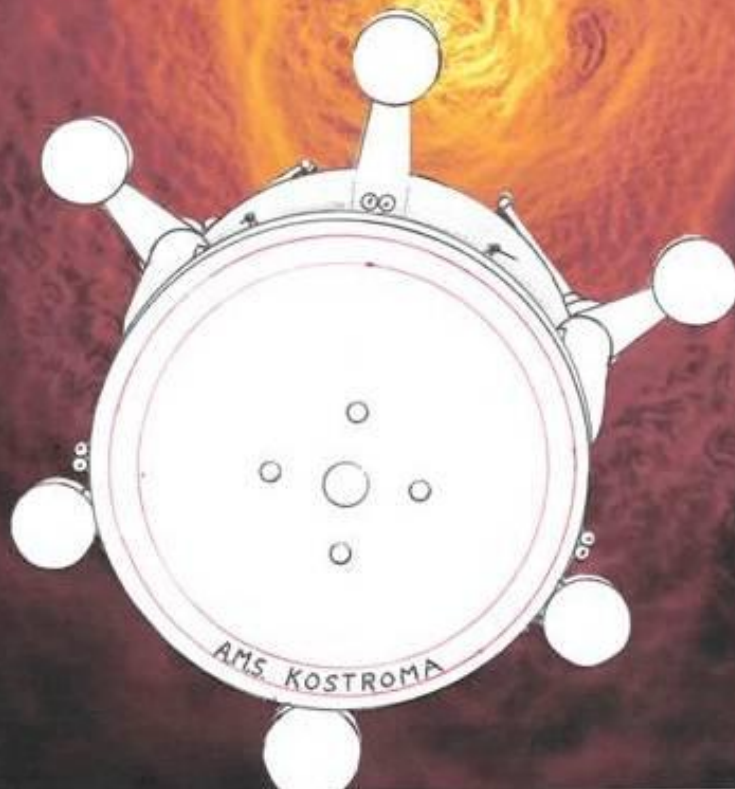


LOST AMONG THE STARS

BY

MICHEL POULIN



LOST AMONG THE STARS

A science-fiction novel

By

Michel Poulin

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WARNING TO POTENTIAL READERS

THIS FICTION NOVEL CONTAINS GRAPHIC DESCRIPTIONS OF WAR AND VIOLENCE, AS WELL AS COARSE LANGUAGE AND CONTROVERSIAL SUBJECTS THAT ARE UNSUITABLE FOR CHILDREN.

ABOUT THIS NOVEL

This novel is a sequel to THE ERIS PROTOCOL, which was itself a sequel to JOVIAN UPRISING – 2315, and continues the adventures in space of the giant cargo ship KOSTROMA and of its captain, Tina Forster.

Other novels by this author

(Available for free at Free-Ebooks.net and at Goodreads.com, or can be requested directly to me via email to natai@videotron.ca)

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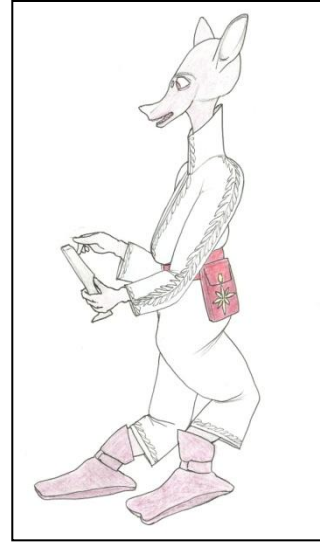
ODYSSÉE TEMPORELLE (in French)
THE LOST CLIPPER
FRIENDS AND FOES
SPACETIME ODYSSEY
A MARS ODYSSEY

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Northern Vancouver Island, British Columbia, Canada.



A Koorivar.

CHAPTER 1 – A STROKE OF GENIUS

08:41 (Vancouver Time)

Tuesday, November 18, 2319

University of British Columbia (UBC), Vancouver

Province of British Columbia, Canada

Northern Alliance, Earth

The students and staff members of the University of British Columbia, or UBC, who were entering or exiting the building housing the university's sciences department all stopped in their tracks when a strange creature stepped out of an air car which had just landed in front of the building. Whispered remarks and exclamations went around as the being, who looked like a kangaroo with an elongated deer head, entered the faculty building. As for the air car, it took off soon afterwards and flew away.

"Was that a Koorivar?" asked a teenage female student to her friend, as the two girls watched the creature walk in.

"What else could it be, Jenny? They are the only extra-terrestrials we know of, thanks to the trip by the cargo ship KOSTROMA to the dwarf planet Eris, some two years ago."

“Oooh, I would love to be able to talk to one of them: there are so many fascinating rumors and stories about them.”

“And also some tragic ones: don’t forget that their world, Shouria, which we knew as Gliese 667Cc, was destroyed in a collision with a wandering brown dwarf¹ some 350 years ago. The 20,000 or so Koorivars who traveled all the way to our system and who now live in the northern part of Vancouver Island are the only known survivors of their race.”

“Still, they are fascinating creatures. I must say that, as different as they are from us, I find them...cute.”

Jenny’s friend smirked on hearing her last sentence.

“Is it the fact that they are said to be hermaphrodites, with a huge pecker on top of a vagina and breasts, that fascinates you?”

“So? A girl has the right to be curious.” replied Jenny, a defensive tone in her voice.

Inside the science department’s building, Senior Physicist Koomak, ignoring the stares and whispered remarks around him, briefly stopped what seems to be a staff member to ask him a question. His English could be said to be more than fair after a bit more than a year of studies and practice, while his voice was on a bit higher pitch than the human norm. Of course, being a scientific genius had helped him learn that alien language quite quickly.

“Excuse me, sir. Could you tell me where the auditorium is?”

“Uh, sure! It is on the next floor up, left of the main staircase. You came for the big international physics conference I suppose, mister...or miss?”

Koomak smiled at the man’s confusion, which was most understandable.

“I suppose that you could say that I am both, since we Koorivars are hermaphrodites. For simplicity’s sake, we have adopted male terms to designate ourselves to Humans. Thank you for your help.”

Koomak then walked to the main staircase in his strange gait, caused by his two ‘4’-like legs. Since he wore a set of clothes comprised of a long-sleeved blouse, a wide belt

¹ Brown dwarf : A massive celestial body larger than the planet Jupiter but barely not massive enough to become a star. Some orbit known stars, while others wander through the Cosmos as solitary bodies.

with purple, trousers and soft boots, only his four-digit hands and his head, with its elongated and delicate snout and its pair of long vertical ears, were visible to onlookers. His clothes, made of a silky-like fabric, were of golden color with white and silver embroidering and were from Shouria, his unfortunate home of birth. Koomak actually jumped up from step to step, three steps at a time, like what a kangaroo would be expected to do, attracting yet more stares on his way. Of course, the fact that the gravity on Shouria had been 1.3 G, thirty percent higher than Earth's gravity, made his aging body look more energetic here than it really was. Once on the upper floor, he effectively saw a large sign standing on an easel, which advertised the international physics conference he had come to attend. Following the signs, he finally arrived at the doors of the big auditorium of the building, where an employee checked his name on his list of guests and attendees before letting him in.

Inside the auditorium, with its inclined floor going down towards a large stage, Koomak saw that over a hundred persons were already in, most of them discussing in small groups at the foot of the stage or along the successive landings along the three wide circulation alleys. Deciding to go mingle with other scientists, he went down one alley, soon stepping on the flat floor surface surrounding the foot of the stage. One man with gray hair hurried to him to shake his hand, a gesture Koomak had quickly learned after he had been awakened from his cryogenic sleep in the VEON SHOURIA, the ship that had brought him and his compatriots from Shouria.

"Doctor Koomak! It is a pleasure to see you here at this conference. I am Max Mandel, Head of the Physics Department at UBC and the organizer of this conference."

"It is a pleasure as well to meet you, Mister Mandel. Did you receive the private message I sent you back after receiving your invitation to this conference?"

From effusive, Mandel became at once most serious and he lowered his voice to answer Koomak.

"Yes I did, Doctor Koomak. As you wished so, the subject of anti-matter will not be discussed at this conference, in order to avoid any, uh, 'misunderstandings'. If anyone raises that subject, I will then intervene to deflect the conversation to other subjects."

"Thank you, Mister Mandel. It is very much appreciated." replied Koomak, reassured. The whole subject of the Koorivar anti-matter technology, once known by Humans to exist, had proven very contentious indeed. While most scientists and

industrialists had seen it as a way to tremendously improve the space-traveling capabilities and profitability of human spaceships, others, particularly ambitious or vindictive politicians and military leaders, had seen it as a way to create hugely powerful weapons which would eclipse even thermonuclear weapons in terms of destructive power. Tina Forster, the captain of the KOSTROMA, had understood the dangers of seeing that anti-matter technology falling into the wrong hands and had counseled at once the captain of the VEON SHOURIA to destroy his anti-matter drive and erase all files pertaining to it while they were still on Eris, a decision Koomak had found most wise when he had heard about it. However, the poor Tina Forster had then faced a fierce barrage of accusations and criticism from enraged scientists and politicians around the Solar System. That dispute had even cost a life and had caused a failed attempt by the power-hungry head of an industrial group to have the chief engineer of the VEON SHOURIA kidnapped, in order to extract from him the secrets of the anti-matter drive. With that point now settled, Koomak braced himself and faced the first of a small crowd of physicists eagerly waiting to discuss with him. Thankfully, nobody was rude or inconsiderate enough to ask him about anti-matter technology, with most asking questions about the internal workings of red dwarf stars, the subject Koomak was due to present during the conference.

After about ten minutes discussing with a number of physicists at the foot of the stage, Max Mandel went to the lectern set in one corner of the stage and announced the opening of the conference, asking the attendees to go take their seats. As a matter of courtesy, as the lone alien scientist present, Koomak was given a front-row seat next to the stage, where he activated his portable translator unit. He may have been fairly fluent in English by now, but the terms used by advanced physicists often were by no means common words, with an average Human who would watch the conference probably unable to comprehend half of what was said. In that, his translator unit quickly proved most useful, allowing Koomak to fully enjoy the scientific dissertations which followed.

Koomak had time to present his subject matter, answering many questions about it afterwards, then returned to his seat to listen to the next presenter, whose subject was about black holes, worm holes and the deformations they created in the fabric of Space. One sentence that presenter said suddenly made Koomak stiffen and pay even more attention, as an avalanche of ideas cascaded around his mind. When that presentation

was over, with a lunch break announced, Koomak feverishly reviewed the audio recording of the parts which had stimulated his attention. He then realized that he was definitely on something that could bring huge consequences, for both him, the Koorivars and the Humans.

18:35 (Vancouver Time)

Central computer compartment

Koorivar starship VEON SHOURIA

Landing pad of Koorivar colony, northern tip of Vancouver Island

A soft, friendly voice greeted Koomak as soon as he stepped inside the heavily shielded and protected central computer compartment of the VEON SHOURIA.

“Good evening, Doctor Koomak. What may I do for you today?”

“First off, could you put this compartment in total privacy mode, Shanya. What I want to discuss with you is extremely sensitive.”

“Of course, Doctor Koomak!” replied the highly advanced artificial intelligence computer of the Koorivar starship. “Privacy mode now established.”

“Excellent! I heard something today at the international physics conference in Vancouver which triggered an idea in my head. I have reviewed that idea and would now like to pass it to you for analysis, so that you could check if it is both realistic and feasible by checking its parameters and running a simulation on it. I am now going to introduce into one of your data receptors a data chip containing the guiding lines of my idea.”

Introducing the small rectangular chip into one of Shanya’s data receptor slots, Koomak then waited patiently as the computer downloaded the content of the chip and started analyzing it. Shanya took two minutes before speaking, a very long time for such a powerful computer.

“Analysis and simulation program completed successfully, Doctor Koomak. I am happy to tell you that your idea is eminently feasible. In fact, the simulation ran more smoothly than I had expected, so I took the liberty after that to draw the complete schematics of a prototype system that I would like to call the ‘Koomak Drive’. I am now downloading those schematics onto your data chip as I speak.”

Koomak had to sit down at one of the chairs facing the computer work station, his head suddenly spinning under the impact of the powerful emotions now washing over his brain.

“You are sure that my idea will work, Shanya?”

“Completely positive, Doctor Koomak. In truth, your idea is a genuine stroke of genius: despite being a simple one, it was by no means an obvious one. May I in turn make a few suggestions to you about it, Doctor?”

“Please, go on, Shanya.” said Koomak, his attention focused to its maximum.



A space shipyard. Design from the FANDOM site.

CHAPTER 2 – SPACE REFIT

13:57 (Greenwich Universal Time)

Thursday, January 8, 2320

Command bridge of the armed merchant ship A.M.S. KOSTROMA

On approach to the Avalon Space Yards

Low Earth orbit

The tall brunette in her early thirties smiled on seeing the face of a mature man appear on one of the small viewing screens attached to the armrests of her command chair.

“Hello Gustav! I am back from my second trip to Eris and am ready for the refit we discussed a few months ago and that is to be financed by the Spacers League. I also have a few million credits that are burning my fingertips and that I am eager to spend at your shipyard on a few personal projects I have in mind.”

“Aaah, the kind of customer I like!” replied with a smile Gustav Shomberg, the owner of the Avalon Space Yards and one of the most prominent spaceship designers in

the Solar System. "So, how are the scientists in the Eris Station doing, apart from wallowing in Eris diamonds?"

"Studying and observing, as you would expect from true scientists. They are also quite busy studying each other, considering the fact that seven babies have been born at the station in the past year and a half, with more on the way. By the way, I also kept busy with Michel Koniev, what with those long space trips, and we now have a three month-old boy named Misha. You will be free to cuddle him once you come aboard."

"Oh! Congratulations! I am sure that he will make an excellent ship captain one day. About your refit, I received three weeks ago from the Spacers League the weapons systems, ordnance and materiel meant to be fitted to the KOSTROMA. From formidable, your KOSTROMA will soon become a truly mighty opponent in a space battle."

"Well, I sincerely hope that I will never need to use those weapons, ever: I hate war, even if I proved to be good at it while fighting the Terran Federation four years ago. The personal improvements I have in mind are definitely on the more pacifist side."

"I am eager to hear about them, Tina. I suppose that your crew will go for a long and well-deserved vacation period on Earth while we will work on your ship."

"You supposed right, Gustav. I may have forests, giant aquariums and farms aboard the KOSTROMA, but I still don't have a seaside beach or a mountain range."

"Can't have it all, I guess." said Shomberg while shrugging and smiling. Well, I will now leave you in peace, so that you can dock your ship inside my Dry Dock Number One. See you later!"

The video link was then cut, leaving Tina Forster free to concentrate back on guiding her 1,700 meter-long ultra-heavy cargo ship towards the waiting main dry dock of the Avalon Space Yards. At an empty mass of 2,510,000 metric tons, the KOSTROMA would definitely inflict some major damage to the space yard if not handled properly and with due caution. Thankfully, her cargo holds were presently empty, while her deuterium-tritium fuel tanks were only a quarter full, the result of the long, year-long return trip to Eris, so her ship's gravity sails, which worked in a fairly similar way to anti-gravity fields, proved more than sufficient to propel the KOSTROMA with agility and precision. Another twenty minutes and the giant cargo ship moored itself inside the largest of the yards' dry docks. The access doors of the dry dock then closed and compressed air started filling the vast volume of space inside.

“Mooring clamps engaged and secured! Communication tunnels extending into position!” announced First Pilot Frida Skarsgard, a 31 year-old woman with reddish-brown hair and blue eyes who was also a close friend of Tina.

“Shut down all engines! Secure from flying stations!” said Tina in turn before looking at her First Navigator, Dana ‘DD’ Durning, who was also her unofficial First Officer. While Dana said that ‘DD’ were simply the first letters of her name, sneaky tongues (male ones mostly) said that it alluded to the size of her chest. Whatever the meaning of ‘DD’ was, the 36 year-old still had most men salivating at her sight.

“Dana, you have the bridge. I am going to meet Mister Shomberg.”

“Understood!”

Getting up from her command chair, Tina then walked down the steps linking her platform level with the next lower one, where the access rotunda to the elevators was. At this level in the ship, just under the massive, 700 meter-diameter bow shield of the giant cargo ship, only two personnel lift cabins and two medium cargo lifts reached all the way up to the bridge complex and were reserved for the exclusive use of the crew. The other elevators contained inside the central longitudinal spine tube of the KOSTROMA stopped short of it on Deck 23, which was the highest level passengers could normally get to, unless invited up by Tina. Calling up one of the lift cabins and then riding it down to the ship’s Main Promenade Deck, on Level 9, Tina left the cabin there and started walking down one of the four radial hallways linking the deck’s central rotunda with the peripheral ring which constituted the Main Promenade proper. Passing in succession in front of the entrances of the ‘Maharaja’ Indian restaurant, the ship’s commercial daycare center, the ship’s barber shop and hair salon and the children’s playground, she arrived after some sixty meters at the junction of the hallway and of the Main Promenade. Small trees and rows of decorative bushes planted on both sides of the ten meter-wide ring promenade added a soft natural touch to what was in essence a commercial shopping venue used by crewmembers, members of their families, passengers and visitors alike. The shops, boutiques and clubs of the Main Promenade were in fact one of the main reasons why the KOSTROMA was such a popular mixed cargo and passenger ship in the Solar System. For the men and women working hard in often isolated mining operations and smaller human outposts around the Solar System, the passage of the KOSTROMA represented a rare and much appreciated occasion to entertain themselves, shop for things that were not available locally, enjoy exotic food

and generally change their minds from work. On such stops at isolated facilities and outposts, another particularity of the KOSTROMA made it even more popular, this time with the managers and logistics officers of those facilities and outposts: the extensive agro-food production facilities on which Tina had worked for years now to develop aboard her cargo ship. With a length overall of 1,740 meters and a total of 128 full decks, many of which were sub-divided into more decks, Tina had plenty of internal space available to devote to hydroponic gardens, animal farms and fish ponds, and this without hurting her cargo-carrying capacity, which presently stood at a whopping maximum of twenty million metric tons, most of it transported in space cargo pods attached to its external flanks. That initiative, apart from helping to fulfill Tina's dream of transforming her ship into what she called 'a village in space', had proved as well to be very lucrative commercially. One reason for that was that the KOSTROMA was now self-sufficient in terms of food production, with Tina not needing anymore to buy foodstuff at often inflated prices from Earth suppliers or from Spacers' moon farms. Another reason was the fact that some of the crops and foodstuff produced aboard the KOSTROMA were highly-sought of products, like spices, coffee, tea and chocolate, which Tina was then too happy to sell to other Spacers at prices markedly lower than those asked for by Earth's exporters.

Tina smiled to herself on seeing that the reception counter of the East Outer Access Gallery, which was now some fifteen meters ahead of her, was already processing visitors from the Avalon Space Yards, many of them being obviously spouses or children of the workers of the giant orbital facility. Despite being stationed in Earth orbit, a trip to Earth's surface was still fairly costly for the average worker, who normally saved his or her money for vacation trips rather than for shopping trips. There was also the fact that the KOSTROMA and Tina enjoyed a special relationship with the Avalon Space Yards, which had effected its first major refit and had also secretly helped arm it in prevision for the war that had opposed in 2315 the now defunct Earth Federation and the Spacers League, a war in which Tina and her cargo ship had played a crucial role. Her smile widened as she watched a group of excited children dragging their parents towards the nearby children's playground of the Main Promenade, which covered over 500 square meters and had a free height of ten meters, allowing it to house some fairly elaborate play modules. Other children also assaulted the adjacent 'Enceladus Swirl' ice cream parlor and candy shop, which served fresh ice cream and

chocolate produced aboard the KOSTROMA. The parents of those last children actually put up little resistance, as fresh dairy products were some of the most sought of (and expensive) items off Earth's surface, due to high transportation costs and the difficulty of keeping those products fresh during the long delivery trips across the Solar System, which could take up to four weeks aboard older cargo ships.

Tina was passing by the reception counter and through the large airlock situated at the junction with the access gallery when her wrist videophone buzzed, making her stop and raise her forearm. Seeing that it was Spirit, the artificial intelligence computer of her ship, calling her, she opened the line and spoke in her videophone.

"Yes, Spirit?"

"I am sorry to bother you, Tina, but I just got a message from Shanya, my friend on the VEON SHOURIA: a team of Koorivars just departed Vancouver Island in one of their shuttle craft and is on its way to here. They wish to speak to you in private about a most important and sensitive subject."

Two things immediately made Tina freeze for a moment. First, Shanya was the AI computer of the Koorivar ship VEON SHOURIA, which had been saved by the KOSTROMA on Eris. The notion of two super computers calling each other a 'friend' was enough to make most people pause. Second, a 'most important and sensitive subject', when it related to the Koorivars, could only concern one thing: their anti-matter drive.

"Uh, I was on my way to go see Gustav Shomberg, to discuss our refit with him. When is the Koorivar shuttle scheduled to arrive at the Avalon Space Yards?"

"It should dock with the station in about 43 minutes."

"Then, once they are on the KOSTROMA, have them wait for me in my suite on Level 24. I will join them there after speaking with Shomberg."

"Understood!"

Her mind now busy speculating about what the Koorivars wanted to tell her, Tina closed the link and resumed her walking. Once out of the 320 meter-long telescopic access gallery, Tina found that Shomberg had sent a driver with an anti-gravity scooter to wait for her at the reception airlock of the station. Thanking the driver, she took place in one of the passenger seats of the scooter and let the man drive her down the long passageways of the installation. Four minutes later, the scooter was letting her step off in front of Shomberg's private office, situated in the design department of the space

yards. Shomberg's personal secretary, a stunningly beautiful Asian young woman, greeted Tina with a respectful bow.

"Welcome to Mister Shomberg's offices, Fleet Captain Foster. Mister Shomberg is waiting for you in his office. If you will please follow me."

A bit amused at being greeted by her rank as a reservist in the small Spacers League's navy, Tina returned the woman's bow, then followed her into a large but not extravagant work office where a joyful disorder of piles of documents and dozens of miniature ship models greeted her. Despite being a true technological genius, Gustav Shomberg was a bit old-fashioned in his work habits and manners and liked to use paper documents whenever he could. Shomberg, a tall and beefy man of pure Nordic type with platinum blond hair and pale blue eyes, greeted Tina with a rather unceremonious hug and kisses on both cheeks.

"Tina, it is truly nice to see you again."

"And it is also nice for me to see you, my friend. So, you wanted to discuss with me the refit work on my ship?"

"Of course! The Spacers League is after all ready to spend some 278 million credits on that refit, so we might as well make sure that it is done right. I already received from the League all the materiel and systems for that refit, so we will be ready to start as soon as we agree on how to make it. You did say on your last call that you wanted to spend some of your own millions on personal work to be done on your ship. What did you have in mind exactly?"

"You remember my complaint about not having a seaside beach? Well, I want one! I would like you to use the free overhead space available over the northern and eastern quadrants of the forest ecosystems occupying my ship's bow section to build a false beach with a false lake of sweet water at least twenty meters wide, on Level 24. I would also like to add some extra agricultural surfaces over the rest of those two quadrants, in order to boost my cereals production. Right now, my wheat production levels are barely enough to fill my minimum needs and I still have to buy wheat grain from time to time."

"I see! With the trees in your Boreal Forest and Temperate Broadleaf Forest not growing higher than about seventy meters, we have a good twenty meters or more of free height to play with in order to build those new deck surfaces. Supporting those new decks above your forests will not be a problem: I will simply suspend them from your bow shield structure above them."

"I knew that you would find quickly a way to do this, Gustav." said Tina in an enthusiastic tone. Now, about that artificial beach..."

By the time that she left Shomberg's office some fifty minutes later, Tina was satisfied that her ship was in good hands for its refit. Now, it remained for her to see what the Koorivars wanted to tell her. Despite being visibly alien creatures, she knew them to be pacifist, good-natured beings whose talents were mostly geared towards the arts rather than technology. Added to the fact that they were vegetarians and didn't eat meat or fish, this made the average Koorivar a normally agreeable person. Her mind was still dancing around that question when she arrived back at the reception desk of her ship's eastern access gallery, again being driven by the scooter driver loaned by Shomberg. Stopping at the reception desk, she asked a question to Natalia Vasilyeva, the tall blonde who worked as the ship's Chief Hostess.

"Natalia, did a group of Koorivars arrive aboard in the last hour?"

"Yes! Four of them, including Administrator Sheraz, arrived some twenty minutes ago by shuttle and were then led to your private suite on Level 24. They are presently waiting for you there, along with Captain Shanandar."

"Perfect! Thanks, Natalia!"

"My pleasure, Tina."

The questions in her mind redoubled at the mention of Administrator Sheraz, who was the political leader of the some 22,000 Koorivar refugees who had been saved on Eris by the KOSTROMA and who were now living on the northern portion of Vancouver Island, on lands graciously given to them by the President of the Northern Alliance, Claudia d'Arcy. If he had come, then that meant that what was to be discussed probably concerned all the Koorivars. Hoping that some kind of local dispute was not at play here, Tina made her way up to her private suite on Level 24, just under the bridge complex. Her suite, along with the suites allotted to the other senior officers of the ship, had a dominant view of one of the four forest ecosystems Tina had made built inside the bow section of her ship. Each of these ecosystems, housing a distinct type of vegetation and climate and carefully separated from the three other ecosystems, covered a surface of 7.1 hectares and had a free height of up to 95 meters, allowing even the tallest trees on Earth to grow in them. However, even when planting already half-grown trees at the time the new bow section had been built, that had been less than four years ago, so her forests were still growing up and would continue to do so for decades. Still, the view she

had from her suite of the Temperate Rain Forest ecosystem, in the western quadrant of the bow section, was nearly enough to make someone forget that they were aboard a ship of space.

When she entered her suite she found five Koorivars, all of them of at least mature age, waiting for her in the main lounge, which had a nice view of the forest below. All five got up at her appearance, with one coming to her for a hug.

“Tina, thank you for receiving us!”

“It’s my pleasure, Shanandar. Your request certainly sounded urgent. Is there some kind of problem brewing up on Vancouver Island?”

“Not a problem, Tina.” replied Administrator Sheraz, standing a few paces away. “In fact, Vancouver Island is close to a paradise for my people and I will never thank your people enough for the gift they gave us. The reason we came here has to do with a stunning discovery that Doctor Koomak, to my left, made recently. Doctor Koomak?” The oldest Koorivar present quickly bowed to Tina before starting to speak.

“Pleased to finally meet you, Captain Foster. On Shouria, I was considered one of the top physicists among my people, with my specialty being astrophysics. I recently attended an international conference on physics in Vancouver and something said during that conference struck my mind and started a wild idea. Well, after I presented that idea to Shanya, the central computer of the VEON SHOURIA, it turned out that my idea was not so wild after all. In fact, Shanya ran a computer simulation based on it and found it to be fully viable. To make a long story short, I believe that I found a way for us to travel around the stars and find back the two other evacuation ships which left Shouria before its destruction, some 361 years ago.”

Tina was silent for a moment, frozen speechless by Koomak’s declaration, before she was able to ask the first of many questions now popping up in her mind.

“Travel around the stars? And at what speed?”

“If my calculations are correct: near instantaneous speed. Basically, the idea is to use some of the properties of our anti-matter creation process to deform the fabric of space itself and open a temporary wormhole between two star systems. All the theoretical calculations and simulations have been done by now, but we still have to conduct test runs to make sure that my invention is fully viable and safe to be used. That is where we would need your help and that of your friend, Gustav Shomberg, to build an experimental drone craft and test it before adapting what Captain Shanandar is

now calling the 'Koomak Drive' to your ship. Once all that is done, we would then solicit your help to go find our compatriots lost among the stars."

Tina, stunned by all this, had to sit on a sofa before she could speak again.

"But, even if your 'Koomak Drive' proves to work as planned, why go after the two sister ships of the VEON SHOURIA? Why not let them arrive at their intended destinations and settle there?"

"For the same reasons which necessitated your KOSTROMA to save the VEON SHOURIA from its icy tomb on Eris, Tina," answered Shanandar, the captain of the VEON SHOURIA. "Remember how the computer controlling our interstellar flight failed due to old age and how all our reserves of seeds meant to provide us with crops had turned bad? Well, we are afraid that the same things will happen to both the SHUNDAR and the SHANIZAR. If and when that happens, the last 44,000 Koorivars in existence will be wiped out and will disappear, leaving only my compatriots now living on Vancouver Island as survivors of my race. When I left Shouria in cryogenic sleep, along with my first contact crew, I fully expected our systems to survive well our long voyage and for our reserves of seeds to keep intact. However, as you know too well, our systems failed us, badly. We don't want the same things to happen to the SHUNDAR and to the SHANIZAR if we can avoid it. We are ready to pay with the help of our gold reserves for the building of a prototype craft and for its testing, then for modifying your KOSTROMA if Doctor Koomak's drive proves to be both effective and safe. So, what do you think, Tina?"

"I...I don't know, really. I see so many implications from this, many of them political, implications of the same kind which were created by the announced existence of your anti-matter drive. Remember the troubles that brought to both me and you. A woman even lost her life because of it, while many more could have been killed as well. On the other hand, you should know that the Spacers League is about to sink over a quarter billion credits into a refit that will add many new weapons, fire control systems and ship armor to my KOSTROMA. As a reservist officer of the Spacers League Navy, I don't have any more full freedom to use my ship as I wish, unless I am ready to break some rules in the process. Finally, would it be fair to develop an effective interstellar ship drive system, only to hide it from the rest of Humanity? Exploring the stars around us has been a dream for a long time for Humanity. To keep that dream to myself sounds wrong to me."

Sheraz slowly nodded his head in response, understanding her hesitations and misgivings.

“You are indeed right to ask yourself all these questions, Tina. You are proving again that you have a clear head about those things, which is to your credit. I agree with you that a viable interstellar ship drive is too big a gift to keep to only ourselves. The real question is: can Humanity use it in a peaceful way, without embarking on voyages of conquests, like it happened too often in your Humanity’s history? Can Humans find a livable home among the stars without taking it away by force from any potential alien life forms which would already be living on those worlds?”

“That is a very good and pertinent question indeed, Sheraz. I fervently hope that at least the Spacers League and the Northern Alliance would prove worthy of such an interstellar drive. As for the rest of Earth, I am not so sure.”

“Then, here are two important questions for you, Tina: first, how much confidence do you have in the discretion and honesty of your friend, Gustav Shomberg? Second, how much do you trust Governor Robeson and President d’Arcy?”

Tina didn’t have to think long before replying to the Koorivar politician.

“Gustav Shomberg, apart from being a genius ship designer, is both a most decent man and a person with strong moral convictions. I would trust him with my life. As for Governor Robeson and President d’Arcy, while both of them are politicians who can play a good game like any other politicians, both are decent women who truly care about their citizens and who take the notion of public service seriously. If approached discretely, I am convinced that we could arrive at a fair deal on how to use in the future your new Koomak Drive, that is of course if it proves to work.”

“I am pretty sure that it will work, Captain Foster.” replied the old physicist. “The only things left to do is to build a prototype robotic craft and test it properly. I already have the technical drawing of such a ship, which of course also includes an anti-matter drive.”

“Then, we shall pay a visit to Gustav Shomberg as a group tomorrow.” declared Tina, now convinced. “In the meantime, you are all invited to have supper here and spend the night aboard. This will also give me a chance to go get my little Misha at the crew’s daycare center, so that I can present him to you, along with my husband Michel.”

10:10 (Greenwich Universal Time)

Friday, January 9, 2320

Work office of Gustav Shomberg

Avalon Space Yards, Earth orbit

Like Tina, Gustav Shomberg was at first left speechless when Doctor Koomak, who had come along with his four compatriots and Tina, told him about his project to build a prototype interstellar craft. Then, the engineer surprised everybody by suddenly yelling loudly in approbation, a huge grin on his face.

“You are asking me if I am interested in building and testing the first interstellar ship in history? Of course I am interested! Building a true starship was my lifelong dream!”

“Uh, I must remind you that there may be a few delicate political considerations about this, Gustav.” said gently Tina. That didn’t seem to faze off Shomberg, who gave her a sober look.

“Of course there will be political considerations, Tina: every major new invention have brought some such considerations in the past. You are after all talking about opening the road to the stars to Humanity...and to the Koorivars. So, Doctor Koomak, tell me more about your star drive.”

“Well, if described in as simple terms as possible, it basically uses a process quite similar to the one involved in our anti-matter rocket but, instead of transforming matter into anti-matter, we will create a rip in the fabric of Space itself, a rip that will then suck up the ship carrying my device. That ship should then be instantly transported to the opposite side of that rip. The distance and direction traveled would basically depend on the intensity of the field created by my device and by the orientation of the ship at the time of the pulse. Basically, we would only need to point the ship in the right direction, dial in the field intensity and press the ‘jump’ button.”

Shomberg’s mouth half opened as he measured the implications of Koomak’s words.

“But, that means that we wouldn’t even need to extensively modify a ship to give it an interstellar capability. We would only need to add the field generator to its bow.”

“That is correct, Mister Shomberg.” said calmly Koomak. As for Tina, those words struck her much harder and her eyes opened wide.

“But, that means that my KOSTROMA should be able to be easily modified in order to turn it into a starship, right?”

"If all goes well, yes!" replied Koomak. Shomberg then added to the drama with a few words.

"Since you based your invention on your anti-matter drive, then I suppose that you could easily draw as well the plans of an engine similar to the anti-matter engine that had propelled the VEON SHOURIA, right? Such engines would nearly be a must for any interstellar ship, in order for it to have a good cruising capability inside star systems."

"That is indeed a given, Mister Shomberg. To keep all this simple and quick, I would see such anti-matter rocket engines designed as simple add-on booster packs, to supplement the existing thermonuclear fusion rockets of Human ships. I would say that four such 'booster packs' could be quickly built and then be easily fitted to the KOSTROMA. They could in fact be fixed to the outer circumference of its stern gravity sail section, thus saving a lot of time and efforts. Since they can function with about any kind of fuel, cruising range would be nearly unlimited, even though simple lead pellets are still the best, most efficient and compact way to fuel them. Being able to convert all the mass of its fuel into energy, our Koorivar anti-matter drive would be way more efficient in terms of fuel than your existing fusion engines, where only a few percents of the fuel mass is converted into energy."

"We of course won't expect you or your space yard to work for free on our behalf." Added Sheraz. "We have many tons of pure gold that we will be happy to use to pay for your services, Mister Shomberg."

"Gold will certainly do, Administrator Sheraz." replied Shomberg with a wide smile.

09:28 (Greenwich Universal Time)

Tuesday, February 17, 2320

Command bridge of the A.M.S. KOSTROMA

Docked inside Dry Dock Number One of the Avalon Space Yards

With the ship being officially under refit and with most of its crew and occupants gone on extended shore leave on Earth, the bridge of the KOSTROMA was unusually quiet and deserted compared to when it was cruising around the Solar System. This morning, only Gustav Shomberg, Tina Forster, Doctor Koomak, Chief Engineer Shoumak, Captain Shanandar and Rose Tillman, the KOSTROMA's chief engineer, were present on the bridge, anxiously watching a video feed retransmitted by one of the

KOSTROMA's cargo shuttles, which was presently flying alongside the prototype star craft in a high orbit well away from normal shipping lanes. Inside the cargo shuttle was its regular crew, plus Navigator Krennek and Dana Durning. Since the start of the project, only a few chosen persons had been made privy to it, in order to keep it as secret as possible. Even among the crew of the KOSTROMA, the number of persons in the know could be counted on the fingers of two hands. The construction of the prototype craft had been equally discreet, with all the building and fitting work done inside the KOSTROMA's workshops and hangars instead of inside one of the space yards dry docks. The prototype craft was not even brand new. Instead, to save time and efforts, an elderly cutter ship due to be decommissioned at the yards had been extensively modified and refitted inside one of the large craft hangars situated in the stern gravity sail section of the cargo ship. Now, that old cutter was about to make history...if all went well.

"Cutter's itinerary programmed and loaded. All its external sensors and special instrumentation are on and functioning. The cutter is now pointed towards its first destination and ready to go. I am now backing off to a safe distance."

Dana Durning's calm voice only made Tina more nervous than she already was: so much was depending on this test flight. The Koorivars present on the bridge were equally nervous, while Gustav Shomberg watched like a hawk the data coming from the prototype craft and being displayed on the screens of the station he was occupying. After a few minutes, Dana's voice came back on the radio.

"I am now some 600 kilometers away from the cutter and following a parallel course. We are ready here for the test."

"Understood!" replied Tina from her command chair. "Stand by!"

She then turned her head to look at Koomak, who was sitting at one of the control stations of the bridge that had been reconfigured for this test run.

"Ready when you are, Doctor Koomak."

"Thank you, Captain Foster. Initiating jump in three...two...one...NOW!"

Watched by six pairs of anxious eyes, the video picture retransmitted by the cargo shuttle suddenly showed a kind of nebulous orange glow just ahead of the prototype craft. Then, both the glow and the cutter disappeared from the screen.

"Visual and radar contact lost with the cutter. I am now transmitting the readings from my instruments to you."

“Thanks, Dana!” said Tina before smiling to Koomak. “Well, the prototype at least went somewhere. Hopefully, we will know exactly where in a few hours. How long do you think that it will take before we get news from the cutter, Doctor?”

“The programmed course of the cutter called for thirty minutes of observation time after reemergence, in order to establish with certainty its new position, followed by a change of course to point the craft towards its second destination. Another thirty minutes are to be spent after the second reemergence before our cutter is supposed to point back at the Solar System for its return trip. If travel with my new drive is truly instantaneous, we should then see the cutter return after about 74 minutes or so. However, I must caution you that the precision of each jump, even if successful, is still unknown. Our cutter could well travel without incident to its two intended destinations, the Alpha Centauri system and Barnard’s Star system, and still reemerge about anywhere within our Solar System. I in fact would not be surprised to see it reemerge in a place as far as the Jupiter System.”

“Hell, I hope that it won’t be the case. Imagine if the Jupiter Space Control Center sends us back our cutter with a fine for flying around without a valid flight plan.” That made Gustav Shomberg laugh briefly before he smiled to Tina.

“Well, in that case I will proudly display that fine notice in my office. How about we go take a break and try to relax a bit now? Our cutter won’t be back for at least one hour, so we might as well stand down for a moment.”

“Not before I can analyze the data collected by your cargo shuttle’s instruments at the time of the jump.” cut in Koomak, who was already looking at a data stream running on his display screen. After a minute or so, he turned his chair around to look at the others.

“The instruments’ data basically corresponds to what I was expecting. The only thing we can do now is to wait.”

That brought a sour look on Shomberg’s face.

“Waiting... I hate waiting! I am happy when things are happening, not when I have to wait for things to happen.”

So they waited...and waited as the minutes passed by. Tension rose up by a few notches as the 75 minutes bar passed, with still no sign of the prototype craft. Tina’s nerves and those of the others were close to cracking when Dana Durning’s voice came back on the radio, sounding triumphant.

"I AM GETTING A TELEMETRY SIGNAL BACK FROM OUR CUTTER! IT COMES FROM BEYOND THE MOON, HALFWAY TO MARS!"

A concert of cheers greeted that message on the bridge. On his part, Koomak blew air out in a most human way at this piece of news, then looked at the telemetry signal they were now receiving.

"Our cutter reemerged in our system some two million kilometers away from its intended return point. So much for precision navigation."

"After visiting two star systems? That is plenty fine with me!" replied Shanandar. "Let's see now if our cutter indeed reached Alpha Centauri and Barnard's Star."

"We will also need to study the cutter down to its smallest detail, to ascertain if jumping around affected in any way its structure, and this down to the molecular level. Then, we will need to conduct more test flights." said Koomak, somewhat throwing some cold water on his companions' enthusiasm. "Our work here is only starting, my friends."

17:03 (Greenwich Universal Time)

Monday, March 1, 2320

Tina Forster's suite, Level 24

A.M.S. KOSTROMA, inside Dry Dock Number One

Avalon Space Yards

"To the success of Program Dice Throw!"

"TO PROGRAM DICE THROW!" repeated out loud the fourteen Humans and five Koorivars present in Tina's lounge, raising their cups of Champagne high. Everybody took a sip from their cups before Gustav Shomberg looked questioningly at Tina.

"Our prototype testing went as well as we could humanly expect. I believe that we now have enough test data to be able to design and build a custom-made Koomak Drive for your KOSTROMA."

"I agree! Rose, how is the building of anti-matter drive units for our ship and its auxiliary craft going?"

Rose Tillman thought for a moment before answering.

"All four so-called 'booster packs' for the KOSTROMA have been completed and are presently being fixed to our stern section. As for our craft, six out of ten of our shuttles, plus our ship's cutter, have been modified and are now propelled by anti-matter

engines, which will tremendously boost their performances and will also allow them to much more easily self-start their engines. Give me another two weeks and both our ship and all our auxiliary craft will be ready, especially now that the planned initial refit work has been completed.”

“What next, then?” asked Michel Koniev, Tina’s husband, who was now part of the tight circle of program participants. Tina smiled to her tall, athletic and most handsome spouse and raised a hand to caress his left cheek.

“Then, when we are fully ready to go, I will talk to our crew...all of our crew.”

08:32 (Greenwich Universal Time)

Wednesday, April 7, 2320

Apartment 20283, Level 20

Outer ring of bow section, A.M.S. KOSTROMA

Floating on station off the Avalon Space Yards

Low Earth orbit

“Come on, Mother! We will be late if you don’t hurry up.”

Ramya Mistry sighed at her eldest daughter’s impatience and took the time to finish adjusting her sari before turning towards Priya.

“I couldn’t go to a Captain’s general address in a botched dress, couldn’t I?”

Priya, now 22 years old and a most beautiful young woman by all accounts, made a face at that.

“Well, it couldn’t be worse than arriving late for the address. The rest of the family has been ready for ten minutes now, so let’s go!”

Leaving the family’s apartment, which was located next to Priya’s own one-bedroom apartment, the mother and daughter joined up with Priya’s father, younger sister and two brothers outside their door, then walked as a group towards the nearest elevator. Taking a quick ride down one level, the Indian family then walked alongside the transparent wall of the giant aquarium which formed a ring around the base of the bow section. That aquarium, with a circumference of 2,036 meters at half of its maximum width of 27 meters and with a maximum depth of thirty meters, actually housed a diverse marine life forming a true ecosystem of its own which did a lot to make life aboard the KOSTROMA even more pleasant. The family then turned into the entrance to the

covered observation gallery linking the bow outer ring with the central core at the level of Deck 19. There was already a fairly dense crowd of crewmembers and their families walking towards the core section, all heading to the ship's auditorium on Deck 10. When the Mistry family arrived at the auditorium, it was to find most of the other occupants of the ship already there and sitting in the concentric rings of folding jump seats of the vast theater-like room. Already on the stage was Tina Forster, standing behind a lectern and with a microphone in front of her. Also on the stage with her was Captain Shanandar. His presence intrigued Priya and her family but they quickly took up seats as near to the stage as possible without asking questions then. At precisely nine o'clock, the scheduled time for her address, Tina powered her microphone and spoke in it, with her voice resonating around the 4,000 seat-capacity auditorium.

"Thank you for coming, my friends, and welcome to this address. Now that the refit work on our ship has been completed and tested, you probably expect me to announce our return to business on the trade and passenger routes of the Solar System. Well, we will indeed be traveling far and wide, but not in this solar system."

Tina paused for a moment to let pass a wave of surprised exclamations from her audience, then resumed her speech.

"What I mean by that is that our beloved KOSTROMA is now much more than just a giant interplanetary cargo ship: it is now a true starship, able to travel quickly between various star systems. We owe this incredible new capability to a Koorivar scientist, Doctor Koomak, who invented the interstellar drive now equipping our ship. During the past three month, me and a very small group of engineers and specialists, both Human ones and Koorivars, worked in secret to design, build and test a small prototype starship equipped with the Koomak Drive. Those tests were fully conclusive, with our modified cutter jumping nearly instantly to the Alpha Centauri system and the Barnard's Star system before coming back without incidents or damage. We then equipped the KOSTROMA with its own Koomak Drive and further improved it by adding anti-matter engines of Koorivar design to it. Our ship is thus now truly without equal in the Solar System. You may now be asking yourselves why I and my Koorivar friends did all this. The answer to that is simple: to go effect a search and rescue mission in order to find and save the two sister ships of the VEON SHOURIA which left Shouria just before its destruction some 361 years ago. As you all know, the VEON SHOURIA suffered a number of significant systems degradations during its long trip towards the Solar System, with the result that it landed by default on Eris, with its crew still in

hibernation and with its food reserves already spoiled and inedible. The two other Koorivar evacuation ships, the SHUNDAR and the SHANIZAR, are unfortunately likely to experience the same kind of systems degradations and may get lost in space if left to their own devices. When we saved the VEON SHOURIA and its occupants from their icy tomb on Eris, I then vowed to Captain Shanandar, who is now standing beside me, to help him find the rest of his people if and when we ever become able to travel among the stars. Well, that time has now come and I fully intend to honor my promise to him. However, I also have a responsibility to all of you, who are all very dear to me. I would never force you and your family members to participate in what will be a risky, even dangerous mission, just to honor a personal promise. I thus called you here this morning to inform you of my intentions and to give you the choice of either staying on board and participate in this search and rescue mission, or to leave the ship and stay safely within the Solar System. For those who will prefer to stay behind, I will arrange alternate places of living and employment while the KOSTROMA travels through the stars. Be assured that no one will blame you for deciding to keep your family safely inside the Solar System. However, I can assure you that all who will accept to come will be useful for our mission. This includes the owners and employees of our commercial concessions on the Main Promenade, who are most welcome to join us in this adventure. For those owners who will come with us, I offer them a suspension of their rent payments during our trip, as I doubt that you will find many paying customers where we are going. I will now let you some time to decide with your family members if you want to stay in this system or go with the KOSTROMA. If you need more time to decide, then I will happily delay our departure for a few days to let you take an informed decision. Don't feel pressured in coming along and don't fear any negative repercussions if you decide not to come. The choice is now yours, my friends."

