consists of a small microphone to pick up speech and an earpiece so that you can hear what it means. There is also a small camera that can scan the printed word and provide a translation of that for you too. Fortunately, some of the still images were of text.”

“Great work, Charlie,” said Alex, “but how do we communicate back? We cannot always do so through Aurora and they would hear us talking in English anyway. What a pity they all seem to speak the same language, we cannot simply pretend to be foreigners.”

“I have thought of that,” replied the computer wizard. “The microphone also picks up what you say and broadcasts a simultaneous translation into their language. White noise cancels out your English words, so that there is no confusion. It will cause a very slight delay in communications between ourselves, because of the double translation; I didn’t have time to introduce a cut-out for that.” Everyone was impressed by his ingenuity and Charlie was able to bask in the glory of a job well done, for the first time out of the shadow of his parents.

“Do we know what they look like, yet?” asked the former journalist, Brad. “We don’t want to look out of place.”

“We have nothing to go on so far,” replied Aurora, “but if we land far enough away from any risk of detection, we should be able to make observations and then Lizzie can make up whatever prosthetics we may require.”