

PAX  
MAGELLANICA:  
Reichworld



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Reichworld

by  
Michael Linaard



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ISBN: 978-1-94654-089-8

# Acknowledgement

The technology behind the star – drives in this book are an interpretation and development of the theories put out by Captain Bruce Cathie in his books Harmonic 33 and Harmonic 295.

I contacted Captain Cathie regarding my intention and asked his permission to commit them to print; he agreed and gave me his permission.

I therefore dedicate this work to a man whom I consider a visionary.



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# Prologue

The light had travelled one hundred and fifty thousand years to reach his eyes.

Four hundred billion stars poured their energies across the vast, empty gulf and reflected as points of light in his pupils, tiny and brilliant; yet through those eyes the same stars filled the heavens before him in a twin spiral of hard, blazing light and life that threw his shadow dark and long behind him.

Axel van Diemen had been to the outer stars of the Larger Magellanic Cloud before; a lifetime ago, when the dream was new and daunting – when ghosts and memories drove him. But now, generations on, the past was safely distant and the dream much closer and real.

Mankind's dream –

– to cross the gulf to the Milky Way. To go back. To find the original home of man. And he was to lead the way.

He was twenty-six years old and had been so for the last ninety-one years.

The road had been hard and long, and his cold grey eyes saw the beginnings of its history dancing amid the brilliance of the stars that were so far away. At his back, bathing him in

their own warm light, were the familiar stars of the 'Cloud; settled and orderly. Finally at peace; testament to his own people's strength.

The woman at his side saw his introspection in the set of his chiseled face and the thrust of his chin, she knew his thoughts, knew where his mind was. She looked much older, yet carried an aura of timeless elegance, and she saw things others could not. Her long grey hair and soft, classically willowy features counterbalanced his white-blond mane and broad-shouldered stance; her grace tempered his power.

She could feel eagerness for the quest radiate from him; and she could feel the pain so carefully hidden – the pain of love and loss; of bitterness and despair. Of unfulfilled desire.

Fifteen generations of pioneers had culminated in the young man with the hard eyes; generations that had begun when survival in the 'Clouds was the first priority of a race lost and alone. Yet they survived, each generation adding the hard-won skills that the next would need to push back the boundaries – to build new worlds – to face impossible odds against a new race – to fight a war.

The war. A vicious and bloody contest, where the price of victory had almost been beyond payment; she saw the pain of it upon his soul.

Axel van Diemen was a product of his people's history and a symbol of their hope; he had done so much, yet there was so much more to do, so much more to endure. The road to

the future had only just begun; the road from the past was as fresh as yesterday –

– and she could see it all from the very beginning; the steps that lead to this moment.

They began so very far away and such a long time ago.

They began in hope –

– many generations ago

– on lost Earth.



# Book One

## The *Thorn* Years



# Part One

## The Road Begins

### Chapter One

The date was November 22 in the year 2099 and a starship drifted across the face of the Earth. It glowed like burnished copper in the sun's light.

High in orbit, she was a new star in the sky, her brightness the symbol of man's triumph over his limitations; her destination the achievement of his dreams. Here, visible to all, was the dawn of a new age, one where man's terrestrial shackles were sundered and the stars themselves beckoned.

The ship was a smooth ovoid seventeen hundred metres long and one thousand metres wide, and four of these giant craft had been constructed in the lunar shipyards. As the

outer hulls were completed they had begun to shine with reflected light. When they were sent to Earth orbit to embark the colonists, they looked like a necklace of small moons around the world. Two ships had been commissioned by the North American Union, one by the new Northern League of European States, and one by China. The Chinese and one American ship were launched, without fanfare, within weeks of each other. The growing habitats and domes around Barnard's star and Alpha Centauri demanded more and more skilled pioneers to unlock the wealth of these new systems, and soon, of the four little moons that had become such a feature of the night sky, only two remained.

That number would shortly dwindle to one.

Peter van Diemen was a starship captain who didn't look the part. In an age when the company way was the only way in looks, image and attitude, Peter van Diemen stood out. He was big, imposing and he had a natural air of ability and authority. His face reflected all the hard, tough times he had experienced in his forty-eight years. Bullet grey eyes scanned the world from beneath heavy black eyebrows; artificially tanned skin was stretched between the prominent features of his wide face, from his proud Celtic nose to his strong cleft chin. Thinning black hair was close cropped in the military style and the deep lines at the side of his eyes told of a man who had looked to many horizons.

He had been there at the very beginning of star flight, on the ground floor. Serving as second-in-command on the

second manned survey ship to Barnard's Star; then the years of frantic activity on the Alpha Centauri route as man's dominions expanded into the two new frontiers. Bonds had been forged between officer and crew in those early days, bonds that went beyond pay.

True to character, he was outside the ship giving the final inspection to the closure team. From his positioning a hundred metres off the starboard bow he could look back along the curved length of the massive, bulbous ship and admire the simple elegance of the design. The big, heavy vacuum suit didn't allow much movement, but he could lift his face up behind the faceplate and look between the pulsing tracking beacons and the suit's gyro controls automatically rotated him to face that direction. The hull glowed in copper hue on this sunward side and his faceplate darkened in compensation. *His ship!* Van Diemen turned his attention back to the bow of the ship, where two suited engineers were maneuvering a large sensor sled into position at the top of the bow door. A third figure hovered to one side, overseeing the operation; Chief Engineer Matheus Kronfeld was keeping his eye on every detail. Small puffs of gas erupted from both backpacks as the engineers struggled with their awkward load until all activity ceased and the senior of the two turned to his Chief and gave the thumbs-up sign. This was probably the most critical check to be carried out prior to Jumping. The entire hull was one unbroken sensor and continuity through any hull penetration was essential if the generators were to operate along the lines of the gravity waves that they were targeted at.

Like a big whale swimming through water, thought Peter van Diemen, blindly following a sound wave sung halfway around the world. But these new waves were gravity and this metal whale could gather them in, compress them into a narrow band of warped reality and leapfrog into a far-removed point of space-time.

The main air lock was twenty meters in diameter and had been closed and sealed when the last of the colonists had been brought aboard; they were the last to be boarded, for as soon as they were installed in deep-sleep and stacked the ship could get under way. A small sally port was built into the centre of the lock so that the crew could attend to the exterior of the ship without breaking the electromagnetic integrity of the hull. It was into this lock that Van was guided; above his head, on a large plaque welded to the outer skin of the main lock was the name *THORN* and as he passed beneath it he reached up one hand and brushed the name. It was a gesture that all the crew had made at some time; one of the bonds between sailors was their superstitions whether they sailed the seas or the skies, and *Thorn* was also the name of the rune of boundless energy and luck. Many of the crew had taken to adorning their personal equipment with the rune and he had instructed his officers to turn a blind eye to the practice; positive superstitions were a lot better than bad ones.

Two crew-men were waiting for him outside the inner door and proceeded to remove the heavy suit from him, and his

two most senior officers waited to one side until the task was completed. They wore the ubiquitous dark grey duty fatigues, their badges of rank silver flashes on their shoulders. He had picked these two himself and he flicked a glance their way.

Helena Bormann was his second-in-command, a tough, no nonsense woman who knew her job inside out; who had spent her whole career in space. She was close to his age, blond and short with the sort of figure that wouldn't attract a second glance and usually didn't. She had an honest face and wide generous smile. He liked her. They had a lot in common, he decided, as his heavy suit was dismantled around him; both had been in marriages that had foundered on the long absences their careers demanded, both had found it necessary to overcome corporate politics that sometimes promoted the mediocre but well-connected ahead of the proven professional. They had known each other a long time, trusted each other and weren't blind to each other's shortcomings. It was she who had first started calling him Van.

He finally escaped the clutches of the heavy suit. The second officer stepped forward with a comp-holo which he offered to his Captain; David Shawcross was tall, lean to the point of emaciation, saturnine in appearance, answered only to his surname and was the perfect executive officer. He was stoicism personified; unflappable in all things. Van had never seen him lose his temper or even raise his voice, yet he could cut to the quick with a look or a word and was possessed of a memory legendary in its scope and detail.

‘Preliminary engineering, Captain,’ said Shawcross, handing over the comp-holo. ‘Final data in –’ he looked down at his chrono-tattoo, ‘two hours. Chief reckons to be able to engage the tugs an hour after that.’ He looked up at his captain with a half smile on his face. ‘All being well that is.’

‘If everyone’s done their job,’ said Van, weighing the comp-holo in his hand, ‘then one hour it is.’ He looked around the empty space of the air-lock. ‘Come on, it’s cold here. Let’s go somewhere warm.’ His voice was a deep rumble that fitted his size.

Helena summoned a small electric trolley and once the three were aboard, directed it to the bridge. There were no open areas or walkways in a ship so filled to capacity and under vacuum, but a network of narrow tunnels allowed rapid access via foot or trolley between the major centres. They were built into the skeleton itself and were independently pressurised. It was down one of these tunnels that the trolley disappeared, a continuous strip-light showing the way.

Four hours and we’re on our way, thought Van as he watched the steel tunnel unroll. After months of tests and trials, crew selections, corporate busy bodies pushing in for their five minutes of fame, scanner crews crawling about everywhere recording every detail for posterity, politicians getting in for their freebies – four hours and, by the grace of God, we go!

– *by the Grace of God!* Van half smiled, acknowledging the irony of it all.

The last century had not been good for Earth. Staggering poverty and overcrowding, resource stripping, wars, disease; all had combined to change the face of man's world. Large organisations were now required to run things; large groups that could make large decisions, that could, if they had to, override minority opposition in the pursuit of the greater good.

The strip light rolled on, as if leading his thoughts. Global government and global business became the two great driving forces; a symbiosis of greed and government, power and politics, needs and necessities. There was nothing that couldn't be accomplished once the obstacle of the religious factions had been overcome. Masses of people the world over had railed against their political masters at the instigation of clergy, but in a world where the diminishing resources were rigidly controlled by big government and big business, famine and deprivation invariably visited themselves upon those foolish enough to bite the hand that fed them.

But even with the orbital yeast farms, solar energy platforms and broadcast power the line was barely held; investments into the quest for heavy metals in the asteroid belt had nearly crippled whole nations, yet so desperate was the need for resources that entire engineering communities proliferated both on Mars and on the Moon, seeking ways to reach the wealth locked up in the outer planets.

Then the hand of God – he shook his head at the timing of it all. Helena Bormann saw the movement and flicked a raised eyebrow his way.

‘Just thinking, number one,’ he replied to the unasked question, his eyes fixed on the dark tunnel ahead. ‘Fate. Kismet. Hand of God. Without that gravity wave research on Mars, we’d still be trying to get around the solar system in slow-boats.’

‘They’ve been measuring grav-waves since the start of the century, why do you see God’s hand in there?’ Helena’s voice carried a warmth and friendliness that belied her looks.

‘It came at the right time, Helena, and it was a fluke. When they built the aerial-grid network to tap into Mars’ magnetic field, gravity anomaly areas were a problem. Someone thought of trying to create artificial gravity waves to stabilise them; that led to the basic gravity generator which became the gravity compression generator. Modulate that and you have a Jump generator. A succession of right ideas at a crucial time.’

The bridge was a command complex deep within the bowels of the ship wherein forty crew ministered to the ship’s every whim and it was almost a ship within a ship; an astrogation room housed all navigation telemetry and giant screens covered the port and starboard walls. The bridge itself was an elevated platform above and to the rear of astrogation, and from his high seat there Van could oversee activities below; if he swiveled his seat to the rear, he could direct his attentions to engineering. Below engineering and amidships were the common rooms and

messes for crew and officers while astern were sleeping quarters and the medical bay. This ship-within-a-ship was physically isolated from the interior spaces save for the tunnel system and it and the hydroponics were the only pressurised areas within the entire vessel. Suits were needed to venture into any other area of the ship. Even the great generators ran in vacuum.

The duty mess was an alcove on the starboard side of the bridge, just big enough to hold half a dozen people at a time. Van dropped into the nearest chair.

‘Right, how’s our schedule holding?’ he asked of his second in command.

‘Well,’ Helena said, looking at her comp-holo, ‘still around four hours. Chief says he’ll couple the tugs up as soon as you confirm the hull data, and not before. The Mars-bound supply ship –’ another glance ‘– *Artemis* out of Luna 3 has requested permission to observe the Jump; and all deep range tracking ‘scopes confirm they are locked onto our first breakout point.’ She shut down her holo and dropped it onto the table then sat down in the chair opposite Van.

He allowed a small smile to appear on his face; the Chief was right about the tugs. If they had to be uncoupled because hull integrity was not complete, someone would be called to account; you couldn’t turn off those big fusion piles like a switch, they took eight hours to recycle. Long enough for an errant officer to repent his haste and contemplate his rapidly shortening career.

A steward appeared at the door and proceeded to serve coffee, a moment later all three were sitting back with a steaming mug each. Van lit a cigar and particle filters kicked in to scrub the air; he knew the other two suffered his habit but he had had it so long now he wasn't about to give it up for anyone. He had even convinced the botanists to include tobacco amongst their inventory of plant stocks, for in his pantheon of beliefs coffee, good liquor and tobacco were inseparable accomplices in the enjoyment of life. He looked across the rim of his mug at Shawcross and Bormann.

'Any last-minute qualms? Things I should know before I push the button?'

Helena took it upon herself to answer first, not because she was a woman but because she was second in command and after the Captain, her voice came first. 'Van, we've all trained our hearts out for this mission. Every one of the crew has been tested to their fullest capacity; everyone has met the physical and psychological profiles required. We can't do any more. I'm happy with what I have to work with. No. No qualms.'

## Departure

Five kilometres astern of *Thorn* the two tugs started to slowly move up on her. Chief Engineer Kronfeld scrutinised their every move on the big screen above the main engineering station and he thought they were the ugliest things ever

built by man. Nothing about them found a soft spot in his heart; massive exposed skeletal frames that were big enough to hold the fusion piles and strong enough to take the loads those engines imposed were perfect representations of the triumph of function over form. To the Chief, good design should encompass the two.

They moved up out of the blackness of space like two giant squid feeling their way, the two long forward arms carrying the magnetic couples that would lock onto *Thorn's* hull; a blue glow to the rear identified the magnetic screens that isolated the engines and protected the crew from radiation. These were crude beasts designed for just one thing, to push enormous objects that didn't have their own means of propulsion. *Thorn* had her own thrust engine dead astern behind the gravity generators; it was fed from the fusion pile that powered those same generators and was designed to give the ship maneuverability around a planetary mass where the jump motors couldn't function. But it was a slow progression using it; these tugs were to give a rapid boost to *Thorn* to get her above the ecliptic to where the gravity waves ran free in the celestial ocean.

The exhaust from their engines formed a glowing halo that showed the tugs in dark relief; they looked like the giant eyes of a stalking beast bearing down on *Thorn*. Chief Kronfeld knew that once they were locked on and under full power the exhaust plumes would be kilometres long and so incandescent that human eyes could not look upon them unaided.

Instruments were telling him that they could sense the magnetic couples as they approached, and it was important that they maintained equal pressure as they coupled. He watched carefully as the forward antenna of both tugs reached a position fifty metres either side amidships and the computers locked them together like a vise around the hull of the ship. He scanned the console, checking the magnetic pressure differentials as the coupling was completed and when he was satisfied they were in balance looked across to his Captain.

‘Engagement stable, skipper, all locked on. We can hand over to the computers anytime you like.’

‘Thank you Chief.’ Van turned to his senior officer. ‘Get us underway would you, number one?’ He looked a lot calmer outside than he felt inside. No matter how long he did his job, no matter how many times he launched a ship, he still got butterflies. It’s just that now his experience has taught him how to hide them.

Helena Bormann nodded assent and headed down to navigation.

Thrust came on slowly and was hardly felt at all on board *Thorn* as the induced gravity masked any sensation.

*Thorn* and its attendant tugs looked for all the world like an enormous firework; two massive plumes of incandescent plasma took shape behind her before forming into one white hot ribbon of gas that marked her progress. She was seen from the lunar orbitals; she swept across the heavens

above the lunar bases and cast her light there; she was seen from the industrial complexes in Earth orbits and she was even seen, comet-like, by sharp-eyed people on Earth itself. Like the two before her, she was watched in awe by some, in hope by others and with resentment by many.

Captain Peter van Diemen watched the receding Earth on the main navigation screens. All the efforts of man could not diminish its beauty, he thought. Will I ever see this sight again? Are there any worlds as beautiful as this one? Images of memories flashed across his mind and he wondered, just wondered, how different things might have been. *If I had stayed married and we had started the family she wanted* – he shook his head in mental negation; *you've made your bed*, he told himself. *Be comfortable in it.*

## Chapter Two

### Hall of the Dead

Her finger travelled down the list of roster pairings until it came to rest against her own name -- Morgansen. S. Able

Rating First Class. Then to the right – Bender C. Able Rating. Good, at least he's competent, she thought; no, that's not fair, some pairings work better than others and she and Bender worked fine together. Sheri Morgansen looked around the duty room, searching for him. She was already outfitted with her light pressure suit; tight-fitting cotton liner under a one-piece, silver jump suit that allowed the body to transpire and radiate heat, but also carried micro-filaments in its weave to provide heating when required. Vacuum-sealed boots and gloves and a large fixed snap ring around the neck to lock the helmet onto. That helmet was now clipped at her waist.

She liked the suit; it showed off her long legs and narrow waist in a way that pleased the eye; and she knew the eyes she wanted to please.

Nine levels of crypts, four up, four down and one dead ahead, one pairing per level. Eighteen crew. She counted them all and found Bender; he was one of the few who had already rigged up and had actually picked up two tool kit shoulder bags which he brought over to, handing her one.

'I checked the list early,' he said. 'We've got 'B' level.' His teeth flashed white with his smile and she replied with a curt nod. Three levels up.

The rear end of the duty room was an air lock, a big one. Large enough for a full repair crew, plus equipment. Beyond that the main axis way disappeared into the darkness, straight ahead. To the left was the down lift, to the right the up lift. In silence, Sheri and Bender rode upwards with six others and

then stood together in the darkness of 'B' deck. 'Deck' was a misnomer; it meant a series of small, narrow mesh walkways dividing one lot of black boxes from another. It meant being able to see through the floor to the other levels; the lights were left off deliberately in the interests of reducing vertigo. Small green telltale lights sparkled in the dark, one on each sarcophagus. They appeared to trail off into the distance and there were lots of them. One hundred thousand, to be exact.

Sheri activated the monitoring computer that would double check their progress, pulled the hand-held reader from her toolkit and set it to the number sequence for their floor.

They slowly made their way between the towering racks of the sarcophagi and she wondered for the hundredth time what it was that gave her the creeps about the place. Maybe it was the fact that crawling through a mausoleum in a light pressure suit, in vacuum, with thousands of technically *dead* people for as far as she could see and *fuck-all lighting* – she shuddered despite the suit heater.

'What's up, Sheri?' came the voice in her suit 'phones. Bender was behind her on the narrow catwalk. The fact that he used her first name reminded her that they were linked suit to suit and not ship's general channel and she stopped to let him catch up.

'What does that do for you?' she asked and nodded her head toward the rising wall of inter-locked black boxes that stretched out above and below and on both sides until lost in the blackness.

‘My dad’s a fundamental creationist,’ Bender replied. ‘He reckons that this lot have lost their souls by icing out.’ He craned his neck to peer up into the heights and she could see the rows of coloured telltale lights reflected in his visor, hiding his eyes. ‘Me, I just carry ‘em. Do they bother you?’

‘If we had a failure in the computers, or if we were disabled in some manner, then these –’ she rapped her gloved fist against the nearest box ‘– would be so much dead meat. That thought bothers me.’

Bender placed the tool pack he had been carrying down on the catwalk. ‘Do you think they would feel the Jump twitches the same as us, or do you reckon they would all accumulate while they sleep and when we wake ‘em they spend a day or two shaking and falling over?’ He illustrated his hypothesis by holding his arms wide and violently jerking his body in a parody of the spasm that came with every Jump.

Bender’s parody caused her to smile inside her helmet. Some people actually *did* behave like that after a Jump. She set off again down the catwalk with Bender in tow to the start of their sequence. With half the crew out doing a manual check on the sleepers, backing up the computers prior to the first Jump, faster than light technology was still new enough not to be trusted, she mused.

## **Rune-chef**

There is not a lot to offer in the way of culinary ability or dexterity when the object of your craft is pre-processed,

pre-calculated for maximum nutritional value, pre-formed into psychologically acceptable shapes and pre-packaged. But what little there was to do, Sammy McManaman did it well. Microwaved it to perfection and set it on a well laid out table; S. McManaman, AR first and chef was under no illusions about his ability in the higher reaches of his profession – he didn't have any.

But what he did have was a general bonhomie and willingness to please that made him, and people like him, indispensable on starships. If he could do something for you, he would. And he would do it with a smile. Every time.

'Hey Sammy! What're you doing?' The voice snapped Sammy out of his pan-cleaning reverie and he turned to face his inquisitor. Inquisitors. There were three of them.

'Gentlemen and lady,' he responded, adding in a mock bow. 'You're almost too late to help with the cleaning up. I can, however, offer you some delightful fish-gutting that is required before this evening's repast can be assembled.' He looked from one to the other, grinning, and they laughed in return. Bergman. AR. Engine room. Hempel. AR. Medic. The last of the three he allowed his eyes to linger on – Sandra Thompson. AR first. Navigation. 'No?' he asked. 'Nothing I can tempt you with?' His eyes never left Sandra's, and was it his imagination or did the corners of her mouth widen, did her eyes open a little more in response? Did they?

'Come on, Sammy,' said Bergman, straddling a chair and resting his arms across its back. 'I wasn't aware you had

to disembowel slabs of yeast cake and protein meal to make them edible.’ The grins of the other two widened. This was part of the ritual.

‘Just goes to show,’ replied Sammy, stacking the last of the pans away, ‘that you lower groups know absolutely nothing of the chef’s art, or the secrets he has to turn the most basic ingredient into an epicure’s delight. You folks just shovel it in one end –’

‘I think you’re doing a bit of shoveling right now,’ interjected Hempel. ‘No, mate. We’re not here for your cooking ability. We’re here for your real ability; the one you don’t want Shawcross to find out about.’

Sammy’s face took on a thoughtful look for a moment. ‘That’s one guy I’d like to cast a ‘scope for.’ He brightened. ‘Still, you never know. What can I do for you?’

Bergman came off the chair and rejoined the other two. ‘What we want, Sammy, is another casting for the ship.’

‘I’ve already done one. You know that.’ His eyes flicked between all three faces.

‘That was at commissioning stage. This is the first Jump!.’ Bergman looked at his two companions then back to Sammy. ‘Listen, Sammy. We just want a little reassurance, OK? Everyone’s tense, a little edgy. We just want to know it’s going to be all right. All right?’

‘All right.’

The kitchen was dark and quiet when the three returned. Only a faint light over the central steel worktable indicated

someone might still be here. The hour was late. Eyes adjusting to the dark eventually picked out a still form at the far end of the table and silently the three spread out evenly around.

No one spoke. This was the ritual, the giving; the respect. This wasn't the chef of hours before who sat here; this was now the Runecaster, and each waited as he rolled out an irregular piece of old leather and laid it in the centre of the table. They held their silence as a bag was presented to each and one at a time they removed a black pebble and placed it face down on the leather in the position the Runecaster's finger indicated.

Nine black runes were placed in a crude letter 'K' and the 'caster's finger traced the outline in the air. 'This shape is the shape of Peorth, rune of fate.' The voice was neutral, there was no hint of the chef in the tone. The fingers descended down from the darkness and started to turn the runes over; east to west, up the shank of the 'K' and then down each leg from the top.

Sandra shivered within herself; the last casting had not been this solemn nor this detailed. This sounded serious.

'The past,' intoned the voice and the finger pointed to the bottom of the upright shank; 'the present,' middle of the shank; 'the future,' top of the shank; 'the spiritual,' top arm; 'the physical,' bottom arm. Long moments seemed to pass. Then a finger lightly touched upon the centre one of the five vertical runes as they were named; 'Gyfu. A gift. An obligation. Here and now.' To the bottom rune, 'Rad. Life

path. Here –' the next above – Eolh. Warding and reaching. Protecting Rad. Here –' the fourth vertical, '– Lagu reversed. Uncertainty; lack of control. There –' pointing now to the top rune, '– Odel. Home. Ancestry.'

Sandra looked up to Bergman's face and found it as if transfixed. Now she felt cold.

'Here is the Physical aspect –' the finger traced the triangle of the lower arm, '-- Rad for life, Ur for strength and here Sigel. Victory. This is a challenge being overcome. Here –' the centre triangle was identified, '– the Emotional aspect. Gyfu, Ken, a torch. Sigel. This is a partnership. The last is the Spiritual aspect. Here.' The top triangle formed by the arms was shown. 'Odel. Ken, light of truth. Ehwaz, spiritual advancement.' The runecaster's hand moved over the stones in a gesture of benediction. 'Strong in all things,' he said. 'Very powerful.' Sandra saw the tension ease in the postures of her friends and felt a lightening of her own mood. This had been heavier than she had –

'Except there.' It was the runecaster who spoke and his finger pointed to one stone. 'Lagu.'

Afterwards, lights, coffee, nervous laughter. The three turned to leave, satisfied in most things, not overly worried about the one nervous aspect. 'Sammy!' called Hempel. 'You dropped one!' The stone traced an arc across the room to Sammy's hand, and then they were gone.

A dread settled in the pit of Sammy's stomach; these things do not happen like this, he thought; this should have been in the bag, this is a false reading. His head slumped in

despair. He could guess at the rune, the missing one. The lost one. He opened his hand and it was no comfort to him knowing he was right –

- it was the rune of luck
- Thorn.

## Chapter Three

### Temple of Power

The word “engine room” was a misnomer, thought the Chief. He had just entered for one final check before the Jump and stood there in his vacuum suit looking up into the vastness of his domain. You couldn’t call it a *room* by any stretch of the imagination, he mused. Too tall, too long, too dark. “Room” implies people, with warmth and light and noise; the word I’m looking for here is *cathedral*.

There were no lights to indicate the vastness of the place; they would only come on automatically in the areas where humans went. And there was no warmth or noise

to cheer the place up, hard vacuum took care of that. No sound registered on the Chief's suit 'phones, nothing to indicate that vast energies were created and contained here, captive until their moment of release. Nothing that indicated the might and power that resided here. Power that was disdainful of the fragile flesh of men.

Mathius Kronfeld, Matty to his wife and Chief to everyone else, turned around to the wall he had just entered through. This was the main shielding between the engine room and the rest of the ship; he had entered through the only access point in the whole shield, a heavy plug-door large enough for a suited man in the centre of the spine of the ship. Above, below and to the sides were the four big gravity compression generators connected by a spider web network of catwalks. The main central walkway carried on down the axis of the ship, passed the generators to the fusion plant behind them. Beyond that were the main thrust and auxiliary engines that allowed the *Thorn* to navigate in normal space.

The Chief activated the wall panel to close the door and watched while it effectively sealed him in. It wasn't that he had to check these things; it wasn't necessary for him to personally inspect every item. *Christ, he didn't even have to be here!* Sensors and relays and computers told him everything he needed to know, but they couldn't tell him everything he wanted to *feel*. This he had to do himself; some people can understand the mood of others just by being in their presence, the Chief had that same ability with machinery.

Satisfied, he turned to face the stern and proceeded down the main axis walkway. As he passed each station, lighting came on around each generator and around each section of the hull; that hull was a long way off. He looked everything over and what his eyes couldn't see his soul felt. He'd overseen every aspect of the ship's construction, but he had taken a special care here; this was his domain, his kingdom. He stopped in the middle of the walkway, a final glance at the darkened machinery all around him. It looked so awkward hanging there above and to the sides but that was only a perception brought on by the artificial gravity that gave everything an up and a down. If he had to undertake repairs, God forbid, he thought, he could shut the generators down and work in free fall.

He'd seen enough, his quiet communion was over.

Time to return.

## **Garden of Eden**

Gunda Wobek had the career she was made for. Gunda Wobek could grow things. If it was green, needed sunlight and rain, if it could be propagated and made to bear fruit, then she loved it. With a passion. She was one of nature's genuine plant people, a human reaction to the environmental degradation of the last century, when it became obvious that the poor and ignorant masses were growing at an alarming rate and that resources were diminishing at an equally alarming rate. No one, from the lowest peasant to the highest executive, was untouched by the degradation of the natural world. Melting ice had altered

coastlines; El Nino's and acid rains had decimated the tropical and equatorial forests. Ozone depletion continued to escalate along with a corresponding increase in skin cancer and crop mutations; and UV penetration of the southern oceans affected plankton yields.

Gunda was one of those who took up the cause of feeding a hungry world through the introduction of sustainable exploitation of resources. Krill breeding farms in the South Atlantic, yeast vats that fed on hydrocarbon wastes, development of genetically modified trees that would survive El-Niño cycles. But her true calling came with the orbital hydroponic farms. Here she could help develop the systems that would give a star ship its air and food, that would allow the fledgling colonies to survive the early years, systems that could adapt plants to the new environments around new stars.

She was typical of the environmentalist breed; no makeup had ever adorned *her* skin, no animal-tested product would ever be used to make *her* more attractive to the opposite sex. Not that she needed enhancement yet; she was only in her early thirties, bright brown eyes, flaxen hair always in need of a comb. Tall and lean, she had the weathered skin of the outdoors; lines beginning to form around the eyes and neck, hands large and blunt and honest. Even though she eschewed the trappings of glamour, she was still conscious of her appearance, for Otto's sake if not her own.

Thought of her husband reminded her of the duties at hand; final checks before Jumping. Otto was out there

securing the automatic machinery and she was to help. A glance in the mirror, and she left the small laboratory that functioned as their day to day office and unhooked a flat-bed electric trolley from its charging spot.

The air was warm and humid and carried the all-pervasive smell of damp soil; it was sensory illusion, the only soil used was a by-product of the waste re-cycle system, but humans were still conditioned to equate plants with dirt. Gunda travelled down the main axis corridor, slowing every hundred metres at the bulkheads. These massive doors were normally open but at pre-Jump they were closed up, leaving access only wide enough for a small trolley. At Jump they were fully closed. She checked her scanner, six hundred metres forward and eighty-five to port; Otto's telltale was still there.

Each section she travelled through was different; here, trees grew up to ten metres. There, fruit orchards scented the air. Further on, vegetables grew in tight, stacked rows. All the while above, lighting systems replicated the sun, varying here and there in intensity to suit each area's needs; following the diurnal clock, imitating the rising and setting sun and providing the crew with a natural rhythm that was a welcome change from the uniform, twenty-four hour lighting on the command decks. Slight pressure differentials across several sections created faint breezes, and it was compulsory for everyone to exercise through there once a day. Higher still, beyond the lights, a full forty-five metres from the ground, extractors dehumidified the air and returned the moisture to the system.

She found him at the far end of the 'ponics, testing the covers on the yeast vats and she parked her trolley next to his. If Gunda looked the stereotypical greenie, Otto could have been her twin. To a casual observer, the two of them were exactly what they looked. But to those who knew the industry, Otto and Gunda Wobek were heroes; it was they who helped on the development of the first practical terraforming techniques to be used on a new world.

Otto closed the final seal and climbed down from the tank; he reeked of yeast.

'How many left?' asked Gunda, nodding her head toward the tank. Otto reached into the hamper on his trolley and pulled out a thermos and mugs.

'Three.' He had always been economical with his words, never offering more than was necessary to supply the information or make a point. 'Two hours, max,' he said, and sat down on the trolley. Gunda joined him and they sat there together, with a cup of coffee and one hundred and thirty hectares of their own creation.

'It's heaven.' said Gunda, staring into the greenery. Otto looked up from his cup and followed her gaze and their eyes seem to look far, far beyond the shrubbery in front of them.

He nodded. Slowly.

# Chapter Four

## Soliloquy

No matter what your station is in life, there are times when you are just in the way. Superfluous to requirements. Under foot. This was one of those periods and Van knew it; he didn't have to be told to get out of the way. He knew when he wasn't needed and it was easier to retire to his cabin than have one of his officers politely remind him of the fact. Every voyage was the same, he mused. Many a powerful captain had been reduced to impotent rage during the final hours of departure. A million checks and balances needed to be checked and balanced; a thousand details itemised and sorted; last-minute problems solved or ignored.

Experience got him out of the way fast; after all, his part was completed. He knew there are only so many things that a captain could personally supervise. That was why they were executive officers and seconds in-command and junior officers and so on down the line, to take care of the little details so that they would not become big problems and bring themselves to the attention of a captain who knew how to deal with officers who allowed little details to become big problems.

He kicked his shoes off and lay on his bed, realising as he did so just how tired he was. Three hours to Jump.

He was ready and by the time he took the bridge in the last hour, the ship would be ready. But until then, he was in the way; even though he felt *Thorn* was his baby, he was in the way. And baby she was. Van put his hands behind his head and leaned back into the pillows, remembering –

– he had been familiar with the construction zones in moon orbit since he had visited there on his first shuttle flight nearly thirty years ago. They were wonderful feats of engineering; it was there that the vessels that plied the solar system were created from materials brought in from the asteroid belt. Spidery framework, black steel on black background, festooned with bright arc lights – new constellations in the skies.

Over the years they had grown larger and larger as the fortunes of the corporations grew, and still they struggled to meet demand.