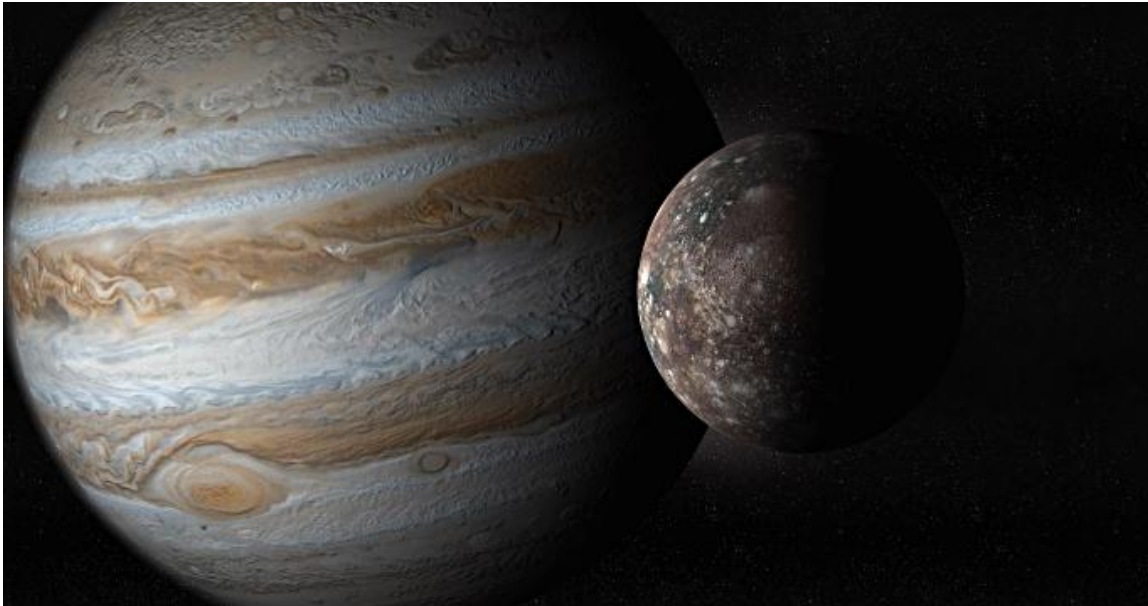
There was then a heavy silence around the auditorium, a silence that was however quickly broken when Priya Mistry jumped to her feet and shouted out loud, surprising her own family.

"I AM WITH YOU, CAPTAIN!"

That prompted at once dozens of other crewmembers to also jump on their feet and yell their willingness to come. That caused a snowball effect around the auditorium among the single crewmembers present, who all volunteered for the mission. The married members of the crew took more time to take their decision, as they consulted their spouses and children first, but everybody voiced their decision within minutes. Tina felt

tears come out of her eyes when she saw that not one single crewmember, commercial concession owner or employee decided to stay behind. When she spoke, it was with a trembling voice full of emotions.

“Thank you my friends, thank you from the bottom of my heart. I couldn’t ask for a more worthy group of people to be with. I will ask you not to inform others outside of this ship about our intentions, as public and political reactions to our planned mission are hard to predict and could be negative. We will now power up our engines and go to the Jupiter System, where I will inform personally Governor Robeson about our mission before we leave for the stars. Bless you all, my friends.”



Jupiter and its moon Callisto.

CHAPTER 3 – DEPARTURE

20:13 (Universal Time)

Monday, April 19, 2320

Official residence of Governor Janet Robeson

Callisto Prime, Callisto

Jovian System

“Your Veal Marsala was truly delicious, Gerald. You should make it more often.”

“Thank you, Janet. However, finding bottles of genuine Marsala red wine is not evident, so far from Earth.” replied Janet Robeson’s husband, making his wife, the governor of the Jovian System and current chairman of the Spacers League Council, smile and pat gently his left shoulder.

“I am sure that you will be able to find a few more bottles somewhere, dear.”

Janet was about to speak more but was interrupted by the beeping of her wrist videophone. Looking at the miniature viewing screen of her videophone, Janet frowned on seeing the source of the call.

“Damn! The Government’s Central Operations Center is calling. I hope that this is not about some sudden disaster.”

Taking a few steps away from her husband in order to cut some of the noise of his cleaning work in their kitchen, Janet then opened the video link and saw the face of an operations dispatcher appear on the mini screen.

“Yes, miss?”

“I am sorry to disturb you in your home at this hour, Madam Governor, but Fleet Captain Forster, aboard the KOSTROMA, says that she has an urgent and important message for you. Do you want me to patch her with you, Madam Governor?”

“Please do, miss!”

Janet smiled on seeing Tina Forster’s face appear next on the screen: she genuinely liked and admired the young and adventurous cargo ship captain.

“Captain Forster, it is always a pleasure to speak with you. I am told that you have an urgent and important message for me.”

“That’s right, Madam Governor. I am now announcing to you that my KOSTROMA is about to leave on a long trip of still indeterminate duration...outside the Solar System. Thanks to a recent invention by a Koorivar scientist, my ship is now capable of interstellar travel and I am leaving on a search and rescue mission, in order to find and save the two Koorivar refugee ships which left Shouria with the VEON SHOURIA just before their home world’s destruction.”

“WHAT?” shouted the governor in disbelief, making her husband snap his head towards her. “This isn’t some kind of bad joke, isn’t it?”

“I was never more serious, Madam Governor. My first destination will be Gliese 667C, Shouria’s solar system, 22 light years away, where we will first search for any possible Koorivar survivors of the catastrophe. From there, we will then retrace the planned flight paths of the SHUNDAR and SHANIZAR and try to find them before they suffer the kinds of systems degradations that crippled the VEON SHOURIA and forced it to land on Eris.”

“But...what if your ship gets lost among the stars, or suffers a catastrophic breakdown? Nobody will then be able to rescue you and your ship.”

“Me and my whole crew have already accepted those risks, but we are firmly intent on finding and rescuing those two Koorivar ships, Madam Governor. If this could reassure you, I am now going to download a sealed data file in your name, which I will send to your government’s operations center. That data file will contain the technical details concerning the Koomak Interstellar Drive, plus our planned itinerary outside of the Solar System. For your information, my ship was refitted for interstellar travel at the

Avalon Space Yards, in Earth orbit. Gustav Shomberg, the owner and chief designer of the Avalon Space Yards, holds the detailed schematics of the Koomak Drive and has agreed with me to provide you all possible assistance to you and your officials if you decide to equip more ships for interstellar travel. Consider this as a gift from the Koorivars to thank us for saving them on Eris and for attempting to rescue their two other ships. However, I must plead with you to only use this new ship drive for peaceful purposes. Humanity's history has seen already too many 'exploration' voyages turning into missions of conquest. I myself will document the various worlds I will pass by, but I have no intention to claim those worlds for myself or for Humanity and will do my best to avoid hostilities, unless directly attacked without cause."

Janet Robeson was silent for a couple of seconds, as her mind digested all that incredible information. She finally found back her voice and spoke up in an urgent tone.

"Wait! Don't go yet! Would you let aboard your ship a representative and observer sent by me to officially record your trip?"

It was the turn of Tina Forster to hesitate a short moment.

"Hum, one government observer will be fine with me, Madam Governor, but understand that I will not take orders from that observer, even if he is sent by you. This will be a purely private enterprise directed by me and by the leadership of the Koorivar colony on Earth. You may send one person who you have complete confidence in, but do it quickly: I will not stay more than a few hours in Callisto orbit before leaving."

"I will send you that observer within three hours, I promise."

"Thank you for your comprehension, Madam Governor. We will be waiting for your representative. KOSTROMA out!"

Janet looked for a moment at her now dark videophone screen, then looked and smiled at her husband, who had frozen behind the kitchen counter while listening to her half of the conversation.

"Gerald, my dear, how would you like to go on a nice trip in space aboard the KOSTROMA?"

22:50 (Universal Time)

Craft Hangar # 2, Hangar Deck (Level 7)

A.M.S. KOSTROMA, low Callisto orbit

Gerald Holmes-Robeson, dragging his two wheeled suitcases by their telescopic handles, stopped once at the foot of the exit ramp of the government shuttle which had just carried him to the KOSTROMA and smiled to the two women waiting to greet him.

"Well, I hope that this is not some elaborate scheme by my wife to get rid of me." His remark made both Tina Forster and Natalia Vasilyeva giggle briefly before Tina replied to him.

"Well, she is a politician, after all. Welcome aboard the KOSTROMA, Mister Holmes. I am Tina Forster, Captain of this ship, and this is Natalia Vasilyeva, our ship's head hostess. She will be escorting you to your assigned apartment on the outer ring of the ship's bow section. There, you will be able to see that our crew and passengers accommodations are quite above the usual norms for a cargo ship, or even a cruise ship."

"I did hear many nice things about your ship in the past, Captain. I however have two questions for you before I follow Miss Vasilyeva. First, what will be our first destination outside the Solar System?"

Tina's expression sobered up noticeably at that question.

"The subject of our itinerary for our search and rescue mission was debated quite a lot before me, my ship staff and the Koorivars agreed on a plan. In this, the Koorivars' words had primacy: after all, we are talking about their old world and their ships. First, we will go to Gliese 667C, the original home world of the Koorivars until the planet Shouria was destroyed some 361 years ago by a wandering brown dwarf. While there are about zero chances of finding any survivors in that system so long after its destruction, we still cannot avoid checking it out. It will also be a chance for the Koorivars traveling with us to say goodbye to their old home world. Once that is done, we will start our search for the two Koorivar ships. Next question!"

"Well, while I was sent here as an official government observer, I would hate to be doing nothing during our trip but lounge around and try your various restaurants. I would like to make myself useful in some way while on your ship, Captain Forster."

"A commendable attitude indeed, Mister Holmes. Do you have any technical, scientific or professional qualifications that we could use on the KOSTROMA?"

"Without bragging, I would call myself a qualified chef, Captain. Before marrying, I was the executive chef at one of the top restaurants on Callisto Prime. Even now, I am still a culinary critique and write on occasions articles for the Jovian Travel Net."

His last sentence made Natalia Vasilyeva's eyes open wide with interest.

“Really? We have tried a number of times in the past to get known culinary experts to visit our ship and rate our restaurants and dining rooms. However, we got many promises, but not a single visit. We also grow our own foodstuff and even have a brewery, a distillery and a winery. You could use your spare time aboard to visit our installations and our restaurants and rate our facilities, then publish an article about the KOSTROMA on the Jovian Travel Net.”

Both Gerard and Tina grinned at once on hearing that.

“Hell, that sounds like a great idea! We have a deal, Miss Vasilyeva. However, don’t expect me to be partial in my judgment: you will get the star rating that you truly deserve, no more, no less.”

“That is plenty good with me, Mister Holmes.” said Tina while smiling to Gerald. “Well, with this said, I believe that Natalia can now guide you to your apartment. She has a scooter nearby for you and your luggage. I will however ask you to be on the bridge in one hour for our departure from the Solar System: we were only waiting for your arrival before leaving.”

“Uh, how long will be our trip to Gliese 667C?”

“Nearly instantaneous, if we can go by the clocks inside our prototype test ship.”

“Then, I promise to make it quick, Captain Forster.” said Gerald before following Natalia to her scooter, his suitcases still in tow.

Some 51 minutes later, still guided by Natalia, Gerald Holmes was stepping inside the bridge complex. The bridge was actually a succession of three concentric, elevated platforms contained at the center of a hollow sphere whose internal surface was entirely covered with a holographic 3D display screen. Such a bridge arrangement was actually common among existing Human spaceships, as it provided to their command crews an instant, all-around picture of the space surrounding their ship, with sensors data being superimposed at the appropriate points on the holographic image. Still, the super-high definition view given by the holographic sphere impressed Gerald, who could nearly think that he was standing on an open platform floating in space. Tina, sitting in her command chair on the highest platform, then called for him.

“Please come up here, Mister Holmes: there are two V.I.P. chairs flanking my command chair on this level.”

"Coming!" replied Gerald before nearly running up the stairs to the top platform. Tina smiled to him as he sat in the V.I.P. padded chair situated slightly behind and to the right of her chair.

"You seem to be still in good physical shape, Mister Holmes: you are barely breathing faster than normal after running up those stairs."

"I actually play a mean game of squash, Captain."

"Please, you can simply call me 'Tina' instead of 'Captain'."

"Only if you call me 'Gerald' rather than 'Mister Holmes'."

"Deal! We are now going to start our jump procedures."

"Uh, you said that you tested a prototype ship over interstellar distances. How often have you tested this ship?"

Tina gave him a disarming smile before answering.

"Never! Anything could thus happen on this jump."

Gerald swallowed hard as Tina turned her head to speak to Dana Durning, who sat in her navigator's chair in front and one level below Tina's chair.

"Start the jump procedures to Gliese 667C, Dana. I want a reemergence point just outside the system proper: with the damage caused by that wandering dwarf, the system is liable to be a chaotic place full of debris flying in all directions."

"Understood! We will reemerge some fifteen Astronomical Units² away from Gliese 667C. This should be enough to give us time to react to any debris or asteroids field inside the system."

"Good! Mister Duharto, put all our sensors and emitters on strict passive mode. I want our ship to be electronically silent when we will reemerge. At the same time, be ready to scan immediately for any possible distress signal, be it electronic or visual."

"The ship is now on electronic silence mode, Captain." replied the ethnic Indonesian man after punching a few buttons on his sensors station. Next, Tina looked at both Frida Skarsgard and Shanandar, who were respectively sitting at the pilot and copilot stations.

"Once reemerged, we will proceed on gravity sail propulsion alone. As long as we won't know what is waiting for us in the Gliese 667C system, we will not advertise visually our presence by lighting up our fusion or anti-matter engines."

² Astronomical Unit (AU) : Average distance between the Earth and the Sun. One AU is worth 149,597,870 kilometers.

"Controls switched to gravity sails propulsion. We are ready to jump on your command, Captain."

"Then, initiate final countdown."

"Initiating final jump countdown!" said Frida, switching her microphone to ship-wide mode. "Ten...nine...eight...seven...six...five...four...three...two...one...Jumping now!"

Gerald, who was nervously watching all this, saw an orange flash which temporarily blinded him, while a strange, indescribable feeling surged through his whole body for a fraction of a second. When he regained his normal vision after a couple of seconds, it was to find himself still sitting in his padded chair and with the bridge unchanged. However, there was one big change that was impossible not to notice: the giant planet Jupiter and its moon Callisto were now nowhere in sight. Scanning anxiously the surface of the holographic display sphere, he couldn't see either the small bright dot that was the Sun as visible from the Jovian System. What he saw instead were three luminous dots in space: two of them of yellow-orange color and a third one, apparently the nearest of the three, of reddish color. Dana Durning then spoke from her station.

"Position confirmed as being at sixteen AU from the visible red dwarf star. The red star's spectral signature corresponds to Gliese 667C down to seven figures, with Gliese 667A and 667B also identified."

"Home..." said softly Shanandar, tears rolling down on his cheeks.



Gliese 667C as viewed from one of its planets, with Gliese 667A and B further away.

CHAPTER 4 – GLIESE 667C

00:14 (Universal Time)

Tuesday, April 20, 2320

Bridge of the A.M.S. KOSTROMA

On the fringe of the Gliese 667C System

“Attention to all aboard, this is your Captain! We have just arrived safely in the Gliese 667C system and will now start a detailed survey of the star system. You are thus the first Humans to travel outside of the Solar System. Thank you for your attention.”

Tina then switched off her microphone and got out of her command chair to quietly go congratulate each of the crewmembers present on the bridge, ending with an emotional accolade with Shanandar.

“I hope that this will mark the start of a successful rescue mission, my friend.”

“And my people will be eternally grateful to you and your crew for your willingness to risk yourselves in order to help my compatriots, Tina.”

Shanandar then took a step back to look up into her eyes.

“How do you intend to proceed from now, Tina?”

“We will first make a passive sensors sweep of the system while approaching the inner zone, where the remaining planets and moons are. From what you told us two years ago on Eris, I understand that there are zero chances of anyone having survived on Shouria itself, but what about on other planets and moons of the system? Did your people have space installations off Shouria?”

“We had a few, nearly all of them being mining centers, dispersed on a few select planets and moons. What you called Gliese 667Ce, which was originally the fifth planet of the system but is now the fourth one, thanks to the original second planet having been vaporized in a direct impact with the wandering brown dwarf, had our biggest mining center underneath its surface. Maybe the miners there somehow survived and had descendants since the disaster 361 years ago. I think that it should be one of the first places to check on as we go.”

“That sounds logical. I however promise you that we won’t leave this system before visiting every surviving planet and moon in it. If there are by a miracle some survivors, then we will find them.”

“Thank you again, Tina: you are a real friend indeed.”

“Well, we better get to our survey now. Go sit next to Anwar Duharto and Patricia O’Neil, at the sensors and communications stations, and help them by pointing out to them where the Koorivar space facilities originally were.”

“With pleasure, Tina!”

With her bridge crew fully occupied with its survey work, Tina returned to her command chair and started reviewing carefully the readings from the ship’s sensors. After some thirty minutes, with passive sweeps not giving any clue about possible Koorivar survivors in the system, Tina ordered the active sensors to be switched on as well, in the hope of getting a more complete picture of the situation in the Gliese 667C System. That new active sensors sweep only confirmed the chaotic nature of the damaged system: the orbits of the surviving six planets were all drastically changed, with some showing serious instability as well. Shouria, originally the third planet from its star, was now the second one and was following an elliptical orbit while wobbling severely on itself, being reduced to a ball of magma from which protruded parts of its old moon. Accepting with a pang of her heart that nobody could have possibly survived on Shouria,

Tina then had her bridge crew concentrate on the remaining four planets turning on orbits outside Shouria's new orbit.

Using her new 'booster' anti-matter engines to move quickly and economically from one planet orbit to the next, Tina was watching Gliese 667Ce, originally the fifth planet but now the fourth one, grow on the spherical display screen, when Patricia O'Neil suddenly spoke up, excitement in her voice.

"Captain, I am detecting a weak, repetitive radio signal coming from 667Ce. It sounds like some kind of automated radio beacon."

"Quick, switch that signal to Shanandar's station! Maybe he will be able to identify it."

"Right away, Captain!"

Shanandar had to listen for only a few seconds before he looked at Tina, his face full of emotions.

"It is one of our standard radio distress beacon signals, Tina."

"Where is it coming from?"

"From the surface of Gliese 667Ce, near the eastern terminator. That's where our mining complex was."

"Frida, accelerate towards 667Ce and place the ship in orbit above the location of that beacon. With any luck, this will prove to be more than just an old automated beacon signal. Shanandar, how long could such distress beacon emit before emptying its batteries?"

"This type of distress beacon emitter is powered by an isotopic generator with a half-life of over 6,500 years. It thus could still emit long after any survivors would have died, but we must go check by ourselves on the spot."

"Agreed! Shanandar, you and Kazmiriel will lead a reconnaissance party down to the location of that beacon and search for any traces of survivors. You will be accompanied by my husband, Michel Koniev, and four more rescuers. Go equip yourself down at the Hangar Deck and bring with you a few space medical gurneys and digging tools."

The mature Koorivar eagerly got up from his seat and bowed briefly his head to Tina.

"Thank you for giving me this chance to save some of my compatriots, Tina." Shanandar then nearly ran down towards the elevator shafts as Tina called up the ship's security section, where Michel worked.

“Security section, this is the Captain! Is Michel Koniev present with you?”

“Yes, Captain! One moment, please.”

A few seconds later, Michel’s face appeared on Tina’s intercom display screen.

“Yes, Tina?”

“Michel, we just detected a Koorivar automated distress beacon signal coming from an old Koorivar mining complex on the fourth planet. I have put Captain Shanandar in charge of a rescue team, along with Doctor Kazmiriel and you. Select quickly four more rescue team members and collect a few space medical gurneys and digging tools, then join Shanandar and Kazmiriel on the Hangar Deck. Your goal will be to find and save any possible Koorivar survivor in that mining complex. Do not bring any weapons except for a few stun pistols and follow the orders and directives from Shanandar.”

“Understood! Our team will be ready in a few minutes. I will call you when ready to leave by shuttle.”

“Thanks, Michel, and good luck!”

Her heart now beating faster, Tina then cut the video link and concentrated back on her ship’s course and the fourth planet.

Some 52 minutes later, a personnel shuttle flew out of one of the four small craft airlocks of the KOSTROMA’s Hangar Deck, with two Koorivars, five Humans and four mining robots as passengers. With the KOSTROMA now in orbit above Gliese 667Ce, the shuttle immediately started its descent towards the Koorivar mining complex from which the beacon signal was emitted. Shanandar, who was like Michel examining the surface of the planet on the shuttle’s sensors displays, spoke up as they were down to an altitude of about six kilometers.

“Originally, this planet sat outside what we would consider to be the so-called ‘habitable zone’ of my home star. However, the passage of the brown dwarf has completely destabilized the planet’s orbit and sent it down to near the old orbit level of Shouria, which itself went down nearer our sun. 667Ce has thus spent over three of your centuries in an orbit much nearer to its star than usual. This is bound to have seriously affected the conditions on the surface of the planet. Temperatures will be up from the usual freezing climate and water ice may have liquefied in places. Right now, our instruments read a breathable atmosphere with a pressure of 1.2 times that of your own Earth and an ambient temperature of minus seven degrees Celsius.”

Michel smiled on hearing that.

“Hey, it sounds like a balmy day in Siberia! I certainly can live with that. What kind of gravity is there on the planet?”

It was then the turn of Shanandar to smile.

“A comfortable 1.1 G. Me and Kazmiriel will be just fine. By the way, nice thinking about the four mining robots you brought with us.”

“Hey, these big brutes were built to dig: if we encounter some collapsed tunnel on our way, they will be perfect to open the way for us.”

The members of the rescue team, wearing space suits with their visors opened, then fell mostly silent as the shuttle approached the surface of the planet. Michel however had one more question for Shanandar as their shuttle was about to land next to a rocky cliff, in which the main entrance of the Koorivar mining complex was visible.

“What kind of mining operation was this, Shanandar?”

“This complex extracted and smelted a few various types of ore containing heavy metals like iridium, platinum, tungsten and vanadium. It was one of our most productive and valuable mining centers and employed up to 460 Koorivars, plus thousands of robots.”

“The surface of this planet shows little damage from the catastrophe which destroyed Shouria. With luck, most of those Koorivars survived and then lived to have descendants.”

“I fervently hope so, Michel. As the captain of a cargo ship which frequently came to pick up finished metal ingots from this complex, I know that it had its own hydroponic gardens and a water source. Hopefully, the shockwaves caused by the planet changing orbit will not have collapsed the complex on itself.”

Michel did not reply to that, as he fully realized how likely such a collapse would have been in this case.

The shuttle finally landed a mere forty meters from the entrance of the mining complex, which was marked by two concrete towers flanking the mouth of a large tunnel. A number of abandoned and rusty heavy vehicles lying around the entrance however reminded the team that all was not well with the complex when they got out of their shuttle with their four mining robots and an anti-gravity sled carrying various excavating tools and five space medical gurneys. Those gurneys could seal and transport patients within a safe, breathable atmosphere and floated around thanks to their anti-gravity generators, thus could prove useful during this mission. Using a portable radio direction

finder, Michel scanned his surroundings and soon pointed at the top of one of the two concrete towers, where a number of antennas and radomes were visible.

“The beacon signal comes from that tower to the left of the entrance. I also can see that it is safe for us to open our suits’ visors: the oxygen content and air pressure are well within safe limits. We might as well save our reserves of air in case we hit sealed or inundated tunnel sections.”

“I agree!” said Shanandar, who then opened the visor of his own spacesuit. The other members of the team imitated him before following him towards the entrance to the complex. Going to the large, armored double sliding doors of the entrance, the team was not surprised to find them without power and thus inoperative. However, Shanandar then led the team to a much smaller airlock door on one side that could be opened manually. The door emitted some rusty noises but otherwise proved usable when he opened it. Passing through an airlock large enough for the whole team and its sled, the rescuers soon ended in a long and large gallery which was barely lit by a few Koorivar red overhead lamps. Only one in four of the lamps functioned, forcing the team members to light their helmet lamps to see around them.

“This place is really looking run down.” Said Leo Sanchez, one of the members of the team, as he looked up at the dead overhead lamps. Michel Koniev was about to agree with him when a detail struck him.

“Wait! Only one in four of the lamps are functioning, but those lamps are all equally spaced between dead lamps. This is statistically implausible, as lamp failures should be random. Somebody had to replace or move lamps during all those centuries.”

“By the stars! You are right!” exclaimed Shanandar as he looked up. “We thus could rightly hope to find some survivors after all those years. Let’s go down the main gallery: there is an administrative complex and a bank of elevators at the end, some 250 meters away.”

Feeling growing hope inside them, the members of the rescue team followed Shanandar at a steady pace down the gallery, which gently curved towards the left as they went. On their way, they encountered more immobilized heavy mining vehicles, all abandoned and empty. As the team was finally in sight of the administrative complex, which consisted of a four-storey building standing along one side of a large rotunda in which multiple heavy cargo lifts ended, Michel suddenly froze and pointed at an office on the third floor of the building, while speaking in a near whisper.

“That office on the third floor: I swear that I saw a red light move inside it.”

Shanandar felt blood rush to his brain as he looked up at the said office.

“I see it! Please don’t speak or move until I say otherwise: Human speech could spook any survivors. I am going to call out in Koorivarese.”

Opening fully his visor, Shanandar then shouted at the top of his lungs.

“HEY, UP THERE! WE CAME TO SAVE THE PEOPLE OF THIS COMPLEX. WE HAVE A SHIP WAITING IN ORBIT.”

At first, he got no response or reaction, so he shouted again, repeating his message. After a few more seconds, a Koorivar head finally appeared at the window and waved before disappearing. That sight truly electrified Shanandar, who resumed his walk towards the building and signaling his companions to follow him.

“I think that this survivor is on his way down. Let’s meet him at the entrance of the building.”

What he didn’t say was how happy he truly was now: to find any survivor here after all those years had to be nothing short of a miracle.

The two Koorivars and five Humans stopped short of entering the building and waited a few paces outside the main double doors. One of those doors was soon pushed open from the inside and one Koorivar stepped out, only to freeze with an alarmed expression at the sight of the five Humans and robots standing behind Shanandar and Kazmiriel. On their part, Shanandar and the other team members were shocked to see that the Koorivar survivor was a mere child of about ten years of age, skinny, dirty and naked. His sight saddened Michel, who spoke softly to himself.

“My god! He looks like Hell!”

Kazmiriel’s instincts as a Koorivar healer specialist then made him slowly advance towards the child while speaking softly in Koorivarese.

“Do not be afraid, my child: those beings came with us to help and are friendly ones. They saved my own ship, the VEON SHOURIA, after it landed on the wrong planet and was entombed in ice for years before they found it and freed us from the ice. Are there many more survivors like you in this complex?”

“A few hundreds.” answered the young Koorivar in a weak, timid voice, his eyes still fixed on the Humans. “I don’t know exactly how many: it has been so long now. Do you have food with you?”

Kazmiriel nodded his head and took out one of the cereals and honey energy bars he carried on him, giving it to the child. The way that the latter devoured the bar broke his heart.

“The survivors here must have survived with only minimal food for many years now. Let me ask the child about the others.”

Kazmiriel waited until the child had finished eating the bar and crouched in front of him.

“Are the others far from here? On which level could we find them?”

“We all live in and around the old hydroponic gardens complex, two levels down. Some of the adults still know how to maintain and operate the gardens, but their output has been steadily decreasing with the years. I was searching the old mine’s offices in the hope of finding some canned food.”

Kazmiriel and Shanandar exchanged knowing looks before Shanandar looked in turn at Michel Koniev.

“We need to turn this into a mass evacuation operation. Could you send someone to alert the KOSTROMA about what we found?”

Michel nodded and turned his head towards Leo Sanchez.

“Leo, go back outside and alert the KOSTROMA by radio that we have found one survivor and expect to find hundreds more soon. I am sure that my wife will react with all due diligence to these news.”

Sanchez nodded, then turned around and ran away towards the complex’s entrance. With him gone, the rest of the team left their mining robots behind and followed the Koorivar child down a set of stairs inside the administrative building.

“The elevators have stopped functioning for a long time now.” explained the child while going down the steps at a tired pace that denoted his level of malnutrition. “We all moved permanently to the gardens level to be within easy access of the surface and to protect and maintain our food supplies.”

“Protect your food supplies? From whom or what?” asked Shanandar, frowning. The child then gave him a sheepish look.

“From those of us who wanted all the food for themselves and refused to share it with others. There were fights at times, in which a few of us were hurt or even killed. However, all the ones who tried to keep the food for themselves were chased away and have not been seen for years now. My parents think that they died of famine somewhere inside the mine complex.”

Shanandar and Michel glanced at each other, understanding too well what had happened here: hunger and the wish to survive at all cost could stimulate the worst in most individuals and push them into doing things they normally would not do. Still, that meant as well that there could possibly be some dangerous individuals running around, ready to commit violence.

“If their situation was this desperate, then we should expect the survivors to react with frenzy and start a stampede once they see that someone has come to save them. I will let you address them, but me and my men will be ready to use our stun pistols if you deem it necessary.”

“Hopefully, we won’t get to that point, Michel, but you are right to want to be cautious: this is no ordinary situation for us Koorivars.”

Two levels down, the group stepped out of the stairwell and found itself at one end of a vast room with a succession of concrete pillars supporting its rock ceiling. Most of the cavern was filled with rows and rows of stacked hydroponic growth basins. However, only about one quarter of the basins seemed to be still in operation, with overhead lamps lit and with fertilizing liquid circulation pumps humming. The rest of the basins were dark and only contained the decomposed plant remains. What however struck the rescuers was the sight of hundreds of Koorivars, old and young ones, sitting or lying around on mattresses and blankets laid along the walls of the cavern. The smell of unwashed bodies also struck their nostrils. Michel Koniev had seen before crowds of refugees fleeing war or some natural disaster on Earth, but the scene before him still moved him deeply.

“My God! Those poor people must have been enduring hell during all these years.”

Shanandar tried to reply to that but couldn’t: a big lump was blocking his throat. He finally was able to speak, but chose to address the crowd of Koorivars instead of Michel.

“LISTEN TO ME, ALL OF YOU! I AM CAPTAIN SHANANDAR, MASTER OF THE EVACUATION SHIP VEON SHOURIA. MY SHIP FOUND SOME GOOD PEOPLE WHICH HELPED MY CREW AND PASSENGERS ONCE IN THE SOL SYSTEM. THOSE SAME GOOD PEOPLE HAVE SUBSEQUENTLY OFFERED THEIR HELP TO FIND THE OTHER SURVIVORS OF OUR RACE. ONE OF THEIR SHIPS IS IN ORBIT AROUND THIS PLANET AND IS GOING TO RESCUE YOU. BE PREPARED TO

LEAVE BUT DO NOT PUSH OTHERS AROUND AND BE CALM AND PATIENT. DO YOU HAVE ONE OR SOME RECOGNIZED LEADERS IN YOUR GROUP?"

After a short moment, a mature Koorivar made his way to the front ranks and stopped in front of Shanandar, saluting him in the traditional Koorivar way.

"My name is Shalmanazar and those people recognize my authority. Can you really save all of us? We are a bit over 1,350 persons here."

"Do not worry, Shalmanazar: the ship we came in, the KOSTROMA, can easily accommodate many times that amount of people. It also carries large supplies of food, on top of producing its own food. We will start the evacuation soon, once your people are ready. Are there more people in other parts of this mine complex?"

"Not that I know of. We all concentrated here decades ago, both to be near our sole sources of food and to create warmth by being near to each other. As you can see, most of us wear only old, dirty rags, while others have nothing left to wear. The survivors of the Great Disaster had some reserves of clothing and spacesuits at first, but those eventually wore out or broke down. Even the hydroponic gardens have been degrading steadily as decades went by and the output of the emergency isotopic generators diminished."

"What about those who were creating troubles and tried to keep all the food to themselves?"

"Those have not been seen for over half a generation now. They probably died of starvation years ago, down in lower levels of the mines. Will you also take away our accumulated stocks of metals before leaving?"

That last question from Shalmanazar both confused and surprised Shanandar, making him reply with a typically human expression.

"Why the fuck would we care about your stocks of metals? We came to save lives, not to loot the system!"

Kazmiriel then gently touched Shanandar' arm with one hand.

"Shanandar, his question makes sense, I believe. First, this mine was the main source of heavy metals for Shouria. Second, their ancestors probably continued to mine those metals for a while after the collision with the brown dwarf, in order to give themselves a purpose other than simply surviving, and those metals represent the fruits of decades of labor. Third, those stocks of heavy metals could help pay for the resettlement and rehabilitation of these people on Earth, the way our own reserves of gold from the VEON SHOURIA helped us build our new colony on Vancouver Island."

"Hum, you are right. How much metals of what types do you have here in this complex, Shalmanazar?"

"We have a few tens of thousands of cubits of Iridium, platinum, vanadium, tungsten and gold."

"Uh, how much is one cubit in kilos, Shanandar?" Asked Michel Koniev, out of curiosity.

"One Koorivar cubit is equal to about 600 of your kilos."

Michel nearly strangled on that answer but managed not to make remarks then, not wanting to derail the conversation between Shanandar and Shalmanazar. A radio message relayed from the outside by Leo Sanchez then reached him.

"Michel, this is Tina. Be advised that I am going to land the KOSTROMA next to the mining complex, in order to facilitate the evacuation of the surviving Koorivars. Will you need some special equipment or vehicles for that operation?"

"Yes! Most of the approximately 1,350 survivors inside the mine have little or no clothes left and will freeze once out of the complex. They are also weak from malnutrition. We will need all the ground transport vehicles we can muster, along with blankets and some clothes for the Koorivars. I suggest that we use our stocks of T-shirts as an expedient."

"A good idea! I will have someone prepare all that. Anything else?"

"Yes! They wish as well to have the stocks of mined and smelted metals brought aboard as well. Kazmiriel says that those stocks could help pay for their resettlement and rehabilitation on Earth."

"Very well. How much metal are we talking about?"

"Supposedly, a few tens of thousands of tons of iridium, platinum, vanadium, tungsten and gold."

Michel could nearly hear Tina swallow on hearing that.

"HOLY...! Alright, we will load those metals aboard, but only after all the survivors will be on the KOSTROMA and are being cared for. I will send you a convoy of vehicles loaded with supplies and clothing as soon as we will have landed."

"Add some energy bars as well: these poor people are truly bordering on starvation."

"Will do! Tina out!"

Next, Michel approached Shanandar and spoke to him.

“The KOSTROMA will send a convoy of ground vehicles loaded with clothing, food and emergency supplies as soon as it will have landed.”

“Excellent! Now, let’s organize those poor people and bring them up to the level of the administration building, so that our vehicles could more easily collect them. This promises to be both long and complicated.”

Shanandar’s prediction turned out to be true, with the moving out and transportation of the Koorivar survivors taking a good three hours once the KOSTROMA landed some twenty minutes later. The 47 Koorivars who were part of the ship’s crew or were passengers for the mission all participated in that operation, facilitating the communications with the survivors and greatly calming the fears of the latter as they interacted for the first time with Humans. Tina made a point to come down to the ground operation and quarantine center of the KOSTROMA, situated in one of the six huge bullet-shaped, pod-like structures which acted as the ship’s landing legs, accompanied by a sober-looking Gerald Holmes. The sight of so many skinny Koorivars, wearing little or no clothes, drew tears out of her eyes as she watched her crewmembers work feverishly to process the refugees, giving them quick showers before they received some clothes and a couple of energy bars each. Doctor Kazmiriel, along with the nine Koorivar medical specialists who had volunteered for the mission, worked non-stopped to quickly examine the newly arrived and decide if they needed some extra care before being escorted to their new quarters on Levels 11, 12 and 13, which were the old passenger cabins of the ship. To help guide and reassure the survivors, a number of the Koorivar crewmembers also moved temporarily to those decks, so that the refugees could find helping hands nearby at all times. Once all the Koorivar refugees were aboard and were being processed, Tina put the ship’s cargo master, Denise Lonsdale, in charge of recuperating and stowing aboard the stocks of heavy and precious metals held inside the mining complex. Even though Michel had already warned her to expect a lot of metal, the quantities brought inside the cargo holds of the KOSTROMA still nearly floored her as she watched with her ship’s purser cum commercial agent and finance officer, Piotr Romanski, forklift after forklift roll by, each loaded with heavy pallets of pricy metals.

“Holy shit! All this has even more commercial value than the load of rare metals which earned us an attack by pirates prior to the 2315 war with the Terran Federation.”

“A lot more actually, Tina.” replied Piotr, a balding, jovial man who was an expert on space commerce and shipping. “At least, the financial well-being of those poor people will be assured for decades. God knows that rehabilitating them will take lots of care and time.”

“And we will be there to help them, I promise.” said Tina, making both Piotr and Gerald Holmes nod their heads in approval.

08:44 (Universal Time)

Wednesday, April 21, 2320

Command bridge of the A.M.S. KOSTROMA

Landed near the Koorivar mining complex on Gliese 667Ce

“The last search team has returned aboard with its reconnaissance drones, Captain. No other survivors have been found inside the mining complex, but our teams did find dozens of Koorivar remains in various corners of the complex, all of which dated from at least a few years or decades.”

“Very well! Dana, have all of our shuttles come back aboard from their exploration of the rest of the system?”

“The last one is presently on final approach, Tina. Unfortunately, no other traces of survivors have been found in the old space installations and outposts they checked out.”

“Understood!” said Tina before looking at Shanandar and Shalmanazar, who were occupying chairs on the bridge, switching to Koorivarese language.

“Mister Shalmanazar, Captain Shanandar, do you agree that further searches in this system would be futile?”

“I agree!” replied Shanandar at once. “Let’s go find our two ships.” Shalmanazar took more time to reply, for the simple reason that he knew next to nothing about space: he had been raised inside the mining complex, with little formal education received from his parents, who themselves had next to no education. In truth, the only reason he had been chosen as a leader by the survivors in the mine was his strength of character and leadership qualities. The fact that the alien captain of the gigantic and most impressive ship he was in was actually asking for his permission to leave this planet deeply humbled and also honored him. That Tina could speak Koorivarese, thanks from working with Koorivars for over two years, also impressed him.

"I agree as well, Captain Forster. We will not find more survivors in this system."

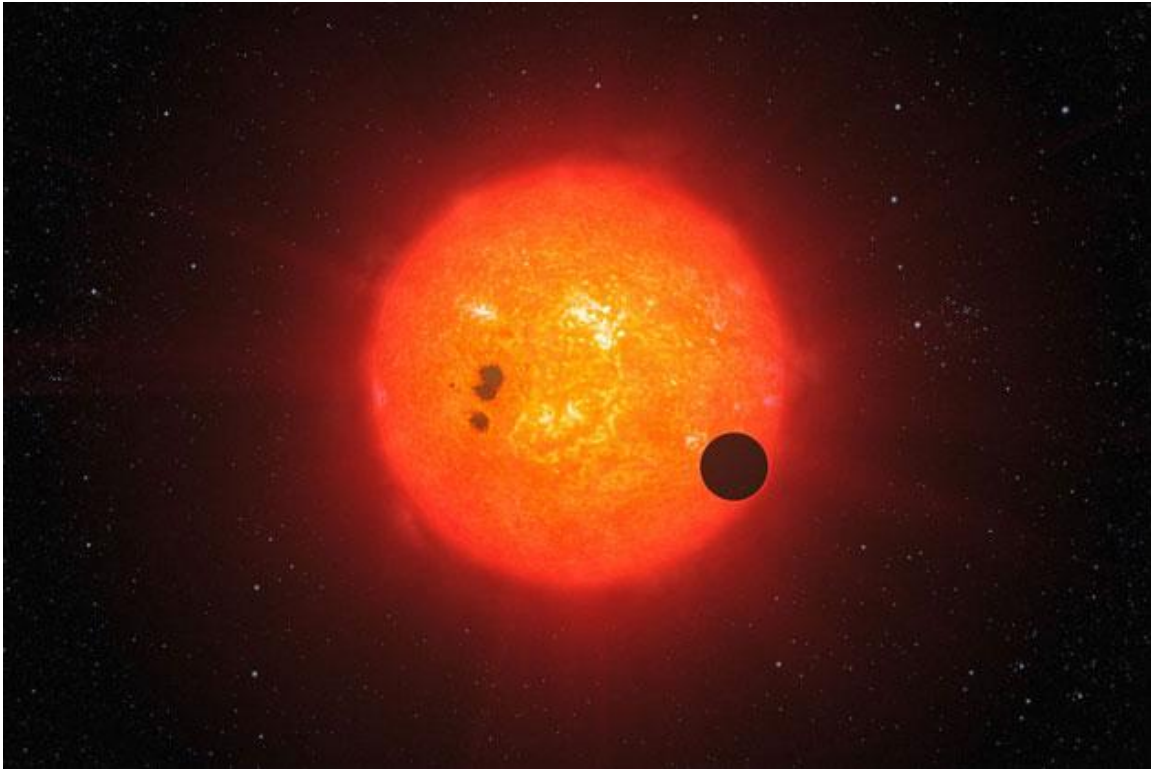
"Then, it is settled! Dana, lock our next destination in our navigation computer. Frida, you may now take off from this planet on gravity sail power."

"Engaging our gravity sail drive, now! Liftoff!"

Rising slowly at first in order not to disturb overly the surface of the planet, Frida Skarsgard waited until the KOSTROMA was over one kilometer above the surface before applying more power and pointing the ship towards their next destination. Fifteen minutes later, they were out of the gravitational well of the planet, at which time Frida engaged the anti-matter rockets of the ship, greatly augmenting the ship's acceleration rate. Tina, who was carefully watching their heading, speed and altitude, then gave a brief order.

"Dana, you may initiate the jump now."

"Jumping now!" said Dana while pressing the large, red button activating their Koomak Drive. The giant cargo ship then disappeared from the Gliese 667C system in a brief orange glow.



The red dwarf star Gliese 625 and its planet, Gliese 625b.

CHAPTER 5 – GLIESE 625

09:09 (Universal Time)

Wednesday, April 21, 2320

Command bridge of the A.M.S. KOSTROMA

Gliese 625 star system

“Jump completed. We are now inside the Gliese 625 System, some five AU from the star.”

Dana Durning then swiveled her padded chair to look up soberly at Tina, still strapped in her command chair.

“There will be no turning back after this mission, Tina. The Koomak Interstellar Drive will change Humanity forever by opening the stars to us.”

“Hopefully, it will stimulate the best in Humanity, rather than the worst.” replied Tina, equally sober. Dana was fully right in her prediction and, once they would return to the Solar System and prove that the Koomak Drive was both safe and reliable to use,

she expected Humanity to embark at once on an explosive program of interstellar exploration and colonization. Unfortunately, the recent past didn't bode well about that exploration program being executed by every political entity in the Solar System with the proper caution and respect due to alien life forms which may be found on the way. In the V.I.P. chairs behind Tina, Shalmanazar bent sideways to whisper to Shanandar.

"Could we go somewhere to speak in private for a short moment, Captain Shanandar?"

"Of course! Follow me!"

Coming out of his chair, Shanandar led Shalmanazar down from the command platform and into the small rotunda where the elevator shafts serving the bridge complex ended. There, he opened the door of one of the unisex, single-user washroom compartments of the rotunda and invited the leader of the mining complex survivors in before closing and locking the door behind him.

"washrooms and toilet stalls are part of the compartments not watched by cameras and microphones controlled by the ship's central computer, Spirit. Before you start thinking of that as a sign of encroachment on individual liberties and intimacy, know that those cameras and microphones are in place strictly as safety and security measures, in case some crewmember or passenger suffers an accident or sudden illness. Spirit actually became a good friend of my own ship's central computer, Shanya, and is a most benevolent entity. Now that I said this, what did you want to discuss in private with me?"

"I wanted to discuss about our host, Captain Forster. Are all Humans like her?" Shanandar nearly snickered at that question.

"Hardly! She is in fact rather exceptional when compared to the average Human. For one thing, she handled the rescue and salvage of my ship and crew on Eris in a masterful and careful way and always showed me and my compatriots complete honesty and respect. She even consciously risked the wrath of her political leaders in order to protect us and safeguard our knowledge. Now, you must understand that the Humans don't have a unified leadership. There are factions on Earth that are intensely hostile to Spacers like Tina and would be ready to violently exploit us if they could. Those factions, including the African Union and the Southern Federation, are in fact still in a state of quasi-war with the Spacers League and its main allies on Earth, the Northern

Alliance and the European Union. Fortunately, those same factions have been run out from Space and are now confined to the surface of the Earth.”

“I see! So, I can have full confidence in Captain Forster and her promises?”

“In her, yes! She will do the utmost to fulfill the promises she makes, but sometimes, some political leaders in the Solar System may oppose her wishes, in which case Tina may or may not overcome that opposition. As for the rest of the Humans aboard this ship, I have learned to appreciate their friendship, kindness and generosity.” Shalmanazar mulled that information for a moment before nodding his head.

“Very well, I will trust Captain Forster and her crew to have only the best of intentions for my people. What is going to happen next?”

“We are now on the trail of the SHUNDAR, one of the two other evacuation ships which fled Shouria with my VEON SHOURIA just before the destruction of our home world. The KOSTROMA will explore the Gliese 625 system to see if the SHUNDAR stopped in it to resettle its 22,000 refugees. If no traces of the SHUNDAR are found, then the KOSTROMA will jump to the next planned stop of the SHUNDAR, and then the next one, until we find and join up with it. Once that will be done, we will go search for our third evacuation ship, the SHANIZAR.”

“And when could my people hope to arrive into their new home?”

“It will depend on what we find on our way during this rescue mission. If we find a Koorivar colony created by the crew of the SHUNDAR, then Tina will lend her ship’s assistance to it for a while and will drop your people off at that colony, if that is their wish. If we find no traces of our ships, we will then return to the Solar System, where my own people will be too happy to welcome your people.”

“What about the SHANIZAR? Couldn’t they also have created a colony of their own?”

“No!” replied firmly Shanandar, surprising Shalmanazar. “The SHANIZAR’s flight plan called for a 384 year-long trip in Space towards the Ross 128 system. It is presently still traveling through space at high sub-light speed and won’t reach Ross 128 for another 23 years...if all goes well. Captain Forster has thus decided to concentrate her present efforts on finding the SHUNDAR. Once that part of the mission will be completed, the KOSTROMA will go meet the SHANIZAR in mid-Space. In view of the long length of its trip and considering the multiple systems degradation my own ship suffered on its own, shorter trip, the SHANIZAR may well be already a crippled ship.”

"I understand. Let's hope then that our people in the SHUNDAR will have succeeded in finding a new home for our race."

"So do I! Maybe we will find something in the Gliese 625 system. Let's go back to the bridge now."

Unfortunately for everyone, the next few hours brought only some discouraging data about the Gliese 625 system. After listening and observing in pure passive mode for one hour, Tina then ordered their active sensors to be switched on, but still did not find anything of interest. Only one planet, Gliese 625b, was visible in the system, orbiting close to its red dwarf star, while an asteroid belt turned around the star at some distance. The planet was a big one, with nearly triple the mass of Earth and was too hot to be habitable, with average surface temperatures of 45-55 degrees Celsius, a dry, desert-like surface and an atmosphere poor in oxygen and barely breathable. Tina finally settled on putting her ship in orbit around Gliese 625b, so that a detailed mapping of the planet could be done, then gave her command chair to Renée d'Argenteuil, the Second Pilot of the KOSTROMA, and left the bridge to go rest and spend some time with her young baby son. On his part, Shanandar also left the bridge at that point, accompanied by Shalmanazar, and went down with him to the old passenger accommodations where the mining complex survivors had been lodged. There, he found the medical experts of his Koorivar crew contingent busy giving medical checks and treatments to the survivors, helped in this by the Human doctors and nurses of the ship. Overall, the medical prognostic of the survivors was guarded at best, with most of them suffering from malnutrition and from long-term conditions that had been left untreated for years. Allied with the nearly non-existent level of formal education of the survivors, all that promised a difficult future for most of them in whatever kind of new life they would find in the weeks and months to come. Shalmanazar broke in tears on realizing that.

"My poor people! Even now that we have been saved from our mining complex, we will still have to live through more difficult times."

"Don't be too pessimistic, Shalmanazar," said gently Shanandar. "The children in your group still have good chances of being able to readapt to a normal, productive life. Talking of children, where is the young one whom I spotted first in the mine?"

"Kiryn? Uh, let me ask."

It took some minutes and questions to a number of Koorivars before they found nine year-old Kiryn, who was being checked by a Koorivar medic. The two adults waited until the medic had finished checking the child, declaring him generally fit apart from being skinny, before Shanandar bent down to speak gently to the child.

"Hello Kiryn! You remember me, Captain Shanandar?"

"Yes, I do! What will happen next to me?"

"You and the other survivors will be resettled in a new home world once our search for more survivors from Shouria is completed. Where are your parents, Kiryn?"

"They are dead." answered the child in a downcast voice. "They defended our allocation of food from looters and were killed by them. Many of our people died the same way before we finally got rid of all the looters."

"I...I am sorry to hear that, Kiryn. Who is taking care of you now?"

"Nobody! I have been surviving by myself for half of my life now."

Shanandar was rendered speechless for a moment by that, as tears started rolling on his face. Swallowing hard the big lump in his throat, he then took a decision on an impulse.

"Kiryn, would you like to stay with me and my two children, Shazanar and Shanir, and be part of my family?"

Kiryn looked up at him, then nodded slowly his head without speaking. Next, the child got up from his bench and went to hug Shanandar, who warmly greeted him in his arms.

"Come, my child: let's go find and meet my two other children."

Shalmanazar, deeply moved, watched Shanandar and Kiryn walk away. He then mentally thanked the Universe for having people like Shanandar and Tina Forster around.

11:36 (Universal Time)

Thursday, April 22, 2320

Command bridge of the A.M.S. KOSTROMA

In low orbit around planet Gliese 625b

Minh Wa Hien nearly didn't notice at first the surface feature but quickly retraced her scan to the solitary crater visible on the dry surface of a plateau on Gliese 625b. Using a battery of various sensors, she got some very unusual readings from that crater and shouted out from her sensors station on the bridge.

“Renée, I have something here!”

That attracted at once to her station Renée d'Argenteuil, who was on command watch duty at the time. The tall French woman bent down to look at her sensors screen.

“What do you have exactly, Hien?”

“A solitary impact crater in a zone otherwise devoid of craters. My magnetometer is also detecting some metal at the bottom of that crater. Maybe an iron-nickel meteorite slammed down there.”

“Well, this is the first anomaly that we have noticed in a whole day of scanning. Also, I doubt that Tina will be satisfied with a simple ‘maybe’. I am going to call her.” Hoping fervently that this crater didn't mark the end of the Koorivar refugee ship they were looking for, Renée hurried back to the command chair, where she contacted Tina Forster and informed her of their find. That call brought Tina to the bridge in minutes, where she examined the data and pictures gathered by Hien.

“This is definitely worth investigating. That crater was made by something quite massive, which impacted at an angle rather than at the near vertical.”

“The surface gravity is a good 1.6 G, while the local temperature is at 53 degrees Celsius, with only nineteen percent of oxygen in the air. Any ground team will need to wear power suits to work in such an environment.” warned d'Argenteuil, making Tina nod her head.

“Quite right! This sounds like a job for my heroic husband Michel.”

Both Hien and Renée smiled at those last words.

“He is liable to think that you are trying to get rid of him, Tina.”

“Nah! Michel can handle anything. Well, almost anything. We will send him and three other members down in a shuttle to go check that crater. Damn, I hope that this is not marking the tomb of the SHUNDAR.”

Less than two hours later, a personnel shuttle left its hangar on the KOSTROMA and started its descent through the planet's atmosphere. Inside, wearing a big, intricate powered spacesuit like his three comrades, Michel Koniev watched the surface grow on the external view cameras of the shuttle. Apart from having a powered exoskeleton, his suit was equipped with both anti-gravity and directed gravity generators, something that was going to allow him to move and work with ease in the normally very difficult conditions found on Gliese 625b. Such powered spacesuits were both very expensive and uncommon and were typically provided only to select crewmembers of a ship.

Michel's security section was part of those select few. While Tina normally didn't like to see weapons being carried by her crew, Michel had argued with her that, in view of all the unknowns about this planet, some weapons should be carried by his investigative team. He thus had brought with him a space pulse rifle and a pulse pistol, weapons which used rocket-propelled projectiles and rear-facing rocket exhaust ports which made them nearly recoilless in zero-G conditions. His three companions, Leo Sanchez, Ahmed Jibril and Martha Lang, were similarly armed. Martha Lang, as the Third Engineer of the KOSTROMA and its specialist in emergency ship repairs, who had been deemed essential by Michel for this job, thus accompanied the three security men down to the surface.

"I see the impact crater ahead! It's a big one!" announced by intercom their pilot, Valentina Suvarova. "ETA in two minutes!"

"Okay! Last equipment check, everybody!" said in turn Michel. The three men and one woman then checked each other's suit and grabbed the bags containing their work tools and portable sensors for their investigation. A soft impact then marked their landing on the rock and sand surface of the planet. Un-strapping themselves and getting out of their padded seats, the four members of the team filed up inside the aft airlock of the shuttle, closing the inner door behind them. Once the pressure with the outside was duplicated, they opened the outer door of the airlock and stepped out, closing firmly the steel door as soon as all four were out. A strong wind blew at once sand against them, making Michel grimace.

"Well, this is not exactly my idea of an ideal vacation spot. Let's check out the conditions out here."

"Charged particles radiation level is tolerable for short and medium exposure, but quite unhealthy for any prolonged exposure." announced Ahmed Jibril. "The air is also very dry and hot and...what the hell?"

Michel saw Jibril quickly swat the air in front of his helmet, as if chasing an insect. The reason quickly became evident when Michel had to swipe away a big flying insect which measured a good two centimeters in length and over six centimeters in span from wingtip to wingtip. More flying insects were soon buzzing around the team members.

"Hell, these insects make Siberian flies look like mere mosquitoes!"

"Yeah, and a few of them are trying to munch through my suit." added Leo Sanchez. "Good luck to them on that, though."

“Well, let’s ignore them for the moment. We will however have to be careful to decontaminate ourselves once back in the shuttle. We have no ideas of what kind of microscopic life there is on this planet. Follow me towards the crater.”

Walking in single file behind Michel, his three companions walked energetically towards the lip of the nearby crater, which had a diameter of about 600 meters and a depth of seventy meters. The layer of sand over the rocky surface was quite thick and made their walking more laborious. Martha Lang suddenly screamed in her microphone while jumping sideways, frightened by something.

“EEEEK! WHAT’S THAT THING?”

Michel’s reflex was to grab the handle of his pistol while turning quickly around. He however didn’t draw his weapon from its holster when he saw what had scared Martha: what looked like a sea worm measuring some twenty centimeters long had sprung out of the sand to try to bite into Martha’s armored boot. A swipe by Martha, using her utility knife, then cut in two the sand worm. The two parts then independently swam back into the sand, watched by the disgusted engineer.

“What an awful creature! This planet is the shits!”

“I would tend to agree with you, Martha.” said Michel. “Let me call the ship quickly to signal this... KOSTROMA, this is the landing team, over.”

“Go ahead, landing team!”

“KOSTROMA, there is life on Gliese 625b, but it isn’t exactly a fun place for vacationers. We have encountered up to now dozens of giant flying insects and one large sand worm that tried to eat Martha’s foot. We have video images of them taken by our helmet cameras. We will now proceed down one slope of the impact crater.”

“Understood, landing team. KOSTROMA out!”

Michel then decided to fly down into the crater, in view of the sandy slope that could easily make them slide and lose their footing. Activating his directional gravity generators, he rose up from the sand and advanced a few meters past the lip of the crater before going down in a gentle glide slope, followed by the others. The four of them landed near the center of the crater, where it was at its deepest. However, it was evident that the crater was not a recent one, in view of the erosion of the slopes and lips. Using a portable seismic radar, Michel started scanning the ground around him. He however had to stop nearly at once, shocked.

“Martha, come and look at this radar reading, quickly!”

The engineer did so and nearly took a step back after one view at the screen of the radar unit.

“My god! This looks like the remains of a spaceship! There are metal ribs, beams and plates all over the place. Do you think that this...”

“...That this is what’s left of the SHUNDAR? I hope not! I am going to transmit those radar scans up to the KOSTROMA.”

Michel felt nearly sick as he opened a channel with their ship: if this was indeed the remains of the SHUNDAR, then over 22,000 Koorivar refugees had ended their lives right here, on this hellish planet.

On the KOSTROMA, Michel’s message and radar scans data hit Tina like a giant hammer. She barely kept herself from bursting into tears of frustration and grief, but needed a few seconds to compose herself and distribute some orders.

“KOSTROMA to landing team: start digging in order to get at the nearest pieces of debris. We need to ascertain without a doubt the origin of those debris. I am going to send some reinforcement with extra digging equipment. KOSTROMA, out!”

As Tina switched to ship’s intercom mode, she made a quiet wish to herself.

“Please, please, God: don’t make this the tomb of the SHUNDAR.”

20:41 (Universal Time)

Impact crater, surface of Gliese 625b

“STOP! STOP! I SEE SOMETHING! LET’S FINISH DIGGING BY HAND.”

Michel Koniev, along with Martha Lang and Leo Sanchez, fell on their knees and started shoveling dirt and sand away with their gloved hands. Parts of some metallic instrument panel progressively appeared as they dug. Soon, they were able to extract a piece of plate some half a square meter from the ground and avidly examined it.

“It seems to be made of some kind of aluminum alloy. It is definitely a kind of instrument panel, with cuts for instrument displays.”

“Hey, there is some kind of small serial number plate fixed to that corner of the plate.”

Three helmet lamps immediately converged on that part, brightly illuminating it.

“There are characters visible! However, they are not in English.”

“Are they in Koorivarese?”

“Uh, no!” said Michel. “In fact, I never saw such characters before. Anybody here can read these?”

The other crewmembers working with his team in the crater took turns looking at the plate, without any success in identifying the characters. Michel was in the process of sending a picture of the said characters up to the KOSTROMA for analysis when Martha Lang scanned the plate with a multi-sensor device.

“Michel, this is not from the SHUNDAR.”

“Oh? How can you be so sure, Martha?”

“How? Because my spectral and isotopic analyzer tells me that this piece of metal is over 6,000 years old. This simply can’t be from the SHUNDAR.”

“SIX THOUSAND YEARS OLD? But, where does it come, then?”

Martha’s expression was most sober when she answered him.

“From an alien, non-Koorivar ship that crashed here millenniums ago, when Earth was still in the Early Bronze Age.”

14:08 (Universal Time)

Monday, May 10, 2320

Bio-chemistry analysis laboratory, A.M.S. KOSTROMA

In low orbit over Gliese 625b

Tina, Michel, Shanandar and Doctor Koomak stood silent and immobile while looking down at the remains of what had to have been some kind of spacesuit made for someone who was neither Human nor Koorivar.

“A third space-faring civilization, just in this small portion of our galaxy.” said softly Tina. “This piece of news will hit hard when we will return to the Solar System. Did your people ever had an inkling about the existence of such a race, Koomak?”

“None at all! This is as much a shock to me as it is to you, Tina. Allied with the fact that we found insects and worms on Gliese 625B, this would tend to indicate that life is quite common around our galaxy, after all.”

“Indeed! Some of the religious prophets on Earth are bound to choke on this piece of news. At least, this crash site was not that of the SHUNDAR.”

“Thank the stars for that!” replied Shanandar before looking again at the ancient spacesuit. “Two pairs of arms, each ending in six-fingered hands, a massive torso and head and a pair of short, thick legs. That creature must have had some phenomenal

digital dexterity. Judging from its proportions, I would also surmise that it came from a heavy gravity world, with a felt gravity at least equal to that of Shouria.”

“You are probably right about that, Shanandar. Let’s hope that the analysis of these remains and of the debris found in the crater on the planet will tell us more about this alien race. For the time being, I would like to call it the ‘Gordo’.”

“The ‘Gordo’?” said Koomak, mystified. “Why? Does it mean anything in English?”

“No, but ‘gor’ are the three first letters of the word ‘gorilla’, the name for a type of big and very strong primate on Earth. Also, ‘Gordo’ means ‘big’ in Spanish.”

“Makes sense!” declared Michel, smiling. “I buy that!”

“Then, ‘Gordo’ it is!” said Koomak while shrugging his shoulders.

08:45 (Universal Time)

Saturday, May 15, 2320

Conference room in the ship’s conference center

Level 10 (Main Cafeteria Deck), A.M.S. KOSTROMA

In low orbit around Gliese 625b

“So, Maria, did we learn anything new in the last few days about the vessel that crashed on Gliese 625b, or about its occupants?”

Maria Perez, the ship’s chief medical officer and an expert in bio-chemistry, exchanged a quick look with Rose Tillman, the ship’s chief engineer, before answering Tina’s question, with the nine other participants to the meeting listening on.

“Well, to be honest, the crash was so violent and also so ancient that there was very little left that could be analyzed in depth. I was able to isolate a tiny portion of fossilized DNA from a crushed piece of bone which had been protected from fire by the spacesuit worn by one of the three sets of alien remains we could recover, but what I could get out of it was extremely limited. The only thing I could say now with certainty is that the DNA of these ‘Gordos’, as you call them, has little in common with Human or even Koorivar DNA. We can thus pretty much conclude that the Gordos evolved completely independently from either us or the Koorivar. Their general built with a massive, strong body, certainly indicates a home world with probably strong felt gravity of at least 1.2 G, if not more. From the remains of their spacesuits, the Gordos measured over 190 centimeters in height, with wide torsos and shoulders and biceps

that would make World-class weightlifters jealous. The shape of their helmets also indicates a voluminous cranium: those Gordos were probably no mere 'chimps', if I could use an old expression."

"What about the spacesuits themselves and the ship's remains, Rose?"

"As Maria already said, the crash and the millenniums since then left us little to analyze. In-depth isotopic analysis did confirm that the crash happened some 6,300 years ago, when both us Humans and the Koorivar were still at primitive levels of civilization. We did not find any traces of what could have been any sort of chemical or isotopic fuel inside the crater, so those Gordos possibly used some form of electromagnetic or directed gravity propulsion, and this some 6,300 years ago! What level of technology they attained since then is anybody's guess but, if their civilization did not self-destruct and is still existing, then I would expect the Gordos to be well ahead of us in the scientific and technological departments."

"But, if they were so advanced, they should have by now visited Earth a long time ago, along with this whole portion of the galaxy." objected Dana Durning. "That they haven't may indicate that their civilization did not in fact endure much longer after that crash we found."

That seemed to amuse Tina, who smiled at her chief navigator.

"You do know that there are still plenty of people on Earth who believe in 'secret extra-terrestrial past visits' and similar conspiracy theories, Dana?"

"Oh, I do know that, Tina, but all these loony-types keep describing these supposed extra-terrestrial ancestors as thin, skinny creatures with inflated heads and big eyes. Have you seen any of them ever describe gorillas with two pairs of arms?"

"Hum, you do have a point there." recognized Tina. "The fact is that our own history showed us that no civilization exists forever and that all of them eventually disappear for one reason or another. Either those Gordos are no longer with us, or they have decided for some reason to withdraw into themselves and their home world, abandoning space exploration. However, that last hypothesis sounds very implausible to me when talking about any technologically advanced race with any healthy level of curiosity about the universe around it."

"Maybe they met someone even more advanced than them and got wiped out." Suggested Bill Morrison, the ship's chief of security. At that point, Tina threw both of her hands in the air.

"I think that we are now strictly in pure speculation mode, people. I thus suggest that we return to more concrete subjects. Rose, are you confident that we now have found and recuperated about everything of significance that we could find at that crash site?"

"Yes! We could go on digging for a few more days, but the chances of finding anything significant are now very low."

"Patricia, have you completed your surveys of the planet? Do you still need more time to study it?"

"All our surveys and mapping are complete." Answered Patricia O'Neil, the chief sensors and communications officer of the KOSTROMA. The last one Tina looked at with a question was Shanandar.

"Captain Shanandar, are you satisfied that the SHUNDAR did not end its trip in this system?"

"I am! There is nothing in this system that would entice Captain Kurkan to land his SHUNDAR on this planet and stay here, short of a major ship malfunction. Since we did not find any traces of the SHUNDAR on Gliese 625b, then I say that it must have continued on its journey in search of a new home world."

Tina slapped both of her hands on the table on hearing that.

"Then, my decision is to continue our search and jump to the Gliese 581 system. Are there any objections to that? No? Then, this meeting is adjourned!"



Planet Gliese 581c and its moon, Hyanesu, with red dwarf star Gliese 581 and planet Gliese 581b visible in the background.

CHAPTER 6 – GLIESE 581

10:02 (Universal Time)

Saturday, May 15, 2320

Command bridge of the A.M.S. KOSTROMA

Inside the Gliese 581 star system

“Now, this looks like a promising star system.” said Dana Durning after a quick visual check of the ship’s sensors. “One, two, three, four, five planets! I can also see a few moons, plus one asteroid belt.”

Shanandar, again present on the bridge for this jump, also looked at the display screens with visible interest.

“This is indeed a very interesting system. With any luck, the SHUNDAR would have found a new home here.”

“Well, the Gliese 581 System was always considered on Earth to be a good candidate system for habitable worlds. We will soon see if the speculations about it on Earth were correct...or overly optimistic.” said Tina, sitting in her command chair. “Let’s start with a half hour of passive electronic listening and observing. Hopefully, we will hear the automated beacon signal from the SHUNDAR...if it is in this system.”

Unfortunately, no artificial electronic signal of any kind was detected during the next thirty minutes, prompting Tina to look at Shanandar, sitting near her in his V.I.P. chair, next to Gerald Holmes.

“Shanandar, what did you find about the systems degradation in your VEON SHOURIA, once you were safely brought to Earth?”

Shanandar, also frustrated a bit by the lack of indications about the presence of the SHUNDAR inside the Gliese 581 system, frowned as he remembered what he had found then in his own ship.

“Well, Spirit did a complete and thorough analysis of the VEON SHOURIA’s systems and unfortunately found a rather long list of systems failures and degradations. Evidently, our technology was not as durable as we hoped it to be. Spirit found that some systems started to degrade as early as 200 years after departing from Shouria, while we had expected them to work reliably for over 400 of your years. The first systems to degrade were the computer programs of the ship’s autopilot, followed by the programs concerned with post-landing procedures, including the switching on of automated radio beacons. On Eris, you should have detected the VEON SHOURIA’s radio beacon, but that beacon had failed, like our autopilot program. Not hearing the SHUNDAR’s radio beacon is no definite indication that it is not inside this system. We will thus have to conduct a thorough survey of this whole system before we could be sure that the SHUNDAR is or is not here.”

“I concur! Since the next stop of the SHUNDAR would be some 117 years away in terms of travel time, we can take the time needed to do a thorough job here. Beside, not mapping or exploring properly this system would be stupid, as we are after all the first ever ship from the Solar System to travel to other stars. Our astronomers would rightly kill me if I didn’t collect at least some initial data about the systems we are visiting during this mission. Mister Duharto, go to active sensors mode and fire a pulse from our long range radars. Let’s see what this system really contains.”

“Firing a VLF radar pulse now, Captain!” replied the sensors specialist, who had been born on Europa but was of Indonesian descent. Anwar Duharto opened a protective cover on his console and pressed a large blue button once. Using part of the energy accumulated inside the eight huge flywheel accumulators of the KOSTROMA, each of which had rotating masses of 6,000 metric tons, the network of very low frequency phased array radar antennas fired off a single, hugely powerful electronic pulse which then started traveling outbound at the speed of light. Any ship that would

have been near the KOSTROMA at that time would have probably seen most of its electronic sensors being overloaded and burning out. In this case, the VLF pulse took 16.6 minutes, or 996 seconds, to cover the distance of two Astronomical Units separating the KOSTROMA from the red dwarf star at the center of the Gliese 581 system. Each of the celestial bodies which the pulse hit on its way out in turn sent back a radar echo signaling its direction and distance from the KOSTROMA. After a bit over one hour, all the echoes that could possibly be reflected from celestial objects inside the system had come back to the KOSTROMA, giving Anwar Duharto a good overall picture of the Gliese 581 system. A second, third and fourth VLF pulses, fired at different frequencies from each other, followed the first one at one minute intervals, allowing that overall picture to be refined so that it also showed the orbits and trajectories followed by the objects inside the system. That long range radar mapping work demanded patience but, when done right, saved a lot of unneeded running around later on. While the VLF radar pulses went their merry way, the spectrometers, telescopes and cameras of the KOSTROMA, eagerly manned by the astronomical team of the ship, studied the visible planets and moons of the system, trying to find out as much data about them as possible from such distance.

After some two hours of patient waiting, Tina got a detailed report from Dana Durning, who was comparing what they were detecting to what Earth telescopes had said about the Gliese 581 system.

"Here is our picture of the Gliese 581 system, Tina. There are five planets of various sizes in the system, three of which have moons, for a total of six moons. There is also a large asteroid belt turning around the star at an average distance of 3.4 AU. The third planet, Gliese 581c, is within the inner edge of the habitable zone and thus could harbor water in liquid form, while the fourth planet, Gliese 581d, is on the outer edge of the habitable zone. The two first planets from the star, Gliese 581e and Gliese 581b, are too hot to be habitable, while the fifth planet, Gliese 581f, is a frozen ball of rock and ice similar to a small Pluto. If the SHUNDAR stopped and landed inside this system, then I would expect it to do so on the third planet, followed in order of preference by the fourth planet."

"I concur with Dana on this." said Shanandar, making Tina nod her head.

"I do too. However, let's not rush at once to the third and fourth planets. We will explore and map this system methodically and thoroughly. The fifth planet is presently

the nearest to us: let's go sniff it from up close. Frida, fly us to Gliese 581f. Use our anti-matter cruise engines."

"Course entered for Gliese 581f. Powering up our anti-matter engines at 2.5 Gs of acceleration." replied the redhead second pilot. "Travel time to enter orbit around the fifth planet: eight hours and six minutes."

"Very well! Dana, call the third bridge watch team to come up and replace us: I want our primary watch team to be rested and fresh by the time we arrive in orbit of the fifth planet. Renée d'Argenteuil will take the command chair from me."

"Understood, Tina!"

Coming out of her command chair when d'Argenteuil arrived on the bridge, Tina then smiled to both Shanandar and Gerald Holmes.

"Would you like to have lunch with me, my friends?"

"I would be happy to, Tina." replied Holmes, with Shanandar then echoing him.

"Any preference in type of food? I feel like trying something more exotic than the menu at the crew cafeteria, even though that menu is excellent and varied. I'm paying!" Both Holmes and Shanandar thought for a short moment before Shanandar spoke first.

"How about the 'Maharaja Restaurant'? It has some excellent vegetarian dishes."

"That sounds good: I love Indian cuisine." replied Gerald Holmes, with Tina nodding her head in approval.

"The 'Maharaja' it is, then!"

Going to the small elevators rotunda of the bridge complex, the trio called a cabin and rode it down to Level Nine, the Main Promenade Deck, where they exited the elevator cabin and took one of the four wide radial passageways connecting the core rotunda with the Main Promenade ring. About halfway down that passageway, Tina veered left and entered the Maharaja Restaurant's dining room, which covered 240 square meters of surface. There were already a good sixty dinners present, many of them Koorivar, including some of the recently rescued Koorivars from the Gliese 667C system. A waiter dressed in traditional Indian garb welcomed the trio near the entrance.

"Welcome to the Maharaja, Captain. I will get you a table right away."

"Thank you, Sanjay. It seems that the recently arrived Koorivars do like this restaurant."

The waiter smiled and nodded his head while still leading them towards an empty table.

“They do indeed, Captain. They seem to love our traditional vegetarian dishes.”

“And I agree with them on that.” added Shanandar, eyeing in passing the plates of Aloo Ghobi and Pualo Rice being devoured by a group of four Koorivars. “Your restaurant serves by far the best vegetarian dishes found on this ship. Your Curry dishes in particular are a pure delight.”

“Aaaah, then you can thank Madam Ramya Mistri for that, Captain Shanandar: she prepares the best Curry powders that I ever tasted, including in India.”

“Ah yes, Madam Mistri!” said Tina, smiling. “I was truly lucky to hire her, along with her eldest daughter and her husband. All of them proved to be hard-working, dedicated crewmembers, but Madam Mistri is truly in a class of her own when it comes to cooking and spices preparation.”

“Well, you will be able to enjoy again her Curry dishes today, Captain. Here is your table.”

“Thank you!”

The waiter then distributed menus to the trio after they sat and pointed at an item on the list of specials of the day.

“For you and Mister Holmes, Captain Forster, I would highly recommend our Lamb Biryani, while Captain Shanandar could try our Vegetables Biryani.”

“That sounds like an excellent choice, Sanjay.” said Tina after getting nods from both Holmes and Shanandar. “I will also have a lentil Dahl Soup as appetizer.”

“I will take your Pakora Vegetables as appetizer, Sanjay.” said Shanandar, licking his lips in advance. As for Gerald Holmes, he ordered as an extra a Mulligatawni Soup, asking it to be extra spicy. As the waiter walked away towards the kitchens with their orders, Gerald couldn't help ask a question to Tina.

“Is everything we just ordered really grown on this ship, Tina?”

“Absolutely, and it is a great source of pride for me to be able to say so, Gerald. We are fully self-sufficient in terms of food production, even when carrying thousands of passengers, and often end up with sizeable surpluses which we are then able to sell with good profits at our various stops around the Solar System. We even produce our own beer and wine. Okay, we don't produce all the types of vegetables, spices, fish or meats one can find on Earth, but we still produce a most decent variety of foodstuff.”

Gerald took a moment to digest that information, then changed the subject, his expression becoming most serious.

“Tina, you do realize the impact that your interstellar trip will make on Humanity? After you will return to the Solar System, things will never be the same and we will probably witness a mad rush towards the stars.”

“I frankly hope that it won’t be so, Gerald.” replied Tina, equally serious. “I have no wish to see Humanity do a repeat of the California Gold Rush or of the conquest and occupation of the Americas by the Europeans. Especially, I do not wish to see any alien race or species being pushed out or marginalized on their own planets by Human colonization or mining ships. Yes, I have left a copy of the schematics of the Koomak Drive in the hands of your wife, but I did so knowing that I can count on her to use that data in a responsible and respectful way. However, some of the other governments and private commercial entities in the Solar System have proved a number of times that they cannot be trusted with such data. Those governments and entities will probably consider the surrounding stellar systems as up for grab, whether those systems harbor indigenous life or not. What I hope from your wife is that she will create a set of legal protocols concerning how Human ships are to behave outside of the Solar System and that she will also create a police force able to enforce those protocols. Personally, if I and my ship ever witness a Human ship or ships abusing or hurting some alien race or ecosystem that did not prove hostile and violent, then I will not hesitate to tell those ships to fuck off, on pain of being militarily booted out of the said system. Whenever we will return to the Solar System at the end of this search and rescue mission, I would greatly appreciate if you could impress on your wife my opinion on this subject, Gerald.”

Gerald only had to think for a short moment before nodding his head.

“You can count of me for that, Tina.”

19:41 (Universal Time)

Command bridge of the A.M.S. KOSTROMA

In low polar orbit of the planet Gliese 581f

“Hum, it reminds me very much of Pluto, but bigger.” said Tina while eyeing the images of the fifth planet of the system. Patricia O’Neil, manning one of the sensors stations on the bridge, nodded her head at that.

“Indeed, Captain! From our preliminary observations and spectrometer readings, it seems to be a frozen ball of rock and methane and water ice, surrounding by a thin nitrogen-methane atmosphere with a pressure of approximately two millibars. The

planet's mass is about 0.05 Earth Masses, some four times that of the Earth's Moon. It has two rocky, irregularly-shaped small moons which appear to be asteroids that have been captured by the planet's gravity. What is interesting in it is that the proportion of methane on its surface and atmosphere seems quite high, while its overall density is also high. In fact, I can detect a weak magnetic field around the planet, denoting the presence of an iron metallic core. Overall, a fairly interesting planet."

"But one that would not have interested the crew of the SHUNDAR in terms of habitability." replied Tina. "We will thus conduct a full mapping and scanning survey of it, but won't waste too much time on it."

"Understood, Captain!"

Tina then turned her head to look at Shanandar, who was again occupying a V.I.P. seat.

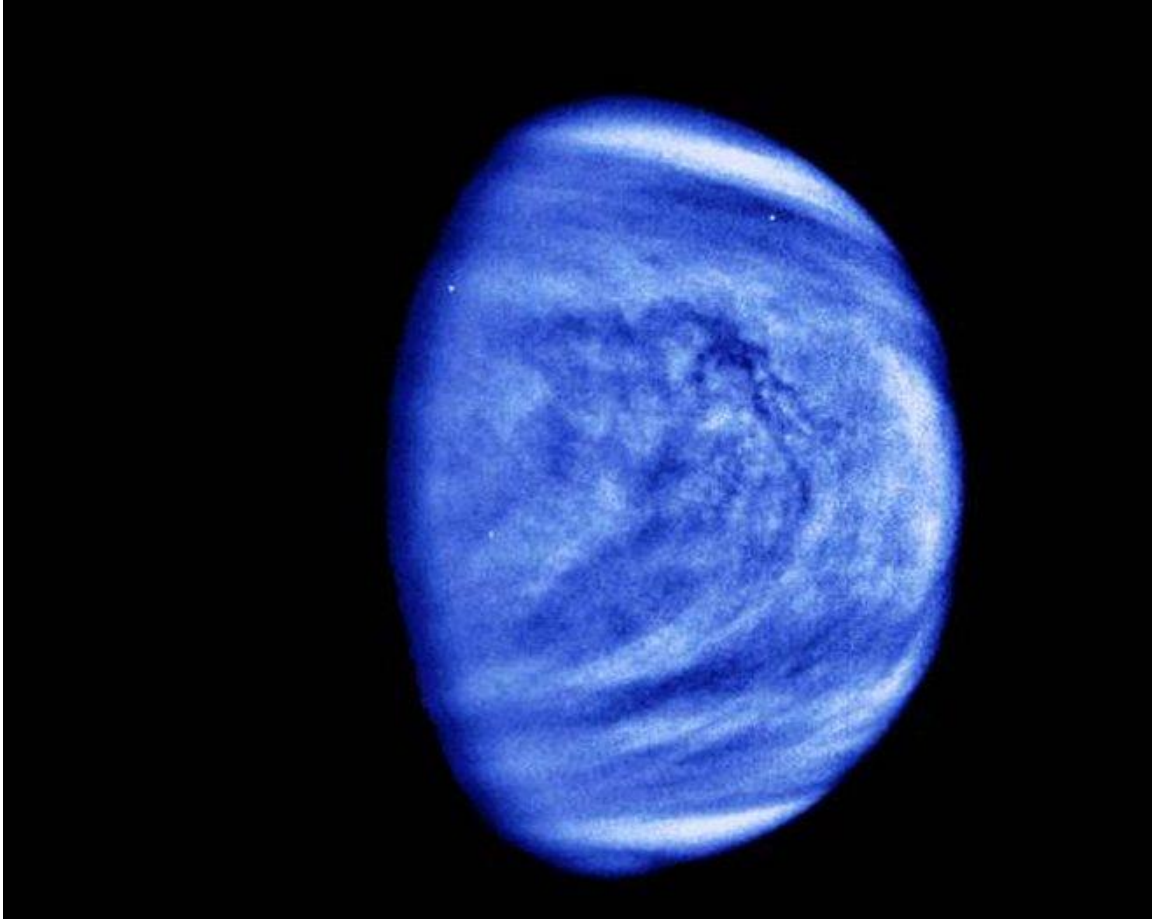
"What do you think, Shanandar?"

"I concur with you, Tina: the SHUNDAR would not have wasted time on this planet: finding a habitable planet for their sleeping refugees was their sole interest. However, since we have plenty of time for us, I also agree that this planet is worthy of a full survey."

"How long could that survey take, Tina?" asked Gerald Holmes.

"Well, unless we find something really unusual that would warrant further attention, a full mapping and survey of this planet should take less than a day. Then, we will go check the fourth planet of the system, Gliese 581d."

Some twenty hours later, having completed its survey of Gliese 581f without finding any worthy surprise, Tina had her KOSTROMA leave its orbit and, under the power of its anti-matter cruise engines, fly down towards the fourth planet. Even from a distance, Gliese 581d was already proving to be a most interesting planet for Tina and her crew, as it was a blue planet.



Planet Gliese 581d, viewed from space.

CHAPTER 7 – A BIG, BLUE PLANET

13:18 (Universal Time)

Monday, May 17, 2320

Command bridge of the A.M.S. KOSTROMA

Approaching the planet Gliese 581d

Hardly anyone was speaking on the bridge as its crew watched the big, blue planet now nearly filling their forward viewing holographic screens. Tina, like Shanandar and Gerald Holmes, could only admire the deep blue orb of Gliese 581d, with white streams denoting atmospheric cloud formations blown around by winds. There were however no apparent land masses to be seen.

“An ocean planet!” said softly to herself Tina, captivated by the image of the blue planet. “It is beautiful! Please, Patricia, tell me that it has a breathable atmosphere.”

“Well, I can’t certify for the exact composition, temperature and pressure of this planet’s atmosphere from this distance, but our spectrometers definitely are detecting large amounts of nitrogen, oxygen and carbon dioxide forming a thick, significant atmosphere. We can also detect a strong planetary magnetic field, something that would protect its surface from solar and space radiations and give a chance for life to develop. Preliminary calculations give us a mass of approximately 3.1 Earth Masses, orbiting the red dwarf star at an average radius of 0.218 AU in approximately 67 days. The planet is tidally-locked to its star, with one half perpetually illuminated by the star and the other half perpetually in the dark. We can see four large, round and rocky moons orbiting the planet, which would explain why the planet’s mass, as calculated from Earth, had been estimated previously to be of a minimum of 5.6 Earth Masses. The surface water on the illuminated side appears to be liquid, while much of the dark side is covered by solid water ice.”

“This planet should have been of very high interest for the SHUNDAR.” said Shanandar, who was standing behind Patricia’s seat. “At a minimum, it would have thoroughly mapped and scanned it before moving on...unless the ship was already out of control and unable to land.”

“Let’s assume that the SHUNDAR was still fully functional and that its crew at least surveyed this planet.” replied Tina. “On my part, I certainly want to know anything that could be learned about this planet and want to be sure that the SHUNDAR is not here right now, entombed in ice or at the bottom of the ocean. Patricia, call up some extra help for our sensors stations. Me and Shanandar will also lend a hand.”

With up to six persons manning the sensors stations of the bridge complex and with Spirit, the ship’s central computer, helping to analyze the data from the various ship sensors, the crew’s knowledge about Gliese 581d quickly grew, while that new knowledge only stimulated their interest in what was proving to be a true ocean planet. A pair of robotic probes sent down to the planet soon brought in some critical information, information which pleased greatly both Tina and Shanandar.

“The atmosphere is breathable, Captain.” announced excitedly Anwar Duharto, who was controlling the probe flying inside the planet’s atmosphere. “Its pressure at sea level is 1,136 millibars, only a bit higher than on Earth, and it is composed of 69 percent

of nitrogen, 23 percent of oxygen, seven percent of carbon dioxide and one percent of a mix of noble gases, most of it argon with traces of neon, xenon and krypton. Atmospheric temperature near the surface of the ocean at the equator, in the half facing the star, is turning around plus 21 degrees Celsius, higher than what the planet's distance from its star would make us expect. I would say that the carbon dioxide in the air is causing a moderate greenhouse gas effect which raised the temperature above water freezing point. However, the surface air temperature drops significantly on the dark side, with a temperature of minus six Celsius at the equator and with the ocean mostly frozen up. However, the conditions around the Terminator zone are still quite mild, with a sea-level average temperature of plus sixteen degrees Celsius."

"We could go around without spacesuits." said Shanandar while smiling to Tina. The latter however shook her head at that.

"In terms of livability, yes, but I won't risk contaminating this planet with Earth germs until we know more about the possible life on the planet. Our first surface exploration teams will go around with sealed suits and while breathing recycled air. They will also go through decontamination both before and after going down to the surface, and that will include their shuttles."

Ingrid Holtz, one of their specialists in sensors and communications, then spoke up, cutting off that exchange.

"Captain, our maritime exploration probe has splashed down near the equator, in the southern quadrant of the planet. I am now getting some firm data about the planet's ocean. First off, the water temperature around our probe, at a depth of ten meters, is surprisingly high, being plus fourteen degrees Celsius. This is completely unexpected for a planet sitting just outside of the outer edge of the system's habitability zone. As for the degree of salinity, it is about the same as found in the Pacific Ocean on Earth. The probe's sonar is giving an average depth of more than 9,000 meters, much deeper than on Earth, with the bottom looking very uneven, with innumerable peaks, ravines and underwater summits. Some of those summits rise up to a depth of 1,800 meters, still quite deep by Earth's standards."

"Wow! That is what I would call an 'ocean'." Exclaimed Gerald Holmes. That made Tina look at him and Shanandar, her expression sober.

"I think that a proper name for such a planet would be 'Oceana'? What do you think?"

"That it would be a perfect name for such a splendid ocean planet, Tina."

"I concur!" added Shanandar. "This ocean IS the planet. With luck, it will prove to harbor life. In fact, I would be very surprised to see that no life would have developed in such an ideal environment."

That prompted Tina to look down at Ingrid Holtz' station.

"Do you have any indications of marine life, Ingrid?"

"Uh, maybe, Captain. The probe's sonar is actually experiencing some kind of acoustic interference. I am now switching on its passive hydrophones."

"Put them on the bridge speakers: I would like to listen to them for a moment, Ingrid."

"Switching our probe's hydrophones on speakers."

A near constant cacophony of noises was suddenly heard around the bridge, making Tina's skip a beat: there were many clicking noises, plus what sounded furiously like loud lamentations.

"Whale songs! Those noises sound exactly like whale songs I heard from an excursion boat off Vancouver Island. There is life in Gliese 581d's oceans! Ingrid, make sure to record those sounds from now on. Spirit, could you start listening to those sounds and songs, to see if there could be some pattern to them?"

"I will devote part of my analytical capacity to that, Tina." replied the soft female voice of their central computer, an artificial intelligence entity of immense capability. On his part, Gerald Holmes was now nearly gleeful.

"This planet looks perfect for colonists, either Humans or Koorivars, Tina. I would be very surprised if the SHUNDAR did not at least explore it."

"If it didn't, then it would possibly indicate to us that the SHUNDAR was already in a poor state and unable to stop its course." replied Shanandar, looking and sounding worried. "I do agree with Gerald that this world would have warranted an extensive exploration program by the SHUNDAR's crew. If they indeed conducted such a program, then we are liable to find some traces of it, like expendable probes, beacons and the like."

"Our probe's sonar is now detecting something approaching it." suddenly warned Ingrid Holtz, her voice tensing up. "It is massive and approaching at a speed of about 25 kilometers per hour. Judging by its constantly changing path, I would say that it has to be some kind of marine life form."

As she said that, a loud sound wave similar to that from a sonar was heard on the speakers, followed some six seconds later by a second, louder one.

“Echo sounding! That marine life form is using echo sounding to locate our probe and approach it. Ingrid, does our probe have cameras?”

“Of course, Tina! I am now pointing one of them at the incoming being.”

At first, they saw only blue-green water, made murky by particles suspended in the water. However, Tina saw some of these ‘particles’ moving around by themselves.

“Hey, some of those particles in the water are actually alive: they are moving!”

“I see that too, Tina.” said Gerald Holmes, captivated. “There is definitely life under many forms in this ocean planet. I... WHOA!”

Gerald nearly jumped out of his seat when a huge, dark mass suddenly appeared from the murky water and sped at the probe, what looked like a huge mouth opened wide. The image from the probe then went dark, as if it had entered a dark oven.

“THAT THING JUST SWALLOWED OUR PROBE WHOLE!” exclaimed Ingrid Holtz, her eyes bulging. That prompted Tina into giving a hurried order.

“QUICK, MAKE THE PROBE BOUNCE AROUND ITS MOUTH, USING ITS GRAVITY SAIL UNIT.”

Ingrid obeyed her at once. A positive reaction followed a few seconds later, with the image from the probe’s camera lighting up and showing from very close the long, hydro dynamically shaped of a huge marine creature with dark gray skin as it swam past the probe.

“IT SPAT OUT OUR PROBE!” announced the blonde sensors specialist. “I have regained control of the probe.”

Before she could say more, the camera of the probe then showed at least a dozen more dark gray masses which swam by it, apparently following the first creature. Tina watched that with utter fascination.

“A whole pod of whales... What a fantastic sight!”

“Something else is approaching our probe now.” signaled Patricia O’Neil. “It however seems much smaller than those...whales.”

Effectively, what next approached the probe measured about three meters in length and was shaped like a torpedo with large swimming fins. It proved very agile and speedy, turning around the probe as if to examine it. Four more similar creatures soon joined it around the probe, exchanging clicking noises between them as they twisted and turned in the water, watched by the fascinated bridge crew. Finally, probably deciding that it didn’t look edible, the five marine creatures swam away. Tina then took a few deep breaths to lower her excitement level.

“God! This was amazing! Our biologists will go bonkers when they will watch these images. Apparently, marine life is quite common on Gliese 581d. Too bad that there are no lands above the ocean.”

“We may have been wrong about that, Captain.” announced Anwar Duharto, pointing at their holographic display sphere. “I see a large, dark plume rising from the horizon, near the western terminator. I am redirecting our flying probe in that direction. It is still far, but I would bet that this is a plume of dust and smoke from a volcanic eruption: I saw two similar plumes in the past, when in Indonesia during the eruptions of two separate volcanoes.”

“Hum, volcanic activity could certainly explain the unusual amount of carbon dioxide in the air, along with the elevated temperatures. Underwater volcanoes and deep ocean bottom thermal vents could also explain the high water temperature of the ocean and could be an abundant source of minerals and nutrients for the local marine life. Let’s hope that your volcano will be part of a substantial land mass, Mister Duharto.”

The bridge crew anxiously waited as the flying probe sped towards the distant plume on the horizon, while continuing to check the data and images sent by their underwater probe. Those images soon showed yet more marine life, with huge schools of fish of various sizes and shapes swimming around. One school of fish in particular was filmed as nine of the dolphin-like creatures which had turned around the probe rushed through the fish formation, gulping dozens of fish in the process. That sight made Gerald Holmes nearly glut.

“This ocean planet is definitely full of life and has everything to offer as a new home. If I would have been the captain of the SHUNDAR, I would have landed on the icepack of the dark hemisphere, established a base camp there and then built floating cities with hydroponic gardens for his people.”

Shanandar couldn’t help sigh on hearing that and gave a dubious look to Holmes.

“That would have been the perfect scenario...if he would have been the captain of a ship like the KOSTROMA, with plenty of storage volume and vast industrial facilities. But he had only the SHUNDAR, designed like my VEON SHOURIA in a hurry with one single goal: to carry as many Koorivars as possible to a new world that could welcome us. It has very little storage capacity, apart from its 20,000 plus cryogenic sleep chambers, and carried only the minimum in terms of shelters and survival equipment.

This planet, while ideal for a big Human ship like the KOSTROMA, which would also be able to quickly return to its solar system to go fetch more equipment and construction material in order to build floating cities, would unfortunately prove a false hope for the SHUNDAR.”