Four years ago the Board had made him Captain Designate of one of the new star ships and appointed him to the Board of Overseers for construction. He'd earned that post – God, how he'd earned it! Selected for star ships back in 2084, he had had two years of training before serving as first officer aboard *The Goliath* to Barnard's Star and another eleven years on the Alpha Centauri route, the last two as captain. His qualifications were impeccable.

He remembered piloting a small four-man shuttle over to the new yard; his first sight of his ship-to-be was in the

company of his new second in command, Helena Bormann. He had asked for her immediately on his appointment and to his surprise the Board had agreed to his request and contracted her over from EurAm Aerospatale. The third designate member of the crew was appointed in-house; Chief Engineer Mathius Kronfeld had been with the company since his cadet days and had been working with the star-drive since just after its inception. He was Overseer of Operations, Star Ship Construction, for this project and was the subject of their visit.

The shuttle was a large plexi-glass bowl with small chemical engines at the rear and he had a superb view of his new command. Even from a long way off it was obvious that work had only just begun, with the main keel being the only recognisable structure. This was the double-skinned central “floor” of the ship and it resembled nothing less than a giant footprint amid the stars.

In the blackness it was all but impossible to see the extent of works where robots performed most of the duties and lighting was intermittent; indeed there was little evidence of movement about the site. He knew that was an illusion. Far off in the distance around the orbit, automated factories were processing the ores into the foam-steel keel plates, which were then floated across to the site where they were positioned for the auto-welders. Nearly every plate was identical and so were the internal ribs and the external plates; this ship was being built with the minimum of variation in construction procedures. Human supervision

came from a command complex at the opposite end to the factories; it was to this point that he was piloting his craft.

Control jets went off like distant firecrackers as he manually altered his course to give them a high overview of the site and the nearer they approached, the more impressed they became.

‘Look over there,’ said Helena, pointing off to the right, ‘crawling down the spine. That looks like a manual inspection rover.’ Van followed the direction of her hand; a cylindrical body with six articulated legs was slowly making its way along the length of the spine. It looked like an ant crawling across the bottom of a swimming pool; a very small ant, a very big pool.

‘Those things hold six men and equipment,’ Van informed her. ‘It gives you some idea of the scale of things, doesn’t it?’

‘It’s huge, absolutely huge.’ She gazed at it for moment. ‘God, it’s big!’ she laughed, shaking her head in amazement.

Van laughed at her surprise. ‘When they start to put the ribs in, you’ll get a better perspective of the size and shape.’ He peered at his display panel for a moment, then – ‘Hang on,’ as he punched the attitude jets and took them down and under the keel.

The massive flat floor was actually two floors fifty metres apart and it seemed to loom over them as he piloted the shuttle beneath it and rotated to keep the down-is-below attitude. Helena flinched; for a second or two fifty-five million cubic metres of metallic structure filled the entire

sky and seemed to spiral in towards them. Then it spiraled out and away and they were looking down on the underside.

‘Thought so,’ said Van. ‘There.’ Now it was his turn to point and away in the distance towards the stern she could see a fine curve of a foam-steel rib arcing up from the keel. Lights traced its arc and as her eyes adjusted, she could see other lights on other arcs marching back into the distance. She could recognise constellations framed within the ribs and the sheer *size* of the project filled her with awe and admiration.

## Chapter Five

### **Beginnings: Day One**

An alarm went off somewhere and Van came awake in an instant. The spacers curse, hair trigger sleeping. Too many things can go wrong in vacuum, and when they do, they kill you. The survivors learned the trick of putting the conscious mind into a deep sleep while the subconscious kept watch.

He called for a sandwich and coffee and climbed into the shower; of all the improvements induced gravity had brought, he thought, showers were the best. No more bags, no more pumps. And sleep. Yeah, that was better too. Sex? No. Taking a pee; that was definitely better! He dressed while eating; shirt, coveralls, boots and his famous leather jacket. No cap. He had never stood on ceremony and never would; if clothes made the man, then he was basic and honest with no style sense.

The bridge was alive; it seemed to throb with expectation. Voices made a low background murmur, body language told of tension; each person had a station and each person kept glancing over at the large navigation screens as if aware that these may be their last glimpses of home.

A ship is a living entity, and at that moment *Thorn* was a rather nervous one. Van could feel it – every Jump was the same. He looked around the bridge. Senior officers held the floor, comp-holo's alive, throat mikes and earphones active. Dark blue one-piece jump suits with suitable rank insignia distinguished them from the rest of the crew whose jump suits were a pale blue. Machinery hummed or clicked away in the background, electronic voices intoned their information; human voices added to the sound, questioning, ordering, approving. Nothing happens in a hurry, nothing happens until something else happens first. Systematic. Orderly.

Helena Bormann presided over navigation; it was she who accepted final telemetry and approved the flight data.

Sailing masters, chief navigators, astrogators, none could as much as break wind without the approval of the number one and they knew it; for them the Captain was no more than a passenger at this time. Nervous eyes everywhere, they sought confirmation of the data stream; check and counter-check.

The Chief made his way across the bridge to the captain's command chair. 'Ready anytime you are, Skipper,' he said. 'Generators are at pre-Jump, thirty seconds for build-up.' Van nodded and looked over towards Helena who caught his eye and tilted her chin towards the view screens. The views of Earth that had previously been crystal clear were now starting to blur and elongate as the gravity about the ship was altered and compressed by the generators; the forward view seemed to stretch out and flow to the sides. Helena pointed to the ship's clocks and held up one finger. One minute and he could hand over to the automatic sequencing. The level of human noise diminished as each station completed its task and the operators leaned back in their couches and activated the crash webbing.

Van accepted the hand-overs. It was his voice, and his voice alone, that could start the countdown; just one word of his and *Thorn* would be torn from the heavens of the one blue-white planet that had bred intelligent life and flung toward the stars. He gave that word.

'Commit,' he said, and the clocks started their final sweep. Senior officers settled themselves into their couches

which automatically activated the restraints and Van watched them as he too was being webbed in.

Too late to be nervous now, he thought, as his own heart pounded. In front of him the view screens switched off as the intensifying field distorted vision beyond acceptability. Warning sirens activated at the thirty-second mark and the clocks continued their inexorable fall to zero. His stomach knotted; *no matter how many times I do this, it doesn't get any better.*

Helena watched the clocks, her mouth dry. *Christ, supposing this time the soul didn't come back.* She watched the last few seconds disappear. She closed her eyes and her lips moved silently in prayer –

Shawcross saw the final second disappear – *I really fucking hate this* –

*Gravity was squeezed – reality bent – and the ship – jumped!*

No one has ever been able to define what there is between one moment of existence and another moment five light-days away. What there isn't, is time. At least time in amounts that can be meaningfully measured; time that can be quantified, explained, understood. Instantaneous time was different; there was no place for it in men's minds. No understanding of it. It confused and confounded, it led to paradox. It wasn't there. But if the time itself could not be dealt with, its effects certainly could; if only because they were so visible and variable. In the majority of people, it meant mind-numbing disorientation. Some felt as if the

universe had filled their minds, others said their souls were left behind. Bright minds postulated that the long minutes of incapacitation were in fact a re-birthing. Lesser minds tried not to think about it too much.

Van tried to look up but his eyes wouldn't let him, they rolled around of their own volition, unable to focus. He tried to will them into obeying but his brain wasn't paying any attention so he lay there, waiting for nature to catch up. Distant sounds that he recognised as retching told him that Shawcross was having his usual reaction. Slowly, as his ears and eyes and brain came together, he could take stock.

All about the bridge men and women were feebly trying to undo their couch restraints; the more experienced crew simply lay back and waited for the effects to pass. There was no way the effects could be bypassed and previous attempts to chemically stimulate crews into awareness had invariably led to wholesale trauma.

*Thank God we have no pissers or shitters*, he thought and did a mental scan of his own body. *Everything's there. Fine. Let's try the voice.* 'Captain to bridge. All stations report.' *Croaky, but sufficient*, he thought. *Thank God electronics aren't affected by the Jump.*

Slowly, each station came back online. Within a few moments the entire bridge was on its feet, shuffling about with coffee in one hand and vitamins in the other. Computers had been programmed to do the post-Jump

checks and their electronic messages were coursing across the screens. All okay.

Shawcross came over to Van. 'Three down to sick-bay, Skipper. Not bad for the first Jump.' His face was paler than usual, but otherwise showed no sign of his discomfort.

Van knew what he meant. Familiarity somehow seemed to diminish the effects; new recruits suffered the worst.

The ship fell into a post-Jump routine. Navigation scanned for beacon signals and familiar stars to accurately fix their position and align for the next jump. The first Jump was only five light-days, just enough to diminish the gravitational well of the solar system and close enough to home to call for help if needed. Everything that the computers had reported were checked. Teams were sent out into the vacuum of the storage areas and reported on the condition of their cargo. Engineering completed a full survey over the generators and fusion plant. Every colonist was checked again and the crew subjected to a medical examination. The only part of *Thorn* that wasn't examined in detail was the hydroponics; how do you measure stress in a plant? It can be, and was, done; but only as random sampling. The practiced eyes of Gunda and Otto were sufficient examination.

# Chapter Six

## Day Thirty-nine

Three days. That's how long it takes to set up a star-ship between Jumps. And there were another fourteen jumps to go; the length of each increasing on the previous to the mid-point, then ever decreasing thereafter. Routine. Orderly. Boring.

To Sheri Morgansen the best times were right after duty roster; a pair of rollerblades strapped to her feet and the whole of the 'ponics to cruise in. There were twenty kilometres of access ways throughout the section and most of them were accessible at any given time; and if end of roster coincided with dawn or evening, well, so much the better. At those times the temperatures were cooler and the light different; close your eyes, breath deeply and you could be back on Earth – almost.

'Hey! Senior! Wait up!' Sheri almost stopped; the voice carried a strain as if the owner was exerting himself to catch up but then she recognised Bender's voice and pushed on with her easy, balanced glide. *Let him follow that*, she thought. They'd been paired up for duty the last few rosters and although most of the time they had been in vacuum in the crypts, she had enjoyed working with him. *But do I want to socialise with him? There are nineteen*

*other men on board, I might want to socialise with one of them. Or several.*

She looked behind and saw Bender a hundred metres away and struggling. He wasn't a natural skater, she thought. No sense of rhythm. Wide shoulders, narrow hips, powerful legs; he had a youthful face with freckles – *freckles!* – and unruly brown hair. Good smile. He's younger, too. And shorter. Well, not *that* much of either, really.

Sheri turned off the main axis way down one of the lesser lateral ways. Still smaller ways branched off paralleling the main axis and foliage tended to droop low to the floor. Greenery closed in and muffled the pursuit. Hide and seek. *Come on Bender. Find me.*

She slowed and turned into a lateral way, stopping just inside the corner. A few seconds later Bender flashed past in a blur of speed, seeing her only at the last second. *Shit, he's fast!* No rhythm, all speed. Too fast; Bender tried to brake and turn at the same time and succeeded in throwing himself on the floor, sliding fifteen metres before coming to rest on his back.

Sheri laughed. Then regretted doing so. He might be hurt! She pushed off to help him only to see him lift his legs high and then spring to his feet in one fluid move. She noticed his 'blades were rock solid on the floor. *Well, well, Bender, who's playing games with whom?* 'Are you all right?'

Bender grinned ruefully and Sheri found herself smiling in return. 'Yeah, thanks,' he said, brushing himself down. 'I guess I made an ass of myself, huh?'

‘No, you didn’t, Carl. You just need some tuition and practice.’ Sheri looked into his dark eyes for a moment, then – ‘I could help you, if you like.’

‘And you need the laughs, right?’

Again she laughed. ‘Right. You skate, I laugh. Deal?’ and held out her hand. Bender took her hand, just for a moment – was that the slightest shock she felt? Had Bender felt it too? *Yes! He’s blushing!* She disengaged her hand quickly and turned away; if anything was written on her face she didn’t want Carl to see it until she had time to control it. *Whatever it was. God! When did he become Carl?* But the question was rhetorical; she knew the answer – when she realised there were nineteen other women on board. ‘Come on. Your first lesson starts now, on the way back,’ she said, slowly pushing off and allowing him to fall into step with her.

## Day Sixty-two

Peter van Diemen was happy.

*Thorn* had shaken down into an efficient ship on her maiden voyage. The crew worked together in a disciplined manner that any captain would be happy with. His small bubble of steel-encapsulated humanity had crossed mind-numbing distances and here they were, less than half a light-year to travel and their destination blazing on their screens.

There were three Jumps left. Navigation was simple now, beacons had been picked up and their signals locked onto; Alpha Centauri was a massive white star in their screens;

they could actually *see* where they were going. The ship had a cool, functioning routine about it now; everything worked in accordance with its design. The humans on board could do nothing to contribute to the efficiency of that routine now; they could only follow the programmes and hope that nothing went wrong.

Van settled back in his couch and automatically performed the pre-Jump checklist. He looked about. Shawcross was asleep in his couch. *At least the poor bastard doesn't throw up straight away.* His wandering eyes finally came to rest on Commander Bormann as she stood in front of the main navigation console listening to the final data lock-off from the sailing master, Lt. Eberhorn. He had spent a lot of time in her company these last few weeks; you couldn't avoid people under these circumstances, but he was surprised at how agreeable he found her presence.

Off duty never existed for a captain, but in many of those not-quite duty times he had found himself alone with her on one of his exercises through the 'ponics, or on one of his frequent spot checks throughout the ship. She had partnered him at bridge against Shawcross and the Chief on their frequent card nights and Van had been amazed at just how much she could confer with her eyes. He'd never realised how expressive they were and the card games gave him in opportunity to remedy that. It felt good; it had been a long time since anyone had elicited his interest and caused that warm spot low down in the pit of his stomach. *Maybe it's because we're confined in this space,* he thought. *Or maybe not.*

The one-minute alarm sounded and Helena Bormann settled into her couch and pretended to be busy with the restraints while she watched Van out over the corner of her eye. It had been happening a lot lately; he would look, she would see him, he'd look away. She would look, he would see her and she'd look away. *Like bloody kids!* But he was finally letting her near him, and she liked that. *And maybe, with a bit of luck* – she looked across and gave Van the A-OK for final commit – *it won't be too much longer before he takes the hint. Jesus, it's been so long I'm getting cramps just thinking about it! Come on Van* – she smiled at the thought, and as the last seconds ticked away...

Van saw her smile; *I've got to do something about this – real soon.*

*Space-time altered, and the ship Jumped out of one reality –*

– a wave of dizziness enveloped Van and the colours of the rainbow exploded in his mind leaving little black spots floating in his vision. He could hear, as if far off, a strident noise and voices raised in surprise or – fear? Van set about freeing himself from his couch, surprised at how quickly his head had cleared. More voices;

Commander Bormann shouting for someone *to turn the fucking alarm off and where the hell's navigation* and a junior officer shouting something about the screens and Shawcross ordering everyone back to stations. Van stood, his vision clear. The alarm ceased its racket and

the bridge crashed into silence. Dead silence. Every face was turned toward the screens and on those screens was – nothing.

Long seconds were swept by the clocks – nothing. The screens remained blank.

‘Senior officers to me!’ Van called, and a cold feeling settled in his stomach. Voices rose as bridge personnel started to wonder at the state of affairs and Shawcross and Bormann made their way to Van as the Chief came bounding up the stairs, a look of immense surprise on his face.

*Whatever’s happened, we’re not dead. Yet.* ‘Exec. I want emergency status implemented immediately. Get the ship steady.’ Shawcross departed and Van turned his attention to the other two officers. ‘Any ideas?’ he asked, quietly.

The Chief shook his head first. ‘I don’t know what’s going on out there,’ he gestured to the still blank screens, ‘but I do know what we’ve got here.’ He pulled his comp-holo out and consulted the data. ‘As far as the ship is concerned, Skipper, all systems are at post-Jump status. The generators reached peak and launched us in the same manner as every other Jump.’ He looked at Van and Helena. ‘I’ll give a full engineering report in fifteen minutes, but this ship is behaving as if it’s already made the Jump.’

‘We’ve gone into it but we haven’t come out of it,’ Helena observed. ‘At least, we’ve entered something!’

Van kept one eye on the dark screens. 'Theory says that the Jump is a no-time event. We couldn't be stuck in no-time, but if we were, how do we tell?'

'Skipper, I can play around with the generators and vary the fields. I can set them up for another Jump or I can turn them off. I don't know what effect that would have but I wouldn't like to attempt anything without more information.'

'Fair enough, Chief. Complete your report and we'll review our options then.' Van turned to Helena. 'Proceed with all the routine checks as if this was just another completed Jump,' he told her. 'Any sign of anything out of place, number one, *anything*, report it.' She nodded assent and left and Van's eyes followed her until they were drawn back to the screens.

Blank.

One hour later, they were no closer to finding the cause of their predicament. The three senior officers and their Captain sat around the ward-room table amid the debris of that last hour – empty cups of coffee, crushed packs of cigarettes; comp-holo's on, hooked into the main computer. Pens and paper.

'OK,' said Van, cigar cold in his fingers, stabbing at the table in front of him, 'to summarise. One; the ship is operating normally. Two: there was no departure from standard operating procedures prior to Jumping. Three; data stream to the flight computers has been verified. Four;

power logs from the generators show no inconsistencies or fluctuations. Five; we cannot identify the medium outside the hull. Six; this meeting is being recorded.’ At the mention of the last item three heads nodded in unison. Each was aware of the implications and if they survived then the log would be a record for their defense; if they did not survive and the ship was found at a later date, then the log may yield clues as to the cause.

Shawcross signaled the steward for more coffee. ‘We don’t even know if time’s passing out there,’ he said. ‘I think we should look at the Chief’s earlier options and play around with the generator output. See if it shakes us loose.’

‘We’re not caught on rocks, Exec. There’s no tide to float us off.’ Van looked to the Chief. ‘Before we increase the risks, are there any other options left to us?’

‘I would like to get a probe outside the hull to confirm that the screens and sensors are in fact telling us the truth.’

‘Good. See to it.’

The crew assembled in the main mess. There weren’t enough seats for everyone so the rest crowded around walls. Van surveyed the expectant faces and noted how many of the crew had paired up; theirs were the ones showing the most concern. Senior and junior officers mixed with crew, and Van thought it best that way; it was good for morale and put everyone on the same footing. *Now was not the time to stand on ceremony or structure*, he thought, as he stood alone in front of the whole ship.

‘Some of you understand what’s happened to us, others have heard only hearsay. What I’m about to tell you is all we know at this point of time, but at least we’ll all have the same information. Any questions, I’m afraid, will have to wait.’ He looked around the room and found no dissent. ‘We’ve jumped as per normal. No variation from any other Jump. Everything from astrogation to engineering to the breakfast menu –’ a few nervous laughs, ‘– checks out one hundred percent. The only anomaly inside the ship was the lack of the twitches.

‘Outside the ship is another matter. We get no readings from any sensors and all screens show a grey haze. We’re blind and deaf. Now –’ he held up his hand to forestall the comments he saw coming, ‘– the one thing we require urgently is information. Before we attempt any changes to the pile or generators, we need to get some probes outside. In the meantime, watches and rosters will remain as for general duties; the bridge will, however, post updates on a watch by watch basis.’ He looked at Shawcross. ‘That’s all for me, Exec. Take over if you please.’ With a final nod to the assembly, Van left for the bridge.

‘One point I want to make right now,’ Shawcross said. His voice was quiet and devoid of emotion, but no one had a problem hearing him. ‘Ship’s discipline will be maintained at all times. All times.’ His eyes scanned the room and found none eager to meet his. A final look around the mess. ‘I’ll take volunteers for extra-vehicular activities in fifteen minutes. Dismissed.’

The main air lock had been brought under pressure and Carl Bender stood in his heavy EVA suit on the hoist that would take him up to the small sally port in the middle of the lock. Above him, already in the sally port, a crewman in a light pressure suit waited. His job was to stay inside the opened port, firmly anchored, and monitor Bender's progress as well as pay out the tether. Around him the Chief and one of the technicians made ready the equipment he would take outside. Already Bender wore the heavy military laser and power pack; the telescopic rod in the Chief's hands carried a small array of sensors that he would thrust before him.

Bender checked the interior suit controls for the tenth time and his mind wandered off for a moment and thought of Sheri. She hadn't liked this one little bit. She had gone to a lot of trouble swapping billets around so that they could share the same cabin and now that they were paired up probably expected him to be a bit more – what? – compliant? He grinned at the thought of her well-meaning mothering; and at the anticipation of the affection he was certain she would exhibit on his return.

The Chief handed the rod over and signaled for the hoist to ascend. The small air-lock closed behind him and there was only just enough room for the two men and the equipment; the crewman was short-tethered to the inside of the lock and he snapped on two lines to Bender's suit and then gave him the thumbs-up.

The Chief's voice came through the phones. 'Right, Carl. I've got you on my screen. Telemetry's good. Voiding now.'

He heard the air go. 'We have vacuum. Opening outer door now.' The segments rolled smoothly back inside the main lock; beyond was a gray, blank – nothing! Bender edged forward until he was just inside the line of the hull and extended the telescopic rod; gingerly he pushed it outside into the gravity shell around the ship.

'Keep going,' came the Chief's voice. 'Full extension.'

'That's it, sir,' said Bender. He took his hand off the rod and it stayed in position, as if embedded. 'Plenty of resistance from the field now.'

'Copy. Try the laser now.'

Bender pulled the two-handed weapon from its scabbard across his chest and powered it up. Emerald lights reflected back at him and he aimed straight out from the hull. 'Ready, Chief?'

'Yeah. Go.'

A short burst of coherent green light stabbed out through the gravity field and disappeared. A second burst was longer and the results the same.

'I can't get a reading past the field,' said the Chief. 'We'll try stage two.'

Bender's stomach did a little flip-flop, this was the part he had hoped wasn't *really* necessary –

'Right,' the Chief continued. 'I've suppressed the field around the main lock; gravity will drop to two gees in a cone straight ahead. Proceed when ready.'

The Skipper's voice broke into the com circuit, 'Captain here, son. Good luck.' An answer wasn't needed and Bender

didn't give one. He sheathed the laser and gripped the rod as it started to float away under the reduced gravity. Suit jets fired and slowly launched him away from the ship and immediately he felt the double gravity. It seemed like he was floating through molasses and he had to concentrate on aiming along the guidance beam from the air lock. The tether was under constant tension and gave him a feeling of connection back to the ship.

All the while the Chief's voice counted out the distance he travelled through the field. 'You're fifty meters from the theoretical boundary of the field. Hold it there.' Bender's heart started to beat a little faster; he was already a quarter of a kilometre out into the unknown with the prospect of further travel.

He extended the rod before him and kept up a light pressure on the tether with his suit jets and the crewman back in the air lock slowly paid out the line.

'Slowly – slowly – slowly.' The Chief's voice had an edge to it. 'Hold it! Hold it! Bender, do you copy?'

'I copy,' answered bender, licking suddenly dried lips. 'I still can't see anything. It's still grey.'

'Bender, we're going to go forward a metre at a time. Keep that probe out there at all times.' There was no sense of movement and no reference points. The only reminder that he wasn't alone was the double line hooked to his suit. The probe was a fifteen metre silver rod that could have been a kilometre long for all the depth of field he had. If he wasn't holding it –

*'STOP!!! Bender, pull in the probe NOW!!!'* The Chief's voice had a ragged edge to it now. Slowly he pulled the probe back until the head was a metre away. There was something odd about the small cluster on the end; he couldn't quite see in this non-light but there was definitely something different about the end of the probe.

'Right, Bender. We'll try the laser again.'

He drew the weapon and fired a long burst of light. A green halo appeared, twenty metres or so in diameter and a few metres in front of him; the laser beam looked like the handle of a giant green umbrella as it pierced the halo and travelled through to the other side – and broke up. It just seemed to break into little green shards that flickered and died. Carl Bender tried to swallow, but his mouth was too dry. *Shit! That's a combat laser!* He looked down at the weapon in his hands as if seeing it for the first time and then jacked up the power to max. The result was the same; coherent light had no more power than a candle out there. *Wherever the hell out there is,* he thought.

'Bring me in, Chief,' he hailed.

## **Day Sixty-three**

What passed for the Chief's workshop was crowded. Van, Bormann, Shawcross and Bender competed with standing machinery to look over the shoulder of the Chief, who had the telescopic probe laid out on a work bench. Various pieces of equipment laid scattered about the bench, some of them hooked up to the probe.

‘Look here,’ said the Chief, tapping a video screen. ‘This is a blow-up of the video lens. Notice how opaque it is, and –’ he adjusted the screen controls and zoomed into a section of the lens, ‘– how thin it is.’ What was left of the centre of the lens was only microns thick. ‘The same applies to the aluminium housing for the rest of the sensors. Egg shell thin. Anything outside the gravity envelope seems to have been attacked.’

‘Attacked by what, Chief?’ Bender asked the question and nobody thought it proper to rebuke him for his lack of discipline.

The Chief shrugged. ‘I have no idea. Whatever it is has left no residue.’

Van peered closely at the screen. ‘The laser appeared to break apart and dissipate; could this be happening here?’

‘Sorry Skipper, I’m not that proficient in molecular theory. You could be right, I can’t say.’ He switched over the video. ‘The same goes for this. It was recorded just before the lens failed.’ The screen showed the ubiquitous grey. ‘This is still inside the gravity envelope. Now watch.’ The screen was still gray, but a wide “S” shaped band of darker gray formed at forty-five degrees across the screen, bottom left to top right. It stayed on the screen for five seconds and appeared to change shape slightly. The screen then blanked. ‘That’s the point at which the lens failed.’ He turned off all the equipment. ‘You now know as much as I do.’

Commander Bormann started to ask, ‘is there anything in the computers, that –’ her voice trailed off as the Chief shook his head.

'I've tried everything I know and the answer is, I *don't* know.'

'Someone does,' said Van. 'Exec. Get a list of requirements from the Chief here and run a profile search of the assengers through the ships computer and see who fits the bill. Someone,' he said, 'is due for a rude awakening.'

## Day Sixty-five

The dream was still there, but somehow fragmented. Glimpses came and went, teasing the memory. It was wonderful, it was – it was – so close, so real; now drifting away leaving nothing but – it had felt warm and close, clear and true – it was – almost – nearly, within reach. It reached out, disembodied – calling – calling – calling –

'Wake-up, Mr. Blum.'

Dark within light; swirling silence. Shapes hovering beyond perception, ephemeral remnants of the dream – shapes all about, reaching – reaching – reaching...

'The shot will help, sir. Please give it a moment before you try to move.'

Light within dark. Absence of silence. Shapes coalescing into – white – arms? Arms. Faces.

'He's out of it now, Exec. Give him a couple of hours of normal sleep and you can have him.' A man.

'Thanks Doc; call when he's ready.' Another man.

Dark within dark – fading –

Gabriel Blum. Science officer, *Thorn* Expedition. It had all come flooding back during breakfast. Well, breakfast for

him. Wife and two children also on board; a new life ahead. A new world to build – unless –

He had been dressed in a blue one-piece jump suit, fed, injected, sent to the heads and now he faced a panel of four serious-looking ships officers. He felt he should know them, but a residual fuzziness still played around the edges of his mind that he couldn't quite recall their names. The largest of the four step forward, a giant of a man with iron-gray looks and a rumpled leather jacket, and offered his hand.

'Dr. Blum.' His hand was huge and completely swallowed Gabriel's. 'I'm Captain Peter van Diemen; my senior officers –' said Van, introducing Bormann, Shawcross and the Chief. The names registered and some of the cloud lifted from Gabriel's mind. They sat and a steward brought coffee; the last few mental locks clicked into place.

'I gathered from Dr. Eletov that I had been brought out under emergency procedures,' said Gabriel. 'I assume from that we have not reached our destination.'

'Your assumption is correct. We have a situation here that requires an input from someone with your specialised knowledge.' Van took a sip of coffee; his eyes watched Gabriel and his free hand rested on a hard-copy of the young doctor's resume - a doctorate in molecular physics, practical work on the Jump generators, author of several papers on the theory of hyper-space and – the clincher for Van – a proponent for the investigation of worm holes. Blum was twenty-eight years old with a bookish air about him and was already balding.

The Chief leaned forward, a comp-holo offered toward Gabriel. 'We're point four light years from Alpha Centauri,' he said. 'We've made a Jump that has not been completed –' Gabriel's head jerked back, his eyes widening, '– and we appear to be trapped in a space that does not conform to the Einsteinian model.'

Gabriel took the comp-holo and long moments passed while he scrolled its air-borne contents and he became excited at the answers it gave him. 'I need more information,' he said, finally. 'Someplace to work, some serious computer time.' His eyes search the faces of the four officers. 'I'll need access to all your navigation data, generator field characteristics, more probes –' he was thinking aloud now.

The Chief stood, inviting Gabriel to follow him. 'All that and more, Doctor. Skipper, your permission?' Van nodded assent and the pair left the room; Gabriel never looked up from the palmtop.

Shawcross looked across at Van. 'Skipper? What do you think?'

'I think we have to make some contingency plans in the event our learned friend is unsuccessful.' His eyes were bleak. 'Assume the worst. Assume we don't shake free of whatever it is holding us here. How long can we survive? Doctor Eletov can provide the data on the sleepers; we do know that deep sleep hibernation can be extended to two years or more. Hydroponics can provide consumption figures based on the existing crew numbers and an alternative based on

a reduced, rotating crew. Navigation won't be needed and there are additional back-up tanks that can be used.'

He looked up at the other two. 'Anything else? No? Okay. We'll put the question to the Chief and the Medical Officer,' said Van. 'All inquiries are to be directed to section heads under secure information conditions. 'I don't want to start any rumours or panic.' *God forbid it should come to that.*

## **Day Seventy-nine**

Gabriel cannibalised just about every piece of equipment that the Chief had in his workshop. Components from several sources were integrated into a particular configuration, used and then pulled apart again for another machine. Probes were built and tried; computer models built and discarded. The ship's library was scavenged for information, theories, crackpot ideas; everything was considered, nothing discounted in the search for an answer. He had played around with the gravity generators, increasing the outer field, removing the inner one. Long lines with weights at the bottom had been set up throughout the length of the ship. The Chief's pristine environment had the look of a junkyard and day-by-day more material, more burned out probes, were added to the pile. And as the pile grew, so did the frustration. He wasn't happy; he wanted answers but couldn't get them, he needed different equipment and didn't have it. His appearance suffered. He was constantly tired but, through it all, information was pieced together; a

scrap here, a glimmer there. A fragment from this, a shard from that.

## Day Ninety-two

Two weeks after he had begun, Gabriel had a part of the answer; a very small part.

It was the same room and same people, but this time he was in better shape to deal with it. Hot showers, real food and some decent sleep had restored him to something his family and friends would recognise. He felt sorry for the others here; he was about to give them everything he knew about their state of affairs and he knew they wouldn't like it. *Hell! He didn't like it! But it was all he had and it was all he could get, so he could accept that. They would have to deal with it.*

'I didn't think you would want the math,' he began, 'so I haven't included it in the report.' Everything he had completed was in the computer and no hard copy had been printed yet. 'The Chief thought it best I just give you a verbal rundown and we can go through the math later.'

Van nodded agreement. The last two weeks had been a real bitch; tempers had been running short as people contemplated the prospect of an extended period in this nether-region and it had taken a lot of personal intervention to keep the ship functioning – *and it doesn't look as if the good doctor has exciting news for us, either.*

'Good, thank you,' continued Gabriel. 'First, we're moving.' He had their attention now. 'Pendulum tests

within the hull indicate movement and some of the stuff we've been hitting would support that fact.'

'What sort of stuff?' asked Shawcross.

'Weird stuff. Quarks, muons, unidentified FTL particles; a whole range of things that have been swept up in the gravity sieve or penetrated the hull. Some appear to be anti-matter, but it's hard to test them. It confirms my initial suspicions about the images the Chief took outside the gravity shell. Here, let me show you.' He activated the wall screen and called up the images that had been taken outside the ship; a gray field with a darker gray band. 'The band moves. I suspect that it only appears to move and in fact we are the ones who are moving. The particles we encounter tend to confirm that proposition.'

'How fast are we moving?' Helena asked. 'Is there any way we can measure speed or distance?'

'No,' replied Gabriel, emphatically. 'If I knew more about the environment out there, I could answer that question. I suspect that we're somehow trapped at the lapse-point of the matter spiral, the cusp where the electron passes between matter and anti-matter. Unprotected matter cannot exist at that point, it breaks down and flies apart. That's what destroyed the probes. My instincts tell me that the concept of speed is irrelevant, and if negative matter is involved, so too may be negative time. In fact, what we're learning now —'

Van interrupted him. 'Doctor. What is it out there?'

'Sorry, I thought I'd mentioned it. It's a worm hole.'

*Jesus!* *Fucking Hell!* Helena and Shawcross competed for epithets.

‘If you can imagine,’ continued Gabriel, completely unfazed by the enormity of the situation, ‘the pulse-spiral of the electron travelling through both sides of the matter/anti-matter cycle, then the thing that separates them is the turn-over point; the hyperbolic tangent. Right? Right. Now, we can measure the matter-side, but not the other, but we can determine its effects by the stability of the matter-side.’ He looked around at the faces before him. ‘Except, now, at this moment, I am getting higher values of mass, gravity and speed of light harmonics around that point. We appear to be held isolated inside our gravity shell, like a cusp, while around us the mathematics of the worm hole obey similar accelerated values in the anti-matter side.’ He shook his head in frustration. ‘We haven’t the equipment to perform accurate measurements, but based on what we observe here we’ll be able to build them – if we get out.’