“Oh! Sorry for the over enthusiasm.” Said Gerald, prompting a gentle reply from Tina.

“Don’t be, Gerald! Your thinking was typical of that of most Humans. Only experienced space-based engineers and scientists are accustomed to analyzing in depth the potentials of some space body or system. However, I agree with Shanandar about this planet which, while ideal for us and the KOSTROMA, would be a dead end for the crew of the SHUNDAR...unless they had to land here due to a malfunction, something that is still quite possible. We will thus look carefully for any sign of the SHUNDAR while mapping and exploring in detail this planet and its ocean. Just from what we have already seen, I would say that we will be here for a good two weeks, at the least. That could turn out to be even longer, if those volcanoes prove more interesting than we already hope.”

Some two hours later, their flying probe arrived in direct line of sight of the volcano which had caught their eyes, while the KOSTROMA itself was arriving above it as it flew in a polar orbit around Gliese 581d. Its orbital path, which made it overfly at intervals all the points of the planet, also revealed a crucial piece of data: emerged volcanoes were actually common at the surface of the ocean planet, with no less than 178 active and 659 presently inactive volcanic summits emerging from the sea. Some of those volcanic summits, like the active one the probe was approaching, had existed long enough to form sizeable islands made of volcanic ash and rocks. The volcano the probe was now close to was in fact the center of a large island covering a good 130 square kilometers. What was at the surface of that volcanic island was however what captivated the most the bridge crew.

“I SEE TREES, VEGETATION!” Announced excitedly Shanandar, making Tina look in awe at the display screens.

“My god, you are right! That’s it! We definitely have to send down a surface exploration team. Shanandar, would you like to direct that team?”

“I would love to, Tina.”

“Then, take Kazmiriel, Doctor Janus Kadar, Michel Koniev, Leo Sanchez and at least six specialists in geology, biology and botany with you and go down on that island as soon as you are ready. In the meantime, we will continue to accumulate data and images via our probes and ship’s sensors.”

“Thank you, Tina! Thank you very much! I’m on my way!” replied the happy Koorivar while nearly running down towards the elevators rotunda of the bridge complex.

16:33 (Universal Time)

Light shuttle ‘GRASSHOPPER’

At the surface of the volcanic island in the western equatorial quadrant

Planet Gliese 581d

“You can lower the aft access ramp, Yasmina.”

“Ramp lowering now, Captain Shanandar.” replied by intercom Yasmina Jumonji, the young Europa-born pilot of the exploration team’s light shuttle. Shanandar looked around him inside the aft airlock to do a last visual check of his team companions. Like him, they all wore light sealed suits with air masks and closed cycle breathing systems of the kind bio-hazard technicians wore inside high containment level laboratories. Those suits, while ensuring that no accidental biological contamination would occur either way, were much lighter and less bulkier than spacesuits and allowed much greater freedom of movement, as they were not pressurized like spacesuits. He then pressed a button on the control panel of the airlock, making dozens of gas vents blow a strong decontaminant all over him and his companions. Only after that did he open the outer airlock door and stepped on the lowered access ramp. With his companions following him with their bags of equipment, he walked down the ramp and stopped once both of his booted feet rested on the black volcanic sand of the beach on which their shuttle had landed. For safety reasons, Yasmina Jumonji had landed her shuttle on the point of land farthest from the smoking summit of the island’s volcano, in case a sudden, violent eruption would occur. The beach they were on, apart from giving them direct access to the ocean, was also bordered by trees, bushes and long grass, which the team intended to study. Looking up, Shanandar watched a pair of large birds fly over them, smiling at that extra proof of life on this ocean planet. They had in fact sighted many birds of various species during their approach and had also been able to

discover from the air that the island nested a number of large bird colonies, something that had added to the high interest the shuttle occupants already had for this island.

While a bit strong at 1.14 G for his Human companions, Shanandar found the local gravity to his liking, as the gravity on Shouria had been 1.3 G. As for his immediate environment, it strongly reminded him of what he had seen during a past visit he had made to Iceland. Looking towards the sea, he watched as moderate waves kept washing over the black sand of the beach. Some distance away, a bird dove steeply down towards the sea, splashing in it and then reemerging with a fish in its mouth. A few flaps of its wide wings and it was airborne again, its diner firmly held in its jaws. Shanandar had seen a similar scene countless times while walking down the beaches and shores of northern Vancouver Island, where the Koorivar colony from his ship had established itself, thanks to the generosity of President d'Arcy of the Northern Alliance. This planet decidedly pleased him more and more as time went. Hopefully, his team would not discover some biological hazard that would then close off this planet for both Humans and Koorivars. Personally, if he would have been in the place of Captain Kurkan and would have landed the SHUNDAR on this island, he would have elected to stay and settle his sleeping passengers here, even though this ocean planet could hardly provide much of the mineral resources that a highly technical colony would typically need. Minerals could always be mined on other planets and moons of this solar system, using the SHUNDAR and its shuttles. However, that process would have taken time, lots of time, as the quantity of equipment and mineral processing machines on the SHUNDAR was severely limited. An idea then came to Shanandar's mind, giving him one option to use this world if the KOSTROMA ever found the SHUNDAR and SHANIZAR, along with their 43,000 Koorivar occupants. Now feeling much more optimistic, he turned around to watch his companions as they spread out to collect samples of air, water, soil and plants, with Michel Koniev and Leo Sanchez standing guard, pulse rifles in their hands. This island may be looking at first like a welcoming one but there was no way to know what it contained in terms of local life of the predatory kind. Looking back towards the sea, Shanandar suddenly felt his heart skip a beat: he could have sworn that he had just seen some movement at the shoreline, where waves washed over the volcanic sand. A few more seconds of observation were then enough to confirm his first impression, making him shout to the chief biologist of the KOSTROMA.

“DOCTOR KADAR, I SEE AN ANIMAL CRAWLING OUT OF THE WATER, OVER THERE.”

That brought Janus Kadar to the side of Shanandar in seconds.

“Where is it, Captain Shanandar?”

“There, forty meters away, at the water’s edge.”

“I see it! Let’s get closer to it.”

Shanandar was too happy to follow Kadar, as he was dying with curiosity right now. Walking to within ten meters of the creature now plainly visible to them and then stopping to keep a safe distance from it, the duo watched and filmed the newcomer as it slowly crawled on its belly out of the water and up the beach.

“It is similar to a giant sea turtle from Earth.” said in a low voice the biologist, not wanting to scare away the creature. “It must weigh close to half a ton. This is fascinating.”

“It certainly is, Doctor Kadar. Decidedly, this planet is full of life of all kinds.” Something strange then happened: the giant turtle stopped crawling up the beach and instead pivoted on the spot to face Kadar and Shanandar and look at them with its three eyes, its expression impassive. That made Kadar open his eyes wide.

“My god! It is showing curiosity towards us. Maybe it is an intelligent creature. Sea turtles on Earth are known to have long life spans, some of them living up to and even past one hundred years. Turtles have also been evolving for tens of millions of years. That is plenty of time to develop their brains. In fact, the head of this turtle is quite voluminous, apart from being protected by a sort of shell acting as a helmet.” They were then joined by Michel Koniev, who cautiously examined from a few meters away the giant turtle while keeping the muzzle of his rifle pointed down at the sand.

“It is not showing any signs of aggressiveness...up to now.”

“Sea turtles on Earth are actually like gentle giants and were never seen attacking a person, either on the ground or in the water.” replied Kadar. That was when Jennifer Scott, a young Canadian marine biologist and sea explorer hired by Tina Forster a mere three weeks ago, arrived at a run to look excitedly at the giant turtle.

“Ooooh, it is magnificent! It actually looks a lot like a Leatherback Sea Turtle.”

“Do Leatherback Sea Turtles stare at Humans the way this creature does, Miss Scott?” asked Shanandar, sobering up a bit the young marine biologist.

“Uh, no! Normally, they do as if we didn’t exist. This creature may however possess a higher degree of intelligence than Earth turtles. I will have to watch its

behavior for a while before I could say more on this. With your permission, Captain Shanandar, I will finish taking seawater samples, then will change into a diving suit and go for a swim in order to examine the kind of marine life that is to be found just off the shore. I will take a waterjet unit with me, so currents shouldn't cause me problems."

"Very well, but be cautious, still: we don't know what kind of marine predators may lurk in these waters."

"I dove with Great White Sharks off Australia, Captain. I think that I will manage...but I promise you to be careful."

Jennifer, an athletic woman of 25 years with a most sexy body, then ran back towards their shuttle. Shanandar followed her with his eyes while smiling.

"Aaah, the exuberance of youth! I am unfortunately long past that stage."

The giant turtle then decided at that moment to resume its original course up the sloping beach, watched from a distance by Kadar, Koniev and Shanandar. Arriving after long minutes of slow crawling near the limits of the vegetation bordering the beach, the sea turtle then started digging a hole in the sand with its two pairs of wide fins. Kadar opened his eyes wide on seeing that, understanding in a flash what it was doing.

"A nest! It is digging a nest, probably to lay eggs in it. The more it goes, the more it behaves like an Earth sea turtle."

The giant turtle effectively pivoted its body over the hole it had just dug, then small brown eggs started dropping at the bottom of the hole.

"I was right!" exclaimed Kadar. "If I could just get my hands on one egg, to study it..."

"You will refrain from doing so, Doctor Kadar." countered at once Shanandar, using a most definitive tone. "If we collect samples of local creatures, then it will only be from dead ones. Captain Foster and me are in agreement about interfering as little as possible with the local life and ecosystem. You may look and examine from a distance, but you may not touch or hurt in any way living creatures."

Kadar, quite disappointed, looked back at the turtle as it was now piling sand over its eggs in order to protect them from predators. A large bird somewhat similar to an albatross then dove on the nest, probably hoping to grab an egg or two before they could be covered with sand. To the surprise and shock of the Koorivar and the two Humans, the turtle's head then sprang out as if mounted on a long coil spring, shooting up to two meters in the air and with the parrot-like beak of the turtle clamping shut around the legs of the bird. The latter screamed out with pain and panic as the turtle's

neck coiled back inside its carapace, the bird still held in its mouth. The next move by the turtle was to crawl over the hapless bird, immobilizing it under its enormous mass, before snapping the bird's neck in two with its beak. It then calmly finished filling the nest with sand and, grabbing the dead bird in its beak again, started its return journey to the sea.

"Holy shit!" exclaimed unceremoniously Michel Koniev. "Talk about an unexpected move!"

With now increased respect for the turtle's abilities, the trio stayed a good five meters away from it while slowly following it towards the water's edge. However, the turtle stopped for a moment just before getting into the water and turned its head towards Janus Kadar, the dead bird still in its mouth. The turtle then slowly extended its neck and put down the dead bird in front of the biologist. Next, it looked up at him and blinked its three eyes simultaneously before retracting its neck and crawling into the water, disappearing from sight after a minute or so. Kadar, utterly baffled, sat down heavily on the sand of the beach while staring at the dead bird some two meters in front of him.

"I...I can't believe this! It is as if that turtle understood what we said between ourselves, then acted upon it, giving me this dead bird as a specimen to be examined."

"I think that this is exactly what happened, Doctor Kadar." said Shanandar, equally shaken. "It is now obvious that this race of sea turtles is a lot more intelligent than we thought them to be. They may even possess some kind of telepathic power, which would explain how it could understand at once a totally alien language like English. This is a huge discovery indeed."

"I concur!" added Michel. "This now makes four different races of sentient beings that we know of to date in this corner of the galaxy: us Humans, the Koorivars, the Gordos and, now, those turtles. This after visiting only two star systems after Gliese 667C. It would tend to show us that life, including intelligent life, exist basically everywhere."

"I believe that to be correct. Well, let's join back with the rest of the team. Don't forget your bird specimen, Doctor Kadar!"

The poor biologist rolled his eyes at that sarcastic remark from Shanandar but still took out a large plastic bag and put the dead bird in it before sealing it carefully.

When Jennifer Scott emerged from the shuttle, wearing a wet suit and a compressed air bottle on her back, she was immediately accosted by an excited Janus

Kadar, who showed her the dead bird and told her about what the giant turtle had done. She in turn nodded her head slowly, impressed.

“This is indeed huge, Doctor Kadar. Their intelligence level must approach or even surpass our own.”

“Surpass our intelligence level? Aren’t you pushing it a bit, Jennifer? How could you develop a high level of intelligence on an ocean planet where tool making is next to impossible and where you can’t light a fire?”

Jennifer, who had been captivated since her youth by marine life and had frequented dolphins, whales and other intelligent sea mammals, gave him a cautioning look.

“Doctor, they could use their intelligence in three domains: their survival techniques; their general knowledge about this ocean world and for their social skills.”

“Social skills?”

“Yes, social skills. Imagine that the whales and other large marine life forms our underwater probe saw were all intelligent and able to communicate with those turtles. Imagine the amount of social gossip that could be exchanged when a turtle like the one we just encounters a pod of whales or other sea turtles. Hey, maybe it is presently busy passing the word around about a bunch of strange land-bound yahoos having arrived on this island.”

“Uh, I think that your imagination is working in overdrive, Jennifer.”

“And why shouldn’t it be in overdrive, Doctor? For a marine biologist like me, this planet is simply fabulous! In fact, I could easily and happily consecrate my whole life in studying the marine life on this planet.”

“Well, whatever floats your boat, Jennifer. Good luck on your dive, but be careful.”

“I will, Doctor Kadar.”

On that promise, Jennifer walked to the edge of the water, where she put on her fins, adjusted her mask and bit on her air regulator’s mouthpiece. She then walked into the water while firmly holding on to her waterjet propulsion unit, which was also secured to her by an elastic strap. Soon, she was in deep enough water to fully dive in it. However, she only used her fins to swim around at first, wanting to save the batteries of her waterjet unit for later. It became evident at once that life was abundant in this ocean: the black sand of the bottom, intermixed with volcanic rocks, was covered with a variety of sea shells, anemone-like creatures and ribbons of undulating sea weeds. Jennifer could also see a number of crab-like creatures crawling around on their eight legs and

munching on the sea weeds. Fascinated, she filmed all that with her compact marine digital camera, spending a good twenty minutes near the beach before finally moving to deeper waters. The local waters being pretty clear, she still had good visibility around her when she got to a depth of twelve meters while swimming just above the sandy bottom. That allowed her to see and watch dozens of fish of various species swimming around her. She also saw and filmed a pack of what looked like small translucent orange medusas, but cautiously stayed out of touch of them, remembering how many medusa species on Earth were able to inflict painful, poisonous pricks with their thin tentacles. Feeling like in heaven, surrounded like this by alien marine life, Jennifer nearly lost track of the time. Her air pressure gauge unit, which incorporated a micro-computer meant to calculate decompression stops, however warned her with an insistent beep when her air pressure fell in the low zone. Jennifer had just reached the point where the gentle slope of the bottom abruptly changed to a steep rock face going down towards the dark depths when she heard the beeps start. Pushing a button to stop the beeping, she scanned her surroundings with her camera for one last time, filming the rocky surface of the underwater cliff and the dark depths beyond it before starting to swim back towards the beach. She did however collect a few varied sea shells from the bottom as specimens on her way back, so that she could have something concrete to study other than images. She was positively ecstatic when she emerged out of the water and, taking first her fins off, walked up the beach, to be met by Michel Koniev.

"How did it go during your dive, Jennifer? Did you encounter any fish or creature that could have been dangerous?"

"None, Michel, but I still expect to meet a few during my future dives. Any ecosystem needs a few predators to keep it balanced. If not, the non-predatory creatures would go through an endless cycle of boom and bust caused by overpopulation and famine. I am certain that we will eventually find the local equivalent of sharks in this ocean planet. However, for the moment, I have plenty of images and a few sea shells to study. If you will excuse me, I will go change out of my wet suit."

"Go right ahead, Jennifer." replied Michel. Despite being a happily married man, Michel still discretely watched Jennifer walk away towards their shuttle: she did have a very cute and sexy bum. He suspected that their young shuttle copilot, 22 year-old Roger Cummings, would also show interest in Jennifer's most appetizing body. He briefly snickered at the picture which then formed in his mind: a hot romance on an alien beach some 21 light years from Earth.

11:05 (Universal Time)

Wednesday, May 19, 2320

Captain's penthouse suite, Level 24

A.M.S. KOSTROMA, in low orbit around Gliese 581d

With Michel down on the planet and unable to fill his parenting obligations, Tina had chosen to consecrate most of her time to her baby son Misha, now five months old, by staying with him in her penthouse suite, situated on the same level than the bridge complex. She could have used the services of the ship's crew daycare center, like what many of the working mothers in the crew did, but had decided otherwise: she wanted to raise, nurture and educate her son herself, rather than caring for him only for a small part of the day. What had helped her decision was the fact that her penthouse was very close to the bridge complex, only a minute away in terms of walking. If there was a true emergency, she could be on the bridge in a flash. As for routine matters, she had full confidence in Dana Durning and in her other senior ship officers to deal efficiently with them. Besides, with electronic communications means being what they were, she could instantly get reports and queries in her suite as well as send directives and orders around.

Tina was in fact nursing her baby son and sitting in a rocking chair when she got a report on her laptop computer, set in blog mode and sitting on a desk next to her chair. Looking at the title of the report, Tina felt satisfaction on seeing that it was the preliminary report on the mapping of Gliese 581d and of its four moons. Extending one arm, she clicked on one button and opened the report, then switched the position of her baby, who had finished sucking milk from her left breast, putting his head up over her left shoulder and gently patting his back until he burped loudly. Tina then cradled him in her arms and rocked her chair to put Misha to sleep, all the while starting to read the mapping report, which also included a report from the landed exploration team on Gliese 581d.

"Damn, no traces of the SHUNDAR or of its passage was found." she said softly to herself. In a way, this did not surprise her: as attractive as Gliese 581d could be as a habitable world, it would have been of little value to the SHUNDAR because of the very limited total surface of emerged lands and of the lack aboard the SHUNDAR of industrial

facilities and of the equipment necessary to settle an ocean planet. It probably had simply mapped the planet from orbit, then had moved on after realizing that it was unsuitable for settlement with what was available aboard. However, for a ship as big and well-equipped as her KOSTROMA, which could go back to the Solar System and return here in mere minutes with literally millions of tons of supplies, equipment and specialized modules in one trip, Gliese 581d was a dream planet, according to the conclusions of the mapping and exploration reports. Its atmosphere was breathable, the average temperatures on the surface were mild and life existed all around it. The only drawback was the fact that there were only a few hundred small volcanic islands dotting the ocean surface of the planet. However, building floating cities and facilities would be an easy solution to that drawback. She would only need to return to the Solar System, order there the construction of floating, modular sections, load them on her ship and return here to drop those sections and assemble them on the surface of the ocean. The four big moons of Gliese 581d, while not having breathable atmospheres, still could be used as sources of minerals for any colony on the planet and could house a few mining centers, solving the problem of finding sources of metals on an ocean planet. However, what worried her a lot more was the biological aspect of the problem. Even though colonizing a brand new world for either Humans or Koorivars would represent a huge prize, she was not ready to do that if it would mean infecting and harming the local life forms with Human or Koorivar bacteria, or in turn infecting Humans and Koorivars with local germs. She thus paid a special attention to the report from the landed exploration team. She blew air out in relief some ten minutes later, after a careful reading of that report: the analysis of the local air, water and of some biological samples were showing that the local organisms were not harmful to either Humans or Koorivars, being biologically incompatible with them, while the same could be said of foreign organisms towards the local Oceania fauna and flora. Tina already knew about the high intelligence of the local sea turtles, having seen an earlier report about the 'incident' involving Doctor Kadar and one sea turtle. Now, young Jennifer Scott was saying that other forms of local marine life could as well be intelligent ones, in particular the whales and dolphin-like creatures seen by the underwater probe of the KOSTROMA. Tina was more than ready to believe her on that. However, proving it would take a lot more time and many more on-the-spot observations. Unfortunately, colonizing and exploring in depth Gliese 581d was not her top priority right now: finding both the SHUNDAR and the SHANIZAR was. Besides, she still had to map and explore the third planet of this

system, Gliese 581c, which could have possibly appeared as a better potential new home world to the crew of the SHUNDAR.

17:10 (Universal Time)

Thursday, May 20, 2320

Camp of the landed exploration team on Gliese 581d

Jennifer Scott had a heavy heart as she was helping to pack the tents and equipment of the exploration team. The order to return to the KOSTROMA had come some forty minutes ago and had attracted a concert of protestations from the four biologists of the team, including Jennifer, who had argued that there was still an enormous amount of work to be done on and around the island. Tina had understood their arguments but had ruled that the search for the Koorivar ships took precedence, something that Jennifer had to reluctantly agree with.

“Jennifer, could you retrieve our sea thermometer, please?”

“Yes, Doctor Kadar!” replied Jennifer before walking towards the water’s edge. Since the environment of Gliese 581d had been declared non-hazardous, the members of the team had shed their constraining bio-hazard suits and masks and Jennifer was now dressed simply in shorts and T-shirt. Walking barefoot on the black volcanic sand of the beach, she soon was wading in the water to retrieve their thermometer unit, a small sensor they had planted in the sandy bottom at a depth of some sixty centimeters of water. Since it was now low tide, Jennifer was not at risk of wetting her clothes while retrieving the instrument. She had just pulled the stick supporting the instrument from the bottom when a mental message struck her mind.

‘Are you leaving now?’

Stunned by hearing that silent message in her head, Jennifer quickly looked around her and at the waters surrounding her. She felt her heart jump when she saw a large sea turtle lying on the sandy bottom some four meters away, to her right. It was presently immobile and its head was facing her directly. Hoping that this was going to work, Jennifer concentrated into formulating a response in her head.

‘Yes, we are! We have to resume our search for a lost ship traveling among the stars.’

‘You can travel among the stars, graceful one?’

'Yes! We were hoping to find on this planet the lost ship we were looking for. By the way, my name is Jennifer Scott. I specialize in studying various life forms and I find you fascinating.'

'And I am Tumon. Your species is an interesting one indeed. Can you breathe in water?'

'No! We are land animals and our home planet, while covered by oceans on two-thirds of its surface, also has large continents emerging above the waters. We can swim in water, but can only hold our breath for short period of times, unless we use artificial means to bring air with us into the depths.'

The giant turtle was 'silent' for a moment before sending a new mental message.

'You and your friends saw me drop eggs in a nest on the beach, near the trees. Unfortunately for me and my race, many predators like to get at our eggs to eat them or catch the little ones when they emerge from the nest and try to get to the water. I was hoping that your presence would help protect them from the predators. I saw how you were not ready to take some of my eggs to 'study' them.'

'My life has been devoted to the study of life, not to its destruction, Tumon. That is especially true when it comes to intelligent life, like your race. How long will it take for your eggs to hatch?'

'It will take about sixty cycles before the little ones will start coming out of their egg shell.'

'Cycles? I am sorry but I don't know that type of time measurement.'

'We saw each other for the first time six cycles ago. One cycle represents one passage of the main moon of our home world.'

'Oh, I see! Then two of your cycles roughly equal one of our 'days'. Thus, your eggs will hatch in about thirty of our days. Unfortunately, we have to leave today. I would have preferred to stay longer here, but our ship's captain has to resume our search for the lost ships.'

Tumon was then silent again for a moment. Seeing Jennifer standing in the water and not moving, Michel Koniev grew nervous and called her out.

"JENNIFER, ARE YOU OKAY? WE NEED TO HUSTLE HERE!"

In response, Jennifer raised high one hand and made an authoritative gesture while still looking at Tumon.

"WAIT! I AM SPEAKING WITH A TURTLE. PLEASE DON'T APPROACH US FOR THE MOMENT."

While quite flabbergasted by that, Michel understood at once that this was a critical event, thus refrained from running to join Jennifer, who communicated again with the giant sea turtle.

'Maybe your request to me will decide my companions to leave me here temporarily, so that I could protect your eggs and your hatchlings. Let me speak with them.'

"Go ahead, friend. I will wait.'

Staying where she was in the water but turning around towards the shuttle and her companions, Jennifer started shouting towards Michel and Shanandar.

"TUMON, THE TURTLE WE SAW LAY EGGS IN THE SAND THREE DAYS AGO, HAS ASKED ME IF I COULD STAY FOR AT LEAST A MONTH, SO THAT I COULD PROTECT HER EGGS AND COVER HER HATCHLINGS WHEN THEY WILL EMERGE FROM THE SAND AND WILL DO THEIR RUN TO THE WATER. I WANT TO STAY, EVEN IF THAT MEANS THAT I WOULD BE LEFT ALONE HERE ON THIS BEACH."

"BUT, WE MAY NOT RETURN HERE FOR MONTHS, JENNIFER. ALSO, IF SOMETHING HAPPENS TO OUR SHIP DURING OUR MISSION, YOU MAY THEN BE MAROONED HERE FOR THE YEARS TO COME." replied Shanandar.

"I UNDERSTAND THAT, CAPTAIN SHANANDAR, AND AM READY TO RUN THOSE RISKS. I WILL ONLY NEED THAT YOU LEAVE ME A TENT, SOME INSTRUMENTS TO CONTINUE MY RESEARCH HERE AND A RESERVE OF WATER AND RATIONS. PLEASE! THIS WOULD MEAN A LOT TO ME...AND TO TUMON."

To Shanandar's surprise and Jennifer's contentment, another biologist of the team, a middle aged woman from Indonesia, then stepped forward and spoke up in a forceful tone.

"I AM READY TO STAY HERE WITH JENNIFER. I THUS REQUEST THAT CAPTAIN FORSTER REVIEWS HER DECISION."

"I WILL STAY TOO!" said in turn Doctor Kadar. Faced with such a quasi-rebellion, Shanandar hesitated for a moment, then nodded his head.

"VERY WELL: I WILL NOW CONTACT CAPTAIN FORSTER AND PASS ON YOUR REQUEST TO STAY."

"THANK YOU, SHANANDAR! KNOW THAT TUMON WILL STAY WITH ME AND WAIT FOR THE CAPTAIN'S RESPONSE."

Shanandar shook his head at that, a bit overwhelmed by this development, before opening a radio link to the KOSTROMA via their shuttle.

On the KOSTROMA, Jennifer's request created a difficult dilemma for Tina when she got the message from Shanandar. Their search for the SHUNDAR and the SHANIZAR promised to be a long, hazardous one, with many things that could go wrong for her ship on the way, from a major engineering breakdown to collisions with asteroids within uncharted solar systems and even to an encounter with a hostile, advanced civilization. Acceding to Jennifer's demand would mean losing the services of one precious shuttle during a phase in their mission where all of her shuttles could be needed. On the other hand, leaving a team and a shuttle behind would be made in order to help one representative of a newly discovered sentient race, something that could translate later into friendly relations and much educative discussions. Weighing carefully all the factors in her mind for long minutes, she finally contacted by radio Shanandar, who was waiting for her decision on this.

"Shanandar, this is Tina. How many volunteers in your team are willing to stay behind to watch those eggs and continue study the local biology?"

"Three: Doctor Kadar, Jennifer Scott and Shinta Betang."

"Then, tell them that I will send down one of our two jump-capable shuttles, loaded up with supplies and extra biological instruments and exploration equipment, including sturdier field shelter units. That way, even if something happens to the KOSTROMA during the months to come, our team on the island will have the option to return by themselves to the Solar System. I will now have that shuttle prepared to fly down. In the meantime, leave behind the tents, supplies and equipment already on the beach. You will leave with the GRASSHOPPER once the other shuttle arrives."

"Understood, Tina!"

Tina then closed that channel and used the ship's intercom system to contact Henrik Farben, the ship's head mechanical engineer and chief of the industrial production division.

"Henrik, this is Tina. I would need your welders and metal workers to build quickly something..."

On the planet, Jennifer jumped up in joy on learning of Tina Forster's decision and promptly informed Tumon about it.

'Good news, Tumon! My ship's captain has decided to accede to your request and will leave me here with five more of my people, including a shuttle crew and a craft capable of traveling between the stars. We will then stay and watch over your eggs while also continuing our studies of life on your planet, and this while our ship continues on its main mission.'

'Those are excellent news indeed, friend. I will now resume my life at sea and will return in about eighty cycles. I will also spread the news around that new friends have arrived from the stars, friends with good intentions and respect towards our lives and our planet.'

'And I strongly hope that I will still be here to greet you, Tumon. I do have one important question for you and your race, though.'

'Go on, Jennifer.'

'As I said before, our ship's main mission is one of search and rescue, to find two ships full of refugees from a planet destroyed in the past by a collision with a huge wandering celestial body. Those two ships departed their home world just before the collision, with the hope of finding suitable new home worlds for their refugees. A third, similar ship, also left before the collision and ended up inside my own solar system after a long trip. Our ship was the one which found that third ship and rescued it from its ice tomb, then helped its occupants resettle on our home planet. Those refugees are herbivorous and are pacifists who do not hunt nor fish but only eat plants they grow themselves. The question to your race is this: if my ship eventually finds and rescues those two refugee ships, would you accept to see them relocated here, on floating cities? I assure you that the Koorivars are kind and respectful beings who will be careful not to pollute in any way your world and will not bring harm to you and to the other marine life forms on this planet.'

'That is indeed an important question, Jennifer. I will discuss it with others during my wanderings at sea and will bring you their reactions to it when I will return here in eighty cycles.'

'Thank you very much, Tumon. Please be safe during your wandering around.'

'Be safe as well, friend. Hopefully, we will see each other soon enough. Goodbye, Jennifer!'

"Goodbye, Tumon!" replied Jennifer, close to tears. She then watched as Tumon turned around and swam away, disappearing amid the ocean. Her heart heavy but also

with hope inside her, she then turned and walked out of the water to go tell Shanandar about what Tumon had told her.

08:27 (Universal Time)

Friday, May 21, 2320

Command bridge of the KOSTROMA

In low orbit around Gliese 581d

Tina, back in her command chair, reviewed quickly by intercom the status of her ship with her senior officers, then looked at Dana Durning, sitting at the navigator's station.

"Is the route to Gliese 581c entered and locked, Dana?"

"Affirmative, Captain!"

"Then, let's be on our way! Frida, engage our anti-matter cruise engines. Take us out of orbit!"

"Engaging cruise engines now!" replied the redhead while pushing a large orange button and then taking hold of a control yoke with her right hand. The muffled rumble of the anti-matter engines was heard throughout the KOSTROMA as they started to push the giant cargo ship out of its orbit. Within a minute, the ship was firmly engaged on its downward spiral trajectory towards the third planet of the system.



A hostile battle fleet approaching a planet.

CHAPTER 8 – A TENSE SITUATION

13:55 (Universal Time)

Friday, May 21, 2320

Command bridge of the KOSTROMA

Closing in on planet Gliese 581c

Amin Jamilian, on duty at one of the sensors station of the bridge, stiffened when something completely unexpected showed up on his display screens, making him speak up in alarm in his headset's microphone.

"Captain, a number of ships have just appeared on my infrared scanners. They were previously masked by the bulk of Gliese 581c, which would explain why we couldn't detect them before."

"Ships, rather than one ship?" asked a shocked Tina.

"Affirmative, Captain. I count 23 ships, all in low orbit over the single moon of the planet."

Made cautious by her past combat experience during the 2315 War against the now-defunct Terran Federation, Tina urgently gave orders around her.

“FRIDA, SHUT DOWN OUR ANTI-MATTER ENGINES AT ONCE! SWITCH TO GRAVITY SAIL PROPULSION ONLY. MISTER JAMILIAN, SWITCH OFF ALL ACTIVE SENSORS! OPERATE ONLY IN PASSIVE MODE. WE WILL STAY DISCRETE UNTIL WE KNOW WHAT WE ARE DEALING WITH. DANA, SHUT OFF ALL OF OUR EXTERIOR NAVIGATION LIGHTS!”

Next, Tina switched her intercom to ship wide announcement mode and gave out a warning that she had hoped that she would never give during this mission.

“Attention all hands, this is the Captain. Battle stations! I say again, battle stations! We have just detected a space fleet of unknown origin around the moon of Gliese 581c. The passengers and the relatives of our crewmembers are to stay in their quarters until further notice and be prepared to put on their emergency pressure suits. All the airtight doors are to be closed and the damage control center to be fully manned at once. We may not yet be in immediate danger, but we will play the card of caution until we know who is out there and what it is doing. That’s all! Captain out!”

With that done, Tina gave a concerned look at her bridge crew.

“Talk to me, people: I need to know what we are facing here.”

Dana Durning was the first to speak out in response.

“While those ships are way too far to be examined in detail, I can say already that they could have come equally from the planet or from the moon. Both of them appear to have a thick atmosphere containing at least twenty percent of oxygen, while both also have liquid water oceans and visible continents.”

“Our passive thermal sensors don’t show any rocket propulsion engine of any kind lit up right now, Captain.” Added Amin Jamilian. “Either they are simply coasting in orbit with engines off or they use some form of electro-magnetic or gravity propulsion.”

“I am now detecting some faint electronic signatures from these ships, Captain.” Said Patricia O’Neil. “I have both radar waves and radio waves, but the radar waves are all in the medium to high frequency bands and are unsuitable for long range scanning across a solar system. They most probably can’t detect us at our present distance.”

“What about their radio signals, Patricia? Can you actually process them and try to unscramble at least a few of them? That could give us a hint about their language and their appearances...if we could view a video feed.”

“One moment, Captain... I think that I have isolated an audio signal of interest. I am now switching it on the bridge speakers.”

A second later, Tina and the other crewmembers on the bridge started hearing a radio conversation distorted by the distance. It definitely was of alien origin, as the language was a guttural one they had never heard before. The voices themselves were low pitched and deep. Tina, after listening for a couple of seconds, pushed the button linking her with their central ship computer, Spirit, a very powerful artificial intelligence entity with its own personality.

"Spirit, could you please start listening to the electronic communications coming from those alien ships in orbit around the moon of Gliese 581c, to see if you could eventually build a language data base?"

"Already on it, Tina." Replied the soft female voice of Spirit. "From the voices' modulation, I can tell you that their speech apparatus is definitely quite different from that of Humans or of Koorivars... Tina, I believe that we are now intercepting a weak video link signal. I am recording it and transmitting it to the bridge's duty stations and to your chair."

Before Tina could congratulate Spirit for this achievement, a video image of rather poor quality appeared as promised on one of the small viewing screens attached to swivel mounts fixed to the armrests of her command chair. The image was split in two, denoting a duplex communication link. Tina couldn't help making a grimace on viewing the heads of the two alien creatures conversing together.

"Yuk! Not exactly what I would describe as handsome beings."

Dana Durning, who also had the video link on one of her screens, nodded her head in approval: the aliens had a massive head with a pronounced snout, a large mouth lined with dozens of pointy teeth denoting a carnivorous regime rather than a vegetarian one, and a very short, thick neck coming out of a barrel-chested torso from which a pair of long, muscular arms were attached. In turn, those arms ended in six digits with claws at their extremities. While their upper bodies showed that they were wearing a sort of space suit, their uncovered heads showed a dark brown leathery skin with no visible hair.

"In view of their built and of their body proportions, I would say that they come from a high gravity world. That would thus make them possibly natives of Gliese 581c, as the planet has a radius more than twice that of Earth and has five times its mass, thus should have a felt gravity at its surface of about 1.6 G. As for the moon of Gliese 581c, it is nearly identical to Earth in terms of mean radius and mass. I would be ready to say that this fleet came from the planet and is now orbiting the moon for unknown reasons."

"I concur, Dana, but I doubt very much that this fleet went to the moon with peaceful intentions."

"Uh, why do you say so, Captain?" asked Gerald Holmes from his V.I.P. observer seat. Tina looked at him soberly, understanding why he wouldn't know about such a matter.

"Because of the number and individual sizes of the ships in that fleet, Gerald. If those aliens only wanted to explore or map the moon for peaceful purposes, then we would be looking at most at two or three ship or, in most cases, at a single ship. Even if those aliens came to colonize their moon, a very possible scenario, they would then have brought in a more numerous fleet than just a couple of ships, but those ships would tend to be more homogenous in size, like in the case of a convoy of cargo ships. However, what we see here is one large ship surrounded by four medium-sized ships and by eighteen distinctly smaller ships. This looks to me a lot more like a military fleet on an expedition than a colonization or exploration fleet."

"Oh! I understand! Then, what do you intend to do next, Captain?"

"Well, first, we have to remember that we are only visitors in this solar system. Furthermore, our actions will reflect on all of Humanity, while we have pledged to respect the values and ethics of the Spacers League. We are certainly not going to simply jump in and tell those alien ships to leave. What I intend to do is to approach Gliese 581c's moon as discreetly as possible and to search for traces or indications of the passage or presence of the SHUNDAR on the moon. Then, if we see no traces of the Koorivar ship on the moon, we will check out the planet itself, again as discreetly as possible."

With that said, Tina turned her head towards Dana's navigation station.

"Dana, let's modify our approach path towards Gliese 581c and its moon. We will approach from the direction of Gliese 581, in order to hide in the glare of the star. That should complicate detection from the radar systems of these alien ships."

"Understood, Captain! Modifying now our approach trajectory. We should be closing in on the moon from the direction of its sun in approximately three hours."

"Then, let's suspend our battle stations duty status for the moment. We will downgrade our status to 'watch stations' and allow our crew to rest a bit and have supper before returning to battle stations."

"Aye, Captain!"

17:21 (Universal Time)

Command bridge of the KOSTROMA

On approach to the moon of Gliese 581c

"Captain, we are starting to see traces of organized life along the northern and southern latitudes of the moon, near the terminator line, where the mean temperature stands at around 31 degrees Celsius. Our main optical telescope has detected what appears to be a number of villages and small hamlets, along with a few dirt trails, on the northern continent. It has also seen a few sailing ships navigating near the coasts."

"Hum! That sounds like a pre-industrial society to me." replied Tina, thoughtful. "Hardly the kind of society capable of producing spaceships. Are you detecting any electronic emissions from those villages and hamlets, Patricia?"

"Absolutely none, Captain! Furthermore, the villages nearest to or along the terminator line do not show artificial lighting other than ordinary campfires."

"Mister Jamilian, are your detectors seeing any traces of the SHUNDAR on the ground, or of its passage some eighty years earlier?"

"Not yet, Captain! I am presently using both thermal, spectroscopic and magnetic sensors to look at the surface of... WAIT! I just detected a magnetic anomaly centered inside a small crater. I am now centering our main optical telescope on that anomaly and switching its view to the duty stations of the bridge."

Tina's heart nearly sank on hearing the words 'magnetic anomaly' and 'crater' in the same sentence. They had detected the VEON SHOURIA on Eris thanks to the magnetic signature its steel hull created. Shanandar, who was also sitting in an observer's seat next to Gerald Holmes, also felt his heart skip a beat. Both he, Tina, Holmes and Dana eyed carefully the picture now showing on their screens.

"Some vegetation has grown inside that crater." remarked Dana. "It is thus not recent. It however could date from around eighty years ago."

"Captain," suddenly said Min Wa Hien, one of the sensors specialist on duty on the bridge, "look just past the northern lip of the crater, among the trees surrounding it: I can see some kind of metallic debris."

Tina shifted at once the aim of their telescope and pushed its resolution to maximum. What they saw then made Shanandar swear loudly.

"By the stars! That is a section from a shuttle...a Koorivar shuttle!"

"But, if it had crashed on the planet, wouldn't that shuttle's debris mostly stayed inside this crater?" asked Gerald Holmes, making Tina nod her head while clenching her teeth.

"Normally, yes, especially concerning a nose section, which that thing is. I can see only one explanation for this: that shuttle suffered an internal explosion...or was destroyed by someone."

"A Koorivar shuttle would not explode like this, Tina." said somberly Shanandar. "Our shuttles contain no volatile or explosive fuel or liquids and we had no weapons, thus no ammunition that could explode like this. That shuttle was struck by something while on the ground, a something that dismembered it and dug that crater."

"Tina, have you noticed that this crater is near a sizeable native village?" interjected Dana. "If there were survivors from that explosion, then they would most probably have tried to find refuge and help in that village, no?"

"Damn, you are right, Dana!" said excitedly Tina, who next looked at Shanandar. "We have to go investigate this crash site and the village near it by sending a ground investigation team."

"I wholeheartedly agree, Tina! Furthermore, I would like to lead that team, since this concerns a Koorivar shuttle."

"That would make eminent sense, my friend, but you won't go down without some protection. Michel and three of our security personnel will accompany you to the surface. I also want you to wear a set of body armor and a helmet. You may be a pacifist, but I believe that wearing protective gear will not go against your credos."

"That is correct. Uh, what do you intend to do if that alien space fleet shows up here while we are on the surface?"

"First of, the shuttle that will land you will then return immediately to the KOSTROMA, so that it would not stay on the ground and betray your presence there. I will then withdraw our ship to a safe distance and wait for your report by radio. For that purpose, you will go down with anti-gravity scooters and a VLF directional transceiver, so that you will have some mobility and a communications means with you. Whenever it will be safe to do, the KOSTROMA will get back into low orbit above you in order to better communicate. The idea here is to investigate what happened to that Koorivar shuttle and its occupants, not to start a war. However, if you are attacked, don't hesitate to defend yourselves and, please, follow Michel's counsels once on the ground: he has

plenty of experience about combat situations and will have a more informed judgment than yours on what to do if you are threatened or attacked.”

“I can understand that and agree with you, Tina.” replied the Koorivar, sober. “I may be a pacifist, but I am not a sheep either.”

“Then, go organize quickly your investigation team, my friend. And good luck!”

19:08 (Universal Time)

Light shuttle WANDERER, flying at treetop level

Approaching the crater of the destroyed Koorivar shuttle

Surface of the moon of Gliese 581c

“Thirty seconds to landing! Get ready to scoot out as soon as the ramp goes down.” said the pilot of their light shuttle, Valentina Suvarova, via the intercom. In the relatively small cabin of the shuttle, the three men, two women and two Koorivars of the investigation team, sitting inside four anti-gravity scooters, tensed up, ready to go. Their scooters, small but agile and fast vehicles, could seat up to three persons each and had sliding canopies which could protect its occupants from the elements, or even from vacuum. The minute that Michel had been told by Shanandar to prepare for a ground mission and why, he had ordered at once eight maintenance robots to immediately start applying a coat of camouflage pattern paint to the scooters, so that they would be more difficult to spot from the air. Michel and the three security specialists who were part of the team were heavily armed and wore armored vests and helmets, like the other members of the team, while Ingrid Holtz was armed with a pistol. To paraphrase an old military saying, Michel was not looking for a fight, but was ready for one, just in case. In this case, the destruction of an unarmed Koorivar shuttle was definitely pushing him towards the side of caution for this mission. The wide rear ramp of the shuttle then started lowering as the craft gently touched down at the bottom of the crater. Michel, who was at the controls of the lead scooter, then activated the anti-gravity field of his machine, making it rise from the floor, and pushed forward his control yoke. With only a slight humming noise being produced by their gravity sails, the four scooters emerged quickly from the shuttle, then flew up to the lips of the crater, where they landed. When they opened their cover canopies, the shuttle was already gone, climbing for a few meters before speeding at treetop altitude towards the nearby sea before it would climb to orbit, out of sight of the occupants of the nearby village. Stepping out of his scooter,

Shanandar pointed at Kovar, the ex-assistant engineer of the VEON SHOURIA, and at Ahmed Jibril, one of the security specialists of the team.

“Kovar, go with Mister Jibril and examine the debris in the crater. Try to establish how our shuttle was destroyed. As for me, I will go inspect the nose section lying nearby.”

“On my way, Captain!” replied Kovar before climbing down the slopes of the crater with Jibril, who was an expert on explosives. While three other team members stayed with the scooters, Shanandar then walked through the long grass and brush surrounding the crater, Michel Koniev at his back. While the local temperature was quite high, at 31 degrees Celsius, the air was dry, making the heat a lot more bearable. Shanandar arrived at the broken nose section after only a few seconds and critically examined the debris while turning around them.

“Definitely the remains of a Kamaz-Class shuttle similar to the shuttles embarked aboard our three refugee ships.” said Shanandar before climbing inside what had been the cockpit, where he noted down a few serial numbers and compared them with a list loaded on his computer pad. His expression then turned from somber to grim.

“This shuttle was definitely one of the shuttles of the SHUNDAR. We now know for certain that it at least got as far as this solar system. Whether the SHUNDAR is still somewhere to be found on this moon or inside this solar system, or departed it after the destruction of its shuttle, remains to be established.”

“I see no traces or remains of the crew of your shuttle, Shanandar.” remarked Michel Koniev, his impulse rifle at the ready. “Hopefully, this could mean that it was outside the shuttle when it exploded.”

“Or it could mean that the local inhabitants retrieved their bodies and buried them.”

“Damn! You could be right about that, Shanandar. Now, the way the fuselage aft of the cockpit was ripped and peeled off suggests to me that a powerful explosion aft dismembered this shuttle and dug this crater. Hopefully, Ahmed will be able to tell us whether traces of explosives remain on these debris.”

They got an answer on that when Kovar and Jibril, looking rather glum, climbed up from the bottom of the crater and joined the rest of the team near the scooters.

“So?” asked Shanandar, anxious. Jibril took on him to answer him.

"I found strong traces of explosives on various pieces of debris, along with multiple holes created by fragments from a warhead. Your shuttle was destroyed by a probable missile armed with a fragmentation warhead filled with a chemical explosive with a formula close to that of HMX. However, that explosive is definitely not of Human manufacture."

Shanandar and Michel exchanged a knowing glance, with Michel then looking at Ingrid Holtz, their communication specialist.

"Ingrid, contact at once the KOSTROMA, using directional transmission mode, and tell the Captain that the destroyed shuttle has been formally identified as a craft carried by the SHUNDAR. Tell her also that it was destroyed by an explosive fragmentation warhead of alien manufacture. That last point is very important. Tell her that we are now going to visit the village to see if we could learn what happened to the crew of the Koorivar shuttle. Confirm to me once you get an acknowledge."

"Will do!" replied the blonde before going inside her scooter, in which their VLF transceiver was carried. Michel had to wait less than three minutes before she returned to his side.

"Message passed and acknowledged, Michel."

"Excellent! Let's go back in our scooters and take off. We will fly slow and low as we approach the village, both to take the time to observe it first and also to try not to scare the locals away."

The seven members of the team went back into their scooters and took off, heading towards the local village and with Michel's scooter in the lead. As they were flying at treetop level at low speed, Shanandar took the time to admire the forest they were overflying.

"Those trees and plants may be alien to me, but this world is still an attractive one. The people of the SHUNDAR would have been happy here...if the local inhabitants would have accepted them."

"That would be a pertinent factor indeed, Shanandar. To my shame as a Human, too many of my people would have ignored the locals' opinion and simply grabbed the lands and resources they wanted. Unfortunately for those locals, it seems that the inhabitants of Gliese 581c may be doing just that. The village is now less than one kilometer away. We will now go down to near the ground and continue slowly between the trees: I want to observe the village from up close while still hiding, before

we reveal ourselves. By the way, I never asked you how old a Koorivar could live, Shanandar. Could any survivor from your shuttle still be alive after eighty years?"

"They could, but they would then be near their end by now: the average life expectancy for a Koorivar is 120 of your years."

Michel nodded his head at that but didn't reply, concentrated on finding an opening in the thick forest top foliage. Seeing one, he slowed down to a near hover, then flew down to just over the long grass and bushes covering the ground between the trees, followed by the three other scooters. Keeping his speed at ten kilometers per hour or less, Michel zigzagged his way through the forest, covering the last 700 meters before the village. He however stopped and lowered his scooter to the ground when about fifty meters from breaking out of the forest and shut down his machine.

"Time to advance on foot, Shanandar: we want to observe and examine that village from a hiding position before we emerge and scare away the locals as the big bad aliens that we are."

That made Shanandar smile in amusement as he stepped out of the scooter with Michel.

"Well, I was most happy to see you big bad aliens when you helped us wake up on Eris, Michel."

"And it certainly has been a pleasure to help save your crew and passengers, Shanandar. I will now ask you to walk as silently as you can and not to speak: we are now going forward in tactical mode."

"You Humans certainly have plenty of experience in those 'tactical' matters. I will be right behind you."

With his companions following him in single file through the forest, Michel cautiously advanced towards the village, his pulse rifle at the ready. After a couple of minutes, he started to see the first houses of the village through the trees and slowed down further his pace while crouching down. He finally stopped behind one of the last trees of the forest and took out his binoculars as his companions deployed on both sides of him to hide and observe from behind other trees and bushes. He already could see a few of the local inhabitants of the village and they certainly were nothing like Humans or Koorivars: they actually looked very much like mythical Centaurs, with a four-legged horse-like body, a torso rising over its forward legs, two arms ending in five-fingered hands and a head that looked nearly human, save for a flat nose and long, pointy ears. The creatures were however much smaller than Earth horses, being more like pony-

sized and with the top of their head reaching a maximum height of about 175 centimeters. Michel actually found the aliens to be quite elegant creatures, with their long blond mane running from the top of their head, Mohawk style, down to their rear end, where it became a long and dense blond tail. Their body was a lustrous, shiny reddish-brown color that actually blended well with the predominant color of the local vegetation. As for their faces, Michel found them quite attractive, with their soft features and large yellow eyes. Most of the local aliens he saw didn't wear any clothes, so he was able to see that the local race was divided into male and female genders, with the female centaurs having a pair of breasts on their chest. The locals who wore anything actually wore what looked like tool bags or haversacks rather than clothes. The only concession to clothing was the wearing of sorts of boots made of soft leather covering their large, round hoofs. He was still observing what looked like a child centaur when he heard Shanandar exclaim himself in excitement.

"I see a Koorivar over there!"

Stunned, Michel turned his binoculars in the direction pointed at by Shanandar. He then effectively saw a young teenage Koorivar playing with two centaur children in front of one of the wooden houses of the village.

"My god, you're right! There were survivors from your shuttle and they have produced a few children while living in harmony with the locals. I really hope that we will find one or more actual surviving crewmember of your shuttle still alive."

"Well, there is only one way to find out. Stay here and keep hiding: I will go out in the open and go speak with that Koorivar child. Since those locals live with a few Koorivar in their midst, I shouldn't attract a hostile reaction. You and your Human friends however could scare those aliens away."

Before Michel could protest, Shanandar walked out of the forest, accompanied by Kovar, and calmly went towards the little Koorivar while walking down one of the streets of the village. At first, the passing centaurs didn't pay much attention to the pair of Koorivars, thus proving to Michel that a number of Koorivars lived in the village. However, a pair of male centaurs armed with bows and knives did notice the body armor and helmets worn by Shanandar and Kovar and approached them. With Shanandar's helmet microphone and camera retransmitting what he heard and saw, the rest of the team was able to follow what happened next as the pair of armed centaurs cut the path of the Koorivars and spoke to them. Their tone was however polite and respectful, even though their

language was incomprehensible. In response, Shanandar stopped and raised one hand high while speaking in Koorivarese.

"I am sorry, but I don't speak your language. Maybe you could use that Koorivar child over there as a translator."

Looking in the direction pointed at by Shanandar and seeing the Koorivar child, who had by now stopped playing and stared with disbelief at the two adult Koorivars, one of the two armed centaurs signaled to the child to approach. The latter did so timidly and listened to what the centaur told him before looking up at Shanandar and speaking to him in Koorivarese.

"Hinoshi asked me if you came from Tyanaman and also asked why you do not speak Hoshin."

"We actually came from space, from another star system far away from here, my child. Are there many other Koorivars in this village? We would like to meet them."

"There are a total of eleven other Koorivars in Wynona, mister, including Kravek the Elder."

The word 'Elder' made Shanandar's heart accelerate.

"This Kravek, is he a survivor from the destroyed shuttle we saw some distance from here?"

"Yes! However, Kravek is now very old and his three original companions have now died. Did you say that you came from space?"

"Yes! Please, guide us to Kravek: we have very important questions to ask him." Instead of replying to him, the child spoke at some length with the two centaurs, apparently translating for them what Shanandar had told him. That got him in turn two suspicious stares from the centaurs and one question that the child translated.

"The Vorlaks also come from space periodically to attack the Hoshy and take away many of them as slaves. Why did you come to Hyanesu?"

"Is 'Hyanesu' the name of this moon?"

"Yes! Did you come in peace?"

"Yes we did, child. We came to find out what happened to the SHUNDAR, so that we could find and rescue its occupants. We really need to speak with Kravek."

Again, the Koorivar child took the time to translate the conversation for the benefit of the centaurs, who then visibly relaxed their attitude towards Shanandar and Kovar. They spoke in turn a few words that the child translated in Koorivarese.

"Hinoshi agreed to let you speak with Kravek the Elder. Follow us, please!"

“With pleasure! What is your name, child?”

“Shomi, sir.”

“And I am Shanandar, Captain of the VEON SHOURIA.”

The name ‘VEON SHOURIA’ seemed to be like a high voltage discharge for little Shomi, who stared in shock at Shanandar.

“The VEON SHOURIA? Kravek often mentioned that ship in the stories he told us. Is it here, over Hyanesu?”

“No! We came on another, much bigger ship, along with friends from another star who saved me and my ship from an icy tomb on a frozen planet.”

Now truly excited, Shomi translated that information for the centaurs, who looked in shock at Shanandar for a moment before gesturing them to come with him. As the centaurs and Shomi guided them towards a house near the end of the street they were on, Shanandar discretely spoke in Koorivarese in his helmet microphone while looking at Kovar, to give the centaurs the appearance that he was speaking to his assistant engineer, while he was in reality speaking by radio to Michel, who had learned Koorivarese while cohabitating on the KOSTROMA with the Koorivars who had been part of its crew for over two years now.

“Michel, this is Shanandar. We are on our way to meet an old survivor from the SHUNDAR’s shuttle. This moon is called ‘Hyanesu’ by the locals, while this village’s name is ‘Wynona’. We were told that there are twelve Koorivars in this village, all but one descendants of survivors from the shuttle. The local race is called the ‘Hoshy’, while the aliens from Gliese 581c are called the ‘Vorlaks’. Those Vorlaks are said to raid periodically this moon in order to take away slaves. I think that this information should be sent right away to the KOSTROMA.”

“Agreed! I will send at once Ingrid back to our scooters, with Lars to escort her. Contact me again when you will know more.”

“I will, my friend.”

With his level of anticipation climbing constantly as he followed the armed Hoshis and little Shomi, Shanandar finally entered one wooden house of modest proportions which was furnished with a few hand-made pieces of furniture. His heart jumped in his heart when he saw what looked like a complete Koorivar family, with two adults, one teenager and one preteen child. In return, all the Koorivars froze on seeing him and Kovar. Little Shomi then ran to one of the adults and pointed at Shanandar.

"Mother, this is Captain Shanandar, of the VEON SHOURIA!"

"But, that's impossible! The VEON SHOURIA left Shouria eons ago, like the SHUNDAR, and went in a totally different direction than our ship."

"I can explain everything later, but please lead me to Kravek right away: I have very important and urgent questions for him."

"Uh, very well, Captain. Follow me!"

The adult Koorivar then led the two newcomers to a nearby small bedroom where one Koorivar with wrinkled skin lay in a bed, looking quite weak. However, the moment he saw Shanandar, he raised himself in a half sitting position and spoke in a frail voice.

"Captain Shanandar? Is that really you?"

Shanandar, now filled with emotions, nearly ran to the bed to press the hands of Kravek.

"My dear old friend! You still could remember my face after all that time?"

"How could I forget the face of any of our three ship captains who took on them to find new homes for our people? How did you get here?"

"In a ship belonging to friends of the Koorivars. That is however a long story. I first need to learn from you what happened after the SHUNDAR arrived in this system. Is it still inside this system?"

Kravek lowered his head at that question, apparently reviewing some sad souvenirs in his mind.

"When we arrived in this system, we quickly found out that the fifth planet was of no interest to us, thus we went to the fourth planet. While it proved habitable and very welcoming, the fact that it had very little in terms of emerged lands deterred Captain Kurkan, who then decided to go check the third planet and its moon. Seeing some Vorlak ships in orbit around the moon, which is named Hyanesu by its Hoshi inhabitants, and not knowing about the aggressive and cruel nature of the Vorlaks, Captain Kurkan sent me and four others down in a shuttle to contact some of the locals, to see if they would agree to let our people settle here. We had barely landed when Vorlak ships approached the SHUNDAR and started firing missiles at it, giving no prior warnings. When he saw that, our shuttle commander told Captain Kurkan to leave the system immediately and to not risk all our people who were in cryogenic sleep aboard the SHUNDAR just to try to rescue us. Captain Kurkan protested at first, unwilling to abandon us here, but he soon was forced to flee the system, barely avoiding a rain of Vorlak missiles. One Vorlak attack craft then spotted our shuttle on the ground and fired a missile at it. That missile impacted our shuttle just as its pilot was starting to take off in

order to lead the Vorlaks away from us and the villagers. I will never forget the courage then demonstrated by Shianey, our shuttle pilot.”

That story brought tears to the eyes of both Shanandar and Kovar, with the former gently patting Kravek’s shoulder.

“Shianey’s courage will be forever remembered in the annals of our people, Kravek. What happened after that?”

“With the shuttle destroyed, me and the three other survivors of its crew fled to this village, where the local Hoshis accepted to hide us from the Vorlaks. Unfortunately, while they didn’t find us or even suspected that we were here, the Vorlaks still took away with them fifty of the locals when they left. Those fifty Hoshis were never seen again. The Vorlaks have since returned once, many orbital periods ago, to take more slaves. We have since learned from Hoshis visiting from other villages and hamlets that the Vorlaks regularly make those raids, choosing villages at random. The Hoshis tried a few times to fight back but their weapons are no match to those of the Vorlaks, who then raze completely the villages that dared oppose them, and this after taking all the inhabitants away with them. The only tactic that has worked up to now is to hide most of the young and the prettiest female Hoshis before the Vorlaks can enter the village.”

Despite being an avowed pacifist, like all the Koorivars, Shanandar couldn’t help feel anger and rage as he listened to Kravek’s story.

“By the stars! Those Vorlaks would definitely deserve a good lesson.”

“But who would give them that lesson, Captain? Even if the SHUNDAR would return here, it has no weapons to oppose the Vorlaks.”

“I spoke earlier about friends of the Koorivars who gave me passage on their ship in order to find and rescue the SHUNDAR and the SHANIZAR. Well, that ship of theirs is a truly mighty one, heavily armed and armored and able to travel among the stars in the blink of an eye. It’s name is ‘KOSTROMA’ and I am sure that it could easily defeat the whole Vorlak fleet presently in orbit around this moon.”

His words made the old Koorivar open wide his eyes in excitement.

“The stars know how much I hate violence and war, but seeing your KOSTROMA chase away those monstrous Vorlaks would truly make me happy. So, now that you are here, what are you planning to do, Captain Shanandar?”

“Right now, my companions hiding in the forest are sending a radio message to inform the KOSTROMA about what is happening here on this moon. The captain of the KOSTROMA will then most probably get closer to Hyanesu in order to launch a shuttle

that will then come to retrieve us. When it will arrive here, I would like to take you and the other Koorivars with us and fly you to the KOSTROMA. Our ship will then go in search of the SHUNDAR and, when successful in retrieving it, will go find the SHANIZAR. The captain of the KOSTROMA, Tina Forster, had ideas about building floating cities for our people on the fourth planet, so that the Koorivars could finally have a new home among the stars.”

To Shanandar’s surprise, his words left Kravek seemingly conflicted, like with the other Koorivar residents of Wynona.

“What? You don’t like the idea of finally be reunited with other Koorivars?”

“That we do like, Captain Shanandar, but what about the Hoshis? Are you and your ship going to simply leave with us and abandon the Hoshis at the mercy of the Vorlaks? The Hoshis sheltered and hid us during all those orbital cycles, at the price of seeing many of their people being either killed or taken away by the Vorlaks. We can’t abandon them like this! Your ship must stay here and protect the Hoshis from the Vorlaks.”

Shanandar gave Kravek a sober look.

“Kravek, you are asking a sentient race from another star system to go to war against those Vorlaks, and this in a conflict that is not touching them. Captain Forster commands the KOSTROMA, yes, but she is not a head of government and has no legal power to involve her race in a war, unless she is attacked first.”

“Doesn’t your precious Captain Forster have any moral convictions? Can’t she simply act to prevent the massacre and enslavement of another people?”

“Careful now, Kravek.” shot back Shanandar. “Captain Forster is about the most decent and principled person I have ever met, be it Koorivar or Human. She cares, believe me! However, as I said earlier, she doesn’t have the kind of political or legal power to involve her race in a war.”

“So, what are you going to do now? Be warned that, if your captain refuses to help the Hoshis, then I will stay here, on Hyanesu.”

“What I will do now is to call her.” replied Shanandar while taking an electronic tablet out of a cargo pocket of his field suit and flipping open its cover panel. Watched by the other Koorivars and by the Hoshi who had accompanied him and Kovar inside the house, who all crowded behind him to try looking over his shoulder, Shanandar tuned in to the tactical frequency of his investigation team, getting the face of Michel Koniev to appear on the display screen of his tablet.

“Yes, Shanandar?”

“Michel, I need to speak directly with your wife. Could you ask Ingrid to arrange a direct connection between me and her? By the way, you will want to listen in on our conversation.”

“I will ask Ingrid to connect you with the KOSTROMA right away. One moment, please.”

As promised, the image on his tablet soon changed, to show Tina Forster’s head and torso as she sat in her bridge command chair.

“Shanandar, how are things on the ground?”

“Rather complicated, Tina. I will now switch to Koorivarese in order to accommodate the Koorivars I found in the village of Wynona.”

Shanandar then spent a minute to explain the situation he had found in the village, along with passing the request for help from Kravek. Tina listened soberly to his report before nodding her head and speaking in Koorivarese.

“Please put Mister Kravek on the line.”

“Will do, Tina!” said Shanandar before approaching the bed in which Kravek lay, holding the tablet at an angle which would let him look directly into the display screen and the mini-camera of the tablet. Tina nodded respectfully to Kravek and spoke first.

“Greetings, Mister Kravek! I am Tina Forster, captain of the Human Spacers League armed merchant ship KOSTROMA. First off, I want you to understand that we are on a search and rescue mission, not a mission of war. My main goal is to find both the SHUNDAR and the SHANIZAR and, if they haven’t established themselves yet on a new home world, to find a suitable planet for them to live on, in which case my ship would logistically support the building of a Koorivar colony. With that said, I fully realize the need to defend you and the local inhabitants of this moon against those Vorlaks, who are plainly guilty of waging a one-sided war and of enslaving and killing another race.”

“So, what are you going to do about them, Captain Forster?”

“What I will do is to tell them plainly what the consequences will be for them if they continue their depredations and genocidal practices.”

“I can tell you already that they won’t listen to you, Captain Forster: the Vorlaks are xenophobic, aggressive bullies and think of themselves as being superior to all other races.”

Those last words attracted a smile on Tina’s face.

“Well, we will soon see about that, Mister Kravek. Michel, deploy your team into defensive positions around the village of Wynona and prevent any Vorlak craft or vehicle from approaching it while I explain myself with the Vorlak fleet. In view of their unprovoked attack on the SHUNDAR and its shuttle eighty years ago, you have my permission to use lethal force as you will see fit.”

“Understood, Tina.” replied Michel, whose head was visible in a corner thumbprint image on the tablet’s screen. “Shanandar, I need you to tell your hosts not to panic or to attack us when we will deploy around the village in two minutes.”

“I will, Michel.” said Shanandar before looking at Kravek. “Please warn the Hoshis that alien friends of mine are about to enter their village and deploy to defend it against the Vorlaks. Ask them not to attack my friends.”

Kravek nodded his head once, then spoke to the armed Hoshi present in the room, who next ran out of the house to shout warnings around at the top of his lungs while he galloped up and down the streets of the village. That of course made the villagers come out of their houses to see what was happening, in time to see the four anti-gravity scooters of the investigation team enter the village to take dispersed defensive positions around its periphery, with two of the scooters covering the sole trail connected to the village.

“Lars, help me place our auto cannon on its pintle mount.”

At Michel’s request, Lars Niström, one of the other three security guards from the KOSTROMA, helped him lift the heavy weapon to line its mounting bracket with the pintle mount attached to a telescopic base fixed inside one scooter. The four scooters of the team were in fact modified ones recently outfitted for possible military operations, so could carry a variety of weapons if needed. Right now, the team definitely needed this auto cannon to be in battery and ready to fire its 20mm explosive and armor-piercing shells. While the general design of that auto cannon directly descended from a similar weapon designed some 400 years ago, that design was still an effective and powerful weapon and also had the benefit of having proven its reliability over the centuries. Only the modern materials and high performance ammunition for it had changed along the years, making a deadly weapon even more redoubtable. With a second similar auto cannon and two portable missile launchers having been carried aboard the scooters, along with other weapons and ammunition, the investigation team was going to possess some serious firepower with which to greet any unwanted visitors.

As Michel and Lars were working on loading their auto cannon, a small troop of Hoshi children gathered nearby to watch and examine them with intense curiosity. Michel smiled at that and wave his hand in a friendly matter at the children: these children centaurs were really cute in appearance, while some of them could be said to be downright lovely. Lars couldn't help smile as well when a Hoshi mother joined the group of children to supervise them: that female Hoshi, like all the other female Hoshis they had seen in the village, was naked and sported on her torso a pair of firm breasts with large nipples.

"Nice tits on those female Hoshis, don't you think, Michel?" whispered discretely Lars, making Michel's smile widen.

"Quite! The Hoshis are indeed a most handsome race and their kids are downright adorable. I wonder what they are thinking about us, though."

"Uh, I'm not sure that I want to know about that, Michel. They probably find us butt-ugly."

"Time will tell, Lars. Time will tell. Now, let's camouflage our scooter as best we can before the Vorlaks could show up."

20:16 (Universal Time)

Command bridge of the KOSTROMA

In low orbit at the vertical of the village of Wynona

Moon Hyanesu of Gliese 581c

"Captain, the leading vessels of the Vorlak fleet are now rounding the eastern terminator line of Hyanesu and heading in our direction. Their radars should be able to detect us at any time now."

"Understood, Mister Jamilian. Spirit, how are you doing in translating the Vorlak language?"

"Unfortunately, not very well, Tina." replied the ship's central computer. "I had next to no comparison points that I could use to infer the meaning of the words we intercepted. Right now, I have at most 58 words about which I have a reasonable certainty about their meanings. Any attempted verbal conversation with the Vorlaks right now would most probably result in some misunderstanding."

"Oh well! Then, let's fall back to good old pictograms, Spirit."

20:23 (Universal Time)**Bridge of the flagship of the Vorlak fleet****Low orbit around Hyanesu**

“Admiral, we are now receiving a video transmission from the alien ship we just spotted.”

Admiral Wooshek frowned on hearing that.

“Really? Pass the video link to my command chair.”

“Right away, Admiral!”

Two seconds later, a color picture appeared on Wooshek’s viewing screen. He examined with interest the head and torso of the alien being looking at the camera: it definitely looked much more frail and weak than a Vorlak, something that made him snicker in contempt. The image, with no sound connected with it yet, then split in two, with one top half and one bottom half picture. The image of the alien being, who was probably the commander of the alien ship, was doubled and reduced to thumbprint size at the same time, with the thumbprints sticking themselves to icons representing an alien ship shown in orbit of the moon. In both half pictures, a group of icons also in orbit of the moon and some distance from the alien ship’s icon probably represented Wooshek’s fleet. The top half image then started to animate itself, while the bottom one stayed frozen. As Wooshek watched carefully the top picture, the Vorlak fleet was shown advancing and approaching the alien ship. A big hand and arm then appeared, attached to the alien head and making a sign that most probably meant for the Vorlak fleet to reverse course and withdraw, which it did without firing a shot. The presentation ended by showing the Vorlak fleet returning to its home planet, while the alien captain harbored a big smile. As the top picture then froze, the bottom picture started changing. At first, it basically showed the same as in the top picture, with the Vorlak fleet approaching the alien ship. However, the video showed a Vorlak jumping out of one ship to attack the alien captain. A huge fist coming out of the alien captain’s picture then punched the Vorlak hard, projecting him far away, while the Vorlak ships were shown being destroyed by missiles from the alien ship. Wooshek snickered as the video froze. The alien way to communicate was quite crude, but it was also simple and easy to understand.

“So, you pretend to destroy my fleet if we don’t turn around and return to Shumesh, eh? Fat chance! Let’s give this alien captain a typical Vorlak answer.

WEAPONS MASTER, FIRE A VOLLEY OF MISSILES AT THAT ALIEN SHIP. PULVERIZE IT!”

The Vorlak weapons officer was tempted to point out to his admiral that the alien ship in question was bigger in terms of volume than all the ships of the fleet compressed together but abstained: questioning an order was a good way in the Shumesh Empire to lose your rank and even your life.

“FIRING FULL MISSILE SALVO NOW!”

On the KOSTROMA, that missile salvo was detected at once, with Patricia O’Neil shouting a warning to Tina.

“THE VORLAKS ARE NOW FIRING MISSILES AT US! I COUNT SIX MISSILES NOW ON THEIR WAY AND ACCELERATING QUICKLY.”

Tina shook sadly her head on hearing that.

“A typical response from a bully accustomed to only face weaker opponents. You are witness to the fact that the Vorlaks fired on us first, Gerald?”

“I am, Tina!” replied Gerald Holmes, his expression hard. “You now have the legitimate right to defend yourself from an unprovoked attack.”

“Thank you, Gerald. Yoko, use our lasers to destroy those missiles once they will be within 500 kilometers from us, then start cutting to shreds the Vorlak fleet. Don’t stop until all the Vorlak ships will have been destroyed.”

“Aye, Captain!”

On the Vorlak flagship, Wooshek watched with growing disbelief as his six missiles quickly disappeared one by one from the radar screens while still well away from the alien ship. Since the lasers of the KOSTROMA were tuned to a frequency not visible to the naked eye, he had no visual clue of how his missiles got destroyed. He was still wondering what had happened when a loud explosion of sparks from the forward face of the bridge compartment made him instinctively turn his head away for an instant. The hurricane of an explosive decompression then followed, with the Vorlaks not attached to seats being sucked out of the bridge compartment through the widening cut through the ship’s hull, to end in the void of space. The last vision of Wooshek was that of space itself, when the whole right side of the bridge compartment flew off the ship, completely cut off by a 1.2 gigawatt laser beam. The same laser beam, fired on continuous mode against the flagship, kept digging deeper and deeper through the

heavy cruiser, until it touched off one of its missile magazines. The VALASH then blew up in a spectacular explosion which projected debris all around. Some of those debris in turn collided with other ships of the fleet, either damaging them seriously or squarely destroying the smaller ones. With the three other cruisers of the fleet also being systematically cut to ribbons by invisible laser beams, the remaining Vorlak ships still intact reacted in the only manner they knew how to do: they fired their own missiles at the sole visible enemy ship in sight. On the KOSTROMA, Tina immediately ordered in response her laser batteries to switch to automated anti-missile mode and to also jam the Vorlak fire control radars. However, while the Vorlak ships were now temporarily rid of the KOSTROMA's laser fire, that didn't mean that they had stopped hurting, far from it. Already deployed out of their protective, armored silos positioned behind the underside of the forward bow section and masked by the massive, 700 meter diameter bow shield of the KOSTROMA, the four recently installed heavy rail gun turrets of the ship each pointed at one of the surviving Vorlak major units. Their 150 meter long barrels, in essence being powerful electro-magnets put end to end and fed with 200 megawatts of electricity, started shooting up compact armor-piercing projectiles at muzzle velocities of twelve kilometers per second. In open space and at typical interplanetary speeds, that kind of muzzle velocity would have been considered marginal in terms of precision against a moving target. However, when shot against ships simply coasting in orbit around a planet, or against a fixed ground target, the kinetic impact of their projectiles was devastating. The Vorlak troop transports hit by the tungsten carbide-tipped shells of the KOSTROMA's heavy rail guns were literally deformed by the 260 mega-joule impact energy of those shells, which produced as well blinding flashes on impact. The melted mass of the projectiles, followed by melted metal from the ships' hulls, then went through from end to end, literally gutting those ships. The KOSTROMA also had eighteen much smaller, 25 meter-long rail gun turrets housed inside its six huge landing leg pods, but Tina decided to keep them in reserve for the moment. It took anyway only a bit over four minutes before all the Vorlak ships were destroyed, their parts destined to eventually fall from orbit and burn up on reentry, while none of the Vorlak missiles even got close to the KOSTROMA. However, Tina decided to continue using her laser batteries in order to cut the larger pieces of debris into smaller ones, so that they would not cause significant damage on the surface of Hyanesu when they would enter the atmosphere. Some nine minutes after opening fire, Tina finally decided that the job was done and sat back in her command chair.

“Well, that’s one problem that has been taken care of, people. Now we will need to make sure that there are no other Vorlak ships or fixed installations on the surface of this moon: we need to get rid thoroughly of this Vorlak infestation on Hyanesu.”

20:31 (Universal Time)

Village of Wynona, moon Hyanesu

Shanandar, a big grin on his face, closed the link with the KOSTROMA on his tablet, then looked at Kravek.

“You may pass this good news to your Hoshi friends: the Vorlak fleet has been totally destroyed. The KOSTROMA is now going to do a full reconnaissance of the moon surface in order to make sure that there are no other ships or fixed installations on the ground.”

Nearly giddy with joy, the old Kravek wasted no time in translating Shanandar’s words into the Hoshi language, prompting the armed Hoshi in the room into pushing out a scream of triumph.

“**HEEEEEIII!** I’m going to pass this news to the rest of the village.”

On those words, the Hoship galloped out of the house and into the street, where he went up and down the alleys while shouting the good news around. Soon, the whole village was dancing and celebrating. Seeing that, Michel Koniev walked to Kravek’s house, entering it and going to join Shanandar and the other Koorivars. Shanandar’s joy was somewhat doused when he saw the serious expression on Michel’s face.

“Is something wrong, Michel?”

“Maybe, Shanandar. We may be celebrating a bit too soon right now.”

“What do you mean?”

“That we may have destroyed one Vorlak fleet, but that it is most likely that the Vorlak have more ships on or around their planet. Also, since they were making periodic raids on this moon, it is very possible that they established one or more ground fixed installation or landing pad on Hyanesu. If there are any of those, then we must find them quickly and destroy them. Now, could you please ask the resident Koorivars if the Hoshis ever told them about any such Vorlak ground facilities? This could be very important.”

“Uh, you’re right. Give me a minute.”

Shanandar then looked at Kravek and at the Koorivar family whose’ house they were in.

“My friend Michel needs to know if you or any Hoshi has seen or heard about fixed Vorlak ground installations on Hyanesu, things like barracks, headquarters or landing pads for ships.”

His question in turn prompted the three adult Koorivar residents into an involved discussion in a Koorivarese tainted with Hoshi words. Shanandar patiently let them plenty of time to talk between themselves, with Kravek finally looking at Shanandar and Michel.

“There is an old tale about a traveling Hoshi merchant who supposedly saw some kind of Vorlak camp from a distance but stayed cautiously away. That merchant said that there were buildings and one landed ship visible. He however did not dare get closer to have a better look. He also said that the Hoshis who had been living in villages near that Vorlak camp all deserted them, to go live far away from that camp.”

“I can’t say that I blame them.” said Michel. “And where would that camp be?”

“Some seventy ryals from here, to the Northwest.”

Shanandar, seeing Michel looking a bit confused, then helped him out.

“The ryal is a Koorivar unit of length measurement. Seventy ryals would equate to about 310 of your kilometers.”

“Okay! Anything else?”

“No!” replied Kravek, shaking his head. “The Vorlaks don’t like much traveling on the surface: they are paranoid about being ambushed on the ground.”

“How typical! Bullies are often cowards at heart.” snickered Michel. “Very well: I will transmit this information right away to the KOSTROMA. I am sure that Tina will make good use of it.”

21:20 (Universal Time)

Command bridge of the KOSTROMA

In orbit over Hyanesu

Tina was silent as she looked at the pictures and videos transmitted by the reconnaissance probe sent to investigate the possible Vorlak camp signaled by Michel. In fact, everyone was either tense or filling with cold rage while watching those pictures, including Gerald Holmes.

“Those fucking, monstrous bastards!” muttered the husband of the Chairperson of the Spacers League Council. He, Tina and others on the bridge were now viewing a

live video feed showing a part of the Vorlak camp. That camp was however in reality a fully fledged base, with permanent buildings, a large warehouse, three hangars and three concrete landing pads. It also had a number of vast, fenced corrals full of Hoshi captives. What was enraging Gerald Holmes and Tina was a view of a sort of scaffold situated between two of the corrals and on which a chained Hoshi was screaming in pain while being tortured with electricity by a Vorlak guard. It took everything to Tina not to bang her fist on the armrest of her command chair.

“That poor Hoshi is probably being publicly punished for something in order to scare the other captives into total submission. What a bunch of barbarians those Vorlaks are!”

“Yeah, they remind me of some of the Human dictatorships we had in our past.” added Holmes, a bit sarcastically. However, that doesn’t excuse their present behavior. What do you intend to do about this Vorlak base, Tina?”

“Normally, I would simply raze it to the ground and exterminate all of those damn Vorlaks, but there are all those poor Hoshis inside the base which could be killed by our fire. We must find a way to free and evacuate them before we could unleash all of our firepower. That will in turn definitely need the use of ground troops. Unfortunately, we have a grand total of only nine trained security personnel on the KOSTROMA, of which four are already down on the planet. Let me think for a moment, Gerald. Dana, collate and analyze in the meantime all the images and data we now have on this Vorlak installation. Have our probe infiltrate those buildings as much as safely possible, to see what is inside them.”

“Got it, Tina!”

Thinking of a practical, promising and relatively safe plan of action proved difficult to Tina, partly because her mind was still boiling with anger caused by the images of the Hoshi being tortured. She was still not sure how to proceed when Minh Wa Hien, who was controlling their reconnaissance probe, suddenly turned in her seat and violently vomited on the bridge’s deck. Alarmed, Tina jumped out of her command chair and ran to the sensors specialist, who was still bent forward and throwing up.

“HIEN, WHAT’S WRONG?”

Hien, unable to speak, pointed a shaking finger at the display screen showing the live video feed from one of the micro-spy drones of the probe. It appeared to be inside a part of the Vorlak warehouse, which looked like a walk-in freezer. Dozens of meat

carcasses were suspended from steel hooks, with one Vorlak visible some distance away, busy cutting off parts from a carcass. Absolute horror filled Tina when she saw what the 'carcasses' were.

"HOSHIS! THOSE MONSTERS BUTCHER HOSHIS FOR THEIR MEAT!"

She herself felt like throwing up and she stepped back from the sensors station, while Gerald Holmes ran to it to look at the view from the probe. He also had to look away after a second, horror and disgust on his face.

"Those fucking Vorlaks! They are clearly a danger to all the sentient races which they will get close too. If we establish Human or Koorivar colonies on Oceania, or on this moon, those colonies will be at constant risk of attack by those monsters. We have to do something about them."

Still deeply shaken, Tina could only nod at Gerald's words.

"Yes, we certainly do, for the sake of the Hoshis and of any future colony in this system. However, such a decision is way above my pay grade. I am after all only the owner and captain of a single cargo ship, not some head of a planet or space consortium."

"Then, I will go get a decision for you, Tina!" said Gerald forcefully. "You still have a jump capable shuttle aboard the KOSTROMA?"

"Uh, yes? What do you have in mind, Gerald?"

"I intend to make a quick trip to the Solar System and present to my wife all the data, information and video footage we have taken in this system to date, then will ask her for a set of directives and orders for you. Knowing her the way I know her, I am certain that she will not stay insensitive to the tragedy the Hoshis are living through."

"What if she rules that we have no business in involving ourselves in alien matters?"

That got Tina a dubious look from Gerald.

"After she will have seen the pictures of this cold room, I doubt very much that she could then take such a cowardly decision."

"Very well! I believe that we have little to lose by sending you back home on a liaison trip. Go prepare a suitcase for your trip while Patricia O'Neil will compile all our present data and imagery on a thumb drive. Alan Ashford will pilot our interstellar shuttle."

"Thank you, Tina! I will make it quick."

As Gerald was about to run out of the bridge, Tina stopped him by calling his name out loud.

“GERALD!”

“Yes, Tina?”

“Please be convincing with your wife.” she said in a near pleading tone. “I am not ready to watch such horrors and do nothing about them.”

“I will do my very best, Tina.” promised Gerald before leaving. Tina watched him go, then slowly turned towards Dana, sitting at her navigator’s station.

“Dana, could you check if we possibly could strike and destroy the Vorlak installations without endangering the Hoshis held in those corrals?”

Dana simply nodded her head, then started working up her station, using the video links from the reconnaissance probe. After about two minutes, she looked back at Tina.

“I believe that we can do it, Tina. I will just need to build a fire plan that will then be executed under the control of Spirit, in order to achieve maximum accuracy.”

“Good! Start working on that plan, Dana.”

06:17 (Universal Time)

Saturday, May 22, 2320

Governor’s official residence

Callisto Prime, Callisto moon of Jupiter

Solar System

Janet Robeson felt a bit like a zombie as she prepared her first cup of coffee of the day. She had worked late at her gubernatorial office and had to wake up early this morning because of a scheduled policy meeting. Not that this meeting was one she really wanted to attend, far from it, but politics often was about compromises. She sighed when her wrist videophone buzzed, announcing an incoming call.

“This better not be someone trying to push his personal points even before the meeting.” she said to herself. Punching the ‘open line’ button, she felt her heart jump in her chest when Gerald’s head appeared on the small display screen of her wrist videophone.

“GERALD! YOU’RE BACK!”

“Not for long, though.” replied her husband, his expression sober. I came on one of the jump-capable shuttles of the KOSTROMA and intend to return to the Gliese 581

system as soon as I will have a chance to show you a few things and discuss them with you.”

“The Gliese 581 system? Then, that Koomak Drive really works?”

Her last sentence made Gerald smile briefly before he answered her.

“Oh yes, it works very well and the future will never be the same for Humanity, I can guarantee you that, Janet. I suppose that you are home right now?”

“Yes, I am! However, I am due to attend an important policy meeting at nine.”

“That meeting, what will it be about and who will attend it, if I may ask?”

“Oh, there is nothing secret about it, Gerald. It is going to discuss interplanetary trade issues and a number of my ministers, plus a few trade and economy experts, are going to be present. So, what made you come back to Callisto ahead of the KOSTROMA’s return?”

From serious, Gerald’s expression then turned to somber.

“The KOSTROMA’s mission is far from finished, Janet. It still has to find the SHUNDAR and the SHANIZAR but it has found many things during the last month, some of them very disturbing. I am now in a taxi that is about to arrive at our house. Once there, I will show you a few recordings and data. I don’t want to discuss this on an open line, so I will wait until I am home. See you in a few minutes my dear Janet.”

Gerald then closed the link, leaving Janet standing in her kitchen, wearing a robe and looking at her now dark videophone screen.

“Damn, I better put something on before Gerald arrives: God knows if I will have to get moving after he shows me his recordings.”

Some three minutes later, Gerald entered the residence, being let in by one of the two government security agents posted at the main door of the official residence. Janet, having hurriedly put on a simple long dress, nearly ran into his open arms and exchanged a passionate kiss with him before looking into his eyes.

“My god, Gerald, the last month felt really long without you.”

“The same here, my dear Janet. However, that month was no wasted time, I can assure you.”

“Let’s go to my private study: we will be able there to discuss privately what you want to show me.”

“A good idea, Janet.”

Going up the main staircase together, the couple soon entered the large, well furnished study used by Janet for her work and to receive important visitors. Gerald moved one of the rolling easy chairs of the study and placed it behind Janet's work desk, beside her own chair, then put his laptop computer on top of her desk and opened it.

"To make it short and sweet, know that the KOSTROMA has visited to date the Gliese 667C, Gliese 625 and Gliese 581 star systems and is presently around the moon of the third planet of Gliese 581. On the way, we found and rescued 1,359 Koorivars who had survived and multiplied inside a mining complex on the fourth planet of Gliese 667C. Those Koorivars are presently sheltered aboard the KOSTROMA. Then, on Gliese 625, we found the single planet of the system to be uninhabitable, with no traces of the passage of the SHUNDAR. What we found however was the ancient crash site of an alien ship, dating back by some 6,000 years. We found some remains of one alien there, a sort of gorilla with two pairs of arms, which Tina Forster is calling a 'Gordo'. Just that is proof that intelligent life is not so rare around the galaxy...or the Universe."

"Six thousand years?! My god, those aliens could have advanced a lot since then."

"Yes, or they could have self-destroyed, the way Humanity nearly did to itself in the past. Anyway, from Gliese 625, the KOSTROMA jumped to the Gliese 581 system, to resume its search for the SHUNDAR. By the way, the Koomak Drive is proving to be a complete success: it is safe, dependable and allows us to jump to another star system in the blink of an eye. Once adapted to more of our ships, Humanity will then be able to roam at will among the stars. On that, I can tell you that we have found a minimum of three intelligent species on three of the celestial bodies of the Gliese 581 system. We also found traces of the passage of the SHUNDAR on the moon of the third planet, plus one old Koorivar survivor from the SHUNDAR and eleven offspring from three other survivors, who have by now died of old age. This is where we hit a snag that is now causing me to see you: those survivors were helped and sheltered by a local race of intelligent centaurs called the Hoshis, after their shuttle was destroyed by missile fire from an alien ship that came from the third planet of the system and that also chased the SHUNDAR away. Those aliens, called the Vorlaks, have been conducting a campaign of enslavement and genocide against the Hoshis, on top of having fired without provocation on the SHUNDAR and its shuttle. Even worst, we have just found out that the Vorlaks butcher the Hoshis for their meat and eat them."

Janet's eyes and mouth opened wide with horror and disgust on hearing that.

“Those Vorlaks butcher and eat another intelligent species?”

“Yes, and they also fired on the KOSTROMA after Captain Forster ordered them to leave the orbit of the moon of the third planet. I was witness to that. As you may guess, that turned out to be a very bad decision on their part. The KOSTROMA, acting in self-defense, then destroyed the Vorlak fleet orbiting the moon, which is called Hyanesu by the way. Shortly after that, we found a Vorlak surface base on Hyanesu, where the full scale of the horrors committed by the Vorlaks then became evident to us. I have to warn you that the images you are about to see are very hard to watch, Janet.”

Janet steeled herself mentally, then nodded her head once.

“Go ahead, Gerald. Show me what you found.”

Gerald selected the video compilation file recorded by the reconnaissance probe and its micro-drones in the Vorlak camp, then opened and started it. Janet then watched in silence as the recording started to play. Seeing the poor Hoshi prisoner being publicly tortured created a flash of anger in her, but the next views, taken inside the Vorlak’s freezer room, proved much worse. Despite Gerald’s warning, she barely kept herself from vomiting and turned her head away for a second. She however regained control and forced herself to watch the rest of the video, sighing with relief when it came to an end.

“My god, I have rarely seen something as horrific and disgusting as this. What does Captain Forster plan to do about that Vorlak base, Gerald?”

“She wishes to destroy it and free the Hoshis held there, Janet, but she realizes and understands the long-term political implications of such an action and is asking for your official support. After all, this would mean that we, Humanity, would go to war with the Vorlaks in order to defend an intelligent race of aliens being massacred by those Vorlaks. There is also the question of the safety of all the intelligent marine life on Oceana, the fourth planet of the system, if the Vorlaks manage to get there. Right now, their space technology is inferior to ours and they proved no match for the KOSTROMA but, if given a chance to improve their technology in the coming decades, they will eventually become a very real threat to the species of the fourth planet and of any colony we could establish there. What Captain Forster urgently needs now is some political backup that would allow her to defend the Hoshis and eliminate the space threat represented by the Vorlaks. Please realize that both Oceana and Hyanesu would be excellent candidates as new home worlds for the Koorivars of the SHUNDAR and of the SHANIZAR, once we find them. The local Hoshis have already declared that they would

be happy to greet at least a few thousand Koorivars on Hyanesu, while our exploration team on Oceana is awaiting a response from the intelligent sea turtles there on whether they would allow floating cities to be established on their planet. At the rate things are going, the KOSTROMA is liable to discover more habitable worlds and more intelligent races in the next star systems it will visit while searching for the two Koorivar refugee ships. How to relate and deal with various alien races has now become a very pertinent and urgent question. However, I realize that discussions on such novel policy making could take a long time indeed and I must emphasize that Captain Forster needs some political support now if she is to do what is needed to save the Hoshis from the Vorlaks.” Janet sat back in her chair and was silent for a long moment before she finally replied to Gerald.

“You said that the Vorlak space technology is inferior to ours, but the Vorlak base you showed me is quite large and is liable to contain many Vorlaks. To save the Hoshis being held captive in it while also destroying the base would need a substantial number of ground troops, as the fighting on Mars and Earth during the 2315 War proved to us. How many trained fighters does Tina have aboard the KOSTROMA?”

“Only a handful, literally, while four of those are already down on the surface of Hyanesu, protecting the Koorivar survivors living in a Hoshi village.”

“And those Hoshis, could they support Tina’s security officers in an assault on the Vorlak base?”

Gerald shook slowly his head in response.

“The Hoshis may be brave, but they are actually at the technological level of the early Middle Ages and are no match for the projectile weapons and missiles of the Vorlaks. For them to assault that base would result only in a bloody massacre.”

“I see!” said Janet, who then fell silent again while thinking furiously. Gerald didn’t say a word then, knowing how his wife’s mind worked when faced with a problem or an emergency. Janet finally came out of her thoughts and, powering up her government computer, which was linked to the highly encrypted and secure computer network of the Spacers League, started typing out a message, watched by a curious Gerald.

“Uh, what are you typing, Janet?”

“An operational order for our patrol cruiser CENTURION, which is presently docked at the Callisto Main Orbital Terminal. I am going to send it to Gliese 581, along with a company of Space Marines, with orders to support the KOSTROMA.”

"We have another ship equipped with the Koomak Drive?" nearly exclaimed Gerald, shocked, making Janet nod while she was still typing.

"Yes! Before Tina Forster left with her KOSTROMA, she sent me the full schematics and technical data for the interstellar Koomak Drive."

"Yes, I remember that. You in fact booted me out of here afterwards, to send me on the KOSTROMA."

The facetious tone used by Gerald while saying that attracted an amused smile on Janet's lips.

"Well, after I booted you out to the stars, I decided to have at least one ship fitted on a priority basis with the Koomak Drive and contacted Gustav Shomberg, at the Avalon Space Yards. With him declaring himself ready to do the work immediately, I then sent to his shipyard our newest patrol cruiser, the CENTURION, to be fitted for interstellar travel. Mister Shomberg, who knows me and respects me a lot, then gave me a little extra as a gift and had anti-matter 'cruise' engines fitted as well to the CENTURION. So, while not as big and powerful as the KOSTROMA, I will be able to send you back with a ship as well equipped and advanced as Tina's ship...and more."

"Uh, what do you mean by 'more', Janet?"