Van reached for a fresh cigar and took the time to put his thoughts in order while he lit up. ‘I won’t ask where this wormhole comes from or goes to. I won’t even ask how we got into it in the first place. The question that has to be asked is whether we can get out of it or not.’

‘I can’t even answer that,’ replied Gabriel. ‘Theoretically, yes, when we get to the end. And that end could be in a black hole, a dwarf star, a gravity anomaly or clear space. Who knows? Our destination,’ he shrugged, ‘is speculation.’

## Day One hundred and one

'I've called everyone here to day so that the full implication of our predicament is fully understood.' Van surveyed the assembled crew, for what, he felt, may be the last time. 'You've all seen the report Doctor Blum has prepared. There is nothing we can do to extract ourselves that we have not tried; we do not have the equipment or the personnel to do anymore. The more people we wake up and bring into this, the more strain we put on the already slim resources we possess. Therefore, I'm ordering the following emergency procedures to be implemented immediately.

'The ship will operate with a caretaker crew; one senior officer, one medical officer, one from hydroponics and one from engineering. Two crew, preferably a pairing. All other crew will be tanked. A two-month roster will apply.' He wished he could offer them more, but he couldn't. This was new and unknown; it was to be endured and, hopefully, survived.

'Captain.' Gunda Wobek stepped forward. 'Otto and I prefer to stay out of the tanks altogether. There's too much to do at the moment and there's a couple of projects running that we can't leave.'

Van considered her request for a moment and realised that she was right. The Wobek's had been trialling a new system to stockpile yeast product in vacuum; that process needed work and it could become a focus of some serious attention to keep the crew occupied. They were also starting to produce some very good quality genever with the Chief's

help and that project definitely had his approval. 'Very well. But I want a full medical from you on every roster change. Any psychological anomalies and in you go.'

'Plants are very therapeutic, Captain,' replied Gunda with a smile. 'They keep the harmony.'

*Yeah, I know what sort of plants we're talking about too!* 'Right. Rosters are posted,' he said, turning his attention back to the crew, 'we start tomorrow. See Commander Shawcross for any detail changes.' *If there was more that I could do I'd do it.* 'Dismissed.'

## **Day One hundred and fourteen**

'I'm not going into the tanks.' Helena had her face in the galley cool room and her voice came out muffled.

'What?' Van was searching for plates and utensils; under the new regimen everyone did what was required and he had been allocated the crockery, a situation he preferred to the alternative. He was a dreadful cook.

'I said,' Helena said, backing out of the cool room, her arms laden with food, 'I'm not going into the tanks. Not yet anyway.' She set about organising lunch.

'Why not?' He watched as she built an amazingly thick sandwich out of ham and lettuce and cheese and pickle and then pushed it in front of him before starting on her own. It was just as big. She seemed to consider her answer for a moment, as if uncertain as how to give it.

'Listen, Van,' she began, 'you and I have known each other for a long time, agreed?' He agreed with a nod, his

mouth full. 'I don't know if I would have made the best number one you've ever had, but I think I would. Now, I don't think we're going to get the chance to find out. I think we've drawn short straws; I don't think we're going to survive the experience.' She busied herself with her sandwich.

'And you would sooner be awake when it happens than in the tank?' He watched her eyes and they were troubled.

'Not by choice. I'm not that brave, Van. The end could be anything; starvation, madness, mutiny. Suicide. Whatever it is, I'll be needed and I won't shirk that responsibility.' Her gaze held him and he saw in it that there was more to come; this wasn't about her job.

'Alone?' he asked. 'Is it about being alone? At the end?' Her gaze shifted and she gave a small shake of her head. He knew he had come close. Not the end? Then – maybe it was – the obvious hit him like a cold shower and he sat back, surprise written across his face. Now it was he who turned away from her gaze as he tried to gather his thoughts; when can a captain stop being a captain, when can he become a man? Helena saw the emotions wash across Van's face and immediately felt sorry for compromising his position. She reached across the table and touched the back of his hand.

'Sorry, Van. I didn't mean to unload any personal baggage on you. I'm just finding it difficult to accept our situation; it won't happen again.' She went to pull her hand away but found it held gently but firmly in Van's.

‘Maybe it’s time, Heli, for you and I to sort through some of that “emotional baggage”.’ His hand hadn’t let hers go so she returned the hold and was rewarded with a slight twinge of anticipation low down in her stomach. It felt good. Very good.

## Chapter Seven

### Day One hundred and sixty

The ship had the aura of a mausoleum, lighting was turned off in all the un-occupied areas and what was left cast long thin fingers of cold light into areas that had once enjoyed the hustle and clamour of human company. Sounds were muted, as if the few men and women that made up the skeleton crew chose by tacit agreement not to compete with the sombre atmosphere. They much preferred the warmth and light of the ‘ponics, where there were no walls to remind them of their confinement and no echoes to tell of their loneliness. In the ‘ponics

was space and colour and smells and breezes; here was a day-night cycle that suited the human psyche and made waiting much more bearable.

Peter van Diemen sat in his command chair on the darkened bridge. The only light came from screens that were still running and the status lights that glowed around the bridge. It was enough to see by and it was enough to match his mood – pensive, broody. He could come here when he felt like this, when he didn't want Helena to see the worry he couldn't always hide.

His ghostly reflection peered back out from the screens, vague and indistinct. Hunched down in the chair as if hiding from itself – as if – afraid?

## **Day Two hundred and eleven**

Commander Helena Bormann made what must have been her third tour through the habitat in the last four hours. Aimlessly checking lights, cabins, kitchens; reviewing the food lists, anything to focus her mind.

She was bored. Not scared. The fatalist within had already come to terms with the likely prognosis of their condition and she accepted that with subconscious relief. Her mind was now unencumbered, free to fasten onto any worthwhile activity, anything at all that would give a sense of purpose to waking up each day, anything at all that would stop the bloody clock watching, anything at all that would take her away from plant tending, anything at all that would give her *SOMETHING TO FUCKING-WELL DO!*

The Wobeks and the caretaker crew she had left to themselves; there was only so much of the monotony of hydroponics life she could take. *Maybe, she thought, Otto and Gunda are the true leaders of our frail human group, maybe they and people like them are the true leaders of the world. Calm, stoic, focused. At ease with everything. Unfussed.*

She checked her watch; time to check the bridge. Time for the daily log; to report the same thing as yesterday and the day before.

And the day before that.

## **Day Two hundred and nineteen**

Shawcross came out of the tank with a raging headache and a feeling of not had enough sleep. The med-tech had pumped him full of stimulants, he'd completed the post-tank routine and he still felt awful. His mood wasn't improved by the sight of Helena either; she'd lost weight and there were dark circles under her eyes. Her uniform and hair were as immaculate as ever but there was something missing; her eyes were dull, the spark had gone.

'You look as bad as I feel,' he said, zipping up his cover-all. 'Has it been rough?'

Helena shrugged as if to dismiss his concerns about her well-being. 'After sixty days of 'ponics life you'll find out to just how hard it is,' she said. 'You'll be sick to death of staring at plants, bored shitless with the limited conversation, scared spitless at the unrelenting monotony of the external screens and quite possibly consider going mad. Apart from that, it's easy.'

‘Sounds perfect,’ he said, trying to put a smile on his still stiff face. ‘I take it you’re not going to hang around?’

‘No. As soon as I’ve brought you up-to-date and we’ve organised crew changeover I’m off to the tank. You can wake me up if we hit anything.’

Shawcross yawned and stretched. ‘Done. How was the Skipper?’ he asked. No reply was forthcoming, the room was empty.

## **Day Three hundred and fifty**

Gunda Wobek handed Van a steaming mug of coffee. The pungent aroma had broken his introspection.

‘It’s our own blend,’ she said. ‘We don’t have enough of one type of bean to produce a distinct taste, so we blend the beans from all of our plants. What do you think?’

He sipped and rolled the oily brew across his tongue before swallowing. ‘Potent,’ replied Van, putting the mug down. ‘Not too bitter; heavy flavour. High caffeine?’

‘Very. We don’t have any of the caffeine-gene modified plants matured yet, but within another year we’ll be able to blend them in.’

‘Your optimism is refreshing, Gunda. Most of us try to avoid speculation about the future, but you,’ he gave her a wry smile, ‘have a plan for it.’

Gunda swept the loose hair from her face and looked at the captain. She liked Van; once the discipline of the ship had been put to one side, he had proven to be an approachable, even likeable, man. Not her type, but she could see why

Helena was so attracted to him. 'I learned a long time ago that there were no guarantees on the things that humans did. To the planets. To each other. Many of man's endeavours resulted in ruin and disaster.' She stared down into her coffee.

'Is there a "but"?' asked Van.

She laughed. 'Yes. There's a "but". Sometimes, if man concentrates on the natural order of things and gets them right, then nature will look after man.' Her eyes hardened and Van knew that this was the essence of the woman speaking. 'I will continue to believe that by creating and maintaining the life-cycle, that I will in some small way help to restore the balance of the universe.'

It was said with absolute conviction and Van knew that nothing, not even death, would shake her belief in the elemental rightness of things. 'Gunda, when we finally stand on the soil of our new home, you and I will discuss this philosophy in depth. You may even get a chance to put it into practice.' He shrugged and smiled. 'Who knows?'

'I know. Here.' She pointed her right index finger to her temple. 'And the plants know. Here.' She moved her hand and placed it over her heart. 'And you, Van. Now you know.'

Van watched her walk away, and realised that he hadn't felt this good in a long time.

## **Day four hundred and seventy-two**

Shawcross clambered across the mesh deck high above the yeast vats; lifting machinery for the lids had been draining a little too much power lately and he suspected that the job

of cleaning the hoists had not been done properly. Twenty metres above the lids, a small access ladder ran up and over the hoists. He climbed up to the top and peered over the top rung; experience told him what to look for though he had never been up here before. Condensates had gathered on top of the hoist housing, building up into a crusty agglomeration that filled in the void between the drum and the housing; additional drag.

He was about to activate his collar-com to recall the whole crew to savour the joys of housekeeping, when the com burst into its own life. 'Exec! Exec! Gunda here. Emergency. I say again, emergency. Area fourteen, sector eight. Do you copy?'

Shawcross was already down the ladder and starting his descent of the deck as she finished speaking. 'Copy you, Gunda. What have we got?' His voice was absolutely calm yet he made the 'ponics floor in record time.

'Sir,' she never said "sir", 'we have a crewman deceased.' He was running now for the trolleys. 'Apparently by his own hand.' A pause, then 'Sir?' She was rattled; badly. He could hear it in her voice.

'Seconds only Gunda,' he reassured her. 'Touch nothing.' The trolley could travel at the pace of a running man, not fast, but when you have a kilometre to go, it's the best show in town.

Fourteen/eight was a eucalypt sector, ten metre plants with a trunk genetically tailored to minimise knots. These trees were for terra-forming; they were tough, resilient, held the soil well,

provided shelter and fuel, medicines and oils. They produced no fruit. Not until today, thought Shawcross, as he dismounted the trolley. And only one; that one at the far end of the row. The one with the black-faced husk at the end of a rope.

The small crew parted to let him walk up to the tree. Gunda's shocked eyes were wide and bright with withheld tears and Otto's strong arms kept her in check; his eyes were on the body that slowly rotated in the breeze.

Blackened face. Loosened bowels. Dead.

Shawcross took in the marks on the trunk made from climbing feet; *you tried to break your neck*, he silently addressed the corpse, *you tried to avoid a slow suffocation and you got the worst of both worlds. Jesus, son! Sweet Jesus!* 'All right,' he said, turning to face the crew. 'Otto, I need this recorded. Can you and Gunda sort that?' Otto nodded, grateful for the opportunity to remove his wife from the scene. 'Griswald. You're medic. Prepare a tank. When we've taken him down, put him in with rope attached. Got that?'

Griswald had difficulty swallowing; his young face was trying to move in several directions at once and his mouth moved without saying anything. Shawcross recognised the signs and put his hand on the younger man's shoulder. A gentle squeeze as he turned Griswald to face him. 'You all right, son?'

The medic's face cleared and he finally managed that swallow. 'Yes sir. Thank you sir.' He took a deep breath, then – 'I'll go and see to that tank now, if that's –'

‘Sure lad, off you go,’ said Shawcross, giving him a shoulder pat along the way. ‘Everyone else –’ there were only four left and they looked as shocked as the medic had, ‘– everyone else remove yourselves from this sight and record a statement each. Stay in my sight and separate. Twenty metres.’ Trauma or not, procedure was procedure and he would see it done properly before his own feelings came into account.

Sammy McManaman, Able Rating first class and chef, became the first casualty on what was to be the long, hard road to the future.

## **Day Five hundred and seventy**

Coming out of the tank was like coming out of a Jump, but much, much slower. And the older you are, the slower it is. Peter van Diemen was getting older, and he didn’t like it. ‘Not one fucking bit!’ he mumbled in a moment of almost-coherence.

‘Sir?’ The med-tech looked up from the console next to the bed where Van lay, but the Skipper was back in the land of almost-dreams again. Just as well, the orderly mused, these tankings are knocking the old man around. He set the monitors for a full recording that would be mandatory reading for Dr. Eletov. Let him sort it out, he thought.

The coffee helped. And the drugs. But he still felt like a three-day drunk hours afterwards. Not a good sign, he knew. He looked up from his thoughts and saw the figure of his Executive Officer striding through the mess towards

him; from the look on his face he knew he was looking at another sign of ill-omen.

## **Day Five hundred and seventy-one**

He was better now; back to his old self. Almost. Good sleep, good food and the Exec's report; all slept on and digested. And two degrees of separation from the tragedy is almost painless. Almost. His ship. His crew. His ultimate responsibility.

They were in the Captain's day cabin and the Exec sat across from him, report case across his knees, watching with cool detachment as Van re-read the mandatory hard-copy report; watching as the soft hiss of the turning pages counted down the life of a crew-mate.

'Well done, Exec. The report will stand.' Van reached inside a desk drawer for a moment before asking – 'Off the record, David. Was there anything I should know?'

For a microsecond Shawcross' eyes flicked to the hand in the drawer. *Is there a pause in there or not? Does it matter?* The two thoughts appeared as quickly as the eye flick. 'No, Skipper. Not one single thing. This is kosher. He had no aberrant behaviour, he was as normal to his crew-mates as ever; he was within every psychological guideline we have'

Van kept his hand in the drawer. 'These are not exactly normal times we're in, David.'

Shawcross shook his head slowly, his eyes never leaving Van's. He let out a long sigh; it had been a bad month. 'I tanked him as found in case you, or any forensic examination, wanted to see him.' He settled back in his chair. 'I see no sinister hand in this.'

A nod of agreement and Van withdrew his hand from the drawer. 'Good. Next question. Have you any thoughts on how this will effect the remainder of the crew?'

Shawcross stood and walked over to the coffee urn and brought back two cups of short black. 'I told the Chief about McManaman,' he handed Van a cup, 'and we decided not to tell his crew because we judged morale to be low enough already without putting another hole in the bottom of the boat.'

'We'll keep it that way, then.' A weary smile crossed Van's face. 'I suspect we'll need all the morale we can muster when we get out of this.' His arms took a sweep around the room and Shawcross knew that sweep took in the whole universe.

'One last thing Skipper,' said Shawcross, standing to leave. 'I found these in his personal effects and I really think they should be put somewhere safe.' He reached into his case and pulled out a small leather sack that rattled slightly as he put in on the desk. Van's raised eyebrow begged the question and the Exec answered it. 'They're runes. McManaman was the rune-caster.'

## **Day Six hundred and fifty-four**

Things were definitely better now that Van was here, mused Helena as she changed the rumpled sheets from last night's reconciliation. Four days into her shift, she was feeling a lot better than she had during the first three. Two spent struggling with wakening, one with the terrible business of the suicide. Last night to take away all the worries for a while and today to begin that long shift that somehow

didn't seem quite so forbidding now that *he* had decided to stay out of the tank and spend the shift with her.

A shout announced that Van had managed to put together some sort of breakfast, and, whatever it was, it was ready. Almost to the door, the bag of runes caught her eye and she stopped to pick them up. Van had put them on his stateroom table as a temporary measure, and forgotten them. But there they were. Pretenders to the ways of fate and fortune, weighed now in her hand. *So light for such power*, she thought. *What of our fate Van? What of our fortune?* The tie parted and her hand delved into the depths of the bag. Fleeting touches of tumbling stones, stones that signposted the way of life for believers; stones that brought order to the world of mystery. *Which is mine? Which is ours? This one? Or this one?* Unseen stones trickled through her fingers, clicking to one another. *Or is it – THIS ONE!!* Helena pulled her hand from the bag, fist clenched around a random piece of rock that bore a primitive carving from an age past.

Quickly, as in an act of bravado, she opened her fist. The stone lay in her palm, cool and smooth, worn so over the years by the expectant fumbings of the supplicants and the caress of the shaman. There was no carving, the rune was face down. Dropping the bag she turned the stone over –

– it was the rune of luck

– Thorn.

## **Day Six hundred and fifty-nine**

Van knew Heli had a secret. Or whatever. She was different; not to the crew, she was far too professional for that. To

him. Their relationship has gone to a new level, something had changed and he didn't know what it is. *But I like it*, he thought, as he tried to shave around a smile. *I've definitely been missing something all these years.*

The last few days had been a blur of stolen moments, eager nights. Soft looks and dreamy plans. And sex. Lots of that. *Oh God! It'll be the death of me*, he smiled. A final glance at the younger man grinning back at him from the mirror, pulling on coveralls that seemed a little too big and he was as good as on his way –

- *a wave of vertigo hit him with the impact of a bullet, slamming him rigidly upright*
- *he could smell rainbows, and stars sang to him*
- *vision was dots of light that played upon his taste buds*
- *noise coursed through him like a wall of soap bubbles –*

– he hit the wall as another wave of vertigo claimed him, his sub-conscious taking over and trying to get him out of there. Wherever *there* was is relative to wherever *here* is, his conscious mind deemed to argue. His automatic reflexes ignored the struggling brain and attempted to drag the feet through the door, along the lower mess deck and up the stairs to the bridge.

Sight was returning; vertigo now merely a lake lapping at his feet; noise was becoming coherent and came from above his head – at the top of the stairs. With each step an act of will and each stair tread an elusive target, he hauled himself along by the handrail; slowly the bridge deck appeared; slowly his body came under control, if not understanding.

The noise faded to silence. He saw Helena slumped to her knees, looking up and away from him; towards the screens that were out of his sight. 'Helena!' he croaked. He had meant to shout. 'Helena!' Firmer now. He staggered towards her, his eyes on her, not the now-visible screen. 'Girl! Are you all right?'

Her face turned towards him, reluctantly dragging her eyes from the screen. 'Jesus, Van!' her eyes were cascades of liquid light that welled and flowed, 'Jesus God!' Her hands clenched and unclenched in her lap.

*'Stars!'*

## Chapter Eight

### Deliverance

Laughter.

So much of it for eight people. Hysteria and relief made up the volume that numbers lacked. Captain Peter van Diemen let them go; after nearly two years locked away without even the familiarity of the stars to lend comfort, even the toughest of them had come close to

cracking. But it was over now as celestial light poured out of the screens and anointed the faithful; world order was back on course.

Only the forward screens were active but what they showed was disconcerting to Van; a density of stars so great there was barely room for the dark of space between. The heavens glowed as if on fire; living sparks from the forge of Hephaestus, thick and hot. Van watched the display for a moment then called his second in command over. 'Helena,' he lifted his chin to the screens, 'what do you think?'

'I think we're lost,' she acknowledged, then laughed. 'We wanted a new start, well – we sure got it!'

He grinned. 'We sure did,' he agreed. 'Business.' They were back; captain and officer. The other man and the other woman were put aside; *for now*, Van thought. 'Get the medic started on waking up the med. staff. All of them. Get him some help. While that's underway, you and I will decide who we need and in what order. Agreed?'

'You're the boss,' she said, turning to her duties.

Van watched her depart then looked up at the jewels of creation on the screen.

*I'm not so sure I am.* 'We're blind up, down, sideways and aft.' Van surveyed the faces of his senior staff. All showed the effects of the induced sleep, all looked like the aftermath of a party. Shawcross, the Chief, Dr Eletov and Gunda Wobek. And Helena. Each gave him their full attention, each conscious of the seriousness of the hour. 'I want a list from each of you; personnel requirements

in order of priority, material requisitions, computer allocations and work schedules. I want to know what levels of expertise we will require and in what disciplines; I recognise there will be a certain amount of guesswork here but we can sort it out at review. I want to know who we should bring out all the tanks, and when.’ He gave them one final chance to comment. None came. ‘We’re in a hurry. Good luck.’

### **A luxury of stars**

Lt. Eberhorn had never seen so many stars so close together. Even in his bleary post-tank state, he recognised the momentous nature of that before him. No one had stood this close to so many stars before; no one had felt the majesty of their proximity. No one – he interrupted his reverie, aware of Commander Bormann standing at his elbow. He remembered her question. ‘I would guess the average distance at less than two lights,’ he said, pursing his lips in concentration. ‘Until we get some astrogation up here, I can’t be sure. But it looks between one and two.’

Helena peered for the thousandth time at the press of light on the screens; *so bright!* So bright that the screens automatically polarised. ‘As soon as you’ve got your people here, concentrate on classification. The sooner we can narrow our search down the sooner we can start looking for a new home.’

Eberhorn emitted a bark of laughter. ‘Point your finger and pick one, Commander. Even with this navigation

telemetry I can tell you that half of what you see falls into F or G class.'

Long moments went by as Helena pondered the wealth of stars before her; so much light, jostling for her attention. 'Pick the nearest six,' she instructed.

Sheri Morgansen and Carl Bender stood side by side below the engine-room sally port. This was familiar territory for Carl, and Sheri let him lead the EVA; he was one of the most experienced crew outside the ship and even though she was senior, she knew when to follow. Just the two of them to replace the aft camera and lens. Out through the only other airlock on the whole ship that did not compromise the magnetic integrity of the hull, a small sally port at the very tail of the ship. No automatics here, just manual actuation in hard vacuum, and the Chief's voice guiding proceedings.

The new camera was on a tether around Carl's neck and he slid it to the side as he operated the inner lock. Sheri followed him in and closed the hatch behind her. There was just enough room for two and – Carl switched over to suit-to-suit – 'Nearly as good as a single bunk –'

Sheri punched him on the arm. '*Sbbb*. Concentrate on your job, Carl.' He did it every time; the moment her guard was down along came Carl with a little reminder of their little private world within the ship. She felt the air go. It wasn't better than the bunk, she silently admonished him as he operated the outer door. Nothing came close to the intimacy of a shared single bunk, nothing comes

close to that touchy-feely time, pressed hard together and hot – the door opened and spilling starlight brought her attention to the job at hand. Carl disappeared and the Chief’s voice came back as she followed him out onto the hull.

‘Tether’s on. Good. Follow the handholds opposite the lock hinge. Tether points every metre. Got that?’ Silence. ‘I say again, got that?’ Silence. ‘Morgansen! Bender! What –!’

‘Chief.’ It was Sheri’s voice. ‘You and the skipper had better come out here.’

‘What’s going on, Morgansen? What’s your status?’

‘Sitting on the hull, Chief,’ came the reply, ‘watching creation. Looking at God.’ A slight pause, then – ‘I’ll turn the hand-held on, Chief – there. Do you see?’

Van allowed his helmet to be dogged before he stepped onto the air-lock hoist. The centre sally port was shut, but he could operate that himself. A tether followed him up. He had shut off the suit telemetry; it would give the med-techs heart failure to know how fast his own heart was racing. Punch the code, operate the door, step in, secure tether, operate the door, vacate air, punch code, operate outer door, step out -- look up.

Four hundred billion stars danced across the heavens in the great, double-spiral wheel of life. Four hundred billion stars filling a third of the heavens. Four hundred billion points of brilliance exploding their light across the gulf to him, dazzling him, bathing him.

Calling him – back.

He knew. Before the experts called upon their computers, before the first words were spoken. He knew.

As his eyes looked through tears at the magnificent celestial whirlpool of the Milky Way, he knew.

‘Sir,’ a thin voice in his ‘phones, ‘sir, it’s – Oh God, it looks like –’

He knew.

# Part Two

## The Pressing Stars

### Cyclopaedia Magellanica: History of Man...

#### Uni-Field Technology.

Albert Einstein: 'Physical matter is nothing more than a concentrated field of force.'

**Phase one:**— the building of a grid around the world using buried 'aerials' to direct the Earth's magnetic field into a geometric device. All lines of gravity are aligned true with the magnetic poles and a line of zero dip exists at the equator.

Major aerials, called Grid Poles, are implanted at the junctions of Great Circles. Each circle, and consequently each junction, is plotted to conform to one of several significant positions: e.g. numerically harmonic relationships to the

speed of light, mass, gravity, acceleration, and time. These positions are harmonically balanced to the magnetic field and positioned against the field so that each major position fulfills a part of the whole. The grid is built to increase the values of light, gravity, acceleration and time.

One of the Major Aerials (Key Stone) must be configured to give a radian value of 1.314232921 or 99.97 percent of pi. The figure 99.97 is the average mass relationship of the nucleus in every atom. As a result of this, each world can be 'gridded' back from this last position and the harmonic resonance of a complete world can be achieved.

To what value? If any world can be brought into a known set of manipulable magnetic parameters, then serious terraforming can take place.

## **Historical drives.**

The gravity compression generator was the first practical interstellar drive. This operated at the first level of what was to be later known as 'Field' technology and was an adaptation of the grid aerials that had just been developed for terraforming the two new worlds around Barnard's Star and Alpha Centauri.

Gravity waves were generated to match the free waves and focused in a narrow cone ahead of the ship. The body of the ship was enveloped in a secondary gravity field to provide a 'well' and then the first wave was then oscillated to alter the value of 'C'. The result was a re-positioning in space along the direction of the cone. This system was limited in range and the average 'Jump' was calculated in light-weeks.

# Chapter One

## Breakout

A blue world. With white clouds. Basking in the glory of a benign sun.

Hungry eyes drank in the beauty as everyone of the crew crowded the flight deck. They needed to touch reality again, to see the existence of life outside their metal confinement. They needed their faith acknowledged. For days now they had witnessed the slow arrival of the blue globe as *Thorn* inched ever closer from the last Jump; now that orbit was established, they could dream again.

Some cried.

*Thorn* was in near chaos as the demands of the additional specialists from the sleep tanks placed a strain on existing accommodation and work areas. All of the flight crew were camped in the 'ponics, as were junior technicians. All non-essential equipment was stowed away in the holds as new equipment was removed and installed. Equipment to measure this new world, to examine and quantify. Analyse and test. Measure it against man's needs. Approve of it. Or not.

## Day six hundred and seventy three

Captain Peter van Diemen always chaired the daily meetings; someone had to have the final say in any

committee and he was damn certain that someone would be him! Without control, he thought, some of these so-called specialists would be down on the surface right now! Already one or two had quibbled at his position of authority, arguing that the fate of the new colony should be in the hands of a committee rather than those of the Captain.

He took his seat. Around from his left was Gabriel Blum, then the biologist Dr Highbury, the chemist Kent, Udahl the astronomer and Ing Blakker of Terraforming. This was the standard committee with each member being responsible for sub-branches of their field.

Van nodded to Dr Highbury opposite, inviting him to begin. It was politics; Highbury was senior in age and qualifications to everyone present and acknowledging it was a sop to the man's vanity.

There were no pleasantries from the man. 'Third day, third meeting,' he began. 'All probe and sweep samples are analysed –'

– Van listened, but his mind went back over the last few days, days when there had been something to do other than listen to this –

– Helena had been glowing with happiness. The preliminary reports had confirmed what a lot of people had hoped; the planet was habitable! 'Listen Van,' she'd said, 'one point one four AU's out. Thirteen point five standard month orbit.' She looked down to her hand-held. 'Eleven and a half

degree axial tilt, twenty six point four hour rotation, one point one five Earth standard diameter.'

'Yeah. And eighty eight percent water,' drawled Van.

'But it's habitable!'

'Of course it is. It only requires the experts to give it a final clearance and we can send down some people to look it over. Meanwhile, I've given the Exec the job of checking out the other two options.'

Helena put her hand-held away. 'What options?'

'Have a seat. Coffee?' He poured two. 'This planet will be difficult to mine. It's low on minerals and what little there are, are under water. The system too is small. One gas giant. One cinder close in, two ice worlds far out.' He slurped coffee. 'Too hard to move around in, Heli. Too hard to work. This place would be acceptable if it was the only player, but it's not.'

'Eberhorn gave me a list of six closest. This was the nearest; four Jumps. What's on your mind Van?'

'Just this.' He pointed to the two cups in front of them, two feet apart; then moved his right arm out and made a fist the same distance away. 'See? Us,' he wiggled his fist, 'and over there two other stars.' His left hand traced the route from his fist to Heli's cup. 'Here to here, one point four lights. There to here,' his fingers moved across to his own cup, 'one point six lights, and finally,' from his own cup to his fist, 'one point two lights.'

'Christ, Van! You want to go there?' Helena stared at the tableau.

‘There are planets. Astronomy has already determined that fact. Lots of them.’

‘Van. Listen!’ Her hand reached out for his. ‘The risk! How can we subject everyone to more risk when they think they already have a home? How can we take that away from them?’

‘While the ground crew go down and play in the mud, the Exec can set up some feasibility models. If we make margin, we go.’ His voice was calm and his eyes had turned that particular dark grey – she knew he was only going to change his mind if the numbers told him to. She sighed and acquiesced, something unthinkable not too long ago.

‘Alright,’ she agreed. ‘What do you want me to do?’

Peter van Diemen eased his thoughts back from the last few days and caught up with the meeting. Basically they wanted an excursion dirt-side as soon as possible. *Good. That will get them out of my hair while we get organised.*

Gunda Wobek surveyed the results of their work. The extra crew camping in the ‘ponics had been a Godsend and together they had really started to move some product into vacuum in anticipation of increased personnel. The domain she shared with Otto would be the most critical part of the new colony for a long time to come and she wanted no problems with supply.

The end of a day. Everyone gone and the light fading to evening. A perfect time to unwind. A coffee, the time to step away from the work and step into that small space

between the structures of human society where the soul can breath and the plants exhale peace –

‘Sorry Gunda –’ said a voice and her eyes flew open to focus on the quiet features of the Exec, ‘– we need to talk.’

Dr Yanu Eletov scanned the readouts on the tankings for the tenth time and the conclusions were the same; repeated visits had a detrimental effect on the nervous system proportional to the age of the patient and the number of visits made and the length of each visit. The older you were, the shorter the visit; the worse it was. Accumulative. The ones who had just come out after nearly two years had shown little variation from the control tests of years previous. Here we are, he mused, the first long-term practical results are in and I’m the only one with them!

‘Got a minute, Doc?’ queried a voice and Yanu knew straight away who it belonged to; the imperious Shawcross. He grimaced.

Yanu turned around, his face under the control of a supercilious smile. ‘Yes, Mr Shawcross?’

‘We need to have a quick chat about –’ his finger stabbed at the printout that Eletov held, ‘– that.’

‘Indeed. These are sensitive procedures with important ramifications, Mr Shawcross. They must be vetted and approved before subject to – casual – scrutiny.’ The voice dripped sarcasm.

The Exec’s left eyebrow rose in a gesture that Helena and Van would recognise as humour. ‘Ah! There you have a problem, Doctor.’

Something was looming in Yanu's mind, something obvious. But he couldn't focus on it, not with this smug man. 'And what problem would that be, Mr Shawcross?'

'Those that vet and approve are – to the best of my knowledge, good Doctor – one hundred and fifty thousand light years –' his finger pointed to the far wall, '– that way.' He lowered himself into a chair. 'Now. About that chat –'

Thorn's big bow doors were open now and the internal lights and cameras turned on. The whole operation could now be guided from the Chief's console and all his screens showed a different view. From where he stood behind the Chief, Shawcross could see most of the action. The crew had connected the stabilising guys to the flyer's pick-up points and were coupling the winches, ready to pull the craft sideways through the bow door.

It was as if the a whale had given birth. Space-suited dots swarmed over the newcomer like tiny midwives and all the while the quiet voice of the Chief ushered them along. *He's in his own environment now*; Shawcross mused as he watched the man's practiced efficiency.

It was over. The flyer berthed, the next stage yet to begin. The Chief signed off and handed over to his senior engineer. As he stood to go he saw the still figure of the Exec standing to the rear of the console.

'Have you got a moment, Chief?' the Exec said.

## **Day Six hundred and seventy five**

Pilot-Captain Laura Matraine was a professional pilot. It didn't matter what it was, she could fly it. She was that

good. Tall, leggy, blonde women didn't fit the mold of orbital pilots. Especially if they are on the right side of thirty. More especially if they had a wide generous mouth, haunting black eyes and an unattainable, aloof bearing. Cold was her gaze. To overcome such handicaps, you had to be special. She was.

Her crews loved her; the men tried to flirt, safe in the certainty of their failure; the women looked on in envy. Laura was indifferent to their attempts, preferences and opinions. She was ice. She had her own reasons for being there, one hidden deep. She never told.

She was brought out of sleep to pilot orbit to ground, her expertise. The shuttle was but a shuttle, but under the long, cool hands of Laura Matraîne, it could fly! She saw it as an extension of her self, her elemental talent.