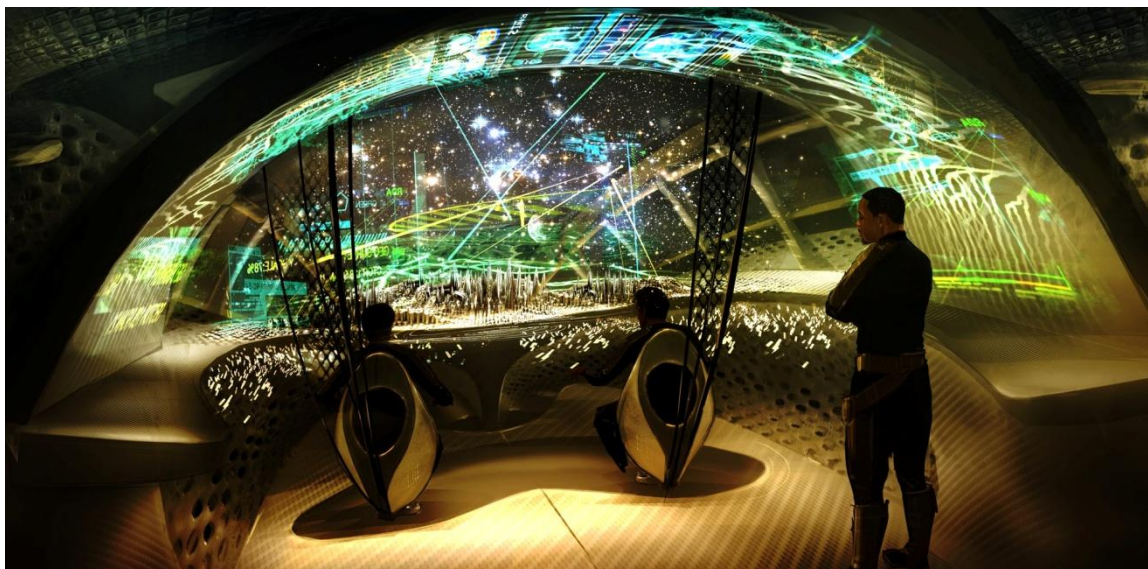
Janet then stopped typing for a moment and swiveled her chair to look directly in her husband's eyes, her expression now dead serious.

"By that, I mean that the CENTURION will have anti-matter warheads aboard as it will leave for Gliese 581."

"ANTI-MATTER WARHEADS?! But, Nadia Suslov, the ex-CEO of the Sverdlovsk Group, was sent to jail for trying to acquire illegally the secrets of the Koorivar anti-matter technology."

"She was sent to jail because she wanted that technology in order for her consortium to gain preeminence over the rest of the Spacers League and because she had ordered the murder of a woman and the kidnapping of a Koorivar engineer in order to acquire it, Gerald. However, if we and the Koorivar can have an interstellar drive, so can other intelligent races around us in the galaxy. As the discovery of the Vorlaks amply proves, not all such alien races may prove benevolent or even indifferent to our existence. I thus decided to have a limited quantity of anti-matter warheads produced by the Avalon Space Yards, where Mister Shomberg personally built them in secret, and to equip the CENTURION with those warheads, plus a few extra ones made for the KOSTROMA's missiles and heavy rail guns. I swore to myself that those anti-matter

warheads were going to be used strictly in the defense of Humanity against a space invader or interstellar threat. Well, I now consider and declare that the Vorlaks constitute such a threat. If there is something that I supremely hate, it is a bully. As bullies, the Vorlaks will simply get what they deserve, while the Hoshis and the other sentient races of the Gliese 581 system will be able to live in peace and security afterwards.”



Part of the bridge of the patrol cruiser CENTURION. (Concept art from the site of Nova Prime Spaceship Weapons)

CHAPTER 9 – TEACHING A LESSON TO A BULLY

15:56 (Universal Time)

Saturday, May 22, 2320

Command bridge of the patrol cruiser CENTURION

Sixty million kilometers away from Gliese 581c

“The spectroscopy readings of the star confirm it to be the red dwarf Gliese 581, Captain. We are now sixty million kilometers away from the third planet, upstream from its orbit.”

“Excellent! Just where I wanted us to be on arrival.” Replied Miki Kondo, the captain of the Spacers League patrol cruiser CENTURION. While she didn’t say it out loud then, she was truly impressed by the accuracy of the Koomak Drive. This was only the third interstellar jump made by her cruiser since it had been refitted at the Avalon Space Yards, the first two jumps having occurred during a test run between Earth and the Proxima Centauri system. Those three jumps now averaged a distance error per jump of plus or minus three million kilometers per light year of travel, a truly negligible factor in terms of astronomical distances where interstellar travel was concerned. Doctor Koomak had certainly proved his genius by inventing his interstellar drive.

“Let’s stay in passive electronic mode for the moment, time to see what is around us.” Added Miki from her command chair. “Pilot, continue towards the moon of the third planet on gravity sail propulsion only. Let’s not generate a drive flare that could be seen from all around us.”

“Aye, Captain!”

Next, Miki twisted her neck to look at Gerald Holmes, who was occupying a chair recently added into the bridge of the CENTURION, which was much smaller than the bridge of the KOSTROMA and was quite cramped in comparison.

“Hopefully, those Vorlaks will not have had time to hurt further their Hoshi prisoners held in their surface base.”

“I am sure that Captain Forster would have acted at once at the least sign of the Vorlaks retaliating against their prisoners, Captain Kondo, and this with or without reinforcements.”

Miki Kondo nodded her head at that: despite her young age, Tina Forster was already a quasi legend among the Spacers League, thanks to both her combat performance during the 2315 War and to the high moral standards she had displayed during and after the discovery of the Koorivar ship on Eris, when she had put her reputation and career at risk in order to follow her moral beliefs and keep her promises to the Koorivar. A warning from one of her sensors technicians then switched her attention.

“Captain, our thermal sensors are detecting a group of four drive flares that have just left the orbit of Gliese 581c and are going down towards the orbit of the moon Hyanesu.”

“Do an analysis of those drive flares: tell me what kind of drive those ships are using.”

“Yes Captain!”

After less than two minutes, the sensors technician came back with more information.

“Captain, those flares are definitely from thermonuclear rockets. However, their spectral analysis and plasma ejection velocity show these drives to be rather inefficient. They would be comparable to the first thermonuclear drives developed on Earth around the year 2100. Also, they are using their main drives in order to cut down their stellar orbital velocity, using an economical Hohmann transfer orbit to align themselves onto an

orbit around Hyanesu. Those ships thus probably have limited space endurance and little agility and also probably have no gravity propulsion system.”

“That’s to my liking. What about any electronic emission from those ships?”

Another sensors specialist answered that last question.

“We are detecting weak signals from medium range radars, Captain. Those radars are however unsuitable for detection distances beyond five million kilometers.”

“Even better! Navigator, calculate a micro-jump inside this system, with reemergence on the illuminated side of Hyanesu, two million kilometers above the moon’s surface.”

Gerald Holmes gave a worried look to Miki on hearing that.

“Has anyone effected such micro-jumps before, Captain Kondo?”

“Yes! The prototype drone ship tested by the Avalon Space Yards tried a series of such jumps inside the Alpha Centauri system, with very good results. Doing a micro-jump now will bring us very close to Hyanesu, while the bulk of the moon will mask us from the enemy ships.”

“Oh, I see!”

“Micro-jump calculated and entered in the auto-pilot, Captain.” announced the navigator after half a minute.

“Then, effect micro-jump, NOW!”

An orange maelstrom enveloped the cruiser for a fraction of a second, then the external views of space completely changed on the holographic display screens of the bridge. Gerald Holmes could now contemplate the side of Hyanesu which faced its star, with the third planet now hidden from direct view by its moon. A small white shape orbiting the moon near its northern pole then attracted his attention at the same time that a sensors specialists spoke up.

“The KOSTROMA is visible in the upper eastern quadrant of our screens, Captain.”

“Excellent! Establish a tight directional laser link with it at once and call the KOSTROMA to tell its crew who we are.”

“Aye, Captain!”

The specialist, pointing first a highly directional laser communication dish towards the KOSTROMA, then spoke for a few seconds in his headset microphone before looking at Miki Kondo.

“Captain, Fleet Captain Forster wishes to speak with you. I am putting her on Line Two.”

“Thank you, mister!” replied Miki before switching one of her display screen on the said channel, making the head and torso of a smiling Tina Forster appear on the screen.

“Aaah, Captain Kondo! It is truly nice to see you here and now with your fine cruiser. I see that Governor Robeson acted quickly with the data files I gave her.”

“And it is a pleasure for me to be able to come assist you in a mission, Fleet Captain Forster. How is the situation in that Vorlak base and prison camp on the surface of Hyanesu?”

The smile on Tina’s face then changed to a most sober look.

“That situation is already resolved, Captain Kondo. When the Vorlaks of the base started giving signs that they were about to massacre their prisoners and then evacuate on one of their cargo ships, I unleashed my Plan ‘B’ and destroyed their barracks, headquarters, hangars and guard towers with a combination of laser fire, heavy rail gun fire and missiles. The guard towers were in fact the first to go, vaporized by laser beams. The investigation team that was already on the surface of the moon then helped evacuate the Hoshi prisoners out of the camp and into our waiting shuttles. That happened some ten hours ago and the freed Hoshis have now been returned to their respective villages...at least to those villages still existing. Those who had no homes left were then accepted into other villages and hamlets. In return, our rescue operation has created a huge positive feeling towards us and the Koorivars and the various local Hoshi village elders have declared that they would welcome the resettling of Koorivar refugees on their moon, whenever we will find and retrieve the SHUNDAR and the SHANIZAR.”

“That is all very good news, Fleet Captain, however I am afraid that I have to give you one piece of bad news: a formation of four Vorlak ships has left Gliese 581c and is now heading towards Hyanesu. These ships may still be simple cargo ships, but I would very much doubt so. My guess would be that they are combat ships sent to investigate what happened to their fleet around Hyanesu.”

“I would concur with you on that, Captain Kondo. By the way, I suppose that you brought Mister Holmes and my shuttle with you?”

“Correct! I also brought with me a directive from Governor Robeson: the Vorlaks are to be considered as a space-faring threat to other sentient beings and are to be

quarantined to their own planet's surface. Only non-lethal orbital satellites will be tolerated around Gliese 581c. This way, the inhabitants of Hyanesu and of Oceana will be able to live in peace, without having to fear Vorlak depredations."

"Excellent! Now, what do you say to us dealing with those four incoming Vorlak ships? We could catch them in a pincer while they are still in their deceleration phase, then give them a single ultimatum to withdraw. If they refuse to obey, then we will open fire."

"From what I heard and seen about those Vorlaks, even giving them a last chance via an ultimatum sounds very generous to me, Fleet Captain."

Tina sighed at those words while lowering her head for a moment.

"Captain Kondo, let's just say that the 2315 War taught me not to collectively judge our enemies. Yes, those Vorlaks have up to now acted like monsters, but what tells you that they are all like this? Maybe the lower classes on the third planet are less cruel and aggressive than their military class and their leaders."

"Maybe, but could we gamble the future of the Hoshis and of the other species in this system on a mere assumption? If those four incoming ships turn out to be warships, then we should destroy them without further ado."

"Still, I would like to give them an ultimatum before opening fire, Captain." replied Tina in a tone that indicated that this discussion was closed. "You will go hide just behind the western terminator line and wait there in ambush while I will show myself to the Vorlaks at the eastern terminator to give to them my ultimatum. If you see them fire missiles at me, or if they continue towards Hyanesu, then open fire."

"Understood, Fleet Captain!" said Miki, hiding her skepticism about Forster's choice of giving a chance to the enemy. She then shouted orders to her bridge crew.

"Pilot, head to the western terminator line and stop just short of it. Sound battle stations! Weapons Officer, have special munitions prepared for our heavy rail guns."

That last order got her a somber glance from Gerald Holmes, something she however didn't notice due to the renewed activity around the bridge. On her own command bridge, Tina Forster first told her pilot, Frida Skarsgard, to rise from their present low orbit and fly towards the eastern terminator line of the moon, then spoke to her ship's central computer.

"Spirit, I will need your talents in communication to compose for me a number of visual messages using pictograms. Here are the messages I want to send..."

Tina waited until the four Vorlak ships, which were plainly visible due to their drive flares, were some 100,000 kilometers away from Hyanesu before starting to emit her first pictographic message, which warned the Vorlaks to turn away and return to their planet on pain of destruction. Either because they were too obtuse to understand the message or because they wanted to close further the range in order to fire their missiles at the KOSTROMA, the four ships continued on their trajectory, ignoring her message. Tina then sent a second message once the Vorlaks were down to a distance of 80,000 kilometers, repeating her warning in an even more blunt fashion. Tina's patience ran out when the Vorlaks kept approaching, getting within 70,000 kilometers of her ship.

"That's it! I have had it with them! Transmit to the CENTURION: fire at will! Renée, make our lasers dance on those ships!"

Renée d'Argenteuil, one of the more senior officers of the KOSTROMA and one who often took Tina's command seat when she was resting, occupied the weapons station at the time and, having already entered a fire plan in her fire control computer, opened a red cover on her command console and pressed the big red button inside.

"Opening laser fire now!"

Four 1.2 gigawatt laser beams, invisible and silent in the void of space, cut across the black emptiness in less than a quarter of a second, each beam targeted at one of the four Vorlak ships. The invisible beams, measuring some forty centimeters in diameter after their 70,000 kilometer-long travel, created an explosion of sparks when they hit the aluminum alloy hulls of the Vorlak battleships, which were not built to fly inside the atmosphere of a planet or moon. Burning through the hulls nearly instantly, the laser beams then danced around inside the ships, melting bulkheads, cutting wires, cables and pipes and opening compartment after compartment to the vacuum of space, creating explosive decompressions which sucked the Vorlak occupants through the jagged hull openings, ripping them apart in the process. The Vorlaks, still being outside of the maximum range of their own missiles, could only endure that treatment for the time being, hoping to soon be able to fire their missiles. They never got that chance, as a huge nuclear fireball suddenly detonated in a blinding flash within 700 meters of the lead Vorlak battleship. That fireball then rapidly expanded to a radius of over fifty kilometers, engulfing and vaporizing the whole ship in an instant. Before the three other battleships, already heavily damaged by the KOSTROMA's laser fire, could react to that, they were vaporized in quick succession by three more nuclear fireballs, which left behind only expanding clouds of plasma and thermal radiations.

The flashes from the four nuclear explosions left Tina Forster's aghast in her command chair, like the rest of her bridge crew. Seeing that the expanding clouds of plasma would eventually hit her ship, she gave an urgent order to her pilot.

"FRIDA, MOVE US SIDEWAYS AWAY FROM THOSE EXPANDING PLASMA CLOUDS!"

As Frida Skarsgard obeyed her and pushed their gravity sails to the maximum, making the giant cargo ship jump sideways with an acceleration of 3.2 Gs, Tina opened a communication link to the CENTURION and gave a hard look at the image of Miki Kondo.

"Captain Kondo, since when do Spacers League ships carry nuclear weapons?"

"Those were not nuclear weapons, Fleet Captain Forster: they were heavy rail gun shells equipped with anti-matter devices triggered via proximity fuses. Governor Robeson expressly agreed to their use against space-faring threats."

"Anti-matter weapons? But, I thought that we banned their production in 2317."

"Correct, but we didn't know at the time that we would be able to travel to other star systems any time soon...if ever. Now that we do, Governor Robeson, with the accord of the other leaders of the Spacers League, decided that we needed to have such weapons ready in our arsenal, in case an invading alien race would show up in our Solar System."

While she still felt that such a decision was wrong, Tina didn't protest further about it: the politicians had decided on this and now there was no way to turn this around. God knew how many more of those anti-matter warheads were in service right now with Spacers League Navy ships. Feeling some bitterness about it, she still conceded that Captain Kondo had acted within her mandate and had destroyed legitimate targets.

"Very well, Captain Kondo. I will now ask you to stay in Hyanesu's orbit, in order to protect the moon while I go do an orbital reconnaissance of the third planet and make sure that no other attack fleet is being prepared by the Vorlak."

"Be careful, Fleet Captain: the Vorlaks could possess orbital defense stations. Remember the ISF orbital fortresses we had to destroy in the 2315 War."

"Oh, I remember them well enough, Captain Kondo. I will be careful. Before I leave for the third planet, could you send back to me my shuttle, along with Mister Holmes?"

"I certainly can do that, Fleet Captain. Kondo out!"

Once the link was closed, Tina stayed silent for a moment in her command chair while digesting the revelations from Captain Kondo. She had done everything in 2317 to prevent the Koorivar anti-matter technology from becoming known and used by Humans, in order to prevent their eventual misuse. To be honest, she had then been the first to have this technology adapted to her ship, once the Koomak Drive had been invented and the Koorivars had asked her to go search among the stars for their two other evacuation ships. That had however been done with the full consent of the Koorivars themselves, with the sole purpose of preparing her ship for an interstellar search and rescue mission. Between that and putting in service anti-matter weapons, there was quite a huge gap. Finally chasing away her bitterness, Tina looked at Dana Durning, her navigator.

“Dana, plot a course to the third planet. Once there, we will do an extensive mapping and reconnaissance coverage of the planet from medium level orbit. We will also tally the number and types of space installations the Vorlaks possess in orbit. However, wait until our shuttle and Mister Holmes are back aboard before leaving the moon’s orbit.”

“Understood, Tina!”

“Then, I will go rest a bit in my day cabin, until the return of our shuttle. Renée, you have the bridge.”

“Aye, Tina!”

20:24 (Universal Time)

Vorlak Imperial Palace

Vorona, capital city of the Shumesh Empire

Planet Gliese 581c (Shumesh)

“Your Majesty, I am afraid that I have some bad news.”

Emperor Shumesh III, sitting on his throne, gave his Fleet Grand Admiral an angry look on hearing those words. He however didn’t jump off his throne and simply said one word.

“Speak!”

“Your Majesty, our four battleships have been destroyed, probably by the same unknown ship which destroyed our Second Fleet earlier. Our ships signaled spotting that alien ship around the moon, then retransmitted to our fleet headquarters an alien

message that was basically a warning for us to stay away from the moon. Shortly after that, four large nuclear explosions were seen in space, above the moon, with our four ships stopping to communicate after those blasts. We still can't get any response from our ships and they thus should be considered destroyed, Your Majesty."

The emperor, who was even more powerful physically than the average Vorlak, slammed a raging fist on the armrest of his throne.

"HOW COULD ONE SINGLE SHIP DEFEAT OUR FOUR MOST POWERFUL SHIPS?"

Grand Admiral Kanos repressed his fear as best he could: bringing bad news to the Emperor was a good way to end up dead afterwards. He however decided to tell Shumesh III the simple truth, as telling lies would only make things worse for him once the Emperor would see through those lies.

"Your Majesty, we believe that this alien ship may be of the same origin as the one that we chased away from our moon some 2,900 rotations ago. However, the present one is much bigger than the one seen in the past. In fact, its mass was largely superior to the combined mass of our four battleships and the ease with which it destroyed our ships indicates that its weapons are superior to our own weapons."

"Could it have come from the fourth planet, Gorosh?"

"That is possible but unlikely, Your Majesty. Before this day, no sign of a space capable civilization was ever seen on Gorosh. In fact the near total lack of emerged lands on Gorosh directly militates against the development of a technically advanced race there. Many of our scientist now agree that this alien ship may have come from another star system, something that would denote by itself a clear technological superiority by those aliens over our own science."

"Humph! And what do we know about those aliens? Do we have pictures of them?"

"We do have a picture of what we presume to be their ship captain. The aliens used it as part of pictographic messages sent to our ships to tell them to turn back. Here is the picture in question, Your Majesty."

Taking the viewing pad offered by Kanos, Shumesh III examined it for a moment with genuine curiosity.

"Hum, a rather frail looking being in my opinion. It must come from a low gravity planet, something that would indeed disqualify Gorosh as being the home planet of

these aliens. The next question I have is why? Why attack our ships around our moon?"

"Our best guess is that it came to try to find what happened to the alien shuttle that was destroyed on the moon 2,900 rotations ago, Your Majesty. Finding the debris of that shuttle may have caused this alien ship captain to seek revenge on us."

"That would make sense, as I would have done the same in his place. But why then telling us to stay away from our moon? Why taking the time to send warnings to our ships before destroying them?"

Grand Admiral Kanos then hesitated for a moment, as what he was about to see was assured of infuriating the Emperor.

"Your Majesty, the only reason I could think of to explain that is if those aliens intend to colonize and occupy our moon."

As Kanos had expected, the Emperor became instantly enraged at his words.

"WHAT? THOSE IMPUDENT ALIENS WOULD COME, DESTROY OUR SHIPS AND THEN ESTABLISH OUTPOSTS AND SETTLEMENTS ON THE MOON OF OUR OWN PLANET? NEVER! WHAT DO YOU HAVE LEFT IN YOUR FLEET THAT COULD CHASE THAT ALIEN SHIP AWAY OR DESTROY IT, ADMIRAL KANOS?"

"Chase it away? Nothing unfortunately, Your Majesty. However, our long range nuclear missiles can easily reach our moon. We could fire them in a massive salvo that would be able to bracket the whole moon. With luck, that should have good chances of destroying that alien ship. Even if they don't, then our moon would become unlivable for those aliens and they would be forced to leave our system afterwards. Better for us to lose the use of our moon than to let an alien race take possession of it, Your Majesty."

Shumesh III needed only a short moment to think about that before he nodded his head.

"I totally agree with that. If we can't have it, then nobody will have it. Prepare at once a missile firing plan and present it to me when it will be ready to be executed. Go!"

22:58 (Universal Time)

Command bridge of the KOSTROMA

Halfway between Hyanesu and Gliese 581c

Tina, having taken some time with her toddler son, had stepped on her bridge only a few minutes ago when Amin Jamilian stiffened in his chair and shouted a warning.

"CAPTAIN, WE ARE DETECTING THE LAUNCH OF HUNDREDS OF OBJECTS FROM THE THIRD PLANET. THOSE OBJECTS HAVE JUST CLEARED THE PLANET'S ATMOSPHERE AND ARE NOW ACCELERATING AT A HIGH RATE TOWARDS HYANESU."

Tina, who had studied extensively the history of modern wars on Earth in order to then prepare herself for the incoming 2315 War against the Terran Federation, didn't take long to understand what was happening and visibly paled.

"My god! A missile strike! How many of those objects can you count, Mister Jamilian?"

"Our sensors are detecting a total of 827 of them, Captain."

"Are they nuclear-tipped?"

"One moment, please... Yes! There are definite radiation signatures for plutonium masses coming from them. They are not the signatures of nuclear rocket engines, Captain."

"Jesus! Over eight hundred nuclear-tipped missiles heading for Hyanesu? They would be the death of the entire moon if we don't stop them. Spirit, you alone can manage fast enough the kind of massive fire control calculations we would need for our lasers to destroy all of those missiles before they could reach Hyanesu. Can I count on you for this?"

"Of course, Tina! Starting fire plan calculations now!" replied the artificial intelligence super-computer. With that off her mind, Tina's next move was to call the CENTURION.

"CENTURION, this is the KOSTROMA. Urgent message, over!"

An operator on the patrol cruiser responded at once to her.

"This is the CENTURION. Go ahead, KOSTROMA."

"CENTURION, this is Fleet Captain Forster. We have detected the launch of 827 nuclear-tipped missiles from the third planet. They are now heading at high acceleration towards Hyanesu. My KOSTROMA will do its best to intercept those missiles, but we may get swamped, with some of the missiles breaking through. I need you to take a second line intercept position and stop the missiles that may filter through me, over."

The voice on the radio then changed to that of Captain Kondo.

"I am moving the CENTURION into intercept position now, Fleet Captain. CENTURION out!"

Feeling better now, Tina punched her intercom button, setting it on 'ship-wide announcement'.

"Attention all hands! Attention all hands! This is your Captain. Battle stations! Battle stations! All non-essential personnel and passengers are to put on their emergency vacuum suits and wait in their quarters or close to the nearest escape pods. Engineering control: we will need the maximum electrical power possible for our lasers and our rail guns. All airtight doors and hatches are to be closed immediately. All the ship's sections will switch to local power generation and local life support systems, while the common ventilation shafts will be shut tight. Power on and disperse all our damage control and firefighting robots. Those measures will stand until further notice. Captain out!"

She had just finished giving her address when Amin Jamilian spoke up.

"Our laser batteries have started to fire, Captain."

"Good! Keep your eyes out for any extra missile launches from the third planet, Mister Jamilian."

"Aye, Captain!"

Then, Tina found herself with nothing to do but observe and wait, leaving her crew and Spirit to do their job. She had learned a long time ago that a micro-managing captain only ended hurting his or her crew performance, especially during an emergency. Calling up a tactical situation display on one of the screens attached to the armrests of her command chair, she watched anxiously as the KOSTROMA's laser fire, directed by Spirit, started taking out missile after missile. What worried Tina was the sheer number of missiles to deal with. Those missiles were also proving to be quite fast. Her nervousness increased as it soon became evident that some of the missiles, mostly those the furthest from the KOSTROMA, were going to filter through despite the astounding job done by Spirit in directing their laser fire. Amin Jamilian suddenly shouted a warning on an urgent tone.

"TWO OF THE NEAREST MISSILES HAVE CHANGED COURSE AND ARE HEADING FOR US, CAPTAIN! THEY SHOULD IMPACT IN ABOUT TWENTY SECONDS."

"HAVE OUR SECONDARY RAIL GUN TURRETS ENGAGE THEM WITH A MASS CONCENTRATED VOLLEY!"

"AYE, CAPTAIN!"

Jamilian then switched the eighteen 25 meter-long rail guns of their secondary turrets, lodged inside the six huge landing pods of the KOSTROMA, to 'automated anti-missile mode' by simply pressing a button. While those rail guns were minuscule compared to the four 150 meter-long heavy rail guns of their main battery, those smaller weapons still threw tungsten-steel pellets out at a muzzle velocity of eight kilometers per second and at a cadence of 900 pellets per minute. The impact of a single pellet on a typical ship hull would burn through it easily via the kinetic energy of such an impact, which made such rail guns ideal for short range fighting. A total of 120 pellets per second soon started raining in the direction of the two incoming missiles, straddling their trajectories nearly at once. One of the missiles was hit after four seconds of fire, with the impact of the pellet vaporizing its nose section, which contained its warhead and guidance package. That impact also deformed the body of the missile and took out its propulsion unit, throwing the whole missile off-course in an uncontrolled spiral. The second missile proved to have a bit more luck and survived another nine seconds before being hit and essentially destroyed. However, that left a cloud of metallic debris expanding in space as it still sped in the original direction of the missile. Those debris, being nearly impossible to further destroy by now, then intersected the KOSTROMA's trajectory in space. Some flew by the ship, missing it by a few hundred meters, but others actually hit the giant cargo ship at velocities of around 1,300 meters per second. Any lesser ship would have sustained some significant damage from those hits, but the truth was that the KOSTROMA would easily qualify as a 'battleship' by any standards. Its regular outer hull was at a minimum made of a sandwich consisting of two ten centimeter-thick steel plates joined by thick steel framing ribs and with the inner space between the plates filled with anti-radiation material. To that had been recently added one meter-thick appliqué armor plates of tough ceramic composites, which covered the vital parts of the ship. The sheer size of the KOSTROMA, with its sturdy construction and structural rigidity and resistance, also helped absorb the impact of the few missile debris which hit it. On the bridge, those impacts were barely felt or heard, with only a couple of lights lighting up on the control panels of the ship's damage control center. As a result, the laser fire was not affected at all and continued picking up missile after missile. When she saw that the surviving missiles were now passing by her on their way to Hyanesu, Tina gave an urgent order to her pilot.

"FRIDA, CHANGE COURSE AND FOLLOW THESE MISSILES ON A PARALLEL COURSE, SO THAT WE COULD CONTINUE TO ENGAGE THEM.

HOWEVER, DON'T STAY RIGHT BEHIND THEM, OR WE COULD BE IN THE WAY OF THE FIRE FROM THE CENTURION."

"Understood, Captain!"

On the bridge of the CENTURION, Miki Kondo was anxiously following the KOSTROMA's battle with the missiles and waiting for her own lasers, which were much less powerful than those of the cargo ship, to be within effective range of the incoming missiles.

"Time to start firing our lasers, Mister Voronzof?"

"Another two minutes and the missiles will be within our laser effective range, Captain. If I may, I made a quick calculation and, at the present rate the KOSTROMA is shooting down those missiles, there will be approximately 183 missiles left by the time we will open fire. The KOSTROMA is truly accomplishing miracles right now, but there are simply too many missiles for it to all shoot them down before they enter Hyanesu's atmosphere."

"Then, we will have to do our part, Mister Voronzof. As the Fleet Captain aptly said, we are now the last line of defense for this moon and for the Hoshis. If we fail, millions may die."

"Understood, Captain. I will do my very best."

"You always do, Mister Voronzof." replied Miki, in order to encourage her weapons officer. However, what she had just said about being the last line of defense was unfortunately too true.

Two minutes and eleven seconds later, the laser batteries of the CENTURION started to fire at the missiles still speeding towards Hyanesu. To increase to the maximum her chances to hit the incoming missiles, Miki had elected to place her ship very close to the calculated trajectory of the missiles, in order to reduce the angular speed of her targets. This also made it possible for one or more missile to detect the CENTURION and then swerve towards it, like what happened to the KOSTROMA, but she was ready to accept that risk in view of what was at stake. Her decision to cut the angular separation between her ship and the missiles proved at once to be an effective one, with the laser batteries of the CENTURION starting at once to shoot down missiles at a high rate. With the KOSTROMA still firing and decimating the missiles in the tail of the swarm, the number of intact missiles dropped dramatically, putting hope in Miki's

heart that they would succeed in destroying in time all of the missiles. Then, Lieutenant Voronzof shouted in alarm.

“MISSILE VEERING OFF...”

He couldn't finish his sentence before a blinding flash of light filled the holographic display screens of the CENTURION's bridge. A tiny fraction of a second later, a shock wave hit hard the patrol cruiser, throwing it in a mad tumble through space. More than half of the bridge's work stations short-circuited at the same time in explosions of sparks. Temporarily stunned by the brutal shock, Miki started to cough as acrid smoke from burning wiring insulation filled the bridge.

“CLOSE YOUR SUITS VISORS, NOW!” shouted Miki before doing so herself. Breathing quickly some filtered air first, she then looked around her to assess the damage to her ship. The bridge was now in semi-darkness, with the holographic screens off and with emergency lights now alone to provide some illumination. The moving lights from spacesuits' helmets then reassured her that at least some of her bridge crewmembers were still alive and effective.

“DAMAGE REPORT! CAN WE STILL FIRE OUR LASER BATTERIES?”

“NEGATIVE, CAPTAIN!” replied at once her weapons officer. “OUR FIRE CONTROL SYSTEM IS OFFLINE AND OUR RADARS ARE DEAD!”

Miki swore quietly to herself: that meant basically that they were now defenseless...and blind. If another Vorlak missile decided to track her ship, then they would be as good as dead. Using one of her command chair's display screen, which was still functional, she contacted the ship's damage control center, where the second engineer of the CENTURION answered her.

“Lieutenant Commander Turner, damage control center!”

“Commander, how extensive is the damage? Do we have casualties?”

“The casualty count is still unclear, Captain, as contact has been lost with a number of compartments. Some of the outer sections have been holed and have depressurized, while our main thermonuclear drive is offline. The half of our sensors facing the explosion burned out at once, while we have major short-circuit damage to our wiring all over the ship. We are now strictly on emergency power and are in no state to fight, Captain.”

“How long to repair at least the essential systems, Commander Turner?”

Miki didn't like the hesitation by Turner before answering her.

"It will take at least six hours to restore most of the life support systems. However, repairing our main drive and external sensors will be a job for a space yard: we simply don't have the spares needed aboard."

"What about our Koomak Drive?"

"Forget it, Captain: it is dead right now, with most of its circuitry fried. I'm sorry but that's our situation now."

"Well, we at least are still alive...for the moment. Do your best in the meantime."

"Aye, Captain!"

Miki Kondo sat back in her command chair, feeling discouragement. Apart from her ship being helpless, she couldn't even say if her efforts and those of the KOSTROMA had saved Hyanesu from being devastated by nuclear explosions. She then looked at her communications officer, Lieutenant Commander Yusuf Abadi.

"Commander Abadi, are we able to contact the KOSTROMA right now?"

"Uh, one moment, Captain: our UHF, VHF AND HF band radios are presently out but I will try on the MF bands."

"I'll wait!"

Miki had to wait less than half a minute before Abadi twisted his head to smile to her.

"I have Fleet Captain Forster online, Captain. I am transferring the call to your command chair."

"Thank you, Commander." replied Miki before opening the link on her sole working display screen. Seeing the image of Tina Forster helped her gain some confidence.

"Fleet Captain, my ship is presently blind and without propulsion and I am still waiting for casualty reports. Did we succeed in destroying all the Vorlak missiles before they could reach Hyanesu?"

"Yes, thank goodness, although you took out one of the last ones in a rather unorthodox manner."

Tina's attempt at lightening the mood actually worked, with Miki giggling briefly at it.

"Well, that method was not exactly my preferred choice. I was just told that my ship is basically out of business at this time and will need major repairs at a space yard, as we lack the spares and tools needed for the job. What do you suggest that we do now?"

"Well, after this attempt at premeditated genocide committed by those Vorlak bastards, a strong reply is definitely in order. However, we will take care first of at least

some repairs to your ship first. My KOSTROMA will come and grab your ship, using its stern towing station, so that we could connect directly our two ships. We will then transfer your crew aboard the KOSTROMA, where it will stay while we effect the repairs we can. Our ship workshops are actually very capable and we have large stocks of spare parts and structural parts aboard. With luck, we should be able to restore most of your systems.”

“And what then, Fleet Captain?”

“It will depend on the degree of repairs we will be able to do on your ship, Captain Kondo. I would like at least for your ship to be functional enough to stay in orbit of Hyanesu and serve as an orbital defense station for the moon, in case of another Vorlak attack. Only then will I go to the third planet and deal with the Vorlaks.”

“Fleet Captain, before you leave for the third planet, I suggest that you transfer to your ship my reserves of special anti-matter munitions, along with a couple of weapons specialists. You will need them to strike the Vorlaks.”

Tina was silent for a moment, appearing conflicted. She finally nodded her head once, her face somber.

“Normally, I would never agree to even carrying anti-matter weapons on my ship, much less so using them. However, the Vorlaks have just attempted what was a clear case of premeditated attempted genocide, with the goal of wiping out completely another sentient race. That attack would also have destroyed a whole moon and made it uninhabitable for centuries. Added to the barbarous acts they already committed in the past against the Hoshis, this makes them a clear and severe threat to all the races that either live already in this system or that will visit the system in the future. As much as this goes against all my moral principles, we are now left only with one solution to this space threat: to destroy the Vorlaks’ heavy industries and all space installations and make them unable to travel into space. I will thus accept the transfer of your anti-matter weapons aboard my KOSTROMA.”

“I would also consider destroying another category of Vorlak installations, Fleet Captain: their command and control centers. Let’s cut the head of the serpent at the same time.”

“That I certainly agree with, Captain Kondo. Are your shuttles still operational and able to leave your ship?”

“I will have to check on that first before answering you, Fleet Captain. Why do you ask?”

"I am asking because, if they are operational, I would like you to use them to send down to Hyanesu your embarked space marines, so that they could provide some ground defenses to the main Hoshi villages and towns. The second-generation Koorivars living in Wynona could then serve as your interpreters with the Hoshis."

"That sounds like a great idea, Fleet Captain! I will check on that and get back to you as soon as I have an answer for you."

"Excellent! Please send me a complete casualties and damage report as soon as you will have compiled one."

"I will! CENTURION out!"

Closing the link, Miki sighed to herself: the next hours and days were going to be very busy indeed.

To Miki Kondo's immense relief, the casualties from the missile detonation turned out to be only fourteen wounded, including three severe cases, but no fatalities. However, the initial assessment of the damages by Lieutenant Commander Turner proved to be mostly accurate, with a series of major repairs needing to be done to the ship, repairs which would normally necessitate the use of a space yard. Thankfully, all of the assault shuttles and fighter craft embarked aboard the CENTURION proved to be still intact and operational. Four hours after the missile strike, the 172 space marines embarked on the CENTURION left the ship in six assault shuttles, to go down to a number of selected villages on Hyanesu, while the squadron of eight fighter craft of the cruiser flew off and went to take residence aboard the KOSTROMA, whose newly fitted fighter hangars had been still empty. Then, the giant cargo ship slowly captured with its stern tractor beams the cruiser, which looked puny compared to the KOSTROMA despite measuring over 400 meters in length and 230 meters in diameter. Once nearly glued to the KOSTROMA's stern, the damaged cruiser was grabbed physically by four huge sets of adjustable clamps with rubberized pads which solidly secured the cruiser to the cargo ship. Miki Kondo was the first to transfer to the KOSTROMA via its stern docking airlock, so that she could start discussing right away with Tina Forster the repairs needed by her cruiser.

Miki Kondo was greeted inside the stern viewing lounge of the KOSTROMA by Tina Forster, her chief engineer Rose Tillman, her head electronics engineer Vincent

Reed and her chief electrical engineer, Gengis Kurganovich. They did a quick exchange of handshakes before Miki handed to Tina a thumb drive.

"Here is my complete damage report, Fleet Captain. You will find it to be quite extensive. Thankfully, the nuclear blast, which I estimate to have been of a yield of 400 kilotons, occurred some eleven kilometers from my ship, so we were able to avoid the worst."

"Thank God for that!" said Tina, who then gave the thumb drive to Rose Tillman. "Here you are, Rose. Do your magic on Captain Kondo's ship."

"We will give it the V.I.P. treatment, Tina. Vincent, Gengis, come with me!" As the trio of engineers walked away, Tina gave an encouraging smile to Miki.

"You will be impressed when you will see the kind of industrial production and repair facilities I have aboard the KOSTROMA. By the way, simply call me Tina when in private: I dislike formal protocol, especially of the military type."

"Yet, you are all but in name the senior ship's officer of the Spacers League Navy. By the way, that was some very nice shooting by your KOSTROMA some hours ago."

"Bof! You can thank our central computer, Spirit, for that: she directed our fire plan. If we could change subjects right now, I would like you to tell me more about the anti-matter weapons you are carrying aboard your cruiser, Miki."

"Well, to be more precise, they are not actually weapons: they are only sub-parts on some of our warheads and shells."

"Sub-parts?"

"Yes! Their concept is actually very simple...and very safe. They contain no anti-matter at all, as they basically consist in miniature Koorivar matter-to-anti-matter converters. Those converters, which are no bigger than a small battery cell, are connected to a special fuse circuitry with redundant safeties. Those safeties ensure that the converters won't function until getting a discharge of very specific frequency and amplitude. Even a strong induced electro-magnetic field will not switch on a matter converter. The converter unit can be fitted to either a heavy rail gun shell or to a missile warhead, which can then be stored safely for indefinite periods aboard a ship. Once fired away at a target, the converter circuit will arm itself, powering up a conversion field when achieving either a direct hit or a proximity hit. The matter converter will then energize itself for a micro-second, long enough to instantly convert part of the mass of the projectile containing it to anti-matter. In the case of heavy rail gun shells, about two

kilos of matter will be converted to anti-matter on impact. That anti-matter will then react with the matter of the rest of the projectile, causing a titanic explosion in the range of sixty megatons. If fitted to a missile warhead, a matter converter unit will change to anti-matter some three kilos of matter, causing a ninety megaton blast. By the way, such anti-matter blasts don't produce any persistent radiation, so they are considered to be 'clean' weapons."

Tina was left aghast at first by these numbers, but regained her composure quickly enough.

"And...how many of those 'special munitions' are you carrying inside your CENTURION, Miki?"

"I still have forty converter-tipped missiles and 92 converter-equipped heavy rail gun shells aboard, Tina. I realize that the prospect of using them probably disgust you, but I believe that the Vorlaks actions to date leave us with no other alternative but to use our most powerful weapons against the third planet. If we don't, then the Hoshis will ultimately pay the price in the long run."

Tina had to sit down on a nearby bench as she contemplated the awful destructive power of those anti-matter weapons.

"These things are even more terrible than I had imagined."

"But to not use them now would bring even more terrible consequences in the future, Tina."

"You are right, unfortunately." Could only reply Tina.

Tina could find little sleep during the following days, partly because of all the things to be done, partly because what she was going to have to do soon weighed heavily on her conscience. Two days after the missile attack, a Vorlak ship attempted a reconnaissance mission around Hyanesu but succeeded only in getting destroyed by one of the CENTURION's fighter craft. A further three days later, the CENTURION was declared functional enough to act as an orbital defense station with limited mobility. It was now time to deal with the Vorlak threat in a definitive fashion.



CHAPTER 10 – A TERRIBLE TASK

14:45 (Universal Time)

Friday, May 28, 2320

Command bridge of the KOSTROMA

In polar orbit over Gliese 581c

The mood was downright gloomy on the bridge as the KOSTROMA inserted itself into a high polar orbit around Gliese 581c. Tina was not the only one to be conflicted about their coming task, far from it. The fresh realization that the planet supported a Vorlak population numbering in the billions only added to the crew's gloom. Tina was in fact contemplating from orbit the lights of a mega-city that was probably the capital of the planet, judging from the centralization of most of the electronic communications of Gliese 581c into that city, when the voice of Spirit came up from a viewing screen of her command chair.

"Tina, this is Spirit!"

"Go ahead, Spirit."

"I wanted to tell you that my Vorlak language translation program is now making rapid progress, thanks to the profusion of video and data channels I can now access

since approaching the planet's orbit. I believe that I will be able to translate with fair to good reliability Vorlak communications within a few hours."

"That is great news, Spirit! This could help us a lot to understand the mentality of those Vorlaks and would in turn help us predict their future moves."

There was a short silence then before Spirit continued, something highly unusual for the artificial intelligence super-computer.

"Tina, I know that you and many others are feeling bad about this present phase of your mission and I fully understand how conflicted you are about it. However, even though I dislike violence as much as you do, I believe that this course of action is ultimately the only viable one you could follow."

Tina raised an eyebrow at those words: for a super-computer, however intelligent it could be, to pretend to understand human emotions sounded a bit farfetched, even in the case of Spirit, which she held in the greatest of respect.

"Spirit, you can't feel emotions. How could you understand my present emotions?"

"Tina, I may not truly feel emotions, but I certainly can understand their causes and effects."

"Did you read some books on human psychology in order to claim to understand emotions? Please excuse me if I sound skeptical, but I have a hard time believing that any computer could understand emotions."

"Tina, I have just read the books, studies and analysis concerning human psychology contained in the ship's data banks...all of them. Humans may believe that emotions are unpredictable and mostly spontaneous, but in reality they are only the results of a mix of past life experiences, stimulus and sub-conscious thinking, which make persons react in certain ways when faced with certain situations and parameters. In the same vein, I can safely predict that the Vorlaks' response to our mere presence in this system will not change even if we tried to negotiate with them: their xenophobia and sense of racial superiority is simply too deeply ingrained in them. Those traits are further reinforced by a strong common tendency towards cruelty and aggressiveness that show in their various electronic communications forms."

"Cruelty? How could you judge that simply from intercepted communications, Spirit?"

"Tina, some of the signals from the surface that I presently monitor are those of video entertainment medias, including what you would call 'video games'. Guess which such video game is by far the most popular and is played by the most Vorlaks."

"Uh, fighting games, I suppose."

"Not really, Tina. What is presently the most popular video game around this planet is a torture game."

"A torture game?" said Tina a bit too loudly, making a few heads turn around her. "What do you mean by that?"

"I suppose that it could be called a 'horror' game back on Earth, except that its graphic content is meant to amuse the Vorlaks, not to scare them, if I can judge by the popular responses to the game. In essence, the goal of that video game is to select a particular individual or animal and then compete in finding the most painful way to torture it until it dies."

"But, that's sick!" could only say Tina, genuinely revolted by such a concept.

"It definitely would have people who would play such a game in the Solar System quickly classified as certified psychopaths and get the game in question banned by the authorities. However, here on the third planet, this game has a seal of approval from the government and in fact appears to be quite similar in spirit to the old Roman gladiator games meant to distract the low masses. Oh, by the way, do you know what is now the favorite victim chosen by the gamers using this video game network?"

"Uh, the Hoshis, I suppose."

"Wrong! You are, Tina!"

"WHAT?" exclaimed Tina, stiffening in her chair under a surge of anger. "How could that be? They know nothing about us...or me."

"Wrong again, Tina: the Vorlaks have your image, the same one I used in our pictographic warnings to them. They apparently extrapolated the general shape of your body from that image and introduced your naked figure as one of the victims gamers could select for this torture game. I will of course refrain from showing you clips from some of those game sessions, as that would be utterly inappropriate."

"Humor me, Spirit!" replied Tina, her expression hard.

"Very well, Tina, but you will have been warned."

The image on Tina's screen then changed from that of the serene woman's face portraying Spirit to what appeared clearly to be from a fairly low quality video game.

Thankfully, Spirit did not play the soundtrack that came with the video. Still, what Tina watched for half a minute or so was enough to deeply disgust and sicken her.

“Okay, Spirit: I have seen enough. I get your point.”

“Then, please consider this point while keeping this video game in mind: what do you think would eventually happen to any Koorivar or Human colony or settlement that we would establish on either Oceana or Hyanesu if we don’t eliminate the threat represented by the Vorlaks? What do you think will happen to the intelligent sea turtles of Oceana or to the other possible sentient marine life forms there if the Vorlaks ever land on Oceana? Pacifism is a nice thing, Tania, but not when it would result in the oppression or even death of masses of innocent people. I believe that the history of Humanity has shown many times already that groups of sheep can’t cohabitate in peace with wolves.”

That left Tina silent for a long moment as she mentally mulled Spirit’s words. The damning thing is that Spirit’s analysis was correct and was amply supported by known history.

“Thank you Spirit for your presentation. You made the goals of our mission clearer to me.”

“Glade to be of help, Tina.”

Some twenty minutes later, as Tina was still sitting in her command chair, Patricia O’Neil gave a warning from her sensors station.

“Tina, we have a large space structure coming into view dead ahead. It looks like some sort of orbital installation.”

“Check it out with our main optical telescope, Patricia. Find out what it is exactly.”

“On it, Tina!”

Patricia proved true to her word, providing more information a mere twenty seconds later.

“That structure is definitely a space yard, and a big one, Tina. I can see at least six ships of various size and design under construction. I would say that this space yard measures a good two kilometers in length and over 800 meters in width and height.”

“That is indeed a significant space installation. Our lasers would take a lot of time to inflict serious damage to it. Renée, load one anti-matter shell in one of our heavy rail guns and fire it at the center of mass of that space yard.”

“Loading one anti-matter shell in Heavy Turret Delta!”

“Captain, we have six small craft departing now from the space yard complex.” suddenly warned Amin Jamilian.

“Probably interceptors or fighter craft. Renée, hold on to firing our heavy rail gun: we will first use our lasers on those six fighters. Hien, fire 100 megawatt beams at those six craft.”

“Firing lasers now!... Targets destroyed, Captain.”

“Excellent! Renée, you may fire Turret Delta.”

“Aye, Captain! Shell on the way! Impact in 29 seconds.”

“Sensors stations, mask our sensors to prevent damages to them from the flash of the explosion. Unmask them in 45 seconds.”

Tina then concentrated her attention on their lidar³ picture, which would not be affected for more than a second by the expected anti-matter explosion. At the instant called by Renée d'Argenteuil, the lidar screen was temporarily blinded by a huge explosion. That flash then gave place to a multitude of dots of varying sizes flying off in all directions, as the huge space yard complex was blown apart in chunks of varying size. Some of those chunks flew outward from the planet but most were projected downward, towards the surface. Entering the upper layers of the planet's atmosphere after a couple of minutes, those debris then started burning from the friction with the air of the upper atmosphere, soon becoming balls of flames with smoking trails which were impossible to miss in the sky of Gliese 581c. The smaller chunks completely burned up before they could hit the surface but many of the bigger pieces were still nearly whole and impacted on one of the continents or crashed into an ocean, causing mayhem and destruction on the ground, plus tsunamis at sea. Tina observed those results with a detachment that surprised a few of her bridge crew, starting with Gerald Holmes, who was occupying his customary V.I.P. chair near Tina's command chair.

Continuing along its polar orbit as if on a simple excursion, the KOSTROMA engaged in reality in a detailed and focused mapping of the planet, bent on identifying the major industrial, military and government installations on which the Vorlak space effort depended. The only other space installation destroyed by the KOSTROMA during

³ Lidar : Short to medium range type of sensor using laser beams instead of radar echoes to locate objects.

its first polar revolutions was what appeared to be a military orbital terminal, where a number of troopships and cargo ships were docked. That terminal, also of significant size, disappeared in the fifty kilometer-wide fireball of an anti-matter rail gun shell, with few solid chunks left of it to fall down and burn in the planet's atmosphere. Strangely enough for Gerald Holmes, the furious Vorlak response he was expecting amounted to only a handful of attacks by small craft, attacks which were easily crushed by the KOSTROMA's batteries. Intrigued, he left his seat and walked to Tina's command chair, waiting for her not being busy giving orders or receiving information before speaking to her in a low voice.

"Tina, I was expecting the Vorlak response to our presence in orbit to be, well, a lot more robust. Instead, it is as if the Vorlaks have run out of ships to defend themselves."

"Actually, Gerald, I believe that this is exactly what is happening. You have visited Earth many times in the past few years. How would you characterize the space traffic and installations around Earth?"

"Crowded!" replied Gerald at once. "There must be hundreds of space terminals and orbital stations around Earth, plus thousands of artificial satellites. The ships going in and out of Earth orbit look at times like old ground cars traffic jams."

"And what is your impression of the space traffic around this planet?"
Gerald then understood what Tina was coming at and looked at her with his mouth half opened.

"The space around this planet actually looks nearly empty to me. Did I miss some things I should have seen?"

"You missed very little, Gerald, for the simple reason that there is very little to see. Up to now, everything to date indicates to me that the Vorlaks are still in the primary phase of interplanetary space travel. Nearly all their ships, saved for dedicated landing craft, look incapable of atmospheric flight and their light construction and architecture tells me that they had to be built piecemeal in orbit from parts flown from the surface. Also, their ships' architecture demonstrates that the Vorlaks have no artificial gravity and use centrifugal designs to create a felt gravity on their ships, while their thermonuclear fusion engines are low efficiency, first generation models. My belief is that the Vorlaks gained an interplanetary capability only a century or so ago and have progressed slowly since. Yet, what did they do while they were still barely able to leave their planet's orbit? They went to their moon, Hyanesu, and immediately attacked the

local sentient race, taking it into slavery and even butchering and eating the Hoshis. They even fired on an alien ship without so much as giving it a warning and destroyed one of its shuttles. What do you think that they will do once their space travel capabilities will improve, Gerald?"

Gerald's face reflected some discouragement as he answered her.

"They will probably continue to play the space bullies, but throughout this whole solar system."

"Correct! The Vorlaks may think of themselves as a superior race worthy of dominating all other races around them, but in reality they are little more than a bunch of bullies with a two-bit space capability. Furthermore, they also show a strong propensity for cruelty, sadism and xenophobia which would make some of our worst past dictators in Earth's history look like pikers in comparison. For the sake of the Hoshis on Hyanesu and that of the intelligent sea turtles and whales of Oceana, those bullies must not be allowed to leave their planet and sow death and misery around this system, ever! We are in the process of identifying and locating all the installations and industrial plants the Vorlaks use to develop their space capabilities and we will then destroy these facilities. We will also eliminate their leaders, who bear the most blame for this despicable picture, and I will feel much better once that will be done."

Shaken by the determination in her voice, but not finding fault in her logic or reasoning, Gerald walked away from her command chair, then decided to leave the bridge and return to his apartment to get some rest there. He was not too keen anyway to witness what was to come in the next few hours.

A few minutes later, Tina got up from her command chair and spoke to Renée d'Argenteuil, still sitting at one of the weapons stations.

"Renée, I am going to rest a bit in my day cabin. You have the bridge. Do not fire again unless attacked or if you encounter more Vorlak space installations or ships in flight. Continue our mapping job and wake me up when it will be completed."

"Got it, Tina!"

Tina then walked down the stairs between her platform level and the lowest platform level and entered the rotunda containing the few elevator shafts ending at the level of the bridge complex, along with a small crew coffee lounge and a pair of washrooms. Instead of taking one of the elevators, she walked to one of the doors opening on the rotunda and entered her day cabin, a small, sparsely furnished cabin with a bed

reserved for her use when she needed to rest while staying close to her command chair. Locking the door behind her, she went to sit at a small work table supporting a computer terminal and powered the computer, opening a link with Spirit.

“Spirit, I need your help with something...”

19:01 (Universal Time)

District canteen, Sector 06

Imperia (capital city of the Shumesh Empire)

Gliese 581c

Gorak needed a strong drink after his shift had ended for the day at one of the administrative complexes in Imperia. Along with a group of seven of his Vorlak coworkers, he thus had gone to one of the district canteens dotting this sector of the capital city and had started to drink ale with them while discussing and watching from time to time the television screen suspended over the bar. That discussion had been done in low, nearly whispered voices and while not saying anything that could have been construed to be against the government: government-paid snitches were everywhere, while surveillance cameras and microphones could be anywhere. Gorak and his coworkers were certainly not subversives or traitors, but many nasty rumors were running around about an alien ship having arrived in the solar system and having attacked Vorlak ships. Even discussing such rumors could attract accusations of disloyalty, in which case the accused could expect to be promptly arrested and interrogated.

Gorak, like the other patrons of the canteen and his coworkers, was making the appearance of listening religiously to the hourly government news bulletin as it played on the screen above the bar, with all conversations having temporarily stopped: watching and listening the government news bulletins and public announcements was mandatory, not a choice, so he pretended to listen with great interest to the platitudes delivered by the female newscaster: at least she was nice looking. To his secret deception but not surprise, the newscaster did not say anything about the rumored alien ship. Gorak was taking a sip of his ale when the image and sound on the television set suddenly became garbled. He was frowning at that, thinking that some idiot at the government news agency was going to be severely punished for such a glitch, when a new image formed

up on the TV screen. Gorlak nearly spat out his ale when he saw that the image was that of a spaceship...and not a Vorlak one! One camera shot taken from inside that ship then showed two bipedal alien beings sitting at the controls of the craft and piloting it towards another alien ship visible in the distance in the blackness of space. The first ship, a fairly small one as far as Gorak could judge, was then shown approaching the second ship, which grew progressively on the TV screen. Exclamations ran throughout the canteen when the true size of the second ship, which dwarfed the first one, became evident. Then, a soft voice speaking a fair Vorlak sprinkled with minor mistakes and misspellings came out of the TV set while the first ship was shown flying by the gigantic second ship.

“Vorlak people, this is the captain of the KOSTROMA, the larger ship you are now seeing on your screens. Me and my ship came to this solar system with peaceful intentions, in order to find a long lost ship that may have stopped in this system.”

The image then changed to show the inside of what looked like a large ship's bridge deck centered on one bipedal alien sitting in a padded chair positioned above a semi-circle of work stations occupied by other aliens. One of the customers of the canteen then shouted out in excitement.

“HEY, THAT'S THE SAME ALIEN WITH WHICH I WAS PLAYING WITH IN THE LAST SESSION OF THE PAIN GAMES!”

That made Gorak raise one of his thick eyebrows: that sort of confirmed to him that this was not some kind of propaganda by the government services. The female voice then spoke again in Vorlak, making all the customers of the canteen fall silent.

“While we did not find in this system the ship we were looking for, we found instead your ships on and around your moon, busy enslaving the local sentient race, the Hoshis. We also found that you were butchering the Hoshis for their meat, an act we found most repugnant. When my ship approached your ships to ask them to leave the Hoshis alone, your ships opened fire on us. That forced us to reply and destroy your fleet orbiting around the moon. Then, your government fired a massive salvo of nuclear-tipped missiles at the moon, with the intent to render it uninhabitable and to chase us away. We destroyed every one of those 827 missiles before they could reach the moon and commit what we would have considered as the planned genocide of a whole sentient race which never attacked you. Such an attempted genocide is something that we can't let go by without a severe punishment for your leaders. We could easily destroy the Vorlak civilization in a matter of hours, but we will give you a last warning

and a last chance instead, along with a measured punishment. From this time on, Vorlaks are to stay within the atmosphere of this planet, never to venture into space again. Any derogation to that rule will result in the destruction of the ships involved and in further punishment to your planet. If you try again to harm the Hoshis or other beings living in this system, including by firing long-range missiles or beam weapons, then your world will be sterilized. This will be our only warning. We will now punish the truly guilty ones in this affair: your government and your power-mad emperor. Don't force us to come back, for your own sake."

The image of the alien bridge then disappeared, to be replaced for a few seconds by that of a very confused-looking female Vorlak newscaster. The image then became blank, save for a hastily written message on the screen announcing some 'technical problems'. As soon as the screen went blank, the crowd in the canteen exploded into exclamations, shouts, comments and questions. However, all that stopped again at once when the noise and vibrations from powerful explosions started to be heard and felt a few seconds later. One of the customers of the canteen who then ran to one of the windows of the local shouted out loud.

"THE IMPERIAL PALACE COMPLEX IS UNDER FIRE! THE CENTRAL DOME HAS ALREADY COLLAPSED!"

Gorak hurried to one of the windows, elbowing his way through the crowd so that he could see by himself what was happening to the imperial palace. What he saw was a heavy deluge of missiles, which were quickly reducing the palace complex into a massive pile of rubble. An intense flash of light in the distance, well outside the city, then forced him to close his eyes for a moment while raising one arm to mask his face. In doing so, he was able to feel the residual heat from the distant blast on his arm, proof of the huge power of the explosion.

"By the gods! This came from the direction of the imperial resort complex on the coast."

19:40 (Universal Time)

Command bridge of the KOSTROMA

In polar orbit around Gliese 581c

"Fire plan completed and all targets destroyed, Tina."

“Thank you, Renée!” replied Tina after a sigh of relief: she definitely disliked war, even though she had just proved again that she was good at it. Gerald Holmes and Shanandar then came to her command chair to shake her hand and congratulate her.

“Tina, that idea to give to the Vorlaks a video warning before delivering a limited strike was pure genius. You could have easily turned most of this planet’s continents to waste, but ended using only...what, a dozen anti-matter rail gun shells in total, none of them against population centers?”

“Make it nine anti-matter shells, plus the two shells we fired at the orbital yards and terminal. We vaporized the Emperor’s personal resort retreat-cum fortress, the castle/fortress/military base of five regional governors, one state arsenal and two astroports. If the Vorlaks don’t understand my warning after this, I don’t know what will convince them, Gerald.”

“Tina,” said Shanandar, “your response to the Vorlak threat could not possibly have been more restrained, in view of their attempt at committing a mass genocide. We Koorivars are ingrained pacifists, but we can easily understand and accept your actions today.”

“Thank you, my old friend. This helps me a lot in chasing the guilt I still have about using such terrible weapons.”

“And what are you planning to do next about the Vorlaks, Tina? How will we make sure that they don’t try again to fly spaceships in the future, short of us keeping warships around this planet on a permanent basis?”

Gerald’s question made Tina think of a moment before she answered him.

“I think that the simplest solution to that would be to place in orbit around Gliese 581c a number of armed robotic stations which will then watch the planet and the space around it, with orders to automatically destroy any craft, missile or ship which will rise out of the atmosphere. Of course, we will still need to send from time to time patrol ships to this system, to make sure that the Vorlaks are not playing tricks in our back.”

“Hum, a good idea, actually. Building such robotic watch stations should be relatively simple and inexpensive and I am sure that the Spacers League will quickly unblock the necessary funds for their construction. I could travel again in your jump-capable shuttle to return to the Solar System and present this plan to my wife.”

“That could be done, Gerald. I will however need to stay in this system for a few more days and weeks, time to continue repairing the CENTURION. I believe that my KOSTROMA will end having to bring the CENTURION back to Earth and the Avalon

Space Yards: the recalibration of the cruiser's koomak Drive is a very delicate affair that could only be done in a fully equipped space yard. Before departing this system with the CENTURION, though, I believe that my ship's workshops could produce by themselves at least a couple of robotic orbital watch stations. We could then use some of the missiles stored in the CENTURION to arm those stations."

"Your onboard workshops could really produce such stations, Tina?"

Tina smiled in response to Gerald's question.

"My dear Gerald, never underestimate the capabilities of my KOSTROMA. It was built to be self-sufficient in nearly all respects."

She then turned to face Shanandar.

"My friend, we have here in this system two worlds which could accommodate in nearly perfect conditions Koorivar refugees, with the local race on one of them, Hyanesu, having already stated that it would welcome such refugees. What do you think about that?"

"I think that Hyanesu would indeed be an ideal resettlement location for my people, and so would be Oceana...if the sentient sea turtles eventually respond favorably to our request. We have already a number of prefabricated modules, along with thousands of tons of supply and equipment, hooked to the flanks of the KOSTROMA and ready to be installed on the ground. The only problem I see is the fact that the refugees from the old mine in the Gliese 667C system are mostly uneducated and lacking in technical skills and would be challenged to operate and maintain those modules by themselves. They could always be helped by trained Koorivar technicians, but we don't have too many of them onboard the KOSTROMA."

"And I will certainly want you to stay on the KOSTROMA for the rest of our search and rescue mission, Shanandar: you will be vital for me to complete our mission."

"I certainly realize and accept that, Tina. Why don't we go continue this discussion in front of a nice salad? I am famished!"

"A great idea! Let's go!"



Underwater section of a floating sea city on Oceana (Gliese 581d).

CHAPTER 11 – A NEW ERA FOR HUMANITY

09:52 (Universal Time)

Monday, May 31, 2320

Corporate headquarters of the Vesta Consortium

City of Kirkland, Vesta asteroid, Main Asteroid Belt

Solar System

Karl Langemann, the powerful CEO of the Vesta Consortium, was reviewing production and costs numbers on his personal computer when his personal aide and confidante, the beautiful Agneta Braun, entered his office, a printed message in her hand and confusion on her face. That last point immediately put Langemann on alert: his personal aide and secret lover was a highly intelligent woman with a strong character. For Agneta to be confused took quite a lot.

“What do you have, Agneta?”

"A message that doesn't make sense, Mister Langemann." replied the aide, who called him by his first name only when in private. "We just received a message from Callisto Prime, inviting you to an urgent meeting of the Spacers League Council."

"So?"

"So, that meeting is to be held on Callisto Prime tomorrow morning, sir."

"What? There must be a mistake about the date of that meeting: it takes a fast ship a minimum of six days to go from here to the Jupiter System."

"That's what I thought as well, so I sent back a confirmation request. The problem is that the offices of Governor Robeson just sent back a response, confirming the time of the meeting for tomorrow morning at nine. It also said that a shuttle will arrive shortly here on Vesta to pick you up and requested that you bring with you one prefabricated structures senior engineer and a production manager."

Langemann sat back in his captain's chair, truly intrigued.

"What the hell kind of game is Janet Robeson playing?"

"A highly sensitive and urgent one, if I can judge from her message. Here it is."

"Thank you!"

Reading quickly the short message, Langemann then raised his nose to look at Agneta, some misgivings on his face.

"This message still doesn't make sense. However, if Robeson has sent us a shuttle that is about to arrive here, then any lateness to this meeting on my part will be on her. Have my suitcases made for two weeks of travel and tell George Melville and Tran Li to pack their suitcases and work laptops as well...quickly."

"Right away, sir."

The 42 year-old blonde then walked out at a hurried pace, leaving the 61 year-old industrialist and geologist to wonder what this all meant.

Some seventy minutes later, Karl Langemann was arriving at the underground hangar of the Kirkland Astroport reserved for the use of Vesta Consortium executives, accompanied by Agneta Braun and two senior experts. They found one personnel shuttle waiting for them there, with a number of people standing outside the craft in order to move a bit around before departure. Three of those persons were evidently crewmembers of the shuttle, including a ravishing young Asian woman who got a warm smile from Karl. The others were however a real surprise for Langemann: they included President Claudia d'Arcy of the Earth's Northern Alliance, Governor Charles Watts of

Mars, Toru Tomonaga, the CEO of the Ceres Consortium, Gregory Mishkin, the CEO of the Sverdlorsk Group, based on Hygiea, and Jacobus Stein, the CEO of the Pallas Mining Industries, plus a good dozen aides. In addition, there was a large group of 25 Koorivars, led by their political leader on Earth, Sheraz. Taking the time to shake hands in succession with everybody around while presenting his aides, Langemann then asked a question in a low voice to Sheraz.

"I knew that the Koorivar community established on Vancouver Island is now an official member of the Spacers League, but why such a large delegation, Administrator Sheraz?"

The Koorivar political leader, who was much shorter than Langemann, like all Koorivars, smiled in response.

"Oh, I only brought two aides with me for the meeting. My other people are here because they are going to embark on the KOSTROMA later on."

"Aah, the KOSTROMA. So, that is how you all could be here so fast."

"Uh, not exactly, Mister Langemann. This shuttle does belong to the KOSTROMA but the KOSTROMA is still 22 light years away, in the Gliese 581 system."

"But, how..." could only say Langemann, stunned by that declaration. In response, Sheraz gently led him by one arm to the front of the landed shuttle, where he showed him a sort of small dome at the front that could split open in two.

"This is a Koomak Interstellar Drive device, Mister Langemann, a Koorivar invention. This shuttle actually travelled by itself between the Gliese 581 system and our Solar System."

Langemann was left speechless for a moment before he could regain his wits.

"That's it? The famous Koomak Drive can be this compact?"

"Yes, it can! In fact, the new capabilities that it is bringing to your Humanity and to the Koorivars will be one of the main subjects of discussion at tomorrow's meeting."

"Well, I'll be!" said Langemann, whose mind was already filling with dreams of producing dozens of starships and new space installations for burgeoning Human and Koorivar colonies around the stars. He then excused himself with Sheraz and nearly ran to Agneta Braun and his two experts, to tell them about the Koomak Drive mounted on the shuttle. That is when the pilot asked his passengers to board his shuttle for the trip to the Jupiter System. Fourteen minutes later, the shuttle was emerging at the surface of Vesta, on top of a giant elevator linking the surface landing pads of the large asteroid to the underground installations of the Kirkland Astroport and of the city it served. The

craft then took off directly from the elevator pad, using its gravity sail propulsion system. Langemann, with Agneta Braun sitting beside him, was settling into his seat for a trip of still unknown duration when a short orange flash filled the cabin for a fraction of a second. Before he could ask what had happened, the voice of the pilot came out of an overhead speaker.

“Ladies and gentlemen, we are now inside the Jovian System and in sight of Callisto. The orbital approach procedures and our landing on Callisto should take approximately forty minutes. Government limousines sent by Governor Robeson will be waiting for you at the Callisto Prime Astroport and will then drive you to your quarters at the guest house of the Government Convention Center.”

Governor Charles Watts, of Mars, who was sitting across the aisle from Langemann’s seat, then extended out one arm to gently pat the shoulder of the stunned executive.

“Welcome to our new future, Karl.”

17:04 (Universal Time)

Suite 304, Guest House Annex

Callisto Prime Government Convention Center

Callisto Prime, Callisto moon

Jovian System

Agneta Braun was the one who answered the light knock on the door of the suite given to the Vesta delegation. She then found herself facing a young female government page who smiled to her and presented her an envelope lying on a silver tray.

“Good afternoon, miss. Governor Robeson is inviting the members of the various Spacers Leagues delegations to an informal group supper tonight at six thirty, in the banquet hall of the convention center. The dress is to be relaxed.”

Taking the envelope from the tray, Agneta then bowed her head to the page.

“We will be glad to attend. Thank you very much!”

Closing and locking the door, Agneta returned to the main lounge of the suite, where Karl Langemann was reviewing with George Melville and Tran Li production statistics for the Vesta Consortium, in advance of tomorrow’s meeting.

“Mister Langemann, we have an invitation to attend an informal group supper at six thirty. It will be relaxed dress.”

Her last words made Karl smile in amusement as he took the envelope offered by his aide.

"Janet Robeson always hated strict protocol procedures. I must say that it suits me just fine. I can bet that the menu will be a help-yourself buffet, rather than a sitting service."

"A help-yourself buffet for the heads of the Spacers League?" said George Melville, Karl's top design engineer. "Wouldn't that be a bit too, uh, informal for such a high-powered supper, sir?"

Karl grinned widely in response.

"If we were not so many, Janet could even have invited us to a home-cooked supper at her residence. Her husband Gerald is said to be a very good cook and the Governor's apple pie is supposed to be sublime."

"Aaah, apple pie!" sighed Agneta. "I haven't eaten that in a long time."

"And what's stopping you, my dear Agneta? We do produce apples in the hydroponic gardens of Vesta."

"It's a self-inflicted wound: I am trying to prevent gaining weight, so I have been avoiding pastries for the last few months."

"I see nothing wrong with your waistline, Agneta. Indulge yourself tonight: it would make me happy."

"Thank you, Mister Langemann. About the invitation, it says 'relaxed dress'. What should I prepare for you to wear for this supper?"

"Make it an informal suit with no tie. As for you, how about something light and sexy, instead of those formal gowns used for government ceremonies?"

"I will think about it, Mister Langemann." replied Agneta, a slight smile on her lips.

When the time came to go to the banquet room of the convention center, Agneta appeared in an outfit that made Karl Langemann smile, while George Melville and Tran Li sucked air in. The tall blonde wore a short pleated skirt made of purple silk, knee-high black shiny boots and a silk golden blouse that left her shoulders and much of her back bare. A set of discrete but fine jewels, light makeup and a few drops of perfume completed her outfit.

“My dear Agneta, you are just perfect!” said Langemann. “I am sure that Governor Watts’ eyeballs will fall out of their sockets when he will see you. Well, since we are all ready, let’s go!”

Going out in the main hallway of their floor, the three men and one woman walked towards the lobby connecting the guest house and the convention center, in which the banquet hall was situated. Having attended a number of political meetings of the Spacers League in the past, Karl Langemann knew where to go, soon arriving at the entrance of the banquet hall with his group. On the way, they met a number of people from the other delegations and exchanged pleasantries with them as they approached the hall. Agneta Braun suddenly came to a dead stop as they were about to enter the large room, while fixing something to her right. Looking in that direction, Karl himself stopped abruptly, while his heart accelerated: three alien creatures were approaching, escorted by Gerald Holmes and by a Koorivar. The aliens were best described as being like mythical centaurs, but of the size of ponies. Their nearly human-like heads had soft, delicate features, a flat nose, yellow or green eyes, long pointy ears and a blond mane that ran from the top of their heads to their back, ending in a thick tail. The aliens wore what resembled skirts running around the whole length of their lower bodies, with one of them also wearing a blouse covering what had to be a pair of breasts. Gerald Holmes smiled to Agneta and Karl, trying to reassure them and the other guests present.

“Don’t be afraid of my friends, people: they are Hoshis, the indigenous race living on Hyanesu, the moon of Gliese 581c. They came as representatives of their race for tomorrow’s meeting and were chosen for that role by their elders because they can speak Koorivarese. They were given Koorivar translation units, so they will be able to converse with us tonight.”

Agneta couldn’t help stare at the three Hoshis, captivated by them.

“They are actually a beautiful race, I must say. Are they herbivorous, like our horses?”

One of the Hoshis took on him to answer her, with his translation unit repeating in English what he said in Koorivarese.

“Our race was strictly herbivorous at first, long ago, but we evolved and are now omnivorous. We however still prefer what you call a vegetarian diet but eat fish and meat from time to time. Since all the compatibility tests have not been completed yet,

we will restrict ourselves here to your cereals, fruits and vegetables. By the way, my name is Ibi.”

“And my name is Agneta, Agneta Braun.” said Agneta, stepping forward to shake hands with the aliens. Ibi bowed his head in salute, then pointed his two comrades.

“Pleased to meet you, Agneta. These are my friends Noshia and Hotona. We grew together in the village which sheltered the four Koorivar survivors of the destroyed shuttle from the SHUNDAR.”

Those last words made Karl Langemann, who had also stepped forward, look sharply at Gerald Holmes.

“The KOSTROMA found the SHUNDAR?”

“Unfortunately no, but it found traces of its passage on Hyanesu. My wife intends to show to everybody after supper a video prepared by Captain Forster, which will resume what the KOSTROMA has found to date during its interstellar trip. That way, everybody will be level with recent events before starting tomorrow morning’s meeting.”

“A fine idea. I can’t wait to see it. Well, let’s enter the banquet hall: I am starting to get really hungry.”

Entering the large hall, they saw that a relatively small table sufficient for forty persons had been set up near one extremity of the room, which could normally accommodate over 200 persons. Lined up along the three walls surrounding the table were a series of tables supporting a multitude of covered service pots, trays and steam tables. That sight made Karl Langemann grin.

“I told you that she would go for a self-serve buffet. Let’s find our seats first, though.”

A majordomo and valets helped them do that, telling them also to be seated for a welcoming speech by Governor Robeson. Janet Robeson, already in the banquet hall, looked at her guests around the table before starting to speak.

“Welcome to you all to this supper prior to tomorrow’s meeting. For your info, breakfast will also be served here tomorrow morning before we move to the conference room next door. I would like first to present to you the three representatives from the Hoshis, the native race of Hyanesu, the moon of Gliese 581c. They will attend the meeting tomorrow and will speak for their race. I thus present to you Noshia, Ibi and Hotona.”

Polite clapping greeted the three Hoshis as they bowed their heads in turn. Janet Robeson then continued on.

“After this supper, which is meant to be most informal, we will view together a video report prepared by Fleet Captain Tina Forster, of the KOSTROMA. You will then see that a number of grave events have happened to date during her mission, through no fault of her own. I will however leave it at that for the moment. Now is the time to eat. Many of you will be pleased to learn that me and my husband Gerald have personally contributed to the menu which will be served tonight. With this said, you may now take the buffet tables by assault.”

Karl Langemann was among the firsts to get up, but then gallantly helped Agneta by pulling back her chair and accompanied her to the start of the buffet tables. Like many of the other guests, they first walked down the line of tables to see what was on the menu, prior to start serving themselves. Karl’s eyes opened wide on seeing and smelling the content of a particular steam table tray.

“Beef Bourguignon! I’m going to stuff myself with it.”

“I prepared it myself, Karl.” said proudly Gerald Holmes, who was nearby. “Knowing your love for Beef Bourguignon, I made an extra large batch.”

“An excellent idea, my friend.” replied Karl, most pleased. On her part, Agneta swooned over the collection of freshly baked pies laid on the desserts table at the end, eyeing in particular six apple pies sitting next to a few cherry pies, pecan pies, cherry cheesecakes and other various cakes, all truly appetizing-looking.

“Oooh, screw the diet for tonight! Those are MINE!”

They then returned to the first buffet tables to start serving themselves, beginning with the soups on display in steaming pots. At that point, Karl noticed that the Hoshis and Koorivars present understandably raided in priority the well stocked salad bar. However, he also saw that the Hoshis were not shy about grabbing a few vegetarian pieces from the sushi bar. He then returned to his seat with his first serving, a bowl of steaming lobster bisque soup which soon proved to be exquisite. Overall, the dress for the occasion may have been most informal, but the menu was proving to be truly royal.

The meal part of the event turned out to be longer than Karl expected, for the simple reason that nearly all the guests kept returning to the buffet tables to try more of the dishes. He himself finally had to sit back and push himself away from the table, being close to bursting but also being quite happy about his meal.

"God, I'm stuffed! This must have been one of my best meals in a long time. Gerald, your Beef Bourguignon was sublime."

"Why, thank you, Karl!" replied Gerald Holmes, pleased with himself, who then looked at the three Hoshis sitting facing him, who were all devouring pieces of pies overlaid with ice cream.

"You do seem to agree with my wife's pies, Noshia."

The Hoshi had to swallow first before he could answer Gerald.

"I must say that what you call pastries are absolutely delicious, especially those that ally fruits and a flour crust. Your available choice of vegetables, roots and fruits is also surprising to us for its size, variety and taste. If some of your people would open vegetarian restaurants on Hyanesu, I am sure that they would prove popular with my people."

"Talking about exchanges between our two people, may I ask what kind of currency you use between yourselves?" asked Karl Langemann, who was sitting next to Gerald Holmes. Noshia put down his fork and thought carefully before answering.

"I must be honest here and say that our society is quite primitive in many ways compared to yours. We do not have any so-called heavy industries and have no artificial sources of energy except fire. All that we use and consume is produced locally in our villages and hamlets and we have nothing that could be called true cities. What we can't produce or find locally is brought by traveling merchants pulling small chariots along the trails linking the various settlements of our people. The quantities they can carry are however quite limited, especially when compared to your own transportation vehicles. As for the currencies we use, barter is still a popular way to exchange goods and services among my people. We also use rare or attractive objects like pearls, stones and small metal pearls or coins made of silver, gold or copper."

"So, this would place you at about the level of our own past Early Antiquity or Early Middle Ages. On this subject of currency, I must be frank with you: our history from a few centuries ago concerning trade between the more advanced countries on Earth and the less developed ones is not a very nice one. The so-called 'civilized' Europeans often cheated the indigenous people by trading nearly-worthless junk, while taking valuable metals from the locals. Thankfully, trade is a lot more regulated these days, but you still can find a few swindlers from time to time. However, if your people ever end up trading with the Spacers League, be assured that we have very severe laws against fraud and commercial abuse."

Noshia made a slight smile before replying to him.

“Thank you for your frankness, mister: it is already one good point in your favor. I must say that the incredibly vast range of products that you could offer us, including all sorts of metal products and tools, would probably overwhelm the average Hoshi if he doesn’t show restraint. In return, I must say that there is little of real value to you that we could offer in exchange. Even the silver and gold we have is produced in only small quantities.”

“Well, any future colonists on Hyanesu could always pay a rent to the local elders in exchange for the land or seafront used by the colony. Since the rent would probably be paid in silver or gold, that would create the base of an exchange currency.” Noshia caressed his chin with one hand in a very human-like gesture.

“Hum, a very interesting and practical concept. I will certainly present it to our elders on our return to our village. And your name is, sir?”

“Langemann! Karl Langemann, CEO of the Vesta Consortium, situated in the Main Asteroid Belt of this solar system. As our specialty, we produce all kinds of metal products and structures, but we also produce our own food locally.”

“Decidedly, the way your race has adapted to life off your home planet is simply astounding. To see for example the kind of city you built here, on an airless moon, makes us Hoshis truly wonder. When we saw for the first time your giant ship, the KOSTROMA, we could not believe at first that you could produce so much metal. That the captain of your ship treated us as if we were equals came as a huge but also very pleasant surprise to us.”

“Aah, but you were lucky, in that you dealt with one of the most decent, respectful and honest person I ever met, Noshia. She also happens to be a great friend of the Koorivars.”

That was when Janet Robeson rose from her chair to address the dinners.

“Ladies and gentlemen, coffee, tea and digestives will now be served, following which we will view together the recorded video report made by Fleet Captain Forster, of the KOSTROMA. I hope that you enjoyed your meal.”

A concert of satisfied remarks answered that last sentence, making Janet grin.

“Excellent! Majordomo, have the beverages served!”

Some seven minutes later, with everybody having been served drinks, Janet started playing Tina Forster’s video report of her mission to date on a large holographic

screen hooked to a wall of the hall. That viewing brought many surprises to the attendees, along with anger and indignation when Vorlak depredations were shown. When the video file ended, Janet Robeson had the lights of the hall returned to normal intensity and looked around the table with a somber expression.

“Ladies and gentlemen, I already had time to view in advance and analyze this video report by Fleet Captain Forster, and I judged her conduct to date during this mission to be most appropriate, measured and responsible. Do any of you here have any objections or critiques to present about her actions?”

Toru Tomonaga, the CEO of the Ceres Consortium, spoke up after a couple seconds of silence.

“My predecessor at the head of the Ceres Consortium would probably have found something to criticize, out of his pacifism at all cost attitude, but it would take a highly hypocritical person in my opinion to find any fault with Captain Forster in the manner she handled her mission. Those Vorlaks got what they deserved and can count themselves lucky to have paid such a limited price for their genocidal actions. I fully support a permanent space ban against them, to be enforce by the Spacers League Navy in order to safeguard Hyanesu and Oceana from future Vorlak depredations.”

“I also support Captain Forster’s action and her request to restrict the Vorlaks to the surface of their planet.” said out loud Langemann, quickly imitated by the other leaders present. Sheraz, the political leader of the Koorivar settlement located on Earth, was the last to express his approval of Tina Forster’s actions. Most satisfied by this, Janet then declared the supper and presentation over and invited her guests to come back the next morning for breakfast, to be followed by a policy making meeting. Agneta Braun sighed while getting up from her chair, patting her full stomach.

“My god, what a meal that was! It will take me weeks to spend all those extra calories.”

“I could help you spend some of those extra calories tonight, my dear Agneta.” replied in a low voice Karl Langemann, a sneaky smile on his lips.

09:00 (Universal Time)

Tuesday, June 01, 2320

Conference room, Government Convention Center

Callisto Prime

“Welcome again, ladies and gentlemen. Yesterday evening, you all got a copy of a short list of subjects to be discussed this morning, so that you could discuss in advance its points between yourselves. Now that we have had a chance to sleep on them, we will start discussing them together, starting with the one point with the most implications for Humanity as a whole: how do we manage our entry into interstellar travel or, as my dear husband said, how do we prevent that from becoming a chaos that would make the Klondike Gold Rush appear like a well organized venture?”

There were quite a few short laughs and giggles around the table at that question from Janet Robeson, who paused for a second before continuing.

“Jokes apart, that question is a primordial one and has the potential to fuel endless future headaches for us if mishandled. For one thing, we certainly want to prevent unscrupulous commercial conglomerates or groups from raiding the resources and real estate where alien races and species already live. The last thing I want to see is for us to act around the stars like a bunch of murdering, thieving conquistadores. However, I know you all well enough to be reassured about the future conduct of your various states and consortiums. What I am worried about mostly are Earth’s states and entities which are not members of the Spacers League and which have a questionable track record concerning respect of individual and collective rights and about the way they treat foreigners and aliens. Prime among these states is the Southern Federation, which is still in effect in a state of latent hostility towards us and the Northern Alliance of President d’Arcy. What complicates this question is how compact and easy to produce and install the Koomak Interstellar Drive is. Restricting access to it to only vetted entities and ships will be difficult indeed and may call for some exceptionally tight security measures to protect the secrets of that drive. The second point to be discussed, in order of importance, is how we will manage the relations between us and the various races and species we will discover. Already, the KOSTROMA has either encountered or found traces of four intelligent life forms during its mission: the Gordos, the sea turtles of Oceana, the Hoshis and the Vorlaks. And this doesn’t even take into account all the non-intelligent forms of life it encountered, with all but one of the planets visited by the KOSTROMA proving to harbor life. If this is a reliable indicator of what to expect in the future, then I would say that we will probably find the star systems around us to be full of life. Apart from being cautious about not involuntarily cause epidemics by carelessly spreading our germs around or by exposing ourselves to alien germs, we will need to be firmly conscious that all those alien worlds don’t belong to us and to be respectful of the

alien life forms we will encounter. I certainly don't want to see Human ships go around and act like thieves and occupiers on the planets and moons they will land on. We will thus need to discuss and establish firm, clear measures to prevent any abuse in this new era of interstellar travel. Thirdly, we will need to decide how best to contain the threat to other races represented by the Vorlaks. I believe that we will have our plates full today and we may have to extend this conference by a day or two if needed to do our job here. The floor is now open to proposals and ideas about our first point, ladies and gentlemen."

Janet Robeson then sat down as her position's built-in computer's screen started filling with written suggestions typed by attendees.

The morning and afternoon went by quickly, so involved the discussions were. By the end of the afternoon, the leaders were starting to discuss the third point: how to contain the Vorlak threat on a long term basis. That was when Karl Langemann jumped in with an idea he had been turning inside his head for a few hours already.

"Governor Robeson, the only reason the KOSTROMA is still inside the Gliese 581 system instead of searching for the SHUNDAR and the SHANIZAR is because it is needed to keep the Vorlaks at bay. However, it will have soon to come back to the Solar System in order to bring the damaged CENTURION to a space yard for repairs and to pick up some needed materiel and supplies to help build an initial Koorivar settlement on Hyanesu, as agreed with Hoshi elders. Captain Forster's suggestion to place robotic armed surveillance satellites around the Vorlak planet is a good one and I support it, but I would also like to propose a way to quickly reinforce those satellites."

"And what do you have in mind, Karl?" asked Janet Robeson, curious.

"To move MJOLNIR to the Gliese 581 system and park it in orbit around the third planet. With such a powerful deterrence overhead, I doubt very much that the Vorlaks will even dare think about attacking the Hoshis again."

"The MJOLNIR?" exclaimed Juan Perez, the governor of the Saturn System. "It would certainly scare the Vorlaks shitless, if you will excuse my language. But can we even move it to Gliese 581? It is way too massive to be towed there."

"No need to tow it, Juan: let's simply adapt a Koomak Drive unit to it."

"Uh, I didn't think of that. If it can really be done, then I am ready to support your proposal."

As more questions and remarks flew around the table about Langemann's proposition, Noshia bent sideways to speak in a near whisper to Governor Charles Watts, seated next to the Hoshi.

"What is this MJOLNIR they are now talking about, Governor?"

"MJOLNIR is what could properly be called a 'doomsday weapon'. It was built during the 2315 War against the then Terran Federation, in order to destroy the Terran orbital fortresses blocking access to Earth's orbit. It is basically a three kilometer wide, irregularly-shaped iron-nickel asteroid that had been part of the Main Asteroid Belt. Having been extensively dug into to extract the metal ore in it, it was at the time reduced to a huge, nearly empty shell with a crust still some 200 to 400 meters thick. Langemann's consortium then added a propulsion system to that shell, plus weapons systems, sensors and living facilities inside. Its main weapons are dozens of huge chunks of iron-nickel rocks to which rocket engines and guidance systems were added. When launched, those rocks then act like kinetic energy missiles, liberating on impact the energy equivalent to a large thermonuclear warhead. I am sorry if I use such terms that are unfamiliar to you but suffice to say that a single rock strike from the MJOLNIR is enough to create a crater the size of a large city."

Noshia couldn't help recoil in horror at that description.

"And...you used that weapon during that war?"

"Yes, we did, Noshia. MJOLNIR destroyed in succession all the Terran orbital fortresses with rock strikes, opening Earth's orbits to our fleet and allowing it to defeat the forces of the Zembelo Regime and to liberate the territories occupied until then by Zembelo's thugs. It had to fire another rock missile near the end of the war, in order to destroy a facility where a deadly chemical weapon was being developed. Unfortunately, that also meant the destruction of the nearby city of Lagos, but we had no other choice then in order to protect the lives of over 200 millions Spacers threatened by that chemical weapon."

"By the spirits, the technological power of your race tends to scare me, Governor Watts."

"Your reaction is perfectly understandable, Noshia, but we Humans have evolved quite a lot during the past few centuries. More importantly, the rights of individuals, promoting justice and helping others in need are key credos of our Spacers League. If you ever face some danger or abuse in the future, it won't come from us, my friend."

03:16 (Universal Time)

Tuesday, June 22, 2320

Biology research team camp

Beach of volcanic island on Oceana (Gliese 581d)

Gliese 581 system

Bip-bip, bip-bip, bip-bip, bip-bip...

Jennifer Scott, having been deeply asleep, took a few seconds to react to the insistent beeping from the small device resting next to her pillow. Opening her still heavy eyelids, she nearly jumped off her camp cot when she realized what the noise was about.

“OH MY GOD! IT’S THE TURTLE NEST MOVEMENT DETECTOR!” she shouted loud enough to wake up Shinta Betang and Natalia Vishenkova, who occupied with her one of the five modular field shelters which had been assembled a month ago on the beach, next to their landed, jump-capable shuttle. Forgetting that she had been sleeping in the nude and frankly not caring much about that detail, Jennifer got up quickly from her cot and grabbed in passing her compressed air pellet revolver before running out of the shelter and onto the black sand of the beach. With the planet being tidally-locked to its sun and always presenting the same side to the red dwarf star, their beach was always illuminated, although the level of lighting was quite low compared to a typical day on Earth, on top of being of a pinkish-red tint. There was however more than enough light for Jennifer to easily orient herself and run towards the spot where Tumon the sea turtle had laid her eggs. That spot on the sandy beach had been covered by a large, protective steel mesh dome of a diameter of three meters and a height of one meter, with small openings at intervals around its weighed down base, so that the baby turtles could crawl out from under the dome when they would emerge from their eggs. Those openings were however also too small to allow birds or other predators to pass through to go eat the eggs. A movement sensor fixed to the inside of the mesh dome had been placed to warn the biological research team of the moment the baby turtles would emerge from under the sand. It had just functioned as planned: now it was time for Jennifer and her comrades to do their job and fulfill their promise to Tumon to protect her babies. Since less than one percent of the newly born baby turtles on Earth made it alive during their initial rush to the water’s edge, thanks to multiple predators picking on them, such protection was very pertinent, especially if you considered that those baby turtles were part of a sentient race.

As she ran towards the dome marking the location of the nest, her revolver in one hand, Jennifer saw the first baby turtles, tiny things only a few centimeters across in size, crawl out through the holes at the base of the dome. Her joy at seeing them was then cooled down by the sight of nearly a dozen sea birds in the process of diving on the dome, intent on having a good meal. She thus accelerated her run and started shouting out loud while wildly waving her arms.

“GO AWAY, YOU VULTURES, OR YOU’LL TASTE MY LEAD PELLETS! GO AWAY, I SAY! SHOOO!”

Stopping near the dome, between it and the sea, she planted both of her feet in the sand and, raising and pointing her pellet handgun, shot at the nearest bird. Stung by the impact of the pellet against its belly, the large bird screamed in pain and veered away from Jennifer and the dome. That however left many more birds still diving down on the baby turtles now crawling past on both sides of Jennifer.

“COME ON GUYS! I NEED HELP HERE TO PROTECT THE BABY TURTLES. WAKE THE FUCK UP!”

She had time to shoot two more times before the first of her comrades emerged from the shelters: it was Robert Lefranc, the pilot of their shuttle, who ran out wearing only his underwear. Thankfully, he also had his pellet rifle with him as he started running towards Jennifer and the nest. By that time, the birds had grown more audacious and, conscious of their numbers, started ignoring Jennifer, diving on the baby turtles farthest from her. Seeing with horror a baby turtle being grabbed in the claws of a bird, the young Canadian biologist pushed a scream of rage and, pointing quickly her revolver, shot that bird in one eye, making it release its prey. Thankfully, Robert Lefranc arrived on the scene at that moment, shooting bird after bird while shouting wildly to scare away the flying predators. When her revolver became empty, Jennifer grabbed it by its long barrel and started swinging it like a hammer while running around on the sand. She however had to be careful not to step onto one of the small baby turtles and squash it. With all of her companions eventually joining her and Lefranc on the beach after a few more seconds, the sea birds finally gave up, with more than a few of them flapping away with difficulty, having been painfully pinched by the pellets. All this was however far from finished yet. Jennifer knew that the birds would next try to grab the baby turtles from the surface of the sea before they could dive deep enough to be safe. She thus ran into the water, ahead of the first baby turtles, and stood her ground menacingly some ten paces

from the water's edge. She was joined there by Natalia Vishenkova, the copilot of their shuttle, and by Zev Bloomberg, the maintenance technician assigned to their team. Seeing that, the sea birds finally understood that this was hopeless and flew away, to Jennifer's relief. Looking at the sand of the beach and at the waves, she was elated to see dozens of baby turtles entering the water one after the other, to soon disappear towards the bottom. She however waited where she was for a few more minutes, to make sure that the sea birds would not come back.

When she did come out of the water dead last, with the last few baby turtles now out of sight, she saw that Robert Lefranc was starting a camp stove in order to boil water and make coffee. When she approached him, the shuttle pilot, a handsome man in his early thirties, looked up at her while grinning.

"You will want a cup of coffee as well I suppose, Jennifer?"

"I sure do! And don't be afraid to make it strong."

"Of course! It will be about ready by the time that you will have put something decent on...not that what you are wearing now is not delightful."

Looking down at herself, Jennifer belatedly realized that she had been exposing herself for many minutes now. Being in a very good mood right now, she slowly approached Lefranc, stopping no more than one pace directly in front of him.

"Is that better, Robert?"

The male pilot eyed her shaved groin, then looked up at her face, framed by the underside of her breasts.

"The best outfit I could think of, Jennifer. Maybe we could discuss our fashion tastes together...later on?"

"I would be happy to, Robert." replied Jennifer, a malicious smile on her face, before walking to her shelter and entering it. Robert had a last look at her firm, well-rounded buttocks before sighing to himself.

"Damn, what a girl!"

10:03 (Universal Time)

Friday, July 02, 2320

The waters off the beach occupied by the biology team

Jennifer was making an exploratory shallow dive with Shinta Betang, swimming near the bottom at a depth of twelve meters, taking pictures and collecting samples, when she saw three large dark masses approaching from the high seas. At first, they were barely visible due to the distance and lack of water clarity, but Jennifer recognized the shapes at once and spoke in her throat microphone to alert her colleague biologist.

“Shinta, three whales are approaching from our nine o’clock.”

The Indonesian-born biologist stopped in mid-water and faced that direction at once, imitated by Jennifer.

“I see them! I think that I also see a few smaller shapes.”

“You are right: I can see those now. I count three whales and five other shapes, possibly local dolphins. They seem to be coming towards us and the island. Let’s stay mostly immobile now, in order not to scare them away.”

“Scare them away? We still don’t know what those whales and dolphins eat on top of fish.”

A mental message then resonated inside the brains of the two women, taking them by surprise.

“Do not be afraid, little land creatures: we the Whiss only eat fish and plankton.”

Jennifer, having already conversed mentally in the past with Tumon the sea turtle, was the first to recover from her surprise and reply to the mental message, speaking it as well as thinking it so that Shinta could follow the conversation.

“The Whiss?”

“Yes! It is the collective name we use for us, the ones you would call ‘whales’. Three of us came with five Roos, which you call ‘dolphins’, along with three Tarkons, who traveled on our backs for speed convenience. You spoke some cycles ago with a Tarkon called Tumon.”

Joy and hope filled Jennifer at the mention of Tumon.

“Is Tumon with you?”

“Yes! She is in fact traveling on my back. I can sense your joy at the mention of Tumon. Your friendship with her is indeed a good portent of your intentions towards us.”

“And I can affirm to you that our intentions are friendly. Tumon, can you hear me?”

“Yes I can, Jennifer.” replied a second, different mental voice. *“Know that my race, the Tarkons, is not the only one on this planet to be able to communicate mentally. The Whiss, or whales as you called them, have even higher mental capacities than the*

Tarkons, while the Roos, or dolphins, are roughly comparable to us Tarkons in telepathic abilities. There is yet another intelligent specie living in the depths of our ocean world, called the 'Motas'. You would describe them as being giant squids, but they mostly stay in the deepest parts of our ocean world."

"Four intelligent, sentient species able to communicate via telepathy, on a single world? That is incredible!" said Shinta Betang, utterly fascinated by this mental conversation and by the marine beings now surrounding her and Jennifer.

"Well, since we can hardly build metal tools and light fire like you Humans and Koorivars do, we developed and used our intelligence to create a way to speak between all of us and to pass pieces of knowledge, wisdoms and also entertaining stories. By the way, what is your name, little one?"

"Shinta, Shinta Betang. I consecrate my life in studying other forms of life, be it marine, animal or vegetal. We call our specialty 'biology' and call ourselves 'biologists'. Our exploration team on the island where our shuttle is counts a total of four biologists, including me and Jennifer, plus two shuttle pilots and one technician who maintains and repairs our machines and tools."

"Well, Shinta, I believe that we will have many stories to share from now on and in the future. How have my babies managed on the island?"

"They emerged from their nest some twenty cycles ago." answered Jennifer, cutting in. *"Nearly all of them made it safely to the open water despite the attempts by the birds to catch and eat them."*

"That is excellent news! I can't thank you and your comrades enough for protecting my babies. Know that, despite our intelligence, the continued survival of the Tarkons is a problematic one: so many predators, and not only birds, keep attacking our nests and eating our eggs."

"Tumon, I myself won't be able to stay forever on this planet, although I wish I could, but maybe us Humans and Koorivars could establish turtle nest sanctuaries on the island where my shuttle is landed and on other islands of your ocean world. If the Tarkons, the Whiss and the Roos agree to let some of my people and of the Koorivars establish floating cities on your ocean world, then we could create and maintain such turtle sanctuaries, thus helping your race to multiply and prosper."

"That would be a great thing indeed." said the mental voice of the whale which had addressed Jennifer first. *"The Whiss and the Roos are good friends of the Tarkons but, due to the fact that we can't leave the ocean and go on dry land, we couldn't do*

anything to protect the Tarkons' eggs...but you can. We could thus form a mutually profitable association, as long as Humans and Koorivars would agree to respect our ocean, avoid polluting it and, especially, avoid fishing in it."

"If this could reassure you, I as a biologist has already established the fact that the local marine life is not truly edible by us Humans and by the Koorivars: we found a type of secretion in the local shellfish and in the few small fish we studied that renders their digestion in our stomachs very difficult. Basically, attempts at eating the local fish and sea shells would cause us a severe colic and diarrhea."

Both Jennifer and Shinta then mentally felt a strong wave of amusement pass over them as one of the five Roos present spoke telepathically.

"Well, we should normally feel offended by being told that we taste bad but, in this case, it is definitely a positive trait for us. So, if you can't eat the local fish, what would your people eat to survive on this world?"

"For the Koorivars, it is easy enough to answer: they are strictly vegetarian and eat only vegetal products, like herbs, cereals, fruits and roots, so they will have absolutely no interest in fishing your ocean and eating fish or shells. For my race, the Humans, things are more complicated, as we are omnivorous and are accustomed to eat a lot of fish and meat. However, since starting to travel around space a long time ago, we have developed ways to grow our own food within enclosed spaces, aboard our spaceships and space installations. We raise the fish we eat inside big water reservoirs, via a process we call fish farming. We similarly raise animals which provide us with meat. If you will accept to let us establish floating cities here, then those cities will have their own hydroponic gardens, fish farms and animal farms, which will not infringe on the open waters of your ocean world. As for the danger of pollution, I must say in all frankness that my specie was guilty of negligence and abuse in the past and polluted our original home planet to a nearly irreversible point. However, the portion of our citizens living in space has learned how to avoid creating such pollution, out of sheer necessity. Basically, a polluted space habitat would quickly become unlivable, as the available living volume and resources are strictly limited in space. Beside, since there are very few dry lands on your planet, all of the mining, heavy industrial production and transformation industries will have to be established off planet, most probably on one or more of the four moons turning around your planet, which by the way we call 'Oceana'."

"Your frankness is to be commended, Jennifer Scott. If what you said is true and if Humans and Koorivars are truly ready to treat us and our oceans with respect and

care, then we Roos see no objections about seeing your people establish the kind of floating cities you described to us.”

The mental voice of the lead whale then spoke in turn.

“The Whiss would also have no objections to your floating cities, if you respect your promises and act the way you just described, little one.”

“And we Tarkons would be happy to make an associative deal with you about establishing nest sanctuaries on a few islands, Jennifer.” said Tumon last. The joy Jennifer felt then was however tempered by the thought that she, as a simple biologist, didn't have the kind of political authority or power to make sure that her promises would be kept.

“Your acceptance of us warms my heart but I must warn you that I personally don't have the kind of authority needed to turn our mutual understanding into force of law. I will however go send a message to my home star system after this conversation, asking for one of our political leaders to endorse formally an official deal. Do you think that you could stay around this island for a few cycles, time for me to get an official answer that I would then pass on to you?”

“Staying around is no problem for us, Jennifer: there is plenty of fish and plankton around. Once you will have an official answer, just swim back to this spot and call for us mentally.”

“I will, and I promise you to make it as quickly as possible. See you soon, my friends.”

Jennifer then swam back towards the nearby beach, accompanied by Shinta Betang. The Whiss elder waited for the two women to be out of the water, then eyed Tumon.

“Those are interesting creatures indeed that you met, Tumon. That they can travel between the stars is still a concept I have difficulty forming in my mind, as we Whiss hardly ever see the stars in the sky of our world. What they can do with their tools and machines is a bit scary, considering their own confession about poisoning their own world in the past. Hopefully, your friends will prove to be the norm rather than the exception for those ‘Humans’.”

15:18 (Universal Time)

Monday, July 05, 2320

Open waters off the beach occupied by the biology team

The first one to approach Jennifer, who was waiting on the sandy bottom at a depth of fifteen meters, was a Roos, the local dolphin lookalike specie. He was followed closely by two more Roos, who started turning lazily around Jennifer while communicating telepathically.

"Did you get a response from your leaders, Jennifer?"

"Yes, but I want that response to be given at the same time to you, the Whiss and the Tarkons. How long would it take for them to join you here?"

"Oh, it won't be long: they were staying close to here and are already on their way. They should be here in less than one twentieth of a cycle."

"Excellent! Then I will wait here, in the water. In the meantime, we could spend the time by talking together, if you wish. For one thing, I am curious to know if there are marine predators in this ocean which could be dangerous to me or you?"

"Oh, there certainly are, Jennifer! First, you have the Grax, which are the more dangerous of the lot. The Grax are a bit bigger than us Roos and generally have the same body shape but have enormous teeth that are very sharp. The Grax are very aggressive and very voracious and eat about any marine species they encounter, except for plankton, which is too small for their taste. They however rarely dare to attack the Whiss, who can defend themselves quite well with their front-pointing horn and who also have a very hard skin that the Grax have problems piercing through. Another type of predator you will find in our ocean world is the Rishk. The Rishk have a long, thin body and a huge mouth full of teeth. Once a Rishk is able to bite something, it is then very difficult to make it release their grip while they basically suck your body tissues into its long stomach."

Jennifer couldn't help shiver as she imagined such a scene.

"My god! That sounds positively horrific! By the way, what is your name, friend?"

"I am Soorak, the leader of the Roos in this part of our world."

"Well, Soorak, I brought with me a machine that can show pictures and moving images on a flat surface. I could show you the Earth equivalent of your Grax and Rishk, plus the ones nearest to the Roos, Whiss and Tarkons."

"Oooh, that sounds very interesting. Show me, please!"

"With pleasure, Soorak." thought Jennifer before powering up her waterproof viewing pad and then punching a few requests in it, using an electronic pen for better touch accuracy. Next, she distributed a series of thumb-sized video links around the

periphery of the screen, opening one video and turning the pad's screen towards Soorak.

"What you are now watching is a group of Earth dolphins, the nearest type of marine mammal compared to your specie."

Soorak and his two companions approached at once their heads as close to the viewing pad as they could and watched the video shown on it, positively fascinated. After nearly a minute of watching, Soorak looked directly at Jennifer's face, half hidden by her breathing mask.

"The resemblance of your dolphins with us is striking, Jennifer. How about your models of the Whiss and of the Tarkons?"

"Coming up!" replied Jennifer before shrinking back the dolphin video and then enlarging and starting a video showing a humpback whale. The Roos watched with great interest that video, then the video showing a leatherback sea turtle. The three Roos however nearly swam back on seeing a video of a group of tiger sharks devouring a poor baby whale.

"By the seas! Your sharks indeed look like our Grax. However, the Grax are generally bigger than those sharks that you just showed us."

"Bigger, you said? Yikes! I sure wouldn't want to meet one of your Grax."

"But he sure would love to meet you, little juicy Jennifer." joked one of Soorak's companions, making Jennifer smirk.

"Yeah, sure! Excuse me if I pass on that invitation. Oh, I think that the Whiss are now arriving."

Two giant Whiss effectively approached to within a few meters of Jennifer, who then could see that a giant sea turtle was traveling on the back of one of them.

"Tumon, is that you?"

"It is me, Jennifer. You got an answer from your leaders in your home system?"

"I got even better than that. But before we start on serious things, let me show you and Tumon what I just showed to Soorak and his friends. What you are going to see are images of the marine life forms on Earth that I believe to be the closest to the life forms here on Oceana. I will start with whales."

Jennifer spent three minutes showing her videos to her captivated audience, then powered off her pad.

"We will now get to serious business, if you don't mind. I promised you that I would get an answer from the leaders of my race about your conditions for us and the Koorivar to be permitted to establish floating cities on your ocean. Well, the response I got was even better than I expected, as my leaders decided to answer your request in person. They will now come down to the bottom to join me and you for a face-to-face discussion."

The surprised Whiss, Tarkon and Roos then saw her pull three times on a rope linking a bottom lead weight to a floating balloon. Three shapes soon splashed in the water, dropping from a waiting rubber boat, and swam down to flank Jennifer on both sides. As the Oceana beings looked at the two Human women and one Koorivar in diving suits now beside Jennifer, the latter both spoke and thought at the same time.

"My friends, I would like to present to you three prominent leaders from my Solar System. First, this is Governor Janet Robeson, chief administrator of the Jovian System and chairman of the Spacers League Council, which govern all of the Humans living off Earth and traveling through space. Governor Robeson governs over 330 million Humans. To my left is President Claudia d'Arcy, leader of the Northern Alliance, constituted of the various states on Earth which are allied to the Spacers League and with have a combined population of approximately 1.3 billion Humans. Finally, furthest to my right, is Administrator Sheraz, the political leader of the Koorivar refugees whom we rescued on an icy moon of our Solar System, and this after their ship crashed on that moon after a very long trip through space. They had to evacuate their home planet just before a wandering brown dwarf crashed into it, destroying their home world. Most of the floating cities that we are going to build here, if of course you give your collective permission, will be meant to settle Koorivar refugees. Again, the Koorivar are vegetarians and don't eat fish or meat, thus will have no interest in fishing."

"My friends, I as Chairman of the Spacers League, am now solemnly promising you that your ocean world and your species will be treated by my people with the utmost respect and that we will refrain from both polluting your world and fishing in your ocean. The only thing we will insist on is our right to self-defense. We heard what you said about your local predatory species. Also, we will be interested in studying your world and your ocean, and this strictly for scientific curiosity. In return, we will be ready to establish a number of protected nest sanctuaries for the Tarkons, on the islands of their choice."

“And I, Sheraz, as Administrator of the Vancouver Island Koorivar Settlement, promise to you that the Koorivars who will settle on your world will do so in peace and respect.”

“I, President Claudia d’Arcy, leader of the Northern Alliance on Earth, promise to support both the Spacers League and the Koorivars in keeping this world a peaceful and pristine one. We will also do our utmost to stop any other state or organization on Earth who would not be ready to respect the integrity of your world from gaining access to your planet.”

The leading Whiss turned his head towards d’Arcy at those words.

“Should we conclude by your words that some of the Humans on Earth would not be ready to obey our conditions about how to conduct themselves on our planet, President d’Arcy?”

“Unfortunately, yes! However, those states and organizations lost a recent war against the Spacers League and my Northern Alliance, a war caused by their desire to dominate and plunder the rest of the planet. As a result of that war, those hostile states have been cut off from traveling through space and all their spaceships have been either destroyed or confiscated, thus they cannot threaten you or your planet now. We intend to enforce that status and will not allow them access to your planet. Know as well that another sentient race living in your solar system, but on another planet, has just been quarantined to the surface of their planet by us, after that race, the Vorlaks, attacked without provocation another race living on a moon, the Hoshis. The Hoshis, whose degree of technological advancement is much less than that of the Vorlaks, is also a pacific race. They also happened to have rescued and sheltered crewmembers from a visiting Koorivar ship, which we are presently searching for among the stars. Those Vorlaks committed many atrocities against the Hoshis, who were basically helpless to resist them, and even tried to exterminate all life on their moon when they lost control of it after one of our ships intervened. Unfortunately, as you can see, goodwill is not universal in this universe.”

“Indeed! However, what is important to us is that you appear to have such goodwill in your heart. Me and my friends thus welcome you on this world. May our association prove both peaceful and productive.”

“Well,” thought Janet Robeson, “we would have liked to seal this understanding with a traditional handshake, but since you have no hands...”

“A hug will do, Governor Robeson.”

After a moment of hesitation deciding how to do that, Janet Robeson, Claudia d'Arcy and Sheraz swam to the lead Whiss and took turns hugging its head, near its eyes and frontal horn, then did the same with Tumon and Soorak. At the end of it, Janet Robeson spoke/thought while still touching Soorak.

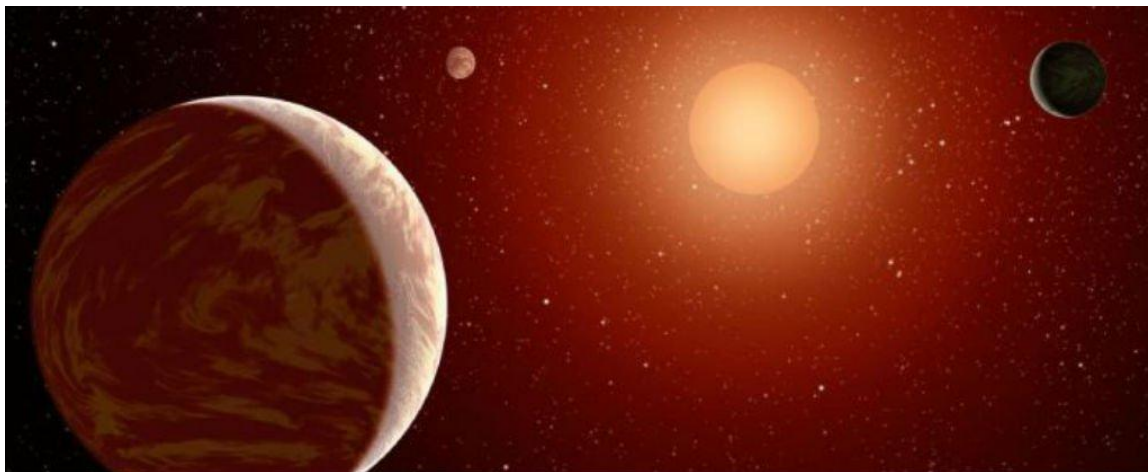
"You very soon will see a giant spaceship temporarily land on your ocean in order to launch an oceanic research ship that will then start exploring and mapping your world. Our team presently occupying the nearby beach will then relocate aboard that scientific ship, but will in return leave behind a small team of three persons that will take care of maintaining and protecting a nest sanctuary for Tarkons, at the same spot that Tumon laid her eggs. As it will travel on your ocean, that ship will establish more nest sanctuaries on islands chosen by local Tarkons."

"That will be a great thing indeed, Governor Robeson. When could we expect your people to start building those floating cities we were told about?"

"In about twenty of your cycles, time for us to load their prefabricated structures on spaceships and bring them here. Those floating cities will have portions lying under the surface of the sea, with transparent windows. Both of our people will thus be able to easily communicate with each other whenever we wish."

"A very important point, certainly. Thank you for honoring us with your visit, Governor Robeson, President d'Arcy and Administrator Sheraz. Thank you as well to you, little Jennifer: you are a very likeable person."

"And you will all be my friends, forever." Replied Jennifer, meaning it.



The Wolf 1061 System.

CHAPTER 12 – RESUMING THE QUEST

16:38 (Universal Time)

Thursday, June 24, 2320

Bridge complex conference room of the KOSTROMA

In orbit around Hyenasu, in the Gliese 581 System

“Well, ladies and gentlemen, we are now free to resume our quest for the SHUNDAR and the SHANIZAR. The battle station MJOLNIR and six armed robotic stations are now posted around the third planet. The oceanographic research vessel JACQUES-YVES COUSTEAU is now plying the seas of Oceana and mapping them and, finally, the first elements of the first floating city meant to welcome Koorivar refugees are now floating on Oceana and are being linked together, with a construction ship in orbit to assist the work. Unfortunately for us, the SHUNDAR must be presently in deep space and some two light years from Wolf 1061, its next planned destination, where it is due to arrive in about 39 years. This means an intercept in mid-flight, while the SHUNDAR is already decelerating under anti-matter rocket power, in order to slow down before arriving in the Wolf 1061 system. That will be complicated and difficult by itself, but we will also have to first find the SHUNDAR in the void of deep space, not exactly an easy task. Suggestions?”

Dana Durning immediately grabbed Tina’s invitation to speak up.

"I believe that we in fact have no other option than to intercept the SHUNDAR in deep space while it is in its deceleration phase, unless we are ready to wait until it arrives inside the Wolf 1061 system, some 39 years from now. Thanks to Captain Shanandar and to the detailed flight plan for the SHUNDAR that was inside Shanya's databanks, we can easily enough calculate the best location, speed and heading to take in order to wait for the passage of the SHUNDAR and intercept it."

Shanandar, who was participating in the meeting along with seven other senior ship officers, followed nearly at once.

"You may be right about how to intercept the SHUNDAR, Dana, but if I would be part of the SHUNDAR's crew, I would want to know what it would find in Wolf 1061 once there. Remember that the SHUNDAR is still searching for a place to resettle its 21,000 refugees presently in cryogenic sleep and that Wolf 1061 is now its last possible option left to it. After the trip from Gliese 581 to Wolf 1061, the SHUNDAR will be technically past its safe usage life and will also be low on fuel for its anti-matter rocket propulsion. The successive space flights it already has accomplished between three different star systems are an exploit by themselves. Besides, what happened to my own VEON SHOURIA demonstrated that Koorivar technology has a shorter reliable shelf life than what us Koorivars believed when we launched our three evacuation ships nearly four centuries ago. The SHUNDAR may very well be already partly incapacitated by age as it is hurtling towards Wolf 1061. What I propose is that we visit first the Wolf 1061 system before we go intercept the SHUNDAR in deep space, so that we could tell to the crew of the SHUNDAR what's there and whether its refugees could resettle there or not."

"I second Captain Shanandar's proposal, Tina." Said next Doctor Koomak, who then got the verbal support of Piotr Romanski, the commercial agent and finance officer of the KOSTROMA. While not a scientist or a technician by trade, Piotr's opinions were always listened to carefully, as he was a man with a bright and calculating mind who always kept an eye on the bigger picture. Tina nodded her head slowly as she weighed in her head the arguments she had just heard.

"Shanandar, I must say that your argument makes a hell of a lot of sense. Spirit, what do you think?"

"I think that Captain Shanandar has a most valid point, Tina." replied the ship's central super-computer. "Also, from the point of view of space exploration, not visiting the Wolf 1061 at this point would be quite derelict on our part."

“Then, it is decided! Dana, calculate a direct route to Wolf 1061. We will depart as soon as you will have our trip locked into our navigation computer.”

The group then broke up, with Doctor Koomak, Piotr Romanski and Rose Tillman taking a ride down by elevator to their respective work decks, while the rest walked into the bridge sphere and went to their respective stations. Tina sat in her command chair and buckled her safety harness before giving a few orders around.

“Alright, people: let’s use the same arrival protocol as for Gliese 581 for our jump to Wolf 1061. I want all active sensors and radio sources to be silent when we will arrive in the Wolf 1061 System, except for our short range collision avoidance lidar sensors. We will use only our gravity sail propulsion until further notice, so that we don’t produce a tell-tale thermonuclear rocket flare. Hien, advise now by radio the MJOLNIR and the M.S.S. KARPATIA that we are about to jump to the Wolf 1061 System and will be gone for an indeterminate period of time that could be weeks and months.”

“Aye, Captain!”

Three minutes later, Dana Durning spoke up from her navigator’s station.

“Route calculated and locked in, Tina.”

“Very well! Frida, you may jump when ready.”

“Jumping in three, two, one, now!”

There was the now familiar brief orange flash around them, then Tina found herself looking at a holographic screen image totally different from that she was looking at mere seconds ago.

“Confirm that we are indeed inside the Wolf 1061 System.”

“Confirmed, Tina.” replied Dana after a few seconds. “The spectroscopic signature matches to the fourth digit with Wolf 1061.”

“Just remind us of what we knew up to now about Wolf 1061, Dana.”

“Wolf 1061 is a ‘M’ class red dwarf star situated some 13.8 light years from the Solar System in the constellation Ophiuchus. It was known to possess three planets, the second of which orbited within the inner edge of the star’s habitable zone. The third planet is situated just beyond the habitable zone, while the first planet is expected to be too hot to be habitable, due to its proximity with its star. That’s about it in a nutshell, Tina.”

“Well, we will see about that with our own eyes. Let us scan the system with our passive sensors, to confirm the number of celestial bodies in it and to establish if there are any artificial radio or electronic emissions in the system.”

A partial verdict came some forty minutes later from the sensors stations of the bridge.

“We are not detecting up to now any artificial electronic signal, Captain. Our optical telescopes don’t see any artificial lights on the dark side of the three planets.”

“Our telescopes and thermal sensors confirm the presence of three planets and one asteroid belt. The third, outermost planet is a big one, with an approximate radius of about 15,000 kilometers, a surface crust of water ice and apparent surface temperatures between minus 56 and minus eight degrees Celsius. The second planet, the one situated within the habitable zone, is also fairly big, with a radius of 8,070 kilometers compared to the 6,371 kilometer radius of the Earth. It clearly shows a thick atmosphere, continents and oceans of liquid water. Three moons orbit the second planet, with the biggest moon being nearly the size of the Earth, with a radius of 5,830 kilometers. That moon also shows evidence of an atmosphere and of liquid water. The first planet is confirmed to be very hot, with surface temperatures of 370 degrees Celsius or more and an opaque atmosphere. It also has one small moon, which appears to be equally hot.”

“Damn! That second planet sure sounds juicy to me. I can’t wait to map and explore it. Very well, guys: activate your active sensors and let’s get a more detailed picture of this system. Frida, fly towards the outermost planet: we will map it first.”

“Understood, Tina. Permission to use our anti-matter cruise engines.”

“Permission granted! We still don’t know how long our search for the SHUNDAR and SHANIZAR is going to take and we might as well save our reserves of cryogenic fuel, as our anti-matter engines are a lot more economical in fuel and use lead pellets, a much more compact and low cost fuel than deuterium-tritium. If there was any technologically advanced specie in this system, we would have detected signs of it already. Once at the third planet, go into a polar orbit.”

“Got it! Lighting up our cruise engines now.”

Despite their small size compared to the KOSTROMA’s main thermonuclear fusion drive, the powering up of the anti-matter cruise engines was felt throughout the ship. Contrary to thermonuclear fusion, in which only a few percents of the mass of the fuel

was converted into energy, the reaction between matter and anti-matter converted one hundred percent of the mass of the fuel into energy. Allied with the high density of the small lead pellets used as fuel, that made the cruise engines capable of producing huge amounts of thrust for long periods of time, at little cost in fuel. The process had proved so efficient and also so compact and simple that Tina had decided to supplement the fusion drives powering the various shuttles and secondary craft of her ship with anti-matter drives, and this while her KOSTROMA was bringing the CENTURION to the Avalon Space Yards for extensive repairs. The same had been done with the squadrons of space fighters she had received from Earth two weeks ago, fighters that had also been fitted with Koomak Interstellar Drives. The way that her jump-capable shuttles had recently proved their usefulness had also pushed her into equipping all of her other shuttles and embarked craft with Koomak Drive units built in the advanced workshops of the KOSTROMA. With her ship and craft so equipped, Tina felt ready to face about anything.

A bit less than four hours later, the KOSTROMA inserted itself into a low polar orbit around Wolf 1061d, the third planet of the system. The first revolution around the big, icy ball was enough to bring in some more detailed data about it.

"The planet's radius is confirmed to be 14,840 kilometers, Tina. Its estimated mass is 6.3 Earth masses and its entire surface is made of thick water ice, with no rocky parts showing. It has a very thin atmosphere made mostly of carbon dioxide, with some nitrogen and argon gas."

"Good! Mister Jamilian, start mapping and filming the planet with our cameras, radars, spectrometers and magnetometers. Patricia, launch a robotic lander that will collect data about the atmosphere at ground level and, most importantly, will scan the inside of the planet with seismic radars and sonars."

"Preparing a robotic lander now. It will launch in about twelve minutes, Tina."

"Excellent! Dana, tell our astronomical observatory to keep the second planet in the sight of their main optical telescope and of their spectrometers while we are around the third planet. Have them learn as much as they can about the second planet in advance of going there."

"On it, Tina!"

One hour later, the first data collected by the robotic lander came in, causing some surprise on the bridge as Patricia O'Neil read the data out loud.

"Tina, our lander has just finished its preliminary radar and sonar soundings. It has found the surface crust of water ice to be only forty kilometers thick, with a liquid ocean underneath with a depth of 4,800 kilometers. The planet thus seems to have a large, solid core at its center. Furthermore, the planet has a weak magnetic field, indicating the presence of iron in the planet's core. Thermal readings also indicate that the internal temperatures of the planet are higher than expected."

"Hell, this sounds like what we found on Eris! Maybe this planet also contains a high level of radioactive elements in its core, elements which could produce all that unexpected heat."

"Don't know yet, Tina, but I bet that our astronomers and planetologists are going to look at this very carefully. About them, I just got a report about the second planet: it appears to be habitable for Humans and Koorivars. The atmosphere is thick, with 66% of nitrogen, 32% of oxygen and 2% of rare gases, making it easily breathable by us. The surface temperature is turning around twenty degrees Celsius on the dark side and three continents are visible on that side, surrounded by oceans occupying over half of the planet's surface. Three large, rocky moons orbit the second planet, with the largest of them also having a bit thin but still breathable atmosphere, as well as surface liquid water and emerged lands."

"My god! Wolf 1061c sounds like a planet waiting to be used. On the other hand, I would be very surprised if no life would have formed in such an ideal environment. Dana, I believe that we should go start examine the second planet from up close at once. In compensation, we will launch a robotic orbital reconnaissance probe to continue our mapping and examination of the third planet."

"Understood, Tina! Hien, prepare and launch an orbital reconnaissance probe while I calculate a trajectory towards the second planet."

Gerald Holmes, sitting in his V.I.P. seat near Tina's command chair, then commented out loud while looking at the image of the second planet appearing on one of his seat's viewing screens.

"This second planet looks like a potential paradise for eventual colonists, Tina. That it has as well one moon with a breathable atmosphere is the icing on the cake. I wonder if we will find some form of sentient life on it. As for any other life form, I would be very surprised to find none on such a nice planet."

"I concur with you, Gerald. Wolf 1061c could very well be the new home that the Koorivars of the SHUNDAR were looking for."

"You do realize that the news of such a planet now being within reach of us could trigger a lot of greed around the Solar System, Tina. This planet is going to look like the Eldorado for many overpopulated states on Earth and we could end up with numerous cases of claim jumping and unauthorized occupation by unscrupulous states and commercial entities."

Tina couldn't help show some discouragement at those words.

"Oh, I fully realize the kind of reactions that news about this world could trigger, Gerald. However, that's where the Spacers League, as the main authority off Earth in the Solar System, will have to do its job and control any colonization projects. Let's not forget as well that the Koorivars should have first pick on Wolf 1061c. After all, they invented the Koomak Drive that is now making it possible for us to fly around the stars. Also, that big second planet must have a local gravity significantly superior to that on Earth. As the gravity on Shouria was 1.3 G, the Koorivars would feel a lot more at home on Wolf 1061c than Humans would."

"That is correct, Tina," said Shanandar, sitting next to Gerald. "However, as an old Human saying goes, let's not sell the bear's fur before we can kill it. There still could very well be a sentient race living on the second planet, in which case we are morally obliged to first ask permission to accept us on their planet and then make a mutually fair deal in exchange for our coming."

"Yeah!" replied Tina, making a bitter smirk. "Someone should have reminded the likes of Columbus, Cortez, Pizarro and the European settlers who grabbed the Americas for themselves about such niceties. One big fear I now have is that the Southern Federation, with its overpopulated, polluted and drought-stricken states, would demand that it be allowed to emigrate parts of its population to here. Such a demand, if refused, could well reignite war on Earth. However, once they are allowed out of the Solar System, I doubt very much that the leaders of the Southern Federation will play nice and follow our rules. They all but destroyed their own nations through their corruption, greed, incompetence and thirst for power and I have no wish to see them around here, or anywhere off Earth. Individual citizens and their families are okay with me, but not organized entities of the Southern Federation."

"I can only agree with you on that, Tina," replied Gerald. "The few months that Europeans were under the boot of the Zembelo thugs brought too many revolting stories

to be forgotten. Today, the African Union in particular is about as corrupt and poorly managed as it has ever been and its leaders simply can't be trusted. Most ordinary folks in Africa would agree with me on that, but are too afraid to speak out loud about it."

"Well, I believe that some compromising will be in order, from both sides." said Tina. "I myself encouraged the hiring of new crewmembers from various parts of the Southern Federation and all of them have proven to date to be hard-working, decent people. If filtered and vetted in advance in order to cull out possible Southern Federation spies and saboteurs, I wouldn't mind seeing significant numbers of SF citizens emigrate out of the Solar System, as long as they obey the rules of the Spacers League and cut their political ties to their old leaders. But, again, let's see first what we will find on Wolf 1061c before skinning this bear."

08:46 (Universal Time)

Friday, July 23, 2320

Personnel shuttle ISAAC NEWTON

Overflying a large archipelago forty degrees north of the equator line

Planet Wolf 1061c

The thirteen passengers occupying the cabin of the personnel shuttle overflying a large group of islands on the second planet were truly captivated by what they could see via their windows and their individual video displays.

"Look at those birds! They remind me of pelicans." exclaimed Wei Ling, a biologist and agronomist in her thirties. "And I also see a couple of large sea creatures just below the surface."

"Look ahead, off the nearest island: I believe that I can see a sort of coral reef around that island." Added Anastasia Semirova, a young biology laboratory technician.

"You're right, Anastasia! And that island itself is covered with thick vegetation." replied Kamesh, a Koorivar agronomist who had been a crewmember of the KOSTROMA for the last two years, like the five other Koorivars who were part of the fifteen-strong mixed Human/Koorivar exploration team. One of those Koorivars, Captain Shanandar, was even the pilot of their shuttle, on top of being their team leader. Koorivars had been favored by Tina Forster for this mission because of the heavy gravity of 1.3 G on Wolf 1061c, as the Koorivars were originally from a world with a similarly heavy gravity. As for the nine Humans of the team, they were going to use special body

harnesses equipped with small anti-gravity generators, on top of wearing the bio-hazard suits and masks which had been declared mandatory for this mission. As beautiful and rich as this planet may be in terms of life environment, it still could harbor some deadly micro-organisms. It also could prove in turn to be vulnerable to either Human or Koorivar micro-organisms. In any case, Tina Forster had decided to play the card of maximum caution. With the SHUNDAR still years away from Wolf 1061, they had ample time to explore in a safe manner this system before going off to intercept the Koorivar refugee ship.

Glimpsing at their surface navigation radar, Shanandar pointed at the horizon dead ahead.

"Let's go land on that big island next to the coast of the nearest continent. We should find a varied life environment there, while its isolation from the continent may contain any possible microbial infection we could cause despite of our bio-hazard suits."

"I concur!" said his copilot, Jan de Ruyter. "It measures some sixty kilometers by forty kilometers and has a mountain range near its center. It should be a perfect piece of ground for the work of our biologists and agronomists."

"Starting to descend now!" announced Shanandar, pushing on his flight control stick. Their shuttle started descending rapidly from its altitude of 23,000 meters, until Shanandar transited to level flight at 1,200 meters, which gave them a good view of the islands they were now overflying. What they could now see was very encouraging indeed, with de Ruyter commenting on the view below their shuttle.

"This could nearly pass as a group of islands in the South Pacific, save for the pinkish color of the sky. The flora is both dense and quite diversified and I see beaches, jungles, forested plateaus and streams coming down from the hills and mountains. Life should be abundant in such a fertile environment. I am..."

"You are what, Jan?"

"We have a flying contact on lidar, Shanandar." said de Ruyter, his tone now most serious. "If it's a bird, it is a hell of a big one. It is at our two o'clock, at a distance of eleven kilometers and at an altitude of approximately 300 meters. Whatever it is, it is flying at low speeds and doing a series of circles."

"Let's go see what that could be." said Shanandar, turning the shuttle to the right. "Warn the KOSTROMA at once that we have an unidentified air contact. Let's be cautious with this."

As his copilot contacted the KOSTROMA by radio, Shanandar glanced at their lidar display screen. Whatever was ahead didn't act like a piloted craft would and its flight path was quite erratic, turning and twisting nearly constantly while staying at a low altitude. It actually reminded him of the flight path of a few birds of prey he had watched while on Vancouver Island. However, the lidar echo denoted something much bigger than any bird he had seen yet. An idea then came to his mind and he switched his microphone to internal intercom mode.

"Miss Cartier is urgently requested in the cockpit with her camera and zoom lens."

He then slowed down significantly his shuttle, so that they could stay at some distance from the unknown contact. About a minute later, Michelle Cartier, the photographer and video technician of the team, nearly ran inside the cockpit, her digital camera equipped with a big zoom lens in her hands.

"What's up, Shanandar?"

The Koorivar captain smiled to her as she crouched next to his pilot's seat: even though she was from an alien race to him as a Koorivar, Michelle Cartier was a young and very appealing woman, with sexy curves, an athletic body and soft facial features framed by long, lustrous brown hair. He then pointed the sky below and to their two o'clock.

"Our lidar has detected something large flying in erratic fashion at low altitude. It is now seven kilometers away. See if you can spot and identify it with the help of your zoom lens."

"With pleasure!"

Pointing her camera and looking through the thick windshield of the shuttle, Michelle methodically scanned the sky for a few seconds before stopping her motion and fixing a particular point in the distance.

"I have it! Whatever it is, it is quite colorful, with a mix of red, orange and green. It is still quite distant but it is definitely not some kind of artificial craft. I would classify it instead as being a very big flying animal."

"But, it would need to be about as big as our shuttle to be visible at such a distance." objected Jan de Ruyter.

"Well, there is only one way to know for sure: to get nearer."

"I am okay with that, Michelle. Make sure that you take some good pictures and videos of it when it will be clearly visible."

“You can count on that, Shanandar.” replied the young photographer, who bent forward over the copilot’s seat for a better look. The latter licked his lips as he found his head next to Michelle’s left breast, well molded in a tight T-shirt that revealed the absence of a bra. After a half minute, Michelle spoke up again, excitement in her voice.

“It is a giant bird, Shanandar! It is actually huge, with a long neck, a long tail ending with a sort of feathered fan and four legs. The rear legs appear much bigger than the front pair, with that front pair having what looks like long-fingered hands. The head has a long beak but the cranium is much more voluminous in proportion to the rest of the body than the craniums of typical Earth birds. The whole beast is covered with colored feathers and the wings must have a span of at least ten meters. Right now, it is flying around over the sea the way a bird of prey would do while searching for its next meal... It is now diving towards the surface of the water... IT JUST GRABBED SOME SORT OF A FISH WITH ITS HIND LEGS’ CLAWS!”

“Do you have pictures of it, Michelle?”

“You’re kidding? Seeing such a thing and not filming it? It is now gaining back altitude and turning around... It has stopped doing circles and is now flying straight towards the big island ahead of us, with its catch still in its claws. I must say that it is a truly magnificent-looking beast, Shanandar. In a way, it reminds me of the legendary dragons of Chinese folklore.”

“I must say that I am not familiar with that term, Michelle. You will have to tell me later about those ‘dragons’.”

“I am sure that Wei Ling would be most happy to tell you more about them, Shanandar. Can we follow it? I believe that it may be heading towards its nest, possibly to bring food to its family. If that’s the case, this could be a golden opportunity to document our first life form from this planet.”

“I am doing just that, Michelle. I will now gain back some altitude and adopt a position high and behind that ‘dragon’. That should make us much more difficult to spot. Keep watching it through your zoom lens in the meantime. I will also call Miss Wei to the cockpit.”

It didn’t take long for the ethnic Chinese biologist and agronomist to appear in the cockpit, a pair of binoculars in her hands. With Michelle Cartier pointing the giant bird to her, Wei Ling was soon swooning at the sight she had in her binoculars.

“By the ancestors! This really looks like a mythical dragon, except for the fact that it is covered with feathers rather than with scales. LOOK! It has just transferred its catch from its hind claws to its front claws while approaching that mountain... It is now flying down towards a large cave entrance visible on the slopes of the mountain. Can we launch a miniature robotic reconnaissance drone, Captain? I would love for us to go look inside that cave.”

“We certainly can, Miss Wei. Jan, launch a reconnaissance drone and pilot it to that cave, but make sure to stay far enough from that dragon in order not to attract its attention.”

“On it, Captain!”

Mere seconds later, a twelve centimeter diameter ball flew out of its storage pod and, piloted by the shuttle’s copilot, started flying down towards the cavern, where the dragon had just landed on its lower ledge. The animal then disappeared inside, its huge wings folded and walking upright on its hind legs, the large fish it had caught still held in its forward claws.

“It can walk upright while using its forward legs like a pair of arms and hands.” exclaimed an excited Wei Ling. Michelle Cartier, who was watching the picture sent back by the drone’s camera, suddenly shouted while pointing at the viewing screen in front of Jan de Ruyter.

“THERE, ON THE RIGHT SIDE OF THE ENTRANCE! I SEE A ROCK WITH SOME KIND OF INSCRIPTIONS ON IT. JAN, CAN YOU ZOOM THE DRONE’S CAMERA ON IT?”

The copilot did so at once and the four occupants of the cockpit were then able to see clearly the rock in question, on which five separate sets of symbols had been engraved. Wei Ling sucked air in as she stared at the inscriptions.

“These symbols are a form of writing. Those dragons are intelligent enough to have a written language system! This is huge!”

With the shuttle now floating immobile in the sky, the four occupants of the cockpit avidly watched the view from the drone’s camera as it slowly entered the cavern while hugging one of the rock walls, in order to be as hard as possible to spot. On a sudden thought, Shanandar switched on the view from the drone to the individual seat viewing screens in the cabin, so that the other members of the team could watch all this. Jan finally stopped his drone to a hover just before the entrance tunnel changed into a fairly large cavern shaped like a dome. In the middle of that cavern were five dragons, two large

ones and three distinctly smaller ones, assembled around a large flat rock on which the fish caught by the arriving dragon was now laid. Michelle Cartier then said something that struck her companions' minds.

"Five dragons... Five sets of symbols engraved on that rock at the entrance of the cave."

Wei Ling looked at her with big eyes, her mouth half opened.

"That rock would be like their house postal box?"

"Why not? If they are intelligent enough to have a writing system, then they must have some kind of racial social life. Maybe they get the visit of other dragons from time to time."

"Wow!" exclaimed Jan de Ruyter. "That suggests some big implications for us about how to interact with those dragons."

"You are right about that, Jan." replied Shanandar. "From now on, we will deal with those dragons as with sentient beings."

"LOOK! The dragon that we saw fish is now using a stone blade to gut the fish and cut it into pieces. These dragons can use tools!"

"I wonder if they know how to make fire." said thoughtfully Wei Ling. She was to say more but clamed up when the head dragon started speaking in a language made of coos and squawks, while distributing the pieces of fish to the members of what had to be its family. That started a full-fledged exchange between the five dragons as they ate their food, listened to by the fascinated members of the exploration team. Wei Ling in particular appeared to be in seventh heaven as she listened to the dragons.

"God, I would love to be there and try to communicate with them."

That got her a dubious look from Shanandar.

"Maybe later, but not yet! We don't know how they will react to our presence, or how aggressive or social they are and I certainly don't wish to have you or another member of our team ending up being the supper of those dragons. We will have to learn a lot more about these creatures before we will attempt a face-to-face contact."

Wei Ling sighed at those words but realized that Shanandar was right to be cautious.

"I understand. However, I can hardly wait for that day to arrive. If the rest of the flora and fauna on this planet proves even half as interesting as these dragons, then our mission will be a captivating one. What about giving these dragons a name in the meantime?"

“What about ‘Kooroo’? ‘Koo’ and ‘roo’ are the two most frequent noises they make when speaking.” suggested Michelle, making the others nod their heads slowly.

“Kooroos... That makes sense to me.” replied Wei Ling. Shanandar and de Ruyter quickly approved that suggestion, with Shanandar then giving out a few instructions.

“Jan, you go park our drone in a discrete spot inside this cavern, on some upper ledge, so that those Kooroos will not easily spot it while it films them. Then, position a relay probe just outside the cave, in order to retransmit the signal from the drone up to the KOSTROMA. Michelle, you take your photos and films, plus the footage from our drone and splice up a visual report to be sent as soon as possible to the KOSTROMA. Pass along the frequency of the drone’s emitter at the same time. I bet that studying those Kooroos will become one of the priorities aboard the ship. Hopefully, Spirit could eventually create a translation program to help us communicate with these Kooroos. I will now go find a suitable landing site on this island for our shuttle, where we will start taking air, water and biological samples. Miss Wei, go start suiting up with your biology and agronomy colleagues, to prepare for your first excursion on the surface.”

“On my way, Shanandar!”

Finding a suitable spot to land actually proved a bit more difficult than what Shanandar had expected, mostly due to the fact that nearly all the island was covered by dense vegetation. He had to turn away from the first open field he found because it was occupied by a large herd of big, buffalo-like herbivores sporting big horns on their heads. One look at the meter-long horns of the beasts convinced him that it would probably be a bad idea to land his team in plain view of that herd. Shanandar finally found a small clearing among the forest large enough to land his shuttle vertically and skillfully put down his craft on the long grass of that clearing, with only a few meters of free space around the shuttle. Shourazan, the senior bio-chemist of the team, was about to enter the airlock of the craft with the six other scientists of the team when Bill Morrison, the head of security aboard the KOSTROMA, cut their path.

“Sorry, ladies and gentlemen, but me and my security officers need to check out our immediate surroundings before you go out.”

Morrison, wearing body armor, helmet and an anti-gravity harness under his bio-hazard suit and armed with a pulse rifle, automatic pistol, stun pistol and utility knife, then stepped inside the airlock, followed by Leo Sanchez and Ahmed Jibril. The trio then

closed the inner door of the airlock, with Morrison pushing a button, sprayed him and his two security officers from head to toe with a cloud of decontaminant