People loaded, the cabin pressurised; descent characteristics programmed and all that was required now was the order to – release!

The craft dropped into the pull of the planet's gravity, following the computer formula of re-entry. Ablative shields took the impacts and stresses of the journey, yet her hands held the controls, sensing the feedback; understanding the currents. To know is to conquer.

Sensors told of clear air and she called her wings into being, and they became. Unfolding to bite the virgin currents. Moving to the rhythm her mind conjured. As a blade sweeps to its final resting place, so too did the wings of Laura Matraîne.

Across rolling pelagic swells; through wind driven spume; over beaches awaiting the footprint of order. rushing jungles of new plant life to reach a high point of clear savannah, there to caress, to touch, to kiss; to lay down.

Far off and alone, the hungry eyes of David Shawcross watched the descent. Far off and alone, he felt the power, the desire; knew the intimacy.

Breakout.

That was the name given to the new world. A world of water and islands. Thousands of islands, some as large as Greenland, others small as atolls. Most were crowded throughout the temperate and tropical zones, encircling the planet with a studded belt of green, breaking the currents of the two great polar oceans. Shallow seas, slow of current and rich in life, lapped their way around them. Small icecaps adorned each pole, already measured to ascertain the degree of inundation should they melt; the computer models said less than half a metre. Paradise for the taking.

Six silver-suited humans brought their alien imprint to the grassland as they moved away from the shuttle and the marks of its landing. They gazed far down-slope to where the savannah became bush, and beyond to where the bush blended into the denser tropical canopy; and finally to the far horizon where the haze of distance blurred the line between land and sea. Azure sea.

Doctor William Highbury slowly removed his facemask, the one final link to the false environment of the ship. It was

no grand gesture, samples and probes had been analysed for days to ascertain that the air was free of any contaminants or poisons and high in oxygen, low in carbon dioxide. Trace elements were within acceptable guidelines and ozone levels were high. He faced the breeze and filled his lungs with air. Champagne air! Redolent with salt, earth, plant life. Laden with taste! The air of Earth still in his lungs mixed with the new and flew to the four winds. *Absurd symbolism, but apt*, as he waited for his colleagues to repeat his act.

High above the horizon, almost invisible in the light of the sun, the great galactic wheel of the Milky Way filled the sky and stood sentinel; the core stars burned in a solid glow, the arms were a latticework of bright dust. Ever-present.

Omnipotent.

Six pairs of eyes were raised in wonder and awe.

Piers Udahl leaned back from the nav-com, and sighed. The instruments weren't perfect but they would have to do as all the big scopes were locked on to the two stars whittled from the list that Bormann and Eberhorn had given him. And it was an easy target, *God! it was the biggest thing in the sky, you couldn't miss it*. He called Commander Bormann over. 'See there?' he said, as she took the seat next to him. 'Where the green cross is?'

Helena peered into the blaze. 'That's it?'

'No. That's just a cross section of the Orion Arm. Watch this.' The screen expanded, dragging stars towards her. At the limit of magnification a dark band appeared at the top

of the screen. 'That,' informed Udahl pointing to the band of stars at the bottom of the screen, 'is the inner edge of the Arm. And that little bump of stars sticking out from the edge is Gould's Belt.'

'Where then -?'

'Inside the Belt. Too small and faint to even begin to see it; but it's there.' He smiled a wide smile. 'Take my word for it, Commander. It *is* there.'

For long minutes she sat before the screens. *The sun. Earth. So tiny; so very, very tiny. So lost.*

## Chapter Two

### Options

#### Day Six hundred and seventy eight

The entourage of highly disciplined scientific personnel all but stumbled over one another in their eagerness to reach the bridge. They were headed by Dr Highbury and to a man, and woman, wore some of the anger that flushed his face. Bridge staff were pushed aside as they sought the

captain and voices were raised as it became obvious Van was not there.

‘I demand,’ grated Highbury to a surprised Lt Eberhorn, ‘to see him’ He waved his hand at those that had followed him. ‘We all demand to see him!’

Officer of the watch Eberhorn was aware of the reason for the anger, but he had his orders from Commander Bormann and put on his best officer face, the blank stony one. ‘Sorry sir. Captain van Diemen is in a meeting of senior officers. I shall tell him of your request when he emerges.’

‘I don’t care what he’s doing! Get him out here now!’ His voice was loud and forceful, egged on by the mutterings behind.

‘The Captain is not mine, nor yours, to command. Sir.’ Eberhorn’s voice moved into the frigid zone. ‘I will pass on your request and you will vacate the bridge. I will perform my part when the Captain emerges; you will do yours now.’ His eyes now matched the voice.

Highbury’s finger stabbed out. ‘You are forgetting yourself –’

‘Now!’

Highbury considered the unyielding officer for a moment before opening his mouth to try again. ‘–’

‘Now, sir.’ It was spoken quietly. ‘Before I have to secure the bridge.’

His words were weighed for a few moments, then Highbury turned around to small group. ‘It appears that

this ship is in the hands of despots. It appears we have no say in the programme of colonisation at all.' Muttering. 'Let us return to our humble tasks with what dignity we can muster.' As with all good academics, sarcasm was always close to hand.

## **Day Six hundred and eighty**

The main mess was the only place large enough for the meeting, and even then, everything that was loose had been removed. It thronged with scientific and expert staff whose function was to establish the new settlement, whose only consideration of the ship that brought them was as a passenger vehicle to be cannibalised at the completion of its duty. They considered that duty completed.

It had taken two days to get together with the Captain, two more days while his crew packed away all the equipment used to determine Breakout's suitability. Two days of rumour and hostility.

The bridge access door opened and Van entered with Helena and Shawcross in tow. Just the three of them. The noise level plummeted while the three took their positions along the galley wall. Van wore his rumpled leather jacket over coveralls, while his two officers were immaculate in their on-shore uniforms. All three had fixed, neutral expressions. Van surveyed the faces before him and the faces bore witness to the emotions within; hostility, expectation, anger. Confusion.

'I will speak and you will listen,' he began, his voice clipped. 'Afterwards, I will see three of the senior staff.'

Now. Breakout is a wonderful planet. I have no problems with that.' A few of the faces eased up. 'It has many things going for it, and a couple against. No metals to speak of, for one. That does not mean we cannot make it work; we can. However,' some of the frowns came back, 'it will commit everything we have to survival as well as relying on the hydroponics aboard *Thorn* for our daily bread. Once *Thorn* becomes part of the orbital habitat, she ceases to be a star ship. And right now she is a star ship in remarkably good condition considering her recent ordeal.' They knew what was coming, given the rumours of the leaked information.

'Contrary to belief, I am not a despot.' A few muffled giggles with Highbury turning red. 'I am, however, in command of this ship and this expedition until I turn over that responsibility to the settlement committee. As the commander, I have another course of action open to me; one that I was quite prepared to discuss with the committee until the basics of the plan were leaked out before all the data was collected.' Shawcross' eyes snapped across the room and found the startled eyes of Dr Eletov. *Now you know that I know.*

'*Thorn* is still able to operate within her specification. Engineering, 'ponics and the tanks are still at peak operational levels and the personnel awake now will not affect our sailing capabilities.' Gloom seemed to spread before him, but they kept quiet. 'My proposal, therefore, is this. We have two close stars with large planetary systems. Data will be available after the meeting. Total round trip in

sailing time, thirty-four days. Plus exploration. We make the two visits, then decide.’ He looked Highbury straight in the eyes, ‘Read the data, Doctor, and then come and see me.’ He glanced across the room. ‘Thank you.’

Highbury paced the aisle in complete agitation. He and a band of five senior staff had gone up to ‘ponics where there was no likelihood of being overheard. The data had been gone over many times and made compelling sense. The dilemma was between a bird in the hand –

‘I can’t believe he would actually propose this,’ Highbury cried, waving his palmtop. ‘This is the most high-handed, irresponsible attitude I’ve ever come across. If –’

Piers Udahl interjected, the tirade had gone on long enough. ‘Bill. Listen –’

Highbury swung on him. ‘No! It’s different for you and Jorg.’ That was the split; he, Kent, Mercer and Tovol against Udahl and Blakker. ‘We’re *needed* down there. There is so much to do before we can even begin to put people down there. With due respect, Piers, astronomy is not exactly the most important skill to bring down to the surface. And terraforming,’ he looked up to Blakker, ‘is definitely not an issue.’

‘You’re assuming that there is some degree of free will associated with this, Bill. Listen to me. You’re looking at van Diemen in the context of your own experience. This is not a corporate pecking order with majority rules. No! Listen!’ he insisted as Highbury attempted to get a word in. ‘He *is* the

corporation. You don't get higher and his word is law. The best we can hope for is that he is a fair leader; and so far, I think he's done a bloody good job.'

Highbury looked aghast. 'You're saying he can do anything he wants? That we're nothing but *objects*?'

Star ship crews and the settlers and scientists they carried had one thing in common – no one was old. That was as it should be for sailing and settling, but sometimes it was a drawback in compromise. Fortunately, nature sometimes solved the problem by putting an old head on young shoulders. In this case, Piers Udahl. And astronomy had lent a polish to his philosophy and world-view. 'Wherever we go and whatever we do, Bill, will be with the blessing of van Diemen. All his crew will follow and, I suspect, most of the techs that are awake.' He grinned. 'That's the realpolitik. Our job is to make sure we do not lose the trust and respect of everyone on our side by setting up a confrontation. We actually need to make his job easier so that we can commence ours all the sooner.' He shrugged, a gesture of inevitability.

The fight had gone.

The great metal egg that was *Thorn* was sealed, ready to swing out of orbit and start the slow climb away from Breakout to a point where the mathematical conceits of man would bend and shape the warp and weft of space-time; and another journey could begin. Tomorrow. This last night she slept under a light brighter than moons, a light that cast shadows on Breakout's dark side; the light of stars close enough to touch.

Helena reached out to the dark shape beside her, then stopped. Her ears told her what she wanted to know, Van was dead to the world. For the first time in days he was relaxed enough to sleep; who was she to wake him now? She snuggled into his side; *I'll wait until morning* –

Both bunk mattresses were laid out on the floor of the small cabin and all but covered it. A tiny light burned red on the com-clock, not enough to see by, but enough to highlight skin. And the sheen of sweat on that skin. Hers. His.

Sheri was an island, spread like a starfish, Carl a dark shadow between her wide-stretched legs; his hands gently massaged her inner thighs and his tongue caressed her, seeking that aching knot of nerves that so easily led her to oblivion.

Breathing hard to stop from moaning; she would soon know the release to come –

Shawcross lay in the dark – black on black – a presence felt. Long fingers, light as breath – sharp nails – caress – a shadow imagined, soft breast across his cheek. Teeth at his shoulder – a blood token – beneath his hand the gate of heaven –

# Chapter Three

## Second Choice

It was a journey of faith; in themselves and in *Thorn*. Two days to move the vast ovoid bulk of the ship round the planet, accelerating slowly, ready for the slingshot, another to reach a clear Jump point above the plane. Routine was the key word. Everyone, except the awakened specialists, had a job they had performed many times before. There was safety in the routine. In the order.

Breakout was a blue teardrop on the rear screens as gravity distorted and the quiet voice of the nav-com counted down. Everyone was webbed in, just waiting for the ride –

*Jump!*

The usual. Attend those disoriented. Check the ship. Check the navigation. Repeat the routine –

*Jump!*

– again.

*Jump!*

## Day Six hundred and eighty nine

Captain Peter van Diemen had his feet up on the desk, a big mug of coffee within easy reach and a cigar in his fingers. The check down was complete; everything in order and his job was done. They'd arrived. Safely. It was for others

to decide the next step, the astronomers and the sailing master, as *Thorn* cruised into the new system. They would tell him when the plane of the ecliptic was found, when the planetary family was located. They would tell him where they wanted to go and he would take them there.

There was a knock. Highbury. 'Er. Captain. A moment?' He didn't look good, the jump effects had hit him hard; his hair was uncombed and his face wore a grey pallor.

'Come on in, Doctor,' effused Van. Easier to be friendly after the battle of wits. 'Take a seat. Sorry about the smoke.' He wasn't.

'I've, er, come to make my peace with you, Captain,' he began. *This is definitely not like you, Doc*, Van thought, the word "schadenfreude" flittering through his mind. He went to his bar and poured out two big measures of icy genever and placed one in Highbury's unresisting hand.

'There's nothing to make, Doctor – *salut*,' half the genever disappeared down Van's throat. 'You did your job, I did mine, we go on from here.'

Highbury stared into his frosting glass, a man coming to terms with the reality of the world. World! Ha! 'Thank you Captain – *salut*.' He shuddered as the spirit hit his stomach.

'Van,' said Van. 'Off duty, I prefer "Van".'

Highbury was taken aback a little. 'Thank you, Ca – Van. Er. Bill,' pointing to his chest as he drained the last of his genever, 'Could I ask –?'

'Yes?'

'Do you have a spare cigar?'

Sheri Morgansen did not like night watch. Never had, never would. Some she knew loved the quiet slowness of it, but not her. It threw her routine out, broke her sleep patterns; not that she slept much anyway, too much nervous energy for that. And it wasn't as if it was important, *I'm only here to wake someone up if something goes wrong!* The hiss of the air conditioning was audible now that the sounds of the day were gone; even soft-soled shoes echoed. Faintly, but there. Electronic voices clicked away in the background and the odd human sounds would waft up from the cabins. Only the bridge had life – quiet and intense, but life. She headed there.

Piers Udahl looked up from the computers as he heard her approach. 'Ah. Sheri. Nice to have your company.'

She liked Piers, he was approachable and happy to discuss his work, or ask about hers. A nice man. 'Hi Piers. Late night again?'

There was a thermo pot on the console and Piers offered it, 'Tea? Good. Astronomy's a funny thing,' he said as he poured. 'Usually we spend days, weeks or even months looking and studying. Plenty of time, nothing's going to go anywhere. Why hurry? Eh?' Sheri couldn't help but smile. 'Until you get on a starship. Ahah! Then it changes. Oh yes!' He waved his cup in the direction of the screens that had been dimmed so the sea of light wouldn't distract from the work at hand. 'Out there a new system. There –' two people across the bridge that Sheri had not noticed, heads down, '– telescopes. Me, the brains of the outfit.' That brought a

snort from the telescope console. 'Over there, somewhere, is a captain sleeping. But when he is not sleeping, say in,' he consulted his chrono-tatt, 'four hours, he will be here asking all sorts of questions. Can you guess what your Captain van Diemen will ask, Sheri?' She could. 'I'll tell you. "How big is it, Herr Astronomer? How many planets, Herr Astronomer? Is there a planet in the photosphere, Herr Astronomer?"' Piers paused to down his cooling tea, 'Rush, rush. Still, looking up into her face, 'it's a job, eh?'

Sheri patted his shoulder. 'I think we're in good hands, Piers. Thanks for the tea.' Back to the watch, back to the tedium that is never mentioned in recruitment speeches, back – her stomach did a little flip-flop. A taste of bile. *Oh God! I hope that tea was alright.*

Laura Matraine held the night watch on the nav-com. She was ranked for this junior post of star ship command, all pilot officers are. But it held no joy for her. On the bridge was routine, dull routine. But she asked for the night watch, where she could be alone. Where she could watch this new system come into being and take on a shape and form that began to make sense to her.

Already she had overheard enough from Udahl and his people to put together a flight scenario through the skies of the looming world. And she did it in her head. Her fingers ran along the edge of the arms of the command chair she sat in, lightly touching the hook-ups and control pads along the way. Too big! her mind said. Too slow!

Her eyes reflected jewel-like as they held the screen; she could all but see the planet, all but feel the caress of wind. Movement brought her gaze around; it was only the rating leaving Udahl to his devices. Leaving. Long legs in tight silver. Turning to go. Firm buttocks flexing with her stride.

Caress. Wind. Caress.

Silver.

## **Day Six hundred and ninety three**

Peter van Diemen had read the report, and understood, but it was good to see it up on the big screens in computer graphics; it helped the crew to understand. Virtual worlds danced to a fast-freeze waltz while their white-line orbits formed skipping rope loops around a sun. This was a big system.

‘Notice,’ informed Piers Udahl, relishing his tutorial role, ‘two big asteroid belts. One close in,’ the graphic pointers zeroed in, ‘and one right in the middle of the planetary group. As you can see, divided into three rings, Saturn-like. Lots of heavy metals. Beyond these rings are six gas giants and five ice balls. Liquid gases. We haven’t been able to count the moons around each yet, but we’re working on it.’ He rubbed his hands together in anticipation. ‘Bear in mind, these planets you see here are not actually in these positions, half of them are strung out far-side. Now! Inward of the rings, five planets. All small, Earth size or slightly larger. Two in the photosphere, but one of them, too hot. That leaves – this one!’ A circle appeared on the graphics.

Shawcross watched Udahl's performance from the rear of the bridge. Unconsciously, his left hand travelled up to his right shoulder and as his eyes absorbed the data, his hand caressed the bite of dreams.

'As we get closer,' Udahl continued, 'we will determine more. We do know a few things that I can tell you, although it is preliminary and you know scientists don't like to open their mouths before they can be certain of not being proven wrong.' Laughter. Ice-break. 'Doctor Highbury and his team will take over the analysis from this point; the geology, chemistry, biology. But we do know that this planet has water, oxygen and a lot of garbage in the atmosphere. You would certainly need heavy filters to breath the stuff. Oh – and there's tectonic activity. Lots of it.'

## **Day Six hundred and ninety eight**

A world like no one had imagined.

Could imagine. A dozen continent-sized islands anned out around three-quarters of the globe, separated by deep blue stretches of water. One large ocean dominated and two enormous ice caps crowned the poles. Nine long, black fingers of smoke issued from volcanic mouths, like leeches sucking the blood of the planet and vomiting it into the air.

Most of the landmasses were brown, and fresh, new ridges with snow-covered peaks dotted them. Thin ribbons of green bearded the coastlines and sent questing tendrils inland. The air was dirty and there were few clouds.

It had a deep and brooding presence.  
Earth size, yet so unlike Earth.

‘Are you asleep, or are your eyes always vacant and staring like that?’ Helena sat down next to Van. She had found him in the day mess, looking out on to nothing.

‘Hmmm? Sorry Heli. Just putting it all together in my head. You and the Exec are so efficient, I’ve got nothing better to do than daydream.’ He yawned.

‘Listen.’ She got up and walked around behind him, putting her arms around his neck; it was safe, no one came in without permission. Except Shawcross. ‘They’re having difficulty putting a name to this place. Half of them want a classical name, macho stuff. Odin. Thor. Some of the others with a sense of history,’ she stole a quick peck on his cheek, ‘want to name it after you. Van Diemen’s Land.’

Van laughed out loud. ‘Sense of humour more like it! Sorry, Heli, it’s already been done.’

‘Well, there is a name I quite like.’

‘Hang on a minute. There’s a protocol for naming new planets’

‘Yes, of course. But we didn’t wake any historians up. We’re on our own with names, Van.’

‘OK. What’s your favourite?’

She moved back to face him. ‘When we first orbited, one of the ratings, Morgansen, I think it was, told our humorous astronomer that the planet reminded her of a smouldering fuse.’

Van was silent for a moment. ‘Fuse?’ It didn’t taste right in his mouth.

Helena Bormann shook her head. ‘Smoulder.’

Jorg Blakker was getting to feel like a spare prick at a wedding. On Breakout, terraforming would not be necessary apart from the basic grid, and here – here it was all but impossible. Massive plate movement! Enormous amounts of volcanic activity! No way the grid could stabilise to this; not even in the medium to long term. The others sensed his frustration and left him alone. They had their programmes, their samples and computations. If they needed him they would ask.

His computer tracked theirs as he built his own template, adding here, giving there. A model for future development should anyone ever come back here with serious intent. What a project! The figure of the Exec loomed before him and he was grateful for the opportunity to put aside his frustrations. He raked his long, sandy hair back with the fingers of both hands and expelled a long breath. ‘Morning, Exec.’

‘Jorg.’ A nod. ‘How’s it shaping up for you?’

‘Fine! If ever I were developing a holiday resort, this would be the place. Here –’ he moved over to allow Shawcross to see the screen, ‘– see these wide deltas all over the place?’ He highlighted as he spoke, every continent had a series of large coastal deltas, wide green fans before the oceans. ‘They got there because of the massive rainfall. Huge rivers bringing down all that soil, spreading it out.’

‘There’s no rain there now, Jorg. Those rivers are dry.’

‘The rain’s not *there*, it’s –’ he tapped the ice caps, ‘– *here*. And when tit decides not to be an ice cap any more, it’s going to go back *there*. Then all those deltas will return to sea floor, and the ocean levels will go back up to the delta coastlines. And that,’ he said triumphantly, ‘is where we build our resorts. Sheltered. A nice wide shallow bay. Perfect sailing.’ He sat back and smiled.

‘What about the volcanoes?’

‘Shit!’ Jorg threw down his pen in mock disgust.

## **Day Seven hundred and one**

As meetings go, it was short; there was simply no option to the facts. No alternative.

‘Do we stay any longer, Doctor?’

‘No, Captain. The few days we’ve had has been long enough. For me anyway.’ He smiled and Van realised the changes that had come over Bill Highbury lately. ‘The engineers want to look at the rings again for a more detailed mineral analysis, but –’ he shrugged.

‘That simplifies my job. Lets get out of here.’

## Chapter Four

### Third Choice

Three times in two years *Thorn* had broken orbit and headed into the stars. Two of those times had been in the last month. There was no one to bid farewell to the disappointment that was Smoulder. Its value was in the information it yielded in resources and all activity was in processing the data.

*Jump!*

Shawcross looked up at the rear screens panning under rotation as the ship sought alignment with its target. They brought the Great Wheel into view, filling the screens and flooding the bridge with light. *Real light*, he mused as the polarisers cut in. *I could watch that for hours.* Aware of Lt Eberhorn standing next to him awaiting his roster changes, he pointed up to the screens. 'Makes your life a lot easier, doesn't it?'

'The Wheel? How?'

Like a father patiently instructing a child on the blindingly obvious in life... 'Simple. Where do you want to go? Outward? Head for the Wheel. Inward? Keep it behind you. Across town, keep it to your left or right. You can't get lost here.'

'Yes, sir. If you say so, sir.'

The Exec handed Eberhorn the update roster and moved away. *No bloody sense of humour some of these – but I try.*

Helena Bormann came up behind Lt Eberhorn as he shook his head at the retreating back of the Executive Officer. ‘Everything all right?’

‘No, Commander.’

‘What’s wrong?’

Eberhorn peeled his lips back in a huge grin. ‘The Exec’s just gone and discovered our trade secrets.’

*Jump!*

Carl swung climbed out of his bunk and gave Sheri’s leg a tug as it hung in space above his head; their morning ritual. Except for the times when they had spent the night in one bunk; then a different ritual was called for. ‘C’mon, sleepy.’ She was a light sleeper, so it was a tease. When he came back from the shower she was sitting on the edge of his bunk, a strange look on her face. ‘Hey, love. What’s up?’ He knelt on the floor in front of her and reached for her hands.

Sheri’s voice was small as she shook her head as if to clear it. ‘I don’t know. I feel so –’ even Carl Benders naturally fast reactions couldn’t save him; her stomach heaved and she threw up all over the front of his fresh coveralls.

‘I’ll give you something for the nausea, Morgansen, but there’s not much I can do about the cause, I’m afraid.’ Doctor Eletov busied himself at the med-con as he punched in his request.

‘What is it?’ Concern was in her voice; the recent nausea was the first time in her adult life that she had been sick and she didn’t like it one bit.

‘Nothing serious. I just never expected it to break out on a starship, that’s all.’

Fear gripped her. ‘What’s broken out, Doctor?’

Dr Eletov looked up from his prescription and smiled. ‘Pregnancy.’

*Jump!*

## **Day Seven hundred and seventeen**

*Thorn’s* crew and scientific staff fell to work with a practised efficiency. The moment they were clear of the Jump Effect, ‘scopes and cameras were brought to bear and people with now-practised eyes sought out the telltale signatures of a planetary family. Two days of drifting as the information came pouring in; while the computers modeled and remodeled.

Then as the model stabilised, *Thorn’s* big thrust engine threw down its incandescent plume as a challenge to the crowded stars, and for a while, a little while, almost outshone them.

# Chapter Five

## Journey's End

### Day Seven hundred and twenty two

For the third time, the eyes of *Thorn* looked upon the face of a new world.

But unlike the first two, this time there was a sense of urgency, a need to find out the truth early. Every piece of detection equipment was deployed as soon as possible and the system model started to build almost immediately. Eight planets found or surmised; at least three gas giants, three small planets outside the photosphere; one inside. Earth-like, but smaller.

The details soon coalesced. No large oceans, just lots of seas. Two large polar continents that broke up into island fingers that stretched out into the ribboning seas that encircled the planet around the equator and up into the temperate zones. Heavy metals. Radioactives. No electromagnetic signatures.

They were all busy; scientific staff commandeered every bit of space and equipment, each team dragging its own data out of the stream, computers talking to other computers and humans, analysts querying and arguing, crew trying to avoid the lot. It was noisy and chaotic, but beneath the

general appearance of disorder, cool minds were putting everything together. Making sense of it. Making it work.

Bill Highbury and a small team, Kent the chemist and Stella Decroix the geologist, had taken over Van's day cabin as a temporary headquarters. Here they processed the results, strung printouts and images all over the walls, weighed up, made decisions. Made a mess. Shawcross stepped over a bundle of computer cable at the door and entered the room. He had elected to be the ship's presence here and keep the Skipper and the others out of it, and with only one officer on the bridge, it meant only one route of communication between the staff and the ship; it made Highbury and his people very careful of the way they did business. The Exec smiled at the thought as he approached the three, and part of the smile was for the state they were in; coffee-promoted hours, long and intense and clothes rumpled and sometimes slept in. Of the three, Decroix looked in better shape, hair and face made up: *but that's women for you, never too busy for what's important.*

'Good evening, doctors,' Shawcross rejoined as he safely negotiated the cluttered distance from the door.

'Evening? Already?' Kent looked at his chrono, then at an overlay on the table. 'God! Where does the time go?' He ran fingers over an unshaven chin and eyed the Exec's immaculate coverall.

'Briefing still alright for two hours?'

Three sets of tired eyes looked at the Exec, and three heads nodded. Slowly.

The officer's mess was crowded. A new temporary screen dominated one wall, faced by eight science staff all but slumped into their chairs, and Van and his two senior officers. Food still lay on plates by the elbows of those too tired to eat and the fragrance of coffee and cigars lingered for a little while before being sucked into the filters. A world pirouetted before them on the screen, enhanced with virtual resolution.

Each one there looked at the globe and saw something different. The geologists viewed the deserts around each pole and wanted to study this post-glacial wilderness; hydrologists looked at the seas at their new levels and determined to examine the currents; botanists were in raptures at the profusion of plant life and biologists –

‘– see how this estuary is blocked with glacial run-off from –’

‘– die-back along some of these outer islands. Weather pattern changes I expect –’

‘– dust storms in these higher latitudes, strong climate –’

‘– stability in the plates. Too much mass along’

Van listened in with half an ear. He was looking for something entirely different. He wanted what every first coloniser wanted; safety. Where can my people go? How can we protect them? He came out of his musings, aware that Highbury was speaking to him.

‘– dust cloud I mentioned earlier. There appear to be three or four of these scattered across this coastal plains area.’

Van peered at the faint plume. ‘Grassfire?’

‘No. It’s a huge herd. Of what,’ he said, forestalling the next question, ‘I don’t know. But it’s big. Tens of thousands of animals.’

‘I’ll make you a bet’, interposed Shawcross. ‘I’ll bet they’re mammals.’

‘How’s that, Exec?’ asked Van, before anyone could scoff or ridicule.

‘The air. Almost Earth-like, right? A few rare gases but pretty much the same balance. Plenty of fresh water, plenty of ground cover.’

‘That does not necessary presage warm bloodied life-forms, Mr Shawcross.’ This from Highbury, who was keeping one eye on the captain.

‘True. But it’s one of the conditions we know mammals thrive in. The other is the social pattern. Follow them.’ Many eyes swung around to the screen as if trying to see something they may have missed. ‘Large herd, migratory. Protection. Following the seasonal food chain. Organised. That’s a long journey across those steppes they’re on. There must be births. Egg-layers nest.’ He shrugged with an air of complete indifference. ‘What did the infrared show? A huge heat-mass?’

Bill Highbury caught the look on one or two of the faces of his team before they looked away. *Shit!*

They called the new world Canaan.

It was a world in rebirth; a world that had thrown off the frozen cape of glaciation and was slowly reawakening to a new order. A new purpose. Life had exploded behind

the retreating ice walls, and now new life came down from the skies.

Intelligent life.

Within days, *Thorn* almost ceased to be a starship, and began to look like the orbital habitat she was designed to eventually be. The great bow doors were removed and converted into workshops; in them the sleep-tanks would be recycled into a million different items. The first of the solar power plants moved into position. Auto-process plants were assembled for testing in orbit, and then broken down again ready for transport to the surface. Satellites were sent out to fully map the physical, electrical and magnetic properties of Canaan.

As each duty magnified, more and more people were awakened. Dragged from their slumbers to gaze on the face of their future before being sent to work. *Thorn's* crew became the basis for the orbital settlement, with few requesting duties planet-side. They built the sanctuary in orbit around *Thorn*, expanding the living areas as the tanks were pulled out. Creating huge water reservoirs in the old bow hangars and filling them with treated water from dirt-side.

Small groups were sent down to predetermined areas; the first priority was to confirm the initial biological compatibility models. Test sites dotted the landscape of the southern continent, where the steppes gave way to coastal vegetation and the seas were within smelling distance. Then mining. It was crucial to start lifting ores out of the ground,

shape them, use them. Auto-plants, nuclear fuelled, refined the very source of their power. Others created form and shapes to a pre-ordained formula; the entire technology of the colony must be replicated to ensure the continual technological viability of the colony. There could be no retrograde steps. It was too important to allow that.

High in orbit, Piers Udahl started to put together the information for the new calendar that would be needed. A new day, a new year; new seasons. Twenty two point six standard hours rotation, three hundred and thirty seven day year, seventeen point eight degree tilt. Counting had started on the day *Thorn* swung into orbit around Canaan, day seven hundred and twenty two since leaving Earth. It would now be the year 2101, November 14. If there had been no wormhole anomalies.

Production fell into two areas and both were a function of the number of people who were to be brought down. Accommodation had to be provided; the first crews and groundbreakers had used thermo-tents brought down from ship's stores. Now they had to be made on the ground. Small camps sprang up, each one the same; hundreds of similar tents around a central ablution area. Waste recycle plants retrieved everything discarded, and water was brought in by a small canal to a pre-treatment plant where it was flash steamed and distilled before sent on for use. Everything was re-used. Water was solar heated and food microwaved in central commissaries.

Aircraft were the second priority. Low-tech ground effect craft for freight and personnel movement; low altitude skimmers for survey and remote site work.

Shuttles. Replicas of the two carried by *Thorn*, precious and irreplaceable until new ones were constructed. Much of the work force was put to work assembling the craft and scabbling out landing fields in the ground; building temporary shelters and setting up maintenance shops to service them. No colony was viable without aircraft.

Energy. Everything took energy. First from the fuel cells, then, as demand increased, from the small fusion mill assembled and set up away from the settlement. Microwaves were beamed down to the remote locations and later, the ground aerals that the terraform teams laid would come online, tapping the planet's magnetic field.

All the while, as humans toiled to build a world, the stars shone down. Visible by day, ablaze by night; brighter than moons, a permanent twilight. Crowning all else, a wheel of fire, the halo of God with four hundred billion prayers to His name. A permanent reminder – filling the whole sky – that there was no way back.

Ever.

# Chapter Six

## World Builders

Paradise is relative to the eye of the beholder. The newly-woken viewed with delight the frontier world awaiting them below. Even the story of their journey to Canaan could not temper their enthusiasm for this new world to conquer; but not a few cast their glances to the Great Wheel and wondered what the fates had in store for them.

These were the wonder months; when common men and women worked with their hands to build a community. They dug pits and canals; they levelled acreage and dug foundations. Soils were tested and crops and trees planted. Manufactured tools and systems were always in demand as the need for more and more equipment grew. Engineers adapted pre-programmed automatics to the new demands; designers modified equipment to adjust to the new environment.

Simplification was a keyword, as were standardisation and reliability. Even a twenty-second century society relied on the basics; wheelbarrows, shovels. Wood fires. The sweat from willing backs juxtaposed with the tapping of computer keys.

They were in the future business, using the past to build tomorrow and as a mark of that new beginning, as a symbol

of their release from the old world, they adopted the new calendar and created the first year as their initial year in the new epoch; year 1ne.

The years of training, the years of experience between the stars could not help Peter van Diemen adjust to the changes going on around him. This was one scenario that had not been foreseen, one set of conditions he had not prepared for.

Loss. His ship. His authority. His purpose. All about him the new was being created as the familiar was taken away and replaced with something else; something that in turn would be dismembered and rebuilt as its purpose for existence was ended. All passings leave a wake, and Peter van Diemen was struggling to stay afloat as a melancholy mood took him into himself.

‘Stop it.’ Helena had found him in his usual spot these days, alone on the silent bridge in his command chair, ostensibly overseeing the running of the orbital, but in reality embarking on the first tentative steps of a journey of self-pity. She could read him like a book.

‘Mmmm?’

‘Do you know your problem?’ she asked, leaning back against his console and blocking his view of the screens. ‘You’ve spent too much time watching everybody else get on with things and you’re feeling left out, when you should be addressing our next development in star-flight.’ Van raised his eyes to hers and she saw the question there.

‘Look, while they’re down on Canaan building, no one will give a thought to the next logical step. Van, if they use up all the resources we have up here then they will be totally committed to a dirt-side life. Star travel will cease to exist. It will not be needed.’

Now Van pulled himself out of his mood. ‘Not necessarily.’ Secretly he was glad Heli had come along; he was starting to get fed up with himself. ‘Once they are well established, say, three or four years time, they’ll start thinking of other places. Smoulder for one; those heavy metals there would be easy to mine.’

‘And who’s going to take them there? Hah? Us? Sure, for a couple of years maybe. Then we’re too old.’ She crossed her arms and waited for Van to digest the reality. ‘This sack of stars we’re in is twenty lights diameter. And it’s absolutely crammed with stars. Less than two lights apart and a high percentage are E’s, G’s and F’s. God above, they’re so thick you’d have to sail *around* them!’ She uncrossed her arms and leaned forward and for the first time in days Van’s hindbrain noticed how her breasts strained against the fabric of the coverall. ‘How many more worlds, Van? I’d guess – a lot! And no-one will be able to go because there will be no experienced starship pilots!’

‘You’re right.’ He scratched his ear. ‘We need to consider –’

‘Don’t worry, lover, I’ve already done it for you.’ Heli straddled his thighs and sat down facing him, her arms around his neck. ‘Everyone on *Thorn*, from you down, should take on the role of tutor. We’ll institute training

programmes for those with aptitude and rotate a steady stream of new talent through here.'

'This is fine for theory, but what will we fly with?'

'Ask the Chief, Van. He helped on the design of this ship and we have design people dirtside getting blisters on their hands; he thinks we can build a small hull around the pile and one or two grav motors and that would be sufficient for local exploration.'

He was conscious of those straining breasts – 'How do you know that will work?'

Heli ruffled his hair, a gesture that brought her chest even closer to his face. 'The Chief says it will.' She tilted his head back and brought her face close to his. 'I told you long ago that I wanted to be the best number one you ever had.' Her breath was very warm on his face and her weight on his lap was causing an amazing sensation in his groin. 'Remember?'

He couldn't even nod as her lips descended upon his.

Shawcross squinted up into the sky and shielded his eyes from the direct sun. Without the glare, he could see the ghostly halo of the Great Wheel as it sat across the sky; horizon to horizon. Nearby, daytime stars flickered nervously in the presence of such majesty. Lowering his gaze, the shimmer of a far horizon tested his ability to focus. That was his destination; out there, high up the steppe; towards the shimmer.

Laura Matraine waited by the small ground effect craft. Indifferent to the far view of the Exec. Unconcerned by

the Eye of Heaven turning above. Subconsciously, her hand smoothed along the aerofoil of the little two person craft; consciously, she reviewed the flight data. The first flight of her two week ground-side stint; take the Exec to where he wanted to go along the steppe on this the last day of his two weeks ground-side.

Goddess of the wind, Diana's arrow; cool to immobility, pale as moonlight with her black eyes hidden behind shades, she waited for the Exec's move. When he was ready she would fulfill the role he wished. Her gaze briefly lifted behind the veil of her shades and took in his dark, severe profile; his eyes saw things she was not able to. He saw *through* to *beyond*.

Without words he turned from the vista and walked around the craft to his co-pilot seat as Laura settled beside him and her slim hands took control. The ground sped away from them, five metres below, as the short, bent wings captured and compressed the moist, heavy air. A high-pitched whine from the compressors played an accompaniment to the hiss of air, and vibrations rippled throughout the lightweight body. Within seconds all trace of human activity was gone, just the local bush-like flora whipping about in the turbulence, then a small river offering a relatively smooth highway down to the sea, twenty clicks away. Banks, here crowded with vegetation, there open to grassland, streamed by on either side, tossed up and down as Laura flicked the craft from side to side to keep track of the river's meanderings. A rush of colour, blur of sky. A

switchback ride on the limits of safety. Fast. Adrenaline pumping. Exciting.

The ocean looked green and cold with a one-metre chop and it gave an arrow-straight ride around the coast to where the bush stopped and the big grasslands began. There was silence in the cabin. There always was. Shawcross could see her hands out of the corner of his eye without turning his head; they appeared to barely touch the two small joysticks and her long fingers held gentle pressure against them from time to time as if to reassure the machine she was still there. Her nails were red.

To the south a haze of dust towards the horizon; blue sea, brown steppe, white sky. He pointed to it, his arm reaching across Laura's vision and the craft banked as if he had commanded it to. It was no dust storm. This was the sign that marked the passing of a great multitude and the closer they came to it, the darker the cloud became. Laura banked again to take them up-wind of the dust just in case turbo-fans took a dislike to the fine particles, and slowly the herd came into view. A rise crested and the brown of the steppe was obliterated with a heaving mass of black –

– beasts by the millions! Horizon to horizon! Flashes of white showed across the herd as heads were lifted to seek the source of the new, strange sound, but Laura had already cut back the speed and dropped to two metres, all but invisible.

Shawcross started the recorders and stared at the rapidly approaching shapes of the first stragglers outside the main

herd; bovine-like, shaggy, horned. Big. They stood nearly two metres at the shoulder and as the humans approached, several of them took a defensive position with smaller beasts behind them. Four curved horns stretched out from a flat skull, the rear set curving backwards and the forward pair framing a wide snout. Long rope-like hair hung from the shoulders and drooped between the front legs while the spine sloped down to the smaller, hairless, hind legs. Ugly.

Another pass along the edge of the creeping sea of flesh, slowly so that the recorders could gather enough comparative information, then Laura took them away into the direction the herd was heading. Shawcross keyed into the recorder: "Auroch." *That'll get up Highbury's nose.* He smiled to himself.

The place was virgin grass. One hour ahead of the herd leaders. Barely a mark showed where Laura had set down; no other sound save the swish of grass against his legs as he walked a few metres into the steppe. No other sound except – *that!* He knew what it was; his pulse knew what it was. He turned back to the craft; above his head the midday sun, before him the Great Wheel. Below him – Laura lay on her back across the aerofoil. Her arms stretched out as if to hold onto the leading edge, her legs were spread, trailing in the grass. Blonde hair hung over the edge and rippled in the breeze and her shaded eyes looked straight up into the Wheel.

She was naked. Her long, sinuous body glittered in the sun, shaved smooth of hair, pale on pale, marked only by her

small proud nipples and blood-red nails. She was waiting. In silent demand.

Equally silent, Shawcross left his own clothes behind on the grass; equally silent, he went to her, feeling the breeze stir the fine black hair that covered his lean, hard body. Equally silent, he leaned over her, feeling the sharp edges of his teeth with his tongue – *my turn*.

## Chapter Seven

### Discovery

An onshore wind, warm and salt-laden, presented itself to Gunda Wobek. It brought her the flavours of air and water and she knew their tastes. Three kilometres from the sea, on savannah-like coastal plains far enough away from the future direction of planned civic development, amid plantings and samples and insects and worm farms, she stood and embraced the messenger. Her bare feet rested in the black soil and her arms stretched out in welcome as she was recognised and the gift delivered. It felt *right!* Otto was

nearby and as their eyes met he gave her a small nod, as if to say – *I've felt it too*. His nose had a smudge of dirt on the tip from smelling the soil, incongruous in someone else, natural in him; his badge of office.

A communicator burred away behind her, calling her name. As she turned to pick it up the whole of the plain came into view and the scope of their endeavours was there for all to see. Dotted across hundreds of square kilometres of plains were dozens of silver, mushroom-like structures twice as tall as a man; solar power collectors and water precipitators for the experimental plantings around each one. She and Otto had hundreds of people out there, working, recording, sampling – the communicator intruded again and she picked it up. The small screen identified her caller, Bjorn Linders, one of the project lab techs. He was peering at her over his rimless glasses.

'Something odd has come up, Gunda. We've just downloaded the deep radar imaging data for your area and there appears – hang on, can you see any detail if I hold up the print out?'

The screen was too small, the images blurred. 'No, Bjorn. Put it through my holo, I'll go over to it now.' Gunda walked towards the utility sled that was plugged into the silver mushroom and beckoned to Otto to join her. They arrived at the same time and she powered up the holo-comp they always carried. 'It's coming through now, Bjorn.' Coloured bands appeared in the air, each

one represented an element or soil density or rock strata of the area around them. Imaging deep into the earth to allow better understanding before they commenced operations.

‘What am I looking for?’ she asked, but the question was rhetorical; Otto’s finger was already pointing to it. A circle. Two metres under the ground and just below the high tide mark – a perfect circle

‘What do you think it could be?’ asked the voice from the com.

Otto tipped his chin to the holo. ‘Intelligence,’ he said.

Anderson Clarke-Pulow was that indispensable member of any community; the jack-of-all-trades. Teacher, colony historian, archaeologist, he would cheerfully lend his talents to whichever course he was directed. There was no disguising the fact that he was built for the bookish life, there wasn’t a firm muscle on his short, rotund figure. His hands were soft and blistered easily and his eyes tended to water if he had to brave the bright outdoors without shades. A ruddy, gnome-like face completed the smiling caricature, saved from the ridiculous by the shock of thick black hair that was always neatly parted and groomed. But not many people made the mistake of equating the mind inside the body with the external appearance; those that did, never repeated the error.

His hands shuffled the printouts across the makeshift bench; eighteen plates that made a mosaic of the coastal waters below the colony. Eighteen images that showed the

scope of the mystery and for every one he had to beg and borrow access to the satellites; each one taken when other workloads permitted.

Seven circles dotted the shallow coastal waters, stretching over an area four kilometres east. They were big; fifty metres in diameter and they appeared to be roughly the same distance from each other. All but one were in deeper water of thirty metres or more. The one nearest the colony, the first one found, was in four metres of water and only twenty metres offshore. This was his target. This was the reason he was sitting in a borrowed tent a few metres from the shoreline with a small group who had succumbed to his persistence and allowed themselves to be volunteered into helping. *Thank God they did!* he silently prayed, as he donned his shades and left the tent.

Stella Decroix looked up from the group she had been briefing. ‘Anderson, do you have any instructions before we launch?’ She liked the archaeologist, he had come to her as soon as the first findings were known and had asked for her help. She had put the geological picture together, now they were going to explore the site.

‘Not really. I’m just going to confirm the scan pattern with your operator and once you’re ready I guess we can begin.’

‘Right.’ She turned back to her group. ‘The lasers are set up to grid the area and they will control the path width of the sounder.’ Several people looked over to the pontoon that carried a desk-sized piece of equipment. It resembled a small crawler tractor that had been put together by a committee; an untidy

heap of disparate parts where arms, treads, power packs and control devices competed for space. ‘That unit is a prospector; obviously aesthetics was not part of the design team’s brief, but it is efficient and carries close imaging radar, deep image probes, sonics and lasers. It also has a sampler attachment. We have it for one day and lucky to get it. Let’s make it work!’

The pontoon moved to the dictates of the laser, water-jet motors automatically adjusting to keep the speed and position within guidelines. The water was flat with a slight swell, not enough to hamper the operation and slowly the pontoon trawled back and forth across the site. All information was fed up to the holo in the tent and as the pictures built, more and more people crowded around to see. Stella’s model of low-lying plains being flooded as a result of the retreating ice was already programmed; the prospector would build on that.

Anderson interpreted for the watchers, a running commentary of the first evidence of non-human occupation. ‘They’re logs. See? Set into the ground to make a wall.’ He waited for a while. ‘Yes! They appear to be set one and a half metres into the ground and rise – one and a half metres.’

‘They’re all even along the tops,’ Stella pointed out. ‘Hard-pack floor – interior pole – probable roof support – short poles, about – ten, on the periphery. Probably an entrance.’ The images built up and virtual programmes showed a ring of poles forming a large circular wall with one entrance. Inside, another ring, wide spaced. Roof supports. Everything else was bare. Whatever had occupied this place

was long gone. Even the roof trusses had been swept away. There was nothing left, except –

‘Look there, Anderson.’ Stella pointed to the centre of the circle.

‘I see it. A small, dense object, exact centre of the ring. About –’ he consulted the computer, ‘– half a metre below the floor level. Football size.’

The prospector trundled down to the water, its treads digging in to the sand on the narrow beach. Set free from the pontoon, the machine could now operate in its true environment with a defined target. Slowly it disappeared from sight beneath the water, and Anderson and Stella Decroix clustered around the remote console as the operator guided proceedings. The water was clear but that fact was of no importance; their target was below the seabed. On the two screens before the operator, the real and the virtual. On both, the position of the target was imposed.

A trench was water-blasted alongside as the prospector’s probe sank deeper and deeper, down through the sediment of millennia, down past the ancient hard-packed floor and into the original soil.

The target was now exposed in the side of the trench; a few water blasts and it tumbled out and came to rest a few centimetres below the probe. Anderson motioned to the operator, and on the virtual screen the target took shape – a pyramid.

‘Can you get the sampler scoop under it?’ Gently, the rock scoop burrowed forward and up, bringing with it the first proof of another intelligence.

Peter van Diemen had made the trip down from *Thorn*. *Orbital!* he corrected himself; his ship was no longer a ship. A backward view as the shuttle undocked and dropped away from night into daylight had shown him the shell of *Thorn* trapped like an insect in the metallic web-like tracery of the orbital’s construction. Pinpoints of bright weld-arc had shown him the ever-expanding and self-consuming nature of the beast in metamorphosis.

Technically, he was still head of the expedition. There had been no political activity or determination regarding the new colony; the original programme was being followed to the letter, as if the mere act of obedience strengthened their links to home. To Earth. The senior officers of the science groups and the starship constituted the leadership of Canaan.

And before them now was the one thing that no-one had foreseen, the one thing a procedure manual had not been written about, the one situation where there was no experience of to fall back on; they were on their own with this problem. Van peered through the clear, sealed plastic of the vacuum box; through the other side the face of Bill Highbury stared back. Between sat the gleaming evidence of alien craftsmanship.

‘A pyramid,’ said Van, stating the obvious.

‘Close, Captain. It’s actually a ziggurat.’ Anderson Clarke-Pulow was still coming to terms with the enormity of the discovery and with the surprise he felt at meeting the almost-legendary Captain van Diemen. They had never met before, and the cigar-smoking, rumple-jacketed bear he had just met was far removed from his, or anyone’s, idea of an heroic star-ship captain and already he was adjusting his thinking in line with the reality. *I’d better get it right, warts and all, if I’m going to record the history of this place.* ‘You can see the ramp that winds up and around all four sides –’ his laser pointer traced the progress, ‘– and ends at this temple-like structure on the top.’

Van tapped the box with a knuckle. ‘Why the vacuum?’

‘Possible contamination.’ Anderson nearly added “sir”. ‘We sealed it in immediately and cleaned it down with sonics.’ The ziggurat sparkled. ‘It’s gold, of course. Weighs close to four kilos.’

Bill Highbury straightened up. ‘Obviously an object of some cultural significance to the owners.’

‘Judging from its position in the centre of the site, I would say that’s true. However,’ Anderson looked directly at Van, ‘it’s speculation at best. We don’t know enough from just this one item. What we do know is this –’ he ticked off on his fingers, ‘– they could work metals. That implies mining, smelting and casting. The object –’

‘Primitive societies can do that,’ Van interjected.

‘That’s true, captain. This object, though, represents something that a primitive society would struggle to put into

practice if it was only an abstract thought not predicated on reality.' The pointer scribed a circle around the base of the ziggurat. 'If this is built to represent an actual construction and if *we* built this based on our human-based scale, this object you're looking at would have the same footprint as the Great Pyramid of Cheops and be two-thirds the height.' Silence greeted his statement as each there processed their own thoughts.

Van looked at Stella Decroix then at Anderson. 'How likely are we to find the real thing lying around somewhere?'

Stella got there first. 'Unlikely. These constructions,' her hands waved towards the deep image prints of the circles, 'have been buried for approximately four to five thousand years. They were built during the recent ice age and drowned when the ice melted. Where we stand now would have been a long way above sea level and I'm certain that any civilisation would have been down on the lower plains.'

'It's possible,' Anderson continued, 'that what we have discovered may have been the final phase of a society coming to terms with a changing world and that the object of their veneration lies buried in deep water. As the water rose, they built higher and higher to escape. It's possible, but it bothers me, all the same.'

'Why's that?' Stella asked.

'There are no further signs of civilisation; no roads, no crop fields, no quarries. Nothing. There are no signs of any semi-intelligent hominid anywhere that we have looked. No monkey equivalents, no organised groups,

no intelligent carnivores; nothing! Nothing that could possibly rub two sticks together.’ He paused, ‘No evolution, no devolution.’

Bill Highbury decided it was time to enter the discussion. ‘Our high scanning has been fairly well detailed as far as the local environs are concerned. Apart from the large herds of –’ he shuddered at the word, but it had stuck and he’d had to live with it, ‘– aurochs, there are groups of predatory, warm-blooded lizards that prey on them. We’ve found tree-dwelling proto-birds with scales and feathers, we’ve found insects and ground-burrowing mammals. That’s just some of the variety. Hundreds of mammals, dozens of lizards and birds. Thousands of insects. Nothing with a brain.’ He shrugged. ‘Sorry.’

‘Could a people totally die out in five thousand years?’ Van asked the question as he prepared to fire up one of his famous cigars.

Anderson couldn’t take his eyes off the glowing tip; he’d never seen anyone smoke before. ‘The site has been buried for that time; it’s possible for them to have died out a lot earlier than that. We will certainly need other evidence before we can even begin to understand what we have here.’ He looked at the enigmatic ziggurat. ‘You do not build an advanced civilisation behind a retreating ice age; you survive. You do not create a technical capacity without visible evidence of how you attained that capacity. And you do not just die out. Not without the assistance of some agency or other.’

‘What sort of agency?’

‘Oh, disease, for one. Cataclysmic events, for two. You know; the dinosaur-meteor theory. Warfare wouldn’t do it.’

Smoke curled. ‘Nuclear would. Or biological.’

‘Sorry, Captain,’ said Stella. ‘Radiation levels are very low and even. No hot spots.’

‘If,’ said Bill Highbury, coming to grips with the only other logical explanation, ‘there was a disease or famine, we would need to find burial sites. Corpses. Something we can test. All we can do at the moment is test this object and some of the wooden fragments that came up with it. And, of course, step up the monitoring of the colony.’

Later, two of them stood alone with the golden mystery. ‘I’ll get my people to keep an eye out for any irregularities in the field reports.’ Stella could offer no more. ‘If anything does turn up you will be notified straight away.’

Anderson cradled the top of the box and peered down between his arms. ‘I’ve often wondered how we would react to the presence of another intelligent life form. I mean; there’s bound to be some.’ He looked up into Stella’s eyes and she saw the fire within. ‘But why something that is so familiar to us? Why something that is so totally and utterly un-alien?’

Hydroponics gave Sheri no respite from the well-wishers; she had hoped for a nice quiet job in a nice quiet corner somewhere working a computer and keeping track of the business of plants. She got the computer, but as for the rest –

the place *crawled* with people, many of who took time out to look in on her. Well meaning but wearying. She was finding her reserves running low; everything was uncomfortable, everything ached. *Please God it's over soon*, she invoked. *Only another three weeks to go!* A shadow crossed her vision and she struggled to rise as Helena Bormann entered her workstation.

'As you were, Morgansen,' said the number one, coming in and sitting on the edge of the desk. 'Have you been having regular checks? You look pretty awful to me.' Concern was in her voice; Gunda Wobek had been concerned for Sheri and had asked her to look in.

'I'm fine, ma'am. Just tired.' Her voice said it all.

'If you like, I can order everyone away, give you a bit of peace and quiet. Or maybe Dr Eletov should have a look and confine you to rest.'

'No, ma'am. Honestly, I'm fine. I'll just be happy when it's all over.' Her hands cradled her enormous stomach.

'Every woman says that, I guess. I've never had children, but I think that's how I would feel.' The tough commander suddenly seemed more human to Sheri's eyes; softer. 'Still,' she continued, 'it is a rather important event. Not just for you, you know. For everyone. The first child born on a new colony. The first one here, in the 'Clouds.' She rose to leave. 'Take care, Morgansen. OK?'

'I will. Thank you ma'am. Ma'am? Could I -?'

'Go ahead.'

Sheri was nervous, but she had to ask. 'Do you think it would be all right if I approached the Captain -'

‘To marry you and Bender?’

Sheri smiled at the thought. ‘No ma’am. To be godfather to our child.’

Helena blinked in surprise – this was unexpected! ‘Sheri,’ she answered, using her given name for the first time, ‘he’d be delighted!’ Helena left, smiling.

## Chapter Eight

### **5.02new era.**

Five years on –

– it was a city like no other ever was or ever would be.

Expedience over elegance; makeshift giving way to modest. It was new and ugly; functional rather than fashionable. It was Canaan the city, on Canaan the planet and it was the first home of mankind in the Larger Magellanic Cloud. It was unique.

It was also the first world found with the mark of another species. An unknown species. An alien species.

Elder Magnassen could look at the sprawling frontier town and take pride in his accomplishments. Five years on and already there was a permanency to things, an order. Gone were the temporary camps and amenities, gone were the dump piles and recycle pits. Now, wide hard-packed earthen roads radiated out from the centre to link up all the new outlying areas. They ran north, along the coast where the ever-growing nets of the fish farms reached into the shallows, and eastwards, where the new kibbutz farms spread down to the sea and across to the horizon. They travelled up-slope, to the south, where the tiny foam-built houses for those with families produced a multi-coloured display that marched over the low hills towards the shuttle field beyond. And to the west, the roads splayed out, finger-like, to service the burgeoning industries that tried to keep pace with the frantic race to develop. And in the centre, hazed by the dust of travellers, was the low, one level complex that made up the heart of Canaan. Administration. Hospital. School. Crèche.

The crack of an incoming shuttle broke his reverie and he turned from the window to the job at hand. And a difficult job too, he mused. He was a tall, athletic man, with a firm grip and a steady eye; blonde hair prematurely balding only served to accent his hawkish features. And like everyone else who had been picked for the colony, he was very good at what he did. Administration. Municipal management. His task was to lead the fledgling town through its embryonic

stage to a point where its viability was assured and the process of political diversity could begin. And expansion. *Ah, yes. Expansion. That was the problem.*

He was reminded of the purpose of his visit with the community's head medical officer by the noise her shoes made crossing the floor as she returned with two mugs of steaming coffee. The big, open office that all shared tended to be cold in the winter months; with most of the power allocation going to the industries and utilities, the services had to make do with solar power only. Sometimes it wasn't enough.

'Thank you, Doctor,' he said as he took the mug and sipped, letting the strong brew add its power of warmth. Dr Marcia Weller held her own mug to absorb the heat through her hands. She had very small hands. Petite was the word that best described her. Brown hair functionally pulled back made her look young and fragile. She was neither. In fact, for Elder Magnassen, she was his toughest opponent when it came to negotiations for resource allocations; her views always carried weight with the general population and she championed their causes with a passion. Especially those of the mothers. *Oh, God. The mothers!* He sighed inwardly, knowing that any sign of emotion on the issue would be seen as a sign of weakness and seized upon. *The mothers. Here we go again.*

'Let me see if I can guess the reason for your complaint, Marcia,' he began, grabbing the initiative. 'We're going to be crossing swords over the maternity programme.'

‘If you agree to be reasonable, Elder, we won’t cross swords at all.’ Her voice was small and soft. *Another illusion.* ‘We have to increase the mid-wife rate of training; we have to build additions to the maternity section at the hospital; we have to honour the terms of the population programme and we have to plan for a major increase in crèche and school demands.’ She stared at him. ‘We don’t have any choice at all if you want a healthy population growth.’

‘Absolutely true.’ He meant it. Three years ago he had been instrumental in arguing for a huge leap in the birth rate. It would be the only way a fledgling group would survive; populate or perish. Preferably, every second fertile female should be pregnant if the original one hundred thousand needed to boost its genetic pool and population was to be sustainable. And it had worked. In the five years since the founding, the numbers had more than doubled. Now the good doctor wanted to boost that again with compulsory pregnancies, bonus allocations for in-vitro twins, expanding the bio-mechanical proto-womb programme to access the billions of sperm and eggs cryo-stored in the orbital. As well as increasing the infrastructure on the ground to cater for all this. ‘And, just as absolutely unobtainable.’

‘We’ve done our sums on this, Elder. The goals are achievable with a thirty percent allocation increase for one year, with a five percent drop on subsequent years, after which the natural curve of supply and demand will match the expansion rate.’

‘Marcia –’ *thirty percent! I can hear the wails now* – that increase will retard our capacity on several fronts. One. Production of goods from consumables to transport to food processing is finely balanced to serve our needs one year ahead. If you took ten percent out of that capacity, we would run into serious shortages within six months.

‘Two. Housing. Relies on cellulose production for most of its basic materials; every building has cello-foam walls. Reduce production and you reduce housing. Three. Utilities. Our biggest expanding area. Power. Water. There’s never enough.’ He indicated the cup warming her hands. ‘Four. Health care. Absolutely critical to maintain the highest standards; wouldn’t you agree.’

His protagonist smiled. *Oh, Oh* ‘Five. Our pie in the sky.’ She pointed upwards. ‘Some of us feel that the demands of maintaining the level of orbital involvement outweigh the benefits.’ She took a sip and watched him over the rim. ‘What do you think?’

*Careful here!* ‘All our satellites are controlled and repaired up there.’ A nod greeted his answer. *It’s not that.* ‘All our microwave and beamed power comes from there.’ Another nod. *No, not that.* ‘They produce huge quantities of food.’ Another nod, but this time accompanied with a frown. *Getting closer.* ‘Zero-gee engineering. Lots of that.’ Tight lips and a look of concentration. *On the button now!* ‘All flight and systems training is carried out there.’ *Bingo!*

Dr Marcia Weller could not hide the look of disdain that crossed her face. ‘Most of the planners here have already

agreed that the so-called flight systems training is nothing more than an exercise to justify the privileged positions of a few increasingly irrelevant star-ship personnel. You know what it costs to transport our people up there. You know that the whole shuttle production industry is enormously expensive in terms of materials and manpower; and for what? We already have six, how many more are there to be? And again, for what?

He'd heard some of this in recent times, but up until now the orbital had been off-limits; apparently there was now a new line of thought about the long-term prospects of further star travel, *and he'd missed it!*

'All processing and the hydroponics can be relocated down here,' Marcia continued. 'Leave the medicine and cryogenic facilities; satellites and astronomy stay along with some of the engineering.' She put her empty cup down. 'Do it now and put what we save into the population boom. It will pay dividends for you.'

He ignored the none-too subtle inducement. 'Marcia, you realise what you propose will effectively leave us without any starship capacity? There will be no one to carry the knowledge, to train others'

'On the contrary, Elder. We will always maintain the orbital and I am sure there will be enough trained people to further explore this system. But we do not need a starship! We are not going anywhere!'

*I'd like to agree with you doctor, but there are some mighty compelling arguments against you.* 'Tell you what. Assemble your lobby group and give me a few days to organise the

venue. Then you can put your proposition before the full and proper authority. How's that?'

'I'm almost suspicious, Elder. But I'll take you at your word. A full council determination is one we will happily recognise.' She took her leave and Elder watched her progress across the crowded floor.

*Be very suspicious, good doctor. Very.*

Three days later Marcia Weller received the call. Elder's face peered out of the screen at her as he confirmed her party. 'Oh-ten hundred hours tomorrow. Is that OK?'

'That's fine. There will be four in the group. Admin block?'

Elder shook his head. 'No. Meet at the shuttle field. Bring an overnight bag.'

'What? What are you talking about?'

'You wanted to present your case before the proper authority didn't you? Well then, in all matters terrestrial, I'm your man.' Elder's face now grinned at her. 'But there are constitutional and contractual separations of power that limit my interference in matters – shall we say – non-terrestrial.'

'Elder! What have you done?!'

'Tomorrow morning, doctor, I will escort you to the orbital where you will have the opportunity to present your case to the one man who can actually do something about it. Our good Captain Peter van Diemen. Until tomorrow!' The screen darkened.

And so too did the face of Dr Marcia Weller.

‘Daddy! Daddy!’ Wet feet slapping on wooden boards, giggles and shrieks following. ‘Daddy!’ Carl Bender finished tying off the painter and stepped up onto the pier, right into the arms of a four-year old whirlwind. Flowing brown hair matted from the sea, freckle-ringed blue eyes dancing with the light of innocence, skin tanned by sun and stars. She launched herself at his neck and clung tight, feet clawing for purchase. ‘Daddy. Mommy says you’re home for a while now!’

‘Hey! How’s my Jasmine? Hey?’ He kissed her neck and looked up to where Sheri was walking up the pier. Carl ruffled his daughter’s hair as he enjoyed the sight of Sheri with the twins; two years old and tough as nails, Sheri had to hold the boys back from running to their father. It was a good sight after two weeks away setting up the estuary pens; two weeks of hard work to get the new farm ready for the fingerlings. The success of the fish farming had taken everyone by surprise and demand was huge, especially after the years of bland, processed food concentrates and yeast cultures. Skilled workers like Carl Bender were always in short supply; he was always busy.

Bare foot and bare legged, lean and muscled with his long salt-laden hair hidden beneath a battered wide-brimmed hat, shades, tanned skin; a far cry from the space jock of old. Sheri smiled at the sight of him and their lips met while the two boys pulled at his shorts for his attention; her probing

tongue told him how much he had been missed. He replied in kind.

Home for Carl, Sheri and the children was luxurious by contemporary standards; if you didn't mind the constant fragrance of fish, fishmeal and ocean. If you didn't mind being isolated twenty clicks from town. If you didn't mind managing the farm and being on call each and every hour of the day; all twenty-two point six standard of them.

A single long-house, rough-sawn and shingled, built high on timber poles, straddled the gap from land to sea; one end open to the boardwalk that divided the different fish pens, the other to the sandy foreshore with its maintenance shed, meal storage and equipment depot. A kilometre east was an identical establishment.

Home. For all its frontier roughness and primitive facilities, it was home. For the first time in their lives, here was a place where the two of them could dream and plan; build their lives, raise their children in a clean world where all horizons were new and reachable. Heaven.

Evening, and the warm earth-smells of the dark land pervaded the night.

A small charcoal fire glowed in a portable ceramic cookout they had set up outside on the rough planks of the boardwalk. Half a dozen small fish sizzled away on the grill that Carl had made from scavenged metal, their sweet savour drifting heavenward, and nearby a wok of fresh vegetables awaited its turn. Carl lay back in his sling chair

and followed the rise of the cooking smoke until it was lost in the glare of the stars; *that's the word for it – glare*. He spoke over his shoulder to Sheri who was half asleep in her own sling chair, mesmerised by the stellar display.

'Have you noticed that the shadows hardly ever change when the Wheel comes up? Just like being back in space, in a way.' Their silhouettes were cast onto the boardwalk below them, hard, dark shadows with well-defined edges; star-shadows. When the Great Wheel was fully risen, those shadows would elongate and move, and the world would appear brighter than an Arctic night.

Sheri heard the wistfulness in his voice and could sympathise to some degree. 'Do you ever regret coming down, Carl?' She moved the fish and lifted the wok into position. 'Even a little?'

His eyes took in her figure as she bent over the cookout; three children in five years had taken some toll, but not enough to dim her attractiveness to him. Not enough that he didn't still enjoy their private moments together; like the one they had just had after the kids had gone to sleep. He grinned in the proto-light, *nice to make up for two weeks*. 'I guess I'll always have a yearning for space. Spent too much of my life in it, love, to ever let go. But I've still got the roster, you know.'

Vegetables spat in the hot oil as she stirred. Van Diemen's roster; keep all the crew rotating through a training programme. Help to keep up your own skills while assisting the new recruits to assimilate to starship life under the captain's scheme to maintain starflight capability. She

flicked hair from her face as she placed fish and vegetables into bowls. *You're a good man, Carl, and I love you for that.*

They ate with chopsticks, sitting side by side, feet dangling over the edge of the boardwalk. Slowly, the lord of the heavens rose in the eastern sky, on the first part of his journey to fill the whole night sky with incandescent glory, to shine his light on all things his.

## Chapter Nine

### Orbital

The orbital that once was *Thorn* spread its spidery arms out from its fat, bulbous body and obliterated the constant silver background of starlight. Seen from the shuttle, the orbital was a welcome blackness against the unrelenting light, which brought relief to the eyes of Marcia Weller. Flying was not one of her favourite pastimes and zero-gee just made it all the worse. She had fought to keep a pleasant face all the way up, certain that Elder Magnassen was aware of her discomfort – *and probably enjoying it too! Just like that smug, scrawny bitch flying this thing* – but she had not given in. That was the main thing.

The big shell of the starship was covered in portals and openings; lights blazed forth from within and small tugs pushed and pulled cargo pods in seemingly random order into or out of the shell and throughout the rib-like strands of the orbital's support structure. It was impossible to gauge the size of the thing although she knew it covered an area of seven square kilometres, nothing of the shape of it was recognisable save for the main bulk of *Thorn* and ribbons of riding lights that led out to arc-lit platforms of activity. As the shuttle moved around the curve of the hull to dock, all aboard noticed the huge gantry hovering over the stern of the ship and the massive array of lights that probed within the peeled-back hull skin. Marcia peered at it intently; *another waste* –

Of all the members of the group that had travelled to orbit, only Elder Magnassen was prepared and knew what to expect. He'd met Peter van Diemen before. Certainly Marcia Weller's people had expected someone entirely different from the urbane, smooth captain of industry they met – *maybe they expected Blackbeard*, and Elder smiled at the thought. There had been no formality whatsoever, as if the group was not the important delegation they thought themselves to be and that in itself was alright to Elder's way of thinking.

He had hung back from the group after introductions were made and watched events unroll. To his way of business, they started off on the wrong foot, and just kept going. They called Van "Herr van Diemen" when he had

introduced him as “Captain”. They declined a tour of the ship. They even declined a shot of Van’s famous ice-cold genever, offered in the interests of settling a stomach sensitive to the weightlessness of the trip up. Elder didn’t. To the clink of glasses, he met Van’s eyes and both saw the amusement in each other’s position.

It went wrong for Marcia the moment they approached the table and Van pulled back the chair at the head then offered it to her. ‘Herr van Diemen,’ she began when the others had taken their own places, Van and Elder side by side on her right, ‘it’s –’

‘Please,’ Van said, ‘I would prefer you called me Van.’ He looked around the table at the others. ‘Anything else is so formal; we don’t stand on too much ceremony up here.’ He had made a considerable change from the character he had been as Captain. Gone were the rumpled jacket and coveralls. Gone was the gruff exterior, the flint-face of command. In their place was a well-groomed man, casual in slacks and open shirt, unadorned of any symbol of authority save his own presence; and that was still pretty imposing. It had been Helena who had been instrumental in levering him out of the role of yesterday’s captain of starships into the figurehead of tomorrow’s captain of industry, farseeing and tough. He liked it.

Marcia eyed Elder before addressing Van, but the municipal manager gave no clues, either with his eyes or posture. ‘I would prefer a formal approach, if you don’t mind,

Herr van Diemen. That way there is no confusion as to our relative positions.’ No way was she going to fall for that old buddy-buddy scenario, she seethed. Needs were too critical for anything other than the clear and absolute delineation of power so that this farrago in orbit could be brought to a long-overdue end and the needs of the real pioneers down on Canaan catered for.

‘You’ve obviously read our allocation requirements,’ she continued, ‘and how they affect this – establishment. Now, while we feel events should proceed at a pace sufficient to maximise the benefits of resources for the people who constitute the vast majority of the population, we,’ she nodded over to her three companions, ‘feel that we must set in place, here today, principles of intent to deliver these benefits. While of course –’ she gestured open-handed towards Van, ‘– retaining the core functions here.’

Van flicked open his folder and scanned through the contents. He smiled up at Marcia and Elder winced at seeing it. ‘Core functions. Yes. Here we are. Supplementary hydroponics. Astronomy. Satellite maintenance. Some zero-gee medicines and some of the cryo-banks.’ He closed the folder and looked at Marcia. ‘Not a lot to do for such a large – establishment.’ Elder helped himself to another genever and topped his coffee up; *I’m going to need this*. ‘Most our food production and engineering to go. All starship flight activities brought to a halt. That’s a lot of expertise to lose, Doctor.’ He fixed her eye with a steady gaze. ‘Once gone, never to be regained.’

‘Herr van Diemen. Nothing will be lost! All resources and skills will merely be relocated so that they can best be directed to maximise their value to the common good. There are some very important projects that simply must be addressed; the birth rate, for one!’ Marcia struggled for a moment, as if seeking the right phrase. ‘Think of it as integrating our assets into an ever-growing pool.’

‘Ah. Who’s assets are we talking about?’

Marcia was non-plussed. ‘Why, ours, of course, Herr van Diemen.’ She smiled at Elder. ‘Canaan’s.’

Van pushed back into his chair and reached into his top pocket for a cigar. Tobacco had not been allowed to be cultivated groundside and any that was in use had obviously come down on one of the shuttles.

‘Doctor Weller,’ Van talked around a mouthful of smoke which he exhaled towards the ceiling, ‘there’s a point or two we need to clarify before we divide the spoils. Basically it comes down to this; *Thorn’s* commitment to the colony is in delivery and safety. Anything beyond that is at the discretion of the master of the ship. Me.’ He surveyed the faces, ignoring Magnassen, *he* already knew the truth. ‘All sailing personnel are at all times under the command of the master of the ship and subject to the terms of corporate contract. That contract is still in place until such times as the board decides otherwise. Directors of the board on *Thorn* are myself and Chief Engineer Kronfeld.’

The room faded into silence. Marcia Weller’s jaw moved a couple of times as if she wanted to say something half

thought out and Elder Magnassen caught Van's eye and gave him the slightest of nods.

'Captain. If I may?' He indicated the table at large. 'Doctor, I've tried over the last year or so to steer a course between all the interested groups that clamour for a greater share of allocations.' He held his hand up to forestall any comment. 'Every single cause is legitimate, but we have finite resources at this point. Now. One of the parameters I, or any administrator is charged to abide by, is the rule of law. Simply put, until this colony achieves a political consensus, all law is defined as the contract and charters we first agreed to. I am the chief administrator of the human colony of Canaan, Captain van Diemen is the legally constituted CEO of the orbital habitat of Canaan.' He held up two fingers. 'Two societies, Doctor, that up until now have worked together very well.'

'This habitat cannot support a viable population, Elder!' Marcia looked to her three colleagues as if for confirmation. 'It depends totally on the colony for personnel just to keep it going.'

'True enough,' Van agreed. 'But the idea is not to form a separate society in orbit. The idea is to be an extension of the colony, to maintain and increase skill levels, to offer the opportunity at the right time for the further expansion. Now, more than ever, when there is no fallback position, no other source of technology to draw on, no other population centre, now is the time to push ahead with the hard decisions.'

‘We’ve done that, Doctor. We have over two thousand personnel working here. Not all at once, we rotate ground-side on a needs basis; but we provide, up here,’ his arms swept the room, ‘all the wherewithal to support that number. And more. On top of that core, there are nearly twenty thousand people on Canaan who have been trained in aspects of spatial enterprise, or are the families of trained personnel.

‘At this moment, we have sufficient trained crew to actually operate a space programme. That includes developing intra-system travel, as well as star travel.’ Van held her eyes with an unblinking stare. ‘I trust that you realise that our primary function here is to maintain our technical capabilities in all things concerning star-flight? Well, we have done just that. More. We’ve actually increased our operational capacity. Within two years, we’re planning to have a new starship completed.’

The accumulated shock of one surprise on top of another had a dulling effect on Marcia’s anger. ‘Starship! What starship?’ she asked, in a strangled voice.

‘*Thorn* has had two of the gravity generators removed and a small shell will be built around them. You probably saw the work in progress as you docked. We also took out the fusion pile for our needs here and replaced it with a new, smaller unit. One of our science staff, Dr Gabriel Blum, has recalibrated some of the parameters of the old generators and devised a modified principle.’

This was news to Elder, but then again, he shrugged, what wasn’t? ‘Why,’ he asked, ‘would you need to modify the generators?’

‘Simply put, Elder, besides performing as an FTL drive, the new-type generators will allow the ship to ‘slide’ within a gravity envelope. That means micro-jumps within the field.’ He saw the confusion on the faces around the table, and qualified himself. ‘It means that a starship can also operate within a planetary system. Interplanetary travel.’

Elder Magnassen let out his breath in one long sigh. *News indeed!* ‘I think now would be a good time for some of the genever, Van.’ He looked at Marcia as she tried to digest the last few minutes. ‘Don’t you, Doctor?’

## Chapter Ten

### 7.04new era Loss and Finality

The horses were a Godsend.

Whatever unsung genius had thought of including them in the gene-cryo banks should have a medal struck after him, mused John Merrick, as he hoisted another sack of fishmeal onto his shoulder and tossed it into the open hold of the freighter. A train of three wagons inched their way

towards the skimmer as John and the freight crew unloaded each one by hand and stacked them into the hold. Each wagon was drawn by two horses and the wagons themselves were pure frontier practicality, native timber platforms and wheels, with friction-less bearings and ceramic tyres.

The smell of the meal formed a pungent envelope around the craft as the heat of the day and the absence of breeze contrived to concentrate the aroma and meal-dust in the one area where it was guaranteed to maximise discomfort. John wrinkled his nose at the smell, although he was used to it by now; how could fish eat this crap? he pondered, between sack loads. Dust from the horses' hooves as they shuffled in position added to the ambience, and their brown eyes watched with complete indifference the efforts of the sweating humans. These horses were the first batch to be processed through the bio-mech wombs three years before, and, along with the dogs had been the main test programme of the wombs. Success had rated in the high seventy percentages and development had since increased those odds to the point where human foetal gestation was scheduled for commencement within the next year. John Merrick hoped so; he and his wife were on the list for adoption to add to their natural-born three.

The skimmer settled slowly as the weight was added and the load monitor chimed in. John wiped sweat from his face and looked at the last wagon, five sacks left; two hundred kilos. Not enough for a return trip, too much to

send back. The dock foreman caught his eye and shrugged the question, arms held out and palms up; *what do you want to do?* He looked to the sky, the sun was directly overhead and the air was clear, hot and still. 'Load 'em,' he said to the foreman. 'I'll take it slow and low.' He grinned his certainty. 'No sweat.'

Sheri waved goodbye and the little arms of her three children waved back in unison from the cab of the flatbed hauler. School day. Sent there with the morning fish delivery, returned by municipal transport. 'Bye,' she called. 'Be good for Frau Christiansen. 'Bye.' The cab rose as the compressors filled the lift skirts and then the two refrigerated trailers followed suit. Dust whirled up into the hot, still air and hovered there long after the road train had whined its way out of the compound and onto the savannah.

She returned to the house, stepping through and picked up her hat, shades and com, before stepping out onto the long, narrow floating pier that led five hundred metres straight out to the edge of the farm. This was Sheri's routine; walk out past the pens, check the net tensioners and strain gauges; down to the end of the pier, where the big sieve net that separated local sea-life from the gene-modified terran model ran east-west, download into her holo-comp the tidal information from the monitor station. Turn east and walk another kilometre to the end station where Carl would be preparing the daily lab samples for testing; then the two of them would have a coffee then start the daily feeding routine.

Long days. Routine days. She loved them.

Turbines bit the air hard as they sought to move the freighter's mass. John Merrick could feel the strain as he boosted the engines; the craft felt sluggish, but stable. Slowly he rolled forward onto the short ground-effect runway and pushed the power all the way up to get lift speed. It took a long time; although time is subjective in the context of a hundred-metre runway, he needed every millimetre of length it had and every slow second they took. For a moment his heart raced and doubt crept into the back of his mind as the craft refused to get into the air. He contemplated the emergency run-off that was fast approaching, visions of professional disgrace looming before him. Then the nose came up, the aerofoils grabbed at the hot air and the craft became as weightless.

Except. Except that he could feel the drag on the controls and the wallowing motions when he changed direction. The turbines were working hard, he could hear them pitching up and he didn't like it. For a second he contemplated turning back before he realised that the wide turning circle he would need to keep the effect beneath the foils would be a dead giveaway to any observer that he was overloaded. He dismissed that thought and settled on five metres altitude and a slow wide arc down to the coast. *Two hundred kilos! That's only two big passengers extra!* He rationalised to himself. Steadiness returned to the controls under his hands and he breathed a sigh of relief. Fifteen tonnes at three hundred klicks per. *No sweat!*

The timbers on the pier deck had shrunk as they dried and through the gaps Sheri could see flashes of colour as the fish below came up to her shadow, forever hopeful of food. They had adapted well, she mused, as her tread beat time on the planking. They were even eating some of the local sea life that managed to squeeze through the sieve nets; so far without any problems. But that was their job; to learn to adapt. *We just alter them to do just that.*

Warmth soaked through the soles of her shoes and sweat trickled down her back. With her short-sleeved shirt open to catch the microscopic breeze and her long tanned legs sticking out from her tight shorts, Sheri looked as if she had been born to this world. Reborn! she smiled at the thought. Therapeutic and seductive; the sun, the water, the silence. The air.

All Routine. Stop. Check. Download. Move on. Sun and heat. Wood smell. Fish smell. Salt. She reached the sieve net; beyond, unending sea stretched out to the north. Torpid. For now. A glance down into the water told her the nets were starting to foul again and she called up the cleaning programme on the holo; another six weeks. The net stretched away off to her left as it travelled west up the coast towards Canaan. To her right, it spread down the coast to the east, towards the end of the pens a kilometre away. Where the pontoon-mounted test lab was moored; where Carl was. She headed off that way, glancing up at the sky now that the sun wasn't directly in her face. Towards the horizon she could see the faint outline of the Great Wheel, in summer it showed itself in daytime and

not even the bright mid-day sun could deny it in entirety. She moved on.

Not far to go now, grinned John Merrick as he gingerly banked to starboard over shining water that seemed to be pressed flat by the sheer force of sunlight. Up ahead the fish farm was a dark line on the horizon and all he had to do now was to parallel the sieve net to the end then bank in towards the beach. Touchdown then taxi-glide to the loading pier. He'd done it dozens of times. And such a flat day too! Perfect! He came down to three metres and cruised on in.

Carl reached into the catch bucket, his gloved fingers catching hold of the thrashing tail of a young Spanish mackerel and with one deft flick of the wrist he hoisted it onto the stun plate. As the fish stopped moving he took a quick bi-op sample and processed both sample and fish in the cryo-chamber. All ready for the trip into Canaan on the skimmer's return trip; ready for the techs to dissect and analyse.

He peeled off his gloves and cleaned up the work area. Time for coffee, he thought, time for Sheri to be here. A movement outside the window caught his eye and he glanced up, then smiled at the sight of Sheri just about to step down onto the pontoon. Something else moved. Behind her. Silver and fast.

Skimmer, his mind said. *But it's too close.*

He'd drifted. Not far, but far enough. In towards the net. With the extra weight, reactions were slow and the craft laboured, at three metres there wasn't a lot of room and ground effect craft relied on rapid maneuverability. Decision time; bring the skimmer back, cut power and land outside the net. To hell with a few extra metres of taxiing. Done. He banked to port, just enough to straighten up; power down and -- drop the last metre to the -- *he still rolled to port!* The aerofoil dipped towards the water and at that moment he knew that he had over-corrected; the extra weight had fooled him and carried the momentum over too far. Too far! Power up *NOW!* As the turbines rose to a shriek and he hauled back to raise the nose, the port 'foil tip dug into the water, and --

– and time slowed to allow his shocked brain to absorb and understand all the fine details of his folly

– of his stupidity

– of his death

– bright spray of water before his eyes – the net pier almost vertical – cartwheel of images – water above, sky below – a white square box floating on the water – a figure running through frozen time – getting bigger – and bigger – no sound, yet every noise – *'Jesus!'* lost in the finality – kaleidoscope of colours, fast and liquid – a noise beyond hearing –

– a pain beyond feeling

– a life beyond living.

Sheri heard the rise in pitch and her name called at the same time; there was fear in both sounds. Carl exploded

out of the station and across the pontoon, his mouth was open and his face contorted as if he was in agony – as if in agony – as if –

‘*CARL!!*’ she screamed.

*Please God give me the time give me the strength please God don't do this let me get her let me please God I swear please sweet Jesus no no no let me touch her LET ME TOUCH HER –*

Elder Magnassen stood on the aerofoil of the skimmer as it gently rocked in the wash of rescue craft. Pieces of wood bobbed up and down in the current-less water and a fine dusting of fishmeal covered everything. With sad eyes he noted the detached rear section of the doomed skimmer as it lay trapped in sections of the torn sieve net, the front section a faint silver gleam far below the surface. Of the pontoon and station, little remained; one float, a section of prefab wall, some loose boxes, dead fish. The display of disaster. All about were the skimmers and hovers of those who had responded to the call to rescue and in the water divers were already searching for the bodies of the victims. He knew whose those bodies were, they all did, and a pall of misery and disbelief hung over the scene.

Hand-coms chattered away as messages, information and requests were conveyed back and forth; but the sounds were muted, somehow drained. The race to get here had been fast and furious. Identified from orbit and triggered on-ground by sensors, Elder heard of the calamity within ten minutes of it occurring and rescuers headed out within

moments of that. But there was nothing to rescue, only recover.

A sweating face broke into Elder's thoughts, telling him the children were all right; they were at school. Elder gave thanks to a God he had not spoken to for a long time.

Below the water, silver shapes darted out into the unknown reaches of a new world. Modified and predatory, they sought the wild freedom the currents had spoken of.

The burials were at night, and the new stars appeared to crowd closer, shine brighter as if bearing witness to the hearts and minds of the new creatures amongst them.

No one had argued when Helena Bormann had come down dirtside for only the third time and proclaimed to Elder Magnassen her decision to adopt the three orphaned children of Carl and Sheri. She didn't even have to insist on her rights as a godparent; everyone knew only too well of the closeness the captain and his partner had with the kids. And so it was agreed, and three small individuals with a sorrow and a loss they could not understand and a pain that came to them slowly, left the memory of the dust and water and started their new lives in the world-above.

The Great Wheel threw its glory into the night sky and proclaimed its dominance; nothing could diminish the four hundred billion-voice paean of its might. Nothing.

Yet, a child—

'Is that heaven, Pappa Van?' Jasmine sat on his lap before the bridge screen and gazed in solemn wonder at the view.

'Is that where Mommy and Daddy have gone?' It was a simple question, simply asked.

'That's where they came from, little one. In the beginning.' Van's voice was husky with emotion as he replied. 'And I think that's where they have gone to. In the end.'

'Will we go there someday? Do you think?'

Van was quiet for a long time as he took in the light from home. 'Maybe,' he finally replied. 'Maybe we will.' And then, as if to reassure himself, whispered, 'maybe we will.'

# Book Two

## Darkhall Founding

### Cyclopaedia Magellanica: History of Man...

#### Field Technology.

#### Phase Two.

Small craft can be constructed to take advantage of the energy available along the world grid. The harmonic relationships of the grid are built into the shape of the craft (in later developments the size is built into ship-generated fields) which resonate and displace themselves in the time/space continuum. Craft built to accommodate the harmonic values will vibrate at a new wave amplitude and move in a space/time continuum that is at a higher level than the planet.

Low field amplitude would bring the craft in line with the visible world, but higher amplitude would take the craft out of sight and it would be able to translate or move to any desired position relative to the world-grid.

These systems are limited to orbit to ground duties, are perfect for established worlds with a grid network in place and provide a very cost effective solution to transport considerations.

## **Historical drives.**

### **Slide Variation.**

Subsequent developments led to variations in the frequency rates between two or more generators that allowed an incomplete gravity envelope to develop, one closely coupled to the Hyperbolic Tangent, but without the true harmonic balance required to achieve a Hyper Shunt.

By 'bouncing' the individual rates against the tangent, a micro-jump could be affected. Several of these in rapid sequence would form a tiny bubble of space-time displacement within the envelope, a bubble that 'slid' through the envelope.

Ships using this advanced technique could operate very close to planetary masses, the nearest stable harmonic balance of which became the Slide Point. The technique also allowed for rapid movement out of the system to the Jump point as several slides could be strung together in a sequence of slide and reality; an analogy would be a stone skimmed across water, the splashes being the reality, the gaps between being the slides.

## **A Synopsis of the era of the Kingdoms, 115ne to 342ne.**

Humanity blossomed in the rich star fields of the 'Cloud. In the face of unlimited opportunities, humanity pushed itself as never before in the hope of attaining its special place in the sun. There were no vast outpourings of peoples into the stars, the population base never supported such numbers. Rather, the initial forays into the nearby stars were by small groups seeking out their own domains. Once these small colonies proved their viability, they attracted people from the growing settlement on Canaan and these people brought with them skills and wealth.

The emphasis on technology had paid dividends. Most people were multi-skilled and highly adaptable; there was no lower order of unskilled people, everyone did whatever was necessary.

Canaan sponsored the settlements by providing the star-ships. Supply lines were short and help was, literally, at hand. The initial infrastructures, supplies, technologies and basic industrialisation were also provided, but on a temporary basis; once the viability was established and the new settlement showed signs of being able to stand on its own, those infrastructures were earmarked for the next colony of the next world. It was a period of mutual co-operation where the currency was obligation.

A social mind-set was in the process of being created, one that bonded humans together in the face of

overwhelming opportunities. A mind-set that valued each and every human equally, a mind-set that linked them altogether in their determination to ensure the survival of not just themselves, but of the human race. It was almost akin to a kibbutz, everyone supported everyone else, colony supported colony and Canaan supported them all. There were no vested interests. There were no corporations, and there were no wheelers and dealers to poison the system.

These would all come later.

Within fifteen years of the founding of Canaan, the first-visited worlds of Breakout and Smoulder supported active colonies and humanity had reached nearly two millions. Two years later, eleven systems had been visited, nine of them acceptable. By the year 48 of the new era, three of these systems had been colonised and a new attitude started to prevail on the frontiers; free from the constraints of political interference from Canaan, many sought to give free rein to their own ambitions. Powerful men with obligations from others at their call looked at the fused canopy of stars that were so near, and so attainable – and they planned the beginnings of their own dynasties.

By the year 115ne, humanity had visited and stayed upon fifteen worlds, moons and satellites. Wherever there was an opportunity, humanity had attached itself there, like moss on a rock. The further out from Canaan man went, the more he became sponsored by the now ever-progressive groups that were evolving into powerful family dynasties.

Four such groups became the main players in the game now. Competition between them spurred each one on to further and further exploration and colonisation in the interests of power and wealth.

Human nature will always insure that a certain people will always strive to attain dominance over others. Always. And sometimes, they succeed. For success or evil, for greed or power, they strive. Never for good or benevolence, never for betterment of others, but always for the darker aspects of the human condition. Goodwill and largesse are merely tools to be used when conditions make them necessary.

The formation of the period of history now known to us as the Era of the Kingdoms can be traced back to this period of time. There are no exact dates that can be identified when it could be said, "Here began the reign of the great houses," yet their influence was certainly in evidence even though the proclamations of their autocratic designs have not yet been made. But by the year 136ne all four were powerful rivals for the wealth of the stars.

On the fringes of this competition stood those who, by design, luck, misfortune or indifference were destined to play pivotal roles in the affairs of the four, yet remained free of control and obligation to them. These were the older families and businesses that had been formed and built on Canaan and the first few settled stars. Independent players who could afford to stand aside and deal with each major

house in turn, free from obligations or coercion. They became wealthy in their own rights, but were viewed with suspicion; corporate mercenaries with no allegiance save that bought and paid for.

As the years progressed, the great houses became de facto kingdoms, with all the trappings of royal wealth and power. Each of the families saw the growing clusters of colonised systems that owed allegiance to them as a personal fiefdom and it did not take long for each house to shed the last vestiges of the principles of individual freedom. Titles came into being, unarguable symbols of authority that left no doubt as to where the power lay and just what level of respect and obedience should be paid to that power.

No matter what the name, or what value of human society they purported to represent, all four societies were controlled by family dynasties. Mostly benevolent in the main, they were nonetheless autocratic in nature. Between them, they accounted for twenty-six worlds and colonies, five joint venture colonies and had five independent worlds and habitats owe them allegiance of one sort or another.

The most powerful of the kingdoms was the House of Hanso-Satt with seven established colony worlds.

The Republic of Aachen had five full colonies with two joint venture colony projects with other Houses and three small independent colonies owed allegiance to it.

The Orunn Kingdom boasted six colonies, two joint ventures and one allegiance.

The House deGuillame was the smallest of the four, with four colonies, one joint venture and one allegiance. At the peak of human expansion, prior to the onset of the war, fifty-nine worlds were partly, or wholly, colonised: twenty-two of them by the four main centres of power. There were seventeen fiercely independent planets, but not all seventeen systems belong to these worlds, and there were five newly colonised worlds that were joint venture projects of the major royal houses. Five small settlements owed allegiance to one of the four Houses and there were three minor planets or systems that had been granted minor nobility status by one or other of the main four. Finally, there were the three original worlds first colonised.

The Houses grew and dominated for a period of two hundred and twenty three years. In that time they were the economic, cultural and military powerhouses in a bubble of new generation stars that contained eleven billion people, and life, although vigorous and progressive, was, at the same time, safe and prosperous. The rule of law dominated, with variations from world to world; people felt secure and trusted the powers-that-be to provide opportunities for on-going enterprise. There was no physical rivalry between the four Houses, although some disputes over territory and areas of exploration did spill over into conflict; these, however, were short and sharp with no on-going consequences.

Most trouble came from the independent worlds and their inability, or reluctance in some cases, to police the activities of disillusioned elements among them that preyed on the success of others.

The independent worlds were distributed at the edge of the group of new generation stars that bordered the older stars towards the centre of the 'Cloud. Their original founders had fled from the controlled and orderly societies that were coalescing in the centre of this area of new stars, and, leapfrogging each other in their haste they reached in towards the dense centre of the 'Cloud where the new stars mixed with the old. A long, straggling trail of sparsely-civilised worlds pointed like a finger to the heart of the 'Cloud.

While these worlds were civilised, conditions were not easy; low population bases meant a lot of work for everyone and if an advantage could be gained by the expedience of a little violence, or claim jumping, or even, occasionally, piracy, then a blind eye could be turned if the benefit was to the society as a whole. These worlds were strung out and, in some cases, far apart. The short lines of communications enjoyed by the kingdoms was missing out there and the proximity of older stars with non-habitable systems combined to make for difficult policing.

# The Kingdom Years

## Chapter One

### 258.2ne Johannes

Johannes van Diemen was not by nature a patient man –  
– but the world of business required patience as one of the building blocks of success and he had learned to master the art; knowing when to wait and how. Putting strategies in place that would take years to fulfill, placing investments, buying at the right time and selling at a better one; showing the calm face of diffidence to the constant scrutiny of eager competition. Patient in the things he could influence and control. What he found hardest, he mused, was to summon the patience to sit in a chair and wait for his scheduled appointment with the Secretary for Trade; an appointment that the Department of Trade had insisted on to such an extent that he had cut short a rare, brief rest with his family and spent five days travelling to Canopy. Only the edict of a high official of

the House of Hanso-Satt could get away with that, he scowled, and that meant his business interests with them were somehow involved.

The room was a copy of neo-colonial times, with tall ceilings, high windows and a wide veranda that kept out the worst of the tropical downpour. The outside doors were open and the beat of rain on the shingles brought a soporific relief to the business of waiting.

The other person sitting alongside Johannes had seen the scowl and kept a small smile to herself. Twenty years as secretary to the head of one of the oldest non-aligned businesses outside the four Houses had prepared Christine Boland well for the moods and thoughts of her boss. And needs too, she added, looking at him from under turned-down lashes. He sat looking out at the rain, indifferent to his surroundings, a hard-looking man with strong square features to his face, all planes and angles made the more severe by white-blond hair pulled back into a short queue and held with an ebony clasp. Eyes of the darkest blue belied the looks by being bright and humourous, they almost contradicted the face and that was an effect used more than once to gain an advantage. Wide shoulders, big hands. Barrel chest. *Yes*, thought Christine, *not bad for forty-four. Not bad at all.*

As if the completion of her inspection had signaled their readiness, the inner door opened and a woman entered; tall, grey-haired, thin, crisp and immaculate in a business suit of house black, she made her introduction to Johannes and his secretary.

‘Eva Delage,’ she offered, shaking Johannes’ hand with a strong, bony grip. ‘It’s nice to be able to put a face to the name I hear so much about.’ Her voice was as dry as her demeanour. Staff appeared and brought with them a small table, a tea samovar and a coffee pot; fine china and the trappings of high tea.

*They want something*, Johannes acknowledged to himself. ‘It’s also nice to put a face to the name on the bottom of our contracts.’ He smiled a younger man’s smile, he spoke in an older man’s voice; a brief smile ghosted across the face of the Secretary for Trade and Johannes sensed the limit of social niceties had been observed and other things waited. He preempted her. ‘However, you didn’t call me here to tell me what a good job Kompas Lines are doing on your behalf.’

‘No, we didn’t. And, by the way, thank you for coming at such short notice.’ *They’re in trouble. I can feel it.* Eva Delage settled back in her chair and took a sip from her tea. ‘You are no doubt aware, Herr van Diemen, that we have recently commenced joint operations on Mandrake Three?’ Johannes nodded. Beyond the inner periphery, out into the older stars. Lots of O’s and M’s and rare elements; mining country with no environmental worries, ten lights away.

‘Johannes, please,’ he invited. ‘I know of it. Serious bulk processing of rare and aggressive minerals using last-generation equipment that’s safe to use out there. A big orbital habitat development with lots of infrastructure; ship repair, ‘ponics.’ What’s the point of paying for the best insider trading information if you can’t flaunt the fact now

and then? he rationalised. ‘On the edge of the independent worlds isn’t it?’

Just for a brief moment, cold eyes regarded him before dissolving back to neutral. ‘Yes. And therein lies the problem.’ Sip. ‘It appears that several tonnes of finished products have disappeared from orbit and our security personnel advise that freebooters are to blame.’ Johannes was always amazed at the inability of the Houses to give cognisance to the independent worlds, as they styled themselves. They were denigrated at every turn save trade; their money was good. ‘How big a shipment?’

Eva seemed to struggle within herself as if trying to decide how much information to offer. She sighed. ‘Fifty tonnes. Mostly rare metals.’

Johannes pursed his lips in a silent wince. ‘That’s a lot of money. How was it – ah – lost?’

Only Eva’s experience stopped it all coming out in a rush. ‘A raid. Probably Independents. Two armed vessels crippled the escort and a boarding party took over the freighter. Complete with crew, I might add.’ She refilled her cup, more to collect her thoughts than for a desire for tea. ‘Ten dead and one station damaged.’ She sipped, waiting for Johannes to comment.

‘Have you followed this up? You’ve got enough ships –’

Eva shook her head. ‘We haven’t the ships, Johannes. Certainly no military craft, anyway.’ She smiled a wan smile. ‘We’re stretched to the limit everywhere; commitments to our other holdings have tied up everything we have. And

you of all people know how difficult it is to get new ships built.'

Ah. That was it! The rub! As a family member of the first and largest shipbuilding group and a shareholder to boot, he certainly did know; especially when House treasuries were notoriously slow payers. *Of course it was difficult, otherwise we'd be broke by now!* 'You have a joint venture partner on this project. Can they assist?'

'No.' Emphatic. 'The involvement from Aachen is financial only. We carry the whole infrastructure. Besides,' the wan smile was back, 'they have fewer ships than we do.'

Johannes turned his eyes back to where the rain was framed in the doorway and watched for a moment as his thoughts pulled together. A major client in trouble with no resources of the kind required to deal with the situation; a favoured contractor with lucrative contracts and the resources at hand to deal with the situation. That's the stick. What's the carrot? It was his turn to sigh.

'How can we be of service, Madame Secretary?'

A clap of hands brought a young man to Eva's side. He also was dressed in the house colours and he held a holo-com out for her. 'Currently you are factoring our goods and services on –' she briefly consulted the air-borne figures '– eight of the independent worlds. You are running four ships but you also use an armed escort at times.'

'True. *Kormorant* is a fast auxiliary that we have converted.' The lie was easy to tell, he'd told it many times

before; in fact *Kormorant* was a purpose-built korvette crammed full of state of the art engines and weaponry – literally a pocket-cruiser. ‘We like to parade her before the customers now and then.’ His teeth flashed inside a genuine smile. ‘There’s no point having a big stick if you can’t show it off once in a while.’ He deliberately forgot to mention the not exactly insignificant firepower that his freighters carried.

‘We would like you to consider broadening your field of operations to include Mandrake Three. Normal providore contract, personnel transport and freight shipments. Standard stuff.’ Her pale eyes held his. ‘If you should deem it necessary to, how shall we say, protect your business there, we would have no objection to making over the damaged station into a suitable base of operations. Further, should you wish to strengthen your security to ensure that incidents like the last do not occur again, then this House would raise no objections to your doing so.’

He had seen it coming. A juicy carrot and a nicely weighted stick. Increased turnover, bigger market share and possibilities of more in return for keeping a lid on freebooter activity. Hanso-Satt gets protection without having to use its own resources and is absolved of responsibility for the activities of others. A very nice face-saving state of affairs if ever judicial violence was required. *All I have to do is pay for it!* ‘We have to do our numbers on this one,’ he told Eva Delage. ‘I’ll bring my people here and get them started. Say in about two weeks?’

‘There is one more thing,’ said Eva as she stood to close the interview, ‘that I should mention at this point.’ Johannes got to his feet, his face a mask of neutrality as he waited for the additional demand, certain that the price was already high enough. ‘Our survey teams found a little system late last year. In towards the centre and Wheelward; about four light years from Mandrake but near the Independents. A small world I believe, but well within the criteria band.’ Her pale eyes narrowed. ‘We would not like to see it fall into independent hands, nor would it be to our advantage if one of the other Houses claimed sovereignty. For our part, we do not have the resources at this moment in time to lay claim and develop it. It’s too far away.’ Eva smiled and this time it was genuine, Johannes could tell the difference.

‘No. What would be preferable to us would be to declare the place a province and install a minor house there; one with allegiance to the House of Hanso-Satt. One, say, that we would be comfortable with in its ability to protect itself and at the same time uphold the laws of the kingdom.’ They walked towards the door, Christine following. ‘I thought a barony would be appropriate for the place. High enough title to command respect out there, small enough to be of no danger here.’ They shook hands again, this time in farewell.

‘Think hard on it, Johannes. Think very hard.’

‘Are you going to do it?’ Christine asked Johannes once they were in the security of their own skimmer. The faint whistle of the gyroscope was not quite drowned out by the beating

rain as the little machine hovered, waiting for Johannes to speak the destination. He sat there, looking out into the rain as it poured off the plastex dome, and he seemed not to have heard her question. She knew differently and gazed in turn at the events outside the skimmer while she waited for Johannes to finish his thought process.

The government precinct that they had so recently departed was a three story stucco and tile complex behind them, resplendent with its twisted columns and arched windows and surrounded by the palms and ferns so suited to the warm, moist climate of New Amsterdam. Before her, the ground fell away down to the city proper and the red tile roofs of the single story buildings fanned out away from the House until cut off short by the harbour line. Far off across town, a tiny sparkling ball came into existence and sped in the blink of an eye across the harbour mouth and just as rapidly turned vertical and shot straight up out of sight into the heavy clouds; one of the new unified-field shuttles following the lines of the world grid before heading into orbit. The colours started with blue and had run up to a glowing silver in the few seconds it had taken to reach the cloud cover. It was all done in complete silence and novel enough for Christine to watch it.

Out of sight around from the House, taller buildings with their glowing windows signposted the commercial heart of town. Rivulets of rain distorted the images and the city seemed to blend into a waving field of red smears. There were few roads, but the ground cover between was

low growing and no danger to the skimmers. Christine's own face mirrored back to her from the inside of the dome; black hair kept that way against the wishes of nature framed a heart-shaped face that in turn was dominated by a pair of large brown eyes. A small button nose and soft full lips gave her a slightly seductive look that was made to look younger than it was in the imperfect reflection of the rain-lashed dome. Loose skin at her throat told a more obvious truth and her hand stole there unconsciously as if to hide it. *At least he's not said anything about it. Not that he would, not even when – no, don't think of it. It hadn't happened for a while, maybe if we're here for a few weeks there might be a chance –* her fingers massaged her neck; *I'll get it fixed. Soon.*

'Hotel dePlas,' Johannes ordered and the skimmer rose on a rush of turbines and swooped down on the city below, the dome clearing as the surface effects took over. 'To answer your question, Chris – maybe. So. First thoughts for the record.' His secretary activated her holo-com.

'Messages for home on the first ship out; a board quorum here, immediately, but with all precaution. Coded message for Dieter Horsmann at Magellanic Shipping; stress family and all that bullshit and ask him to rush through the completion of the patrol craft that the Aachen Republic ordered but have not fully paid for yet; tell them we'll test it for a while.

'Also, any freighters he gets in for repairs that are looking for spot contracts or piece work, sign 'em up. Full secrecy, Chris. I don't want any leaks.' Rain sped away in streams

across the body, flying away behind in a misty tail. Johannes' mind was working overtime on the situation at hand, but a little part of it was dancing with joy. *I can't believe my luck!* Adrenaline flowed and clarified his thoughts.

'I want the weapons group assembled; take them out of the ships they're in and get them to rendezvous with *Kormorant*; circuitous routes, OK? And, get all weapons backup equipment moved out as well, false bills of lading, anything for decoy. Give the competition nothing.' He settled further back in his seat. 'Warehousing. Get me all the latest flow data. What else?'

Christine cherished these times of activity where Johannes seemed to kick into a higher gear and things started to happen. She knew his adrenaline levels were up, experience had taught her the signs. And where adrenaline went, testosterone soon followed. That too was experience. 'You'll need to send word to Marla and the kids,' she replied. 'And I'll arrange for head office to lay out a decoy strategy for your activities.'

'Find the first available ship out and book priority courier facilities; we'll send two teams for each destination.' He blew out his cheeks. 'How long to put this together, Chris?'

She checked her chrono-tatt, careful not to let him see the tremor of excitement in her hand. 'Four hours.' It would be dark by then.

The hotel loomed before them, lights of crystal sharpness, walls of backlit stone. 'Four hours it is.' He leaned

over and turned off the holo-com. ‘Do you fancy drinks and dinner?’ Her black hair nodded, hiding her smile. ‘Good. Restaurant or room service?’ His dark blue eyes held hers steady, a gleam already there.

*Wow! This is going to be a very interesting two weeks.* ‘Oh, I think room service would be just fine, Johannes.’ Her brown eyes gleamed right back at him. ‘Don’t you?’

## Chapter Two

### 259.3ne Mandrake

*I stink. My clothes stink. And worst of all, this job stinks! If it wasn't for the fact I owe Richter some debt-favours I wouldn't be within a fucking light year of this deal! Never again. I swear, never again.*

‘What did you say?’ The query came from a large, heavy man sitting at a console and sweating profusely inside his own pungent clothing. Norbeck, Communications operator.

‘I said, never again! Nothing’s worth this!’

The creak of a heavily laden chair and the soft whir of ventilation fans held the silence for a while. 'Look. When we get back, we'll be rolling in it! We won't have to do this again. Ever.' Norbeck wiped his face with an already damp sleeve. 'I don't like it either, Berger, but I'm going to do it and get out.' His hand cut the air in a slashing motion. 'Then I'm finished with Richter.' He cast a surreptitious glance at the bridge entry lock, as if expecting the skipper to walk in and catch them in the act of dissension.

Conrad Berger twisted his lean frame around in his seat to face the mass indicator he had been peering at now for hours. Behind him sat three others, each with a piece of equipment to monitor; gravity wave detectors, pile emission spectrographs, optical 'scopes. Anything that could detect a ship leaving orbit and heading for the jump point. Anything that could do it with minimal power consumption, that is. Anything that could do it without giving its own position away. The bridge was cramped and hot; all the life signs were wound right down as befits a ship that is trying to hide. Or lying in wait. Pretending to be one of the chunks of rock that made up the asteroid belt, cold and uncaring. But they weren't cold and uncaring. With the fusion plant barely ticking over and all weapons systems pre-programmed and shut down, they were stewing in their own sweat with murderous intent on their minds.

It had taken *Falcon's Reach* two weeks to enter the Mandrake system and creep around the asteroid belt; two weeks of hide and seek amid the rocks until they reached

the closest position to the jump point that their man inside had told them was to be used. Now three days of waiting as if dead, waiting for the opportunity to seize the big freighter that was loaded with the wealth of the soil of Mandrake Three. Three days while they waited to track the rack of pods that was *The Empress of Ishtar*, verifying light signature, estimating cargo mass, plotting its slide to the jump; and all the while the computers counted the moments to intercept.

‘Not long now,’ intoned Norbeck, as the bridge lock sighed open and man of broad stature and dark intensity walked in. Julius Richter; skipper and shareholder in the *Falcon’s Reach* cast his hard gaze at the crew as if appraising each one for the final time. Tough and uncompromising, he was a man of deeds and needs, the product of a frontier world that tolerated the uninvestigated activities of his kind as a necessary expediency. In working bars back on Tambourine he was a hero. With a grunt he fell back into his command chair and swiveled to thrust his unshaven chin towards the screens. All was in order, time ticked away. He called up a data file on the target to review for the last time and his eyes narrowed a little when the defensive weapons summary appeared; two medium calibre lasers, single layer energy screen and an armoured bridge. The date of the maintenance schedule and his spy’s own eyes confirmed that nothing had been updated; there would be no surprises provided he kept his own screens up, those lasers were designed for anti-torpedo work but could still inflict heavy damage on the unwary. And Julius Richter was

never caught unawares; five successful raids in the last four years had trained him well. It was important to double-check everything yourself, he told himself, especially after recent news that one of the raiders from the Vogell system had been badly mauled by a freighter that shouldn't have been carrying that sort of firepower.

And Jackson in *Tiger Heart* had been missing for a month now; and the thought of *that* really worried him.

*The Empress of Ishtar* pushed away from Mandrake Three on a glowing tail of photons, up and out into the rare dark, away from the blinding light of The Great Wheel standing guard above the hard, glittering stars of human space. She looked like a fat, segmented caterpillar with her cargo pods hung in two rows along her long, narrow spine. To the rear, the *Empress* broadened out in a wide skeletal framework that carried the engines and jump generators, and encircling the base of the spine was the small torus that housed the human heart of the ship. She was over a thousand metres long and carrying her full compliment of twenty pods; like benign fruits of human endeavour, they rode in her embrace for distribution among the customers of commerce, processed and paid for.

But not all were benign.

If the gods of the heavens looked down on the Mandrake system, they would see, close by the third world of that system, a microscopic spark flickering in and out of

existence, moving across the void as a stone skipping over water; touching this reality for a brief moment and then disappearing into another. Covering great distances in micro-jumps as it skimmed through the system, seeking the perfect balance of mathematical reality before finally disappearing from their sight. Had they looked further, another flickering spark of part-time reality would have appeared, converging on the first.

Richter's spy had made a mistake; there *was* a difference to *The Empress of Ishtar*. Not a great one, nothing that stood out, but a difference just the same. One cook replaced on a roster change, and an additional engineer to help monitor the contents of one of the pre-registered hazardous goods pods. All above board and all within routine. Nothing hidden. But it was the cook who now tracked their progress along the route, whose commands made sure that every action of the ship was as normal as possible, who resisted the urge to fan out the detectors into the local sub-space in the hope of locating the ship known to be stalking them.

Jesse O'Cahill had been too long in the active command of the ships of Kompass Lines to be anything other than totally professional, even in the face of impending conflict. She had run those ships for twelve of her thirty-four years and was now second in command of *Kormorant*. Plain but not un-beautiful, she managed to stand out by her dynamic personality. Energy always seemed to emanate from her tiny frame, crackling out of

the wild red hair that was her one affectation. Black eyes never still, a body always in motion. People did not relax around Jesse O’Cahill.

Except – for two men she adored. One was her twin; Rory with the bold eyes and bright smile, a Celtic seafarer displaced in time, building the legends of the future; captain of *Kormorant*. The second was the man who carried the fates of thousands in his hands as he sought his own place in the sun for his family and businesses; one with the strength to stand alone – and yet so close. Johannes.

‘All done, boss,’ drawled a voice from behind that Jesse recognised. The extra engineer, Gustav Grimmoldson. Tall, rangy, booming and affable. Weapons officer on *Kormorant*. ‘You won’t even have to test it,’ he added.

‘The day we have to test your work is the day we die,’ retorted Jesse, sinking into the recently acquired captains’ chair. The original occupant was following House orders to comply with the directives of the Kompass people by staying right out of their way.

Gustav chuckled to himself, a big-toothed grin breaking out across his big, long horsy face. ‘Just make sure it’s not a payday, then.’ He sat down opposite his senior officer, all elbows and knees. ‘Besides,’ he continued, ‘sub-space disruptors are notoriously reliable.’

‘Hmmm. We’ll see.’ Jesse opened a hard-wired comm. channel recently installed; they weren’t even taking chances with random pick-up. ‘Captain. Status?’

Her brothers' voice replied immediately. 'Ten minutes left to slide, Jesse, then we're out of this envelope.' Formal and correct, she nonetheless heard the smile in his voice. 'Then four hours positioning for the Jump. That will put you at the mercy of the bad guys.' A pause. 'If they're there.'

'They're there, all right.' It was her turn to smile. 'You're lucky like that.'

When machines fight, it is not on a time scale that humans can understand or deal with. They perform their tasks in the nano-seconds between one thought and another, dispassionately following the pre-programmed will of their lumbering masters. Pain, cruelty and death are meaningless concepts to the machines, and for humans, events scream by at a frightening pace.

Computers had played their part, bringing *Falcon's Reach* out of its gravity slide into the real universe, above and to the rear of the point where *The Empress of Ishtar* was to emerge. Detectors flaring into operation, scanning and probing, weapons powering up and starting to track; eyes hungrily scanning for signs.

Richter stabbed at the screen. 'There!' he shouted, as their prey was identified, a thousand kilometres away. His voice called the battle computer in and the point of no return was passed; from now on he was a passenger. Unless he aborted. A pulse throbbed at his temple and his nerves jangled as the disruptor was released. Far ahead, huge areas

of sub-space quivered, like slow ripples in a pond. The prey was theirs, unable to escape into the now-unstable matrix of space-time.

The crew of the *Empress* felt it. Hard. Nerves resonated to the disruptor's unseen forces, leaving an unscratchable itch behind. Computers took over, scanning the area for the source; that was expected. Energy screens flared into existence, offering a shield to the lumbering freighter; that was expected. Distress calls were sent, micro-bursts aimed back to the complex at Mandrake Three, so far away; that too was expected. As the first bursts of coherent light touched upon the *Empress*' screens and dissipated into a golden corona around the stern of the ship, eight of the pods on the blind side to *Falcon's Reach* split open, their flimsy construction revealing the deception within.

A golden ball of an energy shield was all that showed on the screens, but Julius Richter knew that parts of that shield were glowing in ultra-violet, hot spots that could not be radiated away in time. As *Falcon's Reach* closed in, the tracking computers would be able to target those hot spots and once a burn through was made, it was as good as over. Laser fire came up at them, medium calibre and easily handled by their own shields. He smiled, watching the real-time splash of colours as *Falcon's* heavy lasers kept its prey pinned down, struggling like a fish on a line. 'Tell the boarding party to suit up,' he order Norbeck and turned back to –

- space-time thundering in silent disruption, screaming its outrage along his unsuspecting nerves
- visions of un-reality spearing his mind
- muscle spasms throwing him to the deck
- a computer somewhere, calling, asking for new instructions – to face a new threat
- meaningless reports of energy losses, damages and failures drifting away unanswered
- slowly focusing eyes locking onto the screens for the few seconds of madness they showed before collapsing
- energy flaring away from the *Empress*' side in a blinding halo
- a black something moving upwards, impossibly fast, huge
- shield, cool and impenetrable
- an energy beam, heavy calibre – heavy – heavy
- blackness
- a voice somewhere. Demanding.

Rory O'Cahill looked out of place.

He stood alone, wreathed by the thin streams of acrid smoke that threaded their way across the bridge, surrounded by the black-armoured guards with their combat lasers and machine pistols that pointed everywhere. With a defeated crew at his feet shivering in their misery, their hands clasped to the back of their necks and his own crew downloading every last piece of data from the *Falcon's* computers, Rory O'Cahill looked for all the world like a man suddenly called away from a party. An immaculate green silk blouse covered

his slight frame, black hose clad his legs and disappeared into the calf-high tops of soft, black leather boots. Red hair and beard, both close cropped, highlighted his pale skin, and flashing black eyes completed the cavalier image he so assiduously affected. And his crew loved him for it; he was different and clever and brave. And successful. In complete contrast to the *Falcon's* crew, who were looking up at him with sullen eyes.

'Now,' he said in a smooth voice, crossing his arms and stroking his beard with his right hand, 'we'll go over it again.' He flashed a smile. 'Just one last time. So that there's no misunderstanding.' Eyes that were lost, angry or just plain frightened stared back. 'OK? Good.' It was like speaking to children. Distant metallic noises came from *Falcon's* engine room where his crew was patching up the damage. 'One, or all of you, will be overcome with a desire to confess his sins, repent them and offer to make amends for his sinful ways by fully co-operating with us. The return for which will be honourable service in the pay of the good guys.' He tapped Berger's outstretched leg with the toe of his polished boot. 'That's us, by the way.' His smile widened. 'So. Who's first?'

Berger couldn't believe what was happening, he looked over and caught Norbeck's eye. The fat man had sweat rolling down the sides of his face and his eye had a manic look.

'No-one here will do anything of the kind!' Richter's voice cut across any thoughts he may have had about the offer. 'Our people will know soon enough that this is just

another entrapment by the privileged Houses. Another way of keeping the free worlds under your yolk!' His voice was loud, passionate. 'Denying us the open stars, keeping the wealth of them for yourselves!' The logic was irrational and Berger and Norbeck exchanged worried looks. 'Your prisons and courts won't hold us for long once our people cut off our trade with you.' There was a sneer on the hard face of Julius Richter.

Rory stared at the man for long moments, as if waiting for more. 'Whatever makes you think we are with the Houses? Hmmm?'

Richter looked around at his crew in bewilderment, then back to his inquisitor. 'You work for them! It's the same thing.'

Guards and crew worked their way across the bridge, removing the *Falcon's* personnel and leaving a prize crew in their place. Rory motioned to the disconsolate captives still sitting on the floor. 'Stand up and go with the guards.' He nodded at them. 'Go on. It's alright.' Norbeck staggered to his feet, pulling Berger to his. The others followed, slowly shuffling away from Richter until grabbed by the arms and guided towards the air lock.

Richter spat on the floor, splashing Rory's boot. 'You'll find me resistant to intimidation, you little asshole. And,' he thrust his face close to Rory's, 'my crew know fuck-all!' He laughed. 'You can't buy me and you can't scare me.' His sweat mixed with the smell of fear gave lie to his words and formed a sickening smell around him.

The bridge cleared, leaving the two alone. A look of profound sadness crossed Rory's face. 'I have no intention of buying you. Or indeed, of scaring you. I wouldn't insult the ex-master of my new ship in such a manner.'

'What -?'

'No, Richter,' there was suddenly a hard look to the face and a silver pistol in the hand of *Kormorant's* captain. 'I would much prefer that your legend continue.' The smile returned and filled Richter's eyes. 'Posthumously, of course.'

Berger squeezed into a corner of the main lock, forced there by Norbeck's bulk and his desire to stay as far away as possible from the four guards in there with him. Fear fell off him like sweat and he thought –

– a sharp report sounded on the bridge, muffled slightly by the bulkhead between. Berger's breathing stopped and Norbeck seemed to shrink in on himself. The big guard manning the outer lock turned to Berger, his face deadpan, one eye closing in a slow wink.

'Gentlemen!'

The crew of the *Falcon's Reach* looked up from the mess table at their captor. Showers, clean coveralls and a cup of coffee on board *Kormorant* had gone a long way to diminishing their anxiety about their situation. Rory O'Cahill surveyed them; already he had a feeling as to who would talk and who wouldn't. *So* –

‘First, let me commiserate with you on the death of your captain.’ He shook his head in a rueful manner. ‘He took what he considered to be the honourable way out and shot himself.’ Six pairs of eyes stayed glued to Rory’s face, afraid to look at each other.

‘A grand gesture, I’m sure, and one that you may applaud him for. But a waste of talent, just the same.’ The smile came back. ‘As for you people, suicide will not be an option. We already have enough data from your ship to have that job done for you by the legal system.

‘But,’ his audience waited, hardly daring to breathe, ‘there is an alternative. If you were to offer your services to Kompass Lines, and any relevant information about past affairs that you might think appropriate to advance your prospects of employment, you may just find that we are in fact too busy to involve our employers in such minor detail work as courts and trials. It’s very time consuming. Far better, I believe, for you to use your skills on our behalf, earn some pay and eventually get to see your families again. Don’t you?’

The implications were clear, the history of events already written. Berger felt queasy; *turning on your own people* – ‘Excuse me, Captain,’ he found himself saying. ‘Er – would we be asked to betray our friends? I mean –’ he stammered, ‘– would we have to fight –’

‘Don’t,’ said Rory, cutting Berger off, ‘even consider the question of morality. Certainly Jackson’s crew never raised the issue.’

‘What?’

‘*Tiger Heart!*’ His smile positively dazzled. ‘How do you think we found *you*?’

## Chapter Three

### 259.7ne Tiberius IV- Independent World

Two ships approached Tiberius IV.

The automatics spotted them first as the local sub-space vibrated at the intrusion of man-made gravity wells. Follow-up programmes sought to identify them by their field patterns, seeking a match with known vessels. Both corresponded to known data, and the information was squirted out by tight beam to the orbital light-seconds away. To let the humans deal with.

A polyglot array of lattices, pods and platforms formed the main orbital of the blue-brown world of Tiberius Four. Spinning away to itself in geo-synch, it processed all the traffic to and from planet side. Docks, repair shops, shuttle points, warehouses; all made up the disparate parts that

looked like they had been tacked together randomly and had miraculously worked together. Function only was the criteria. Strung out in orbit on one side were the ships that were waiting to dock, or load, or effect repairs. In the blackness of the orbital's shadow, the refuse of the years trailed behind.

Heyden Bol was in the process of trying to drink what passed for coffee – and was struggling. He suspected that the real stuff went to those in positions higher than his and that ordinary station personnel were fed the sweepings. The incoming signal broke in and gave him an excuse not to drink the stuff. As he half-floated over to the console in the weak rotational gravity of the habitat, he also bemoaned the lack of artificial gravity, razors and good soap. I've been here too long, he thought, as he opened up the signal. Instinctively he checked that the lasers were locked and tracking, then turned his attention to the unscheduled visitors. He compared the patterns again, narrowing them down as they slid in towards him, seeking the matches the auto beacon had found.

'Yep! There they are,' he said to the empty room. Had the other two operators been there, his comment would have still gone unanswered. 'What have we got?' he asked, and the screen told him – *Gilgamesh*, freighter, Vogell system, eleven hundred and fifty tonnes; *Falcon's Reach* –

'Jesus!' Heyden Bol jerked upright and thumbed the comm. system for an urgent demand for the officer of the watch. *Falcon's Reach* was twelve days overdue.

The two craft had finished the gravity slide in and had their generators powering down as they approached orbit. Now they became visible to the cameras, just as the duty officer bounded on to the bridge. He took the vacant seat and directed the cameras in.

‘Raise them,’ he ordered Heyden, then his eyes widened at the sharpening images on his screen. The freighter sported two large blackened holes on her left flank just ahead of the engine room and repair filaments straddled the gaps in an attempt to maintain magnetic integrity. *Falcon’s Reach* looked a wreck; half of the bridge was blown away, sharp metal petals blossoming outwards from beneath hastily rigged plating repairs. Filament bundles swathed the area like bandages. ‘Shit!’ he yelled. ‘They took a torpedo!’

Heyden rubbed the stubble on his chin, wishing he were elsewhere. ‘I’ve got contact. Do you want this sent down?’

The duty officer nodded, his Adam’s apple jerking as he swallowed nervously, ‘Yeah. Keep them informed groundside. Better safe than sorry.’ He looked over at Heyden’s screen, ‘Who’ve we got?’

Encryption flowed and stabilised, codes chattered back and forth and a battered face appeared. ‘Thank God!’ intoned Conrad Berger, peering out of one eye, the other swollen shut and purple. Blood stained his crumpled collar and he hadn’t shaved in days.

‘What’s your status? What happened?’

‘Status?’ Berger stared back in disbelief. ‘Status? We haven’t got one!’ There was a break to his voice as he went

on. 'Most are dead. Richter. Bell. Toomey. We're sailing the ship from the engine room.'

The duty officer leaned over and asked the question again. 'What happened?'

The reply was in a flat monotone, as if the speaker didn't want to relive the event. 'Routine cargo transfer –' a euphemism, nothing more, and both station operators nodded in understanding, '– from a barge –' intra-system transport, no interstellar capability, more nods, '– hence the freighter.' Engine room personnel moved around in the background, giving credence to the tale. 'Mislabelled merchandise, I'm afraid. Turned out to be un-naturally heavy, uniform consistency. Unable to transfer.'

'Where?'

'Vogell Two,' he lied.

Heyden and the duty officer looked at each other, stunned, worry in their eyes. Of the independent worlds stringing their way towards the heart of the 'Cloud, Vogell was one of the earliest colonised. Three removed from the periphery of the kingdoms, it was big and strong; certainly in comparison to the other independents. Someone was running a military sting in the nexus of the free worlds. And they had some heavy weaponry, by the look of it.

'Who's on your freighter?'

'Kopperberg.' The name registered and Heyden called up the freighter. The face that greeted him looked like it would burst into tears at any moment; Heyden could feel sympathy for such a man.

‘Captain Kopperberg, can you dock unassisted?’ the duty officer asked.

‘Yes. Thank you.’ The voice was small, the eyes lost. Poor bastard, thought the officer.

‘OK, Bol. Bring them in. Weapons off. Generators down. Use –’ he checked the dock status board, ‘– four and six. I’ll meet you down there.’ What will they make of this down below? he thought, as he hurried from the room.

Magnetic grapples snaked out from either side of the dock iris, locking on to the flank of the slowly moving *Gilgamesh* with a deep, solid reverberation that echoed throughout the station. Winches took up the strain and brought her hard up against compression stops that extended fifteen metres out from the dock, and hydraulics hissed in complaint as the inertia was absorbed. Lights stabbed the dark space between station and ship and the outer rim of the station iris began to extend out towards the ship’s lock, dragging a flexible conduit with it. Behind the iris, a medical team waited to receive any injured, and automatic safeguards were readied to probe the ship for any suspicious energy levels, especially weapons; suspicion and paranoia were the two survival characteristics of those riding the cusp between legality and illegality. Two armed guards stood back from proceedings at the rear of the dock, mag boots holding them firm in the light gravity. Suspect everyone their motto.

Air whined into the conduit as the seal to *Gilgamesh* was affected and the big iris started to dilate into the station wall as pressure grew.

'*Gilgamesh*, we're getting random emissions from your generators. Please shut down!' Heyden monitored the irregular bursts that were coming from the ship; nothing serious and levels well within tolerance, but they were messing up the auto probes.

'Engine room to Tiberius,' came a voice-only from *Gilgamesh*, 'sorry about this. We've taken some slight damage to the shielding and we're trying to balance the rest before we shut down. Ten minutes at the most.'

It wasn't a break of the rules, just a small bending; they should have mentioned the problem before docking as generator flaring caused small unfocused splashes of instability in sub-space. A bloody nuisance, and by rights he should stand *Gilgamesh* off – *why on my shift?* 'OK. Ten minutes, no more, *Gilgamesh*.'

The big cargo lock on the freighter pulled back with an audible suction, working against the negative pressure in the conduit that led to the station. Fine tendrils of smoke were sucked out and sent on their way to the station's filters as the med team made their way across in slow bounds.

Heyden watched as the crew came out, some half carried, one or two on stretchers, the rest trying to keep up with the med-team. Eight survivors, thumbs up and smiles on their faces, visibly relieved to be safe. He watched them for a moment, happy in their delight, then turned his attention to *Falcon's Reach*. She hadn't moved into the dock yet and he checked his console; that's the reason, he told himself as

he identified the twin generators coming down in matched steps. The correct way.

The last crew filed out of the lock with the med team. No guards had come with them, and for that Rory O’Cahill was pleased. Discovery was not in the plan. From his position deep inside the cargo bay of *Gilgamesh* he could see down the length of the conduit and into the dock; he could even see the two guards moving in to help the med-team. But they couldn’t see him; or sense him either. Not while he was wearing a sneak suit and surrounded by electrical hot spots created to look like battle damage and designed to blur any thermal profiles. Behind him were another ten similarly clad troops he also hoped would not be seen. *Any moment now* –

Heyden sighed in frustration as his auto-probes scrambled to another surge from *Gilgamesh’s* generator –

– the med-tech helped Berger into the personnel elevator along with all the injured crew, eager to reach sickbay. The two guards brought up the rear, closing the mesh gate behind them

– *Falcon’s Reach* turned away from its docking position, moving in to a line of sight on the craft moored along the orbital’s path

– Heyden looked up from his problems with the recalcitrant auto-probes and saw *Falcon’s Reach* starting to drift. ‘What –?’

– nausea and disorientation swept the station as a disruption of sub-space quivered through the structure.

– impact alarms *screamed!*

– he med-tech sank to his knees as his body vibrated like a molecular gong, and he imagined he heard the static discharge of a nerve pistol

– and flickering shapes raced out of the conduit and across the dock.

Rory and his team were moving before the disruptor hit; expecting one was half the battle in negotiating one. They ran in giant bounds, two by two, as wide apart as possible through the conduit. Armoured suits of inert overlapping micro-plates broke the light and thermal profiles, shifting patterns in the variable light. There was no powered equipment on the suits, no communications, no power packs, no helmet imaging; nothing that could be picked up. Not even the weapons carried power; they relied on chemical projectiles plus speed and secrecy. Four sped into the elevator where the med-team was coming to terms with patients miraculously recovered and carrying brutal looking handguns. Four followed Rory as he raced away to the bridge, the route imprinted in his mind from sessions with the old crew of *Falcon's Reach*. Two remained, covering the dock access routes with heavy calibre machine pistols –

– a camouflaged group bounding up steel emergency stairs to the bridge deck fifty metres above

– an elevator opening on the admin deck, startled personnel confronted with a med-team thrust towards them, fast moving combat troops following behind

- a wail of sirens, close and strident
- a guard down, coming to investigate the bridge alarm, legs a bloody ruin in a hail of fire
  - staccato rips echoing up from the dock as station guards tried to probe the area
  - Heyden frozen, half way out of his chair, staring in disbelief as the door blew in, the percussion pressuring his ears
  - *Falcon's Reach* powering up, shields and weapons active.

The master of *Kormorant* caught the shoulder of the stupefied operator and gently pushed him back into his chair. Laser light flashed outside the broken door as some resistance became organised and weapons were brought to bear; a harsh chatter of machine pistols replied, the ricochet of bullets coming back from the path they had just taken.

The console was a chaos of sight and sound, overlapping and incoherent as Rory leaned down and spoke into Heyden's ear. 'Cut the weapons. Now!' The black barrel that gaped so hugely at the side of Heyden's head was the final act of inducement and the operator's hands shook as area by area he closed the defence system down.

Rory threw back his helmet, giving the man a chance to see his eyes, a chance to realise the elemental truth of things before he contemplated doing anything stupid; it usually worked. 'Contact *Falcon*, then open all internal communications.' The frightening thing for Heyden Bol was the complete absence of malice, no anger in the eyes,

no snarl on the face; it could have been a request from the duty officer. He complied. *Falcon*. Are you on schedule?' Rory asked.

A cleaned-up Berger appeared, with no sign of the previous injuries. 'Yes sir. We have the station covered. We're fully powered. Station weapons locks are –' he consulted something off-screen, '– off.'

'Good. Stand by.' The sub-space board lit up, something was coming in, very close and very fast; he checked his chrono, the timing was perfect, coming on the end of the fading disruptor pattern. *Kormorant*. Now he smiled. 'Everything's fine this end. Keep alert.'

He switched to the station comm. 'Good afternoon ladies and gentlemen. Please pay attention; you may just save your lives by doing so.' Seconds dragged by as he let the implication sink in. 'You have the honour of being over-run by the security service of Kompass Lines. All station systems are under our control and the weapons of the *Falcon's Reach* are trained on you.' More seconds passed; the sporadic clatter of small arms faded away and the presence of *Kormorant* entering real space-time almost on top of them was signaled on the console. 'For your added security and protection, we have also provided the reassuring presence of our warship, *Kormorant*. Please assemble at you nearest evacuation point.'

*Kormorant* cruised around the orbit, her sensors picking out the targets they knew to be there half a world away. Several of the freighters were powering up, but four were inert,

their crews having responded to the order from *Kormorant* to abandon ship. Jesse O’Cahill watched impassively as four torpedoes flashed across the arc of the orbit, each one programmed to attack its target at the most vulnerable place a freighter could be attacked, the engine room. She watched as virtual screens told her of each success, seconds before the silent light of blossoming ordnance reached her.

Groups of station personnel huddled together on dock four, herded there by grim-faced soldiers. Cold was seeping in, no longer held at bay by the power plant; the invaders had not only turned everything off, they had destroyed the control rooms.

They shivered in their misery, before the words of the red-haired leader.

‘You have one hour to evacuate. After that time, warehouses one and three will detonate.’ Rory’s troops backed up the conduit to *Gilgamesh*, their weapons trained onto the dock; Rory turned to follow, took a few steps and then turned back to face the captives. ‘The warehouses contain material and goods recently mis-appropriated. The four ships destroyed have also been involved in adventures of a similar kind.’ One last look, then – ‘I really hope we don’t have to do business with you again.’

Then they were alone; only the sound of the iris closing on emergency power and the gentle lurch as *Gilgamesh* undocked kept them company.

What could be scrambled on the surface of Tiberius Two was put into orbit, but it was all too late. Shuttles broached

the atmosphere, carrying whatever crews could be found to man the ships still in orbit, to reclaim the station and ascertain damage. To sort through the mess of warehouses one and three while their previous contents hung like frozen confetti around the station; to salvage what they could from the destroyed ships that were beginning to slide out of orbit and embrace the arms of Tiberius.

For days afterwards, the night sky showed the fiery hallmarks of re-entry burn-up as the ships and contraband broke up and fell, coloured signs amid the crystal canopy of unending light. A costly reminder of the wages of sin.

It was a hell of a business card.

## Chapter Four

### 260.2ne Project

‘No, Johannes. I’m not going.’

The words were spoken in a completely unemotional manner, yet the woman who spoke them looked anything but unemotional. Her cheeks carried a colour that was not

cosmetic, and her pale eyes flashed ice. Marla van Diemen took the quiet aftermath of her statement to check her dress in the mirror; long, dark green business skirt and tailored jacket, frosty white open blouse showing just a hint of cleavage, high heeled pumps. Smart.

‘It’s your project. Your baby.’ She checked the gold at throat, ears, wrists, fingers. Pale hair, pale eyes, high cheeks, dark lips; she looked the image of what she was, a rich, powerful woman. ‘In the last two years you’ve hardly been home. And you’ve certainly not considered me in all this.’ Marla turned away from her image to look at her husband standing by the door. ‘Or the children.’

Johannes grimaced inside, yet kept it from his face. *God. Here we go again. I’ve heard this a hundred times.* The room he looked into was her own robe room, a large private domain, shrine to the symbols and trappings of wealth. He had never entered. He had never been invited to.

‘I would have thought the impending elevation to the peerage might have enthused you, Marla.’ Johannes put a sardonic twist on his smile. ‘Representing as it does the peak of society.’ He tried to see her as she had been all those years ago when their future was there to be written; but he couldn’t recall the image. *We’ve been like this for so long now* – ‘Isn’t that what you’ve always wanted?’

‘An undeveloped mud ball at the end of absolutely nowhere?’ She laughed, but it was not a humorous sound. ‘Spare me, please! If Hanso-Satt wants a puppet way out

there and can buy one for a meaningless title, who am I to stand in their way? But I don't have to go there, Johannes. And I don't want to throw away hard-earned money on it either!' Her own family connections were strong, and cross investment between the two families was heavy; her words carried weight, a fact not unknown to Johannes. Still, there were other options, he mused. Especially the amazingly lucrative sidelines he had been developing, with dummy corporations of course, in trade and security behind the collapsing opposition of the freebooters. *And they're all mine.*

He left her without a word, heading for the outside sun deck. Through rooms immaculate in their presentation and fashionable in their decor; past trophies of their social and business standing. Out through the French doors onto the private deck they shared, now filled with streaming sunlight that was counterbalanced by the cool arbour of vines and the soft feel of terra-cotta tiles underfoot. Over by the balcony where he could see down to the city and almost feel the constant hum that Canaan generated these days. These days! God! What must it have been like then? His eyes lifted up, towards the faint, day-visible stars retreating before the ghostly rising of The Great Wheel. It's up there somewhere, he remembered; the old habitat. His family beginnings. Now a museum and just one of those points of light.

A box of cigars had been left out for him and he took one and lit it, a ritual when he was home. Home! Ha! Just a

sterile, three story temple to personal failure. To be endured. With a smile. And clenched teeth.

A staccato on the tiles broke his reverie as Marla came up behind him, a glass of champagne in each hand. Condensation dripped from them and splattered darkly on the tiles as she handed one to him. She wore shades instead of the more fashionable filter contacts, another reminder to her imminent luncheon friends that some people were beyond the slavish addiction to fashion. He could read her like a book; and she, him.

‘You should give up that habit, Johannes, it’s disgusting,’ Marla said, without reproof and Johannes translated it in his mind: everyone else that matters thinks it’s disgusting, therefore it is.

His reflection came back to him from the French doors, and in the split images he saw himself as few ever did; short-sleeved shirt open all the way down, hanging outside a pair of swim shorts. Bare feet. Tanned. Thinner. Relaxed. These times were precious; a few days isolated from business, time with the kids. A nice cigar and good champagne and to hell with anyone who didn’t like it. Anyone! ‘It’s an old family trait, I’m afraid.’ Smoke dribbled out of the corner of his wide mouth. ‘We’re genetically addicted to it. Cheers!’

Marla placed her emptied glass down and prepared to leave. ‘I don’t mind going to the investiture, Johannes. But my place is here. My home is here. My family is here. I will not spend time away from this in some primitive backwater

while you start up a new enterprise.’ One eyebrow arched. ‘I’m sure you will be able to find – others – who will be more than agreeable to – roughing it, shall we say – with you. You always have.’ Marla walked inside without a backward glance, her friends and their afternoon together now occupying her mind.

‘Hey, Dad!’

The shout woke Johannes from his siesta. The sun was starting its fall into late afternoon and a slight chill had invaded the sundeck. Splashes from beyond the balcony told him where the voice had come from and he rose up from the recliner and sauntered over. There were four teenagers loafing in the pool on the level below and one of them waved up at him as he peered over the edge. ‘Dad! Come on down for a swim!’

Paul-John. Johannes smiled down at him. *Sixteen years old and looking more like me each year. That must really piss Marla off!* ‘Hey!’ he called down. ‘How would you like to spend some time on an undeveloped mud ball at the end of absolutely nowhere, PeeJay?’

‘What?’

‘I’ll come down. I’ve got an idea.’

*Yeah. Why not?*

# Chapter Five

## 261.1ne Blackwood

The tree was unlike any tree ever seen before.

Poets may have dreamed of it, but none could have imagined it. Its size alone delineated the smallness of man, forcing him to re-evaluate his perceptions of majesty and awe. The tree soared upwards for over one hundred metres, reaching into the sky as if the sky was a living thing; the heavens impaled on its branches, the world grasped in its roots, each fixed in their place for all time. Communion between worlds. A trunk that couldn't be encircled by the outstretched arms of twenty men seemed to erupt out of the pungent soil and taper forever upwards, smooth and serene, until meeting the first chevroned branches, eighty metres from the ground. A bark like black walnut skin clad the trunk and the high foliage flickered in the breeze, silver underneath, dark, dark green on top.

A human hand was placed on the trunk, palm pressed hard as if feeling for a pulse; and the surge that coursed through the hand and body of Johannes van Diemen was the surge of excitement at the recognition of something good. It was the pulse of a world communicating with him, bonding, inviting – sharing.

‘I,’ he whispered, pressing his face close to the trunk, ‘am called Johannes, and I mean you no harm. Tell everyone.’ He stood back with a final caress of the smooth black trunk, and realised that even if such a thing were to occur, it would take a long time. A very long time. This new world of his, this offered barony, had huge tracts of land on all three continents cloaked in a permanent forest of such giants.

There were billions of them.

The original survey had been accurate in its broad assessment of this little world tucked away on the inner periphery, but ridiculously short on detail. Point eight standard diameter, heavy mass, twenty-one hour rotation, three hundred and ten day orbit. Two main seasons, small ice caps. Three large land masses separated by oceans that ran north to south, and lots of island strings to break up the currents. One of the land masses, the most equatorial one, was slightly smaller than the other two. All three had mountain ranges that fed prodigious rivers that in turn filled large lake systems; there was plenty of fresh water. Very little terraforming would be needed. The lack of detail in the survey was the one word – “Forested,” it said and Johannes tossed it aside as now irrelevant. The name given was “Blackwood”.

A camp had been set up along the banks of a river that opened up onto an area of rare grass-like pasture, wide acres fronted by a high, black wall of trees and backed by tinkling water. It was a perfect spot, made more so by the fact of

human occupation. They had spotted the settlements from orbit; small hamlets of low energy output, tiny flickers of light against a night side of impenetrable darkness.

They turned out to be remnants of an attempt made three years prior by one of the independent worlds to surreptitiously gain an unlocated base from which the proceeds of questionable activities could be relocated. Underfunded and under-equipped, the original community broke into several feuding groups as they competed for ever diminishing resources. And their sponsors never returned. Johannes had met them and found them a sullen, suspicious lot, resentful of the new authority that now laid claim to their world. He dismissed them with contempt.

The camp was a basic one; inflatable igloo huts of various sizes dotted an area by the river bank. Receivers for beamed power stood arrayed a hundred metres away, pointing to the orbiting ships that provided that power. An area further away still was kept clear for the shuttles that ferried to and from orbit; not the field-craft that relied on using the magnetic grid to flicker around on, but the thruster-driven ones that could double as a ship's boat, or even act as an armed escort.

Watching from orbit were two big freighters, *Rune of Light* and *Harvester*. Protecting them all and watching the whole area of sub-space around Blackwood was *Kormorant* and her two new auxiliaries, the refitted and upgraded *Falcon's Reach*, now renamed *Kondor* and under the command of Jesse O'Cahill, and *Tiger Heart*, renamed *Freya*.

‘Right,’ Johannes said, calling his group to order, ‘let’s get started.’ The men and women sitting around the big mess table were the reason he was here at all. There were eight of them and they represented some of the best technical, business and marketing people that he had been able to sneak away from Kompass and into this new venture; ideas people.

‘We’ve had a week, what’ve we got?’ It was all so informal, yet Johannes had the knack of keeping everyone focused on him, on his bidding. Where others wore utility coveralls, he wore black slacks and a cream open shirt. His presence was his authority and everyone knew it.

‘I can tell you for openers,’ an older man, greying but vibrant; a mentor over many campaigns and years, Jonathon Mace, ‘you won’t be running any stock here.’ Smiles all round. ‘Those trees won’t be cleared easily, you know. They’re hard as stone and almost as unbending.’

‘There’s actually very little animal life here.’ Jennifer Mays, market analyst. Sometimes erratic, sometimes brilliant. ‘Mostly bird-types and bugs. Some small burrowers and their predators, but not much else.’

Jonathon picked up on that. ‘You can blame the trees for that, I’m afraid. They provide no food, they can’t be climbed and they can’t be eaten.’ He shrugged as if in apology for the trees. ‘It doesn’t leave much for anyone else.’

‘The soil’s good though,’ volunteered one of the technical people, Christian Lewis. ‘Believe it or not you could grow just about anything in it, but it is particularly

well suited to a couple of plant types that have been tried on Canaan and a few other places. With, I might add, much success.'

'What are we talking about?' Jennifer asked.

'Grapes. Olives. Citrus' Christian looked around the table.

'Vineyards, yes!' Jennifer responded, going to the next step.

'Wines?' Johannes looked at Jonathon for his reaction; 'Are we talking wines?' The entry flap of the igloo was pushed aside and Paul-John van Diemen walked in, circling the table as he listened in.

Jonathon slowly rubbed his chin, eyes far away. He knew wines and the market for good ones. The trees were the problem. 'If we had the space, then it would be quite feasible to establish vineyards. Yes. I've seen the soils and weather reports; everything would indicate a successful viticulture. Rapid returns on wine. The market is crying out for quality vintages, and do you know –' he wagged his finger at Johannes, '– there are still Earth-cuttings and gene-stock in stasis back on the old *Thorn*? Untouched.' A wistful smile crossed his face. 'That would be something.'

While the discussion was going the rounds of the table, Paul-John came up to his father, a long black strip in his hand. 'Dad? Have a look at this,' he offered.

Johannes broke his concentration on the discussion and looked. The black strip Pee-Jay waved seemed to glisten with an iridescent sheen as it struck the light at a certain

angle and he took the proffered object. Three hundred millimetres long, fifty wide, five thick, heavy in his hands for something so thin. Ebony black with just a hint of the faintest grain when directly in the light. Johannes started to feel something in his stomach, something he always felt when important things were happening. He knew instinctively that he was holding a piece of timber from one of the black trees, but nothing had ever felt like this. His big hands gripped and tried to bend the strip; nothing happened. Harder; tendons standing out on his wrist. Nothing. The thin strip of something that purported to be wood refused to budge. Tapping it on the table brought forth a solid sound.

‘How did you get this, Pee-Jay?’ he asked his son.

‘One of the guys back in the hamlet,’ Paul-John jerked his head in the direction of the little group of shacks across the clearing, ‘he had a piece. I just had one of the engineers shave this off with a laser. Nothing else would cut it.’

As Johannes turned the strip to and fro against the light, he found the angle that highlighted the iridescence and held it there. Like a fine shaving of fire opal, the colours appeared to glisten faintly beneath the surface, an optical phenomena that held the eye. It was beautiful. He passed it around and waited while everyone tested it the way he had. Silence fell –

– then – ‘That,’ said Jonathon Mace, ‘is worth a lot.’ His head nodded as if in confirmation of his own thoughts. ‘A lot.’

There is a clarity of thought that follows sex. When the brain has been freed from the pressures of desire and lust, when the body has expiated those needs, a calmness steals across the soul and in its wake come all the threads of insight and intuition. Small moments, often dis-remembered. Johannes had one now, flashes of certainty that pricked at his mind with such a force he had to record them before they became lost to full consciousness.

His igloo was semi-opaque, fired into translucence by the pure light falling from the fully risen Great Wheel, a torrent of energy that turned the tree tops pale and the river into a silver mirror of the heavens. Shadows followed Johannes as he rose and found the palmtop; the small figure in the bed reaching out in her sleep towards the warm spot he had just left.

He spoke softly, half asleep still, 'Insights. I will live here. The wood is real and the vineyards will exist. My children will live here. My wife will not.' He glanced down to the bed, at the long red hair flung wildly over the sheet, at the muscular sensuousness of her. He felt desire course through him, hardening him. 'Christine,' he told the palmtop, 'see me about this. We have to develop strategies and contingencies.'

In her semi-dream state she could feel the magnetic pulse of desire before his hard body gently slid next to her and the musk-laden scent of sex permeated the currents of her drifting consciousness. Legs that rose of their own volition gripped his waist and through half-lidded eyes she

watched his silhouette block out the star-lit ceiling until there was only the warm darkness of him above –

## Chapter Six

### 260.0ne The New Baron

All coins have two sides, but when tossed, show only one.

Johannes van Diemen had played his. He had tossed the coin of fate in the air, the spinning faces on its flight's parabola reflecting the fluctuations and fortunes of his life. All the opportunities, taken and lost, were there, cascading heads and tails of life's moments. And in his mind's eye he could see them all, each and every one. Especially the painful ones. Nothing could dim those, he thought. Not the glittering assembly of notables assembled for his honour; nor the success of the last couple of years. The sparkling water below, the weight of starlight above, the party lights all around, the fine wines and hospitality of his patron, the House of Hanso-Satt; all were window dressing. But they stop eyes prying within, and that was just fine with him.

The parade of faces had seemed never-ending, lords and ladies of the Family, nobles and notables all offering the words dictated by etiquette, courteous to a one in their welcome to the new member of the aristocracy. Fulsome in their praise of his accomplishments in bringing the outer rabble, if not to heel, then at least trained to the leash. Admiration in their smiles of his plans for the new barony of Darkhall, calculation in those same eyes as his strengths and weaknesses were analysed; was he a friend, how could he be used, what can we gain?

But like all ordeals, the faces passed and he found a nook where the lights and the water and the music drifted before him and the guests in their fineries and merriment's paraded by, all somehow remote, all somehow detached.

Marla was over where the lights blazed brightest and the crowd was thickest, enjoying the attention, studying her new social peers, being studied in turn. I can't deprive her of this night of nights; it was hers as much as mine, he told himself. Part reward for her acceptance of the call of the new coin he had flipped, sweet coating on the pill of realism. For the hundredth time he took that well-worn path within himself, seeking some crumbs of comfort that he may have overlooked on previous visits, trying to recall moments that should have been different than they turned out to be. *Where did we part, Marla? Or were we always this way? Did you see it? Did you know then how it was? Was I too busy to look? Can we go back? Ah, Marla. That's the problem, isn't it? Do we want to?*

'I was told,' said a dry voice behind him, 'that someone was lurking in the bushes.'

Johannes turned, away from the lights, away from his thoughts. 'Good evening, Madame Delage.' He brought his most sincere smile out and displayed it. 'Just catching my breath.'

A waiter had followed Eva Delage and they both took champagne. 'Well, well, Johannes. Baron of Darkhall now.' Her talon-like finger reached out and her nail tapped the badge of office that hung from Johannes' neck on a plain ribbon of black satin, the new crest presented just moments before; a golden disc bearing the silhouette of a black tree. 'Who would have thought?' Crystal touched and tinkled.

'You would, Eva. You would.' His eyes took in the grey gauntness of the woman who had brought about his current situation. She looked out of place in an evening gown that could in no way hide her bony shoulders and thin arms. Jewellery at her throat and wrists failed to shine; probably afraid to, Johannes deduced. 'And by the way. My congratulations on your own elevation to Family Advisor.'

Eva nodded acceptance, her eyes and ears watching and listening for the slightest sign of insincerity; the world of the rich and powerful was riddled with the plotting's and schemes of so-called friends hiding behind their masks of loyalty and obligation and she was expert at recognising the minute telltales. But she struggled to find any in Johannes. He appeared to be different, he appeared to be a man of honour and integrity, but it was so long ago since she had last seen such a one, that she couldn't tell any more. She thought that she liked him.

‘Will your wife join you on Darkhall?’ The innocence of the question belied her knowledge of it.

Johannes helped himself to more champagne and lit up a cigar before replying. He wanted Eva as a friend at court, he did not want her to regard him in the light of the rumours that he knew she had heard. ‘No, I’m afraid,’ peering directly into Eva’s eyes, deciding a little honesty might work better. *I need someone to trust here!* ‘The official story will be that Marla will keep the home fires burning on Canaan while I take up the mantle of whipping Darkhall into shape. A reasonable expectation given that our home and businesses are there, two of our children are still young and a frontier world is still, after all, a frontier world.’ When he said it like that, it didn’t pain as much. ‘Would you like to hear the unofficial story?’

‘Can you trust me with it?’

‘I honestly don’t know, Eva. Confidences are shared before they are broken, I guess; I make no demands on trust.’

It was irresistible now. ‘Go ahead, Johannes. I would like to know.’

Distant music and laughter rose in volume momentarily, signaling the start of a more relaxed party than the formal investiture. ‘Time blinds us, Eva. To ourselves.’ The deep blue in his eyes seemed to warm into a limpid indigo, and Eva wished for the first time in her life that she was younger; a lot younger. ‘My dreams, my hopes, my fears and resolutions were just that I’m afraid.’ Eva waited, almost entranced. ‘Mine. Only mine. And like all dreams, they are impossible to deny. Even the blind dream.’ Johannes inhaled, a slight ragged edge to the intake the only sign of his emotional state. ‘But, Eva, when you can see, you can

choose that which you wish to see. And unfortunately, that choice is sometimes subjective.'

This was not what she expected; this touched things so long buried, so – 'Johannes –' she asked, and to her astonishment, a pulse throbbed at the base of her long neck, '– can you undream?'

*I wish I could, I wish* – 'No. I'm afraid it doesn't work like that, Eva. When dreams become reality, they also become pathways of our desires. One way.' He took refuge in the champagne, Eva's image blurring slightly before he blinked away the offending tear.

Eva reached out and touched his wrist, feeling the vibrancy that pulsed beneath his skin, feeling the taut sinews. Feeling. Touching. 'Will the Lady Marla be comfortable with this, Johannes?'

He moved and Eva felt a strong hand enfolding hers, gently squeezing a message of thanks. Warm. Nice. 'Oh yes. Marla has readily accepted the role. It does solve questions as to the conflicts of her interests. And desires.'

'Johannes,' an offer never made before, 'should you have the need of an ear outside of the constraints of our political relationship, I would like to think that you would talk to me?' Involuntarily her fingers tightened around his in a gesture she was amazed to recognise as sincerity.

As the night progressed and she drifted through the obligations of her office, Eva saw again and again the eyes of Johannes van Diemen as they showed her that most precious of things; himself. Her own eyes sought out the waiter she

had identified a little earlier and crooked her finger. As she took the champagne, she spoke softly alongside his bowed blonde head. 'Return your tray and present yourself at my private office in half an hour. I have need of more than your champagne.' *Much more!*

## Chapter Seven

### 261.5ne Darkhall

To Christine Boland's eyes nothing had changed. Standing in the view room of Darkhall's small and unfinished orbital waiting for the shuttle down, she found nothing at all to look at on the planet below. No lights showed on the dark side of the terminator, no signs of activity on the daylight side. An illusion, she knew; there were things happening down below, she had the latest updates in her briefcase to prove it. But they were too small and too far away to be noticeable. Darkhall looked pristine and virginal in its suit of deep blue oceans and black-mottled landmasses, with its jewellery of clouds. All this against a diamond-dust canvas of stars.

The excitement she felt at returning to Darkhall was a manifestation of the excitement she felt at seeing Johannes again; it had been nearly a year since they had last met at the head office on Canaan when he had come to oversee the finance deals so vital for this next round of development. And six months since she had completed a series of cosmetic operations designed to insure that Johannes returned some of that excitement. *I hope you enjoy your fiftieth birthday present, Johannes.*

A ship's officer came up to her and escorted her onto the shuttle, to the small section behind the cockpit where an attempt at privacy was made for Johannes and his staff. There were no luxuries on these little ships, those would come later when money and people dictated they should be there; for now they were just a long shell of a body with fold-wings and rear thrusters. Cheap and functional; there were no windows.

Following on, the latest batch of recruits to the new venture filed their way down the narrow body, strapping themselves into tight, sling-back seats. Engineers, horticulturists, construction personnel, nurses, teachers; some to take up contracts, others with families waiting to join them, eager to begin new lives. Christine knew that as soon as they undocked, bigger shuttles designed for freight would sidle up to the starship she had arrived on and deliver the tonnes of blackwood tree roots that artisans the length and breadth of the kingdoms were clamouring for. Then they would load the thousand-and-one things that

a new world needs; machine tools, spare parts, electronics, hard liquor, crockery, clothes, perfumes, soap, medicines, entertainments, foodstuffs – the list was endless. And expensive.

Artificial gravity disappeared as the shuttle dropped away from the dock and weightlessness took over. There was a small screen in the private section and Christine tried to avoid looking at it during the descent; but she knew that the world had turned cartwheels with the stars before steadying and rising up like a giant ball, rolling towards her. Vibrations and metallic groans told of the shuttle's battle with the outer layers of atmosphere; later, bumps and hydraulic hisses beneath the floor told her the wings were deployed.

Now she looked at the screen, as the world below unfurled into recognition. The water resolved into blues and greens, rippled by waves and flecked with caps. Huge cliffs reared up on foaming legs and then the land scrolled by, temperate, green, vast. An enormous high savannah on the east coast of the smallest continent had been chosen for the first settlement, mainly because it had areas free of the ubiquitous blackwood, but also because it was cheaper to build on and easier to access orbit from.

Tiny signs of intrusion started to appear; areas of slashed earth, complexes of huts, shining arrays of solar panels; now a river on its way down from the high inland mountains, wide and slow; now earthworks, then a big

water plant; the ground suddenly rushing up in a ribbon of levelled brown. A scream and a shudder as the thrusters reversed, pressing her hard into the seat restraints. Then an anti-climactic sigh as the shuttle dropped the last few metres and came to rest.

He was there to meet her as she stepped out onto the hard packed landing strip. A wide bush hat shadowed his face, but his smile gleamed a welcome. He wore standard frontier working garb of denims, a spun shirt and heavy lace up boots. A wide leather belt circled a waist that looked narrower than Christine remembered it to be, and a huge buckle of blackwood flashed in the sun. Johannes stepped away from the hovering skimmer he had been leaning against and his eyes appraised her as they came close together. They didn't miss a thing, and Christine felt a flush begin.

Johannes watched his secretary approach; he knew something was different from her clothes. Gone was the formal business jacket with closed blouse and long skirt; in their place an open casual jacket over a collarless body stocking that clung to rather more than he remembered. Her breasts swayed slightly as she walked, each bounce in time with hips that were embraced by a short, tight, slit skirt. High heels accented sculpted legs.

'Very nice, Chris,' he began, kissing her formally on the cheek. 'Very nice. You look terrific.'

'You too, Johannes.' She looked down at his flat stomach. 'Hard work suits you.'

‘Come on then,’ he said, leading her to the skimmer and helping her in, ‘come and see what all the work has resulted in.’ Dust scooted about as he lifted the skimmer and headed north, away from the field, away from the growing settlement; to the high country up against the tree line where he had built the symbol of his new beginnings. His great house – Darkhall.

There was no name yet for the new community burgeoning around the settlement, one day there would be, but until then everything was Darkhall; and in seconds it had passed from sight and there was only the savannah and sun, and far off to the right, the ocean glittered.

‘About forty minutes, Chris.’ He’d thrown his hat in the back seats and Christine didn’t have to peer too hard to understand the look in his eyes.

‘A perfect opportunity,’ she said, removing her jacket, ‘to see where some of your money went.’ She sank back, one arm draped along the back of the seat, her hand on Johannes’ shoulder, her breasts in twin profile. Johannes switched to auto and dimmed the canopy to cut down the unpolarised light. ‘A little more Johannes,’ soft lips rising into a smile. ‘They’ve done a good job, but it wouldn’t stand that sort of scrutiny.’

The light went down to an early evening level and Johannes climbed over his seat and laid out the two rows of rear seats. Christine joined him, wriggling over the seat back and into his arms.

Teeth on lips, tongues probing each other; hands moving in patterns of caress, reaffirming. Clothes deliciously removed. Skin sliding on skin.

Money very well spent.

Ranch-house.

That was the way Johannes thought of it. A simple, single story building with central courtyard and wide verandas on all four sides to take advantage of the breezes and the views. A place to be comfortable in. A place for families.

It stood on a slight rise, facing east, facing the rising sun. Behind, and several kilometres away, the land sloped upwards into hills and the entire ridge was covered with blackwood trees, a black unbroken carpet that flowed north and west until lost to sight. Radiating away from the house on the other three sides were the new vineyards, an irregular checkerboard of brown and green, their trellises following the contours of the ground. New areas were still being planted, and far away across the meadowlands, machinery was in motion, extending the mosaic. Still further, to the west, the glitter of water broke through the tree-line, cascading in a torrent of fractal brilliance before falling out of sight; and by that place, where the river resumed, construction crews were putting the finishing touches to the new winery.

To Christine, the first sight was a shock. She had expected the house Johannes said it was, but -- this was huge! Fully fifty metres on each side. And dark. Not black, but shades of darkness, moving with the light, windows

adding a sparkle within the deep recesses of the verandas. Imposing.

‘We made the whole thing out of blackwood.’ He had seen the stunned look grow in her eyes as the skimmer neared the house and now standing before it, he had to admit it was a little – grand. ‘Some of the wood,’ he pointed as he spoke, ‘was bleached to get the shaded effect. Too monotonous otherwise.’ The veranda was two steps up and eight metres deep, the steps running the perimeter of the house. Columns every five metres provided support and the boards drummed solidly beneath their feet as Johannes led Christine out of the sunbaked heat and into the cool of the interior. Voices carried to them from areas unseen, as staff carried out on-going works; detail finishing the rooms, planting copses of eucalypts around the sides to act as screens, final polishing to internal woodwork.

White processed stone formed the internal walls, adding a brightness that the exterior belied, reflecting a sunlight brought inside by the ceiling domes. All architraves, floors and doors were blackwood, stark counterpoint to the unexpected light. Johannes guided her through the room to the opposite side, where all the colours of a garden could be seen through glass doors.

‘Courtyard,’ Johannes informed her. ‘This is the reason the outside is so long.’ Here were the same verandas as outside, but not as long, and around the whole inner perimeter containers were piled in random order outside

rooms, and furniture was stacked against walls. Inside the rectangle, a lush Japanese garden was being created. Pebbles, water courses, fernery, pools; all in the process of completion, soon to bring the peace of mind that was the sole reason for their design.

‘East wing,’ he jerked his thumb over his shoulder to indicate the way they had come in, ‘dining, entertainment. West wing is for working; offices, communications, conferences, that sort of thing. That’s where we will run the show.’

‘The whole planet, or just Darkhall?’

‘At the moment, Chris, Darkhall is the whole planet. This will do for a while, then as we populate, formal government can be set up elsewhere.’

‘Do you have any system in mind, yet,’ a mischievous look crossed her face, ‘or will you be joining the ranks of the noble autocrats?’

‘I’ll tell you later, when I make the transition from businessman to politician. Now,’ he swept his left arm to take in the south wing, ‘here we have the guest quarters, and over there in the northern wing are the family rooms. Notice,’ Johannes pointed out the room they had just walked through, ‘all the main function rooms have doors opening onto the inner and outer verandas, as well as internal access doors. All the smaller rooms, like bedroom suites and offices, have only access to one veranda, the inner or the outer. A corridor divides them.’

‘I love it, Johannes. I really do.’

‘Ah. But when everything has had a chance to grow and blend together, things will look better. More complete.’ He seemed more composed and relaxed than she had ever seen him. ‘Care for a full tour?’

Christine knew what Johannes meant. He was building for a future that only he could see the entirety of; but along the way there were parts for such as she. Immediate things. ‘First things first, I think. Are the bathrooms finished?’

Johannes laughed. ‘Yes. And so is your room. Care to see them both?’

‘Of course, Johannes.’ She took his arm. ‘Lead the way. I think we should inspect them both. Intimately.’

He led her along the veranda, very conscious of the nearness of her and the warmth of her. ‘Did they upgrade your hormones as well, Chris? Or shouldn’t I ask?’

‘Don’t ask!’ and her tinkling laughter echoed off the iridescent walls.

Dinner that night was a casual affair with a buffet in the dining room. The entire household came together and shared the same meal, sitting in groups around a series of temporary tables in the cavernous room. Christine noticed that while everyone exhibited the manners required when dining with the boss, a casual ambience prevailed and conversations murmured back and forth. There was no ceremony to stand on, and Johannes was disinclined to invent one.

Had Christine the gift of precognition, she would have been able to recognise the genesis of the affection that would come to be held for the baron and his line, as elements of the approachability and friendliness of the man guiding their destinies were being laid down on nights such as this.

Both sets of doors stood open to allow the warm night air to flow through and Johannes and Christine sat alone in front of the outer door, watching the Great Wheel climb over the horizon, adding its stupendous light to the dense blaze of the local stars. Outside it was as light as a hooded dawn, shadows crossing one another in their flight before the all-surrounding starlight. Finished plates littered their table and a bottle of wine stood half consumed. Christine toyed with her glass as she delivered a synopsis of the report she had brought with her.

‘– banks aren’t happy at the profit dip; they feel too much has gone into this project. They would like Kompass to reduce its exposure in this instance; although I suspect that Marla’s bringing pressure to bear there.’ Johannes nodded in an absent-minded way. ‘Mag-Shipping is up. There appears to be a surge in demand following stability along the periphery and returns have gone some way to offsetting the Kompass slide. Not enough though, Johannes. For the books, you need to be seen to be doing something.’

‘Is there any good news?’

‘Definitely! That little trading group you put together for the independent worlds is growing in leaps and bounds. It’s already into the black.’

Johannes smiled at that. Free World Trading Inc had been set up to follow up on the uncertainties caused by the crackdown on freebooter activities. A seemingly small company with obvious connections to the inner markets of the kingdoms, with good prices and commissions, on-time deliveries, and honest brokering of free-world goods; it was the right option for many businessmen on the independent worlds who were gun-shy at dealing through some of the existing networks. Too many cargoes had been lost or damaged, too many schedules broken because operators with a habit of moonlighting feared the kingdom laws. Too many times insurance rates were hiked upwards as news of yet another ship falling foul of the seemingly unrelenting security arm of Hanso-Satt's latest outpost, Darkhall. Kompass Lines carried the bulk of the freight around the periphery, but FWT Inc scavenged a big slice of the independent trade; a very big slice, and wherever they went, they were left alone. It hadn't taken the independents long to realise there were no returns in having a warship call unexpectedly and demonstrate some serious firepower.

'That's good news. Opportune, too. I've called a meeting for next month; all our area managers, accountants, ship's captains. Full-on strategy.'

Ship's captains! That meant the little redhead. *You're a bastard, Johannes!* Christine smiled sweetly across the table. 'I'll look forward to that,' she said, in a voice that made him wish he hadn't told her just yet. 'In the meantime, you might

give some consideration to the demands for the wood.' Prim and proper now, all secretary.

The background noise subsided as people finished their dinner and left. Many bid goodnight to Johannes and Christina, receiving the same in return. A cigar seemed called for and he lit one, drawing on it with satisfaction. 'You have the numbers, Chris. How good are they?'

'The market's going crazy for the stuff, Johannes. The trial shipments you made took everyone by surprise. Architects want it for structures; designers want it for interiors and artists are going into raptures. Apparently, from what I've heard on Canopy, commissions are being paid now for future works.'

'What sort of works?'

'Furniture, crests, busts. Anything you can think of.'

Johannes clouded himself in smoke. 'It's funny you should say that. Something's come up, by accident rather than design, I'm afraid, but it could be significant.' He rose from the table. 'I'll show you. Stay there.' He crossed the room to the long dresser the buffet had been served from and returned with two bottles and two glasses taken from one of the cupboards. To Christine's eye, the bottles looked identical as he proceeded to open both. 'This,' he said, wrestling with the cork, 'is a first run from the accelerated trial plantings. A chardonnay. Note the colour.' It looked the same as the wine she had with the meal, pale, yellow-amber. He poured some into a glass. 'This has had very little barrel age, so expect it to be sharp.'

It was. Not unpleasant, just not preferable. She said so.

‘That came from a standard barrel. Now look at this.’ He placed the other bottle down and she peered at it; same colour, same –

‘That’s different. There’s something in there.’ The colour was the same, but *inside* the colour – the faintest bands of iridescence gently swirled, one moment almost on the point of being unseen, the next flaring in the light before fading again.

‘Taste it.’

Wine bubbled into the glass; it even sounded different and before her parted lips could touch the liquid, a subtle bouquet infused her senses; *there* were the flowers from her childhood; *here* were the fruits of field and forest; *this* was rain-wet leaves – her large brown eyes opened in utter astonishment at the effect. The glass tilted in her hand as she tentatively sipped – mellow, smooth, wooded; complexities of flavours lingering long after.

‘That is the same wine. Can you believe it?’ Johannes took a sip from his own glass.

‘What happened to it?’

‘We made some barrels from the blackwood. Just as a trial. A shot in the dark, if you like. The winemakers are doing handstands; this is a unique product. Everything appears to come from the wood; the enhanced bouquet, the accelerated ageing, the colours. Let me show you something else,’ and held out his hand to lead her outside, away from the house, into the deep starlight.

‘Now look at it, Chris. Tell me this isn’t worth a fortune.’ The wine in his glass shimmered with silver filaments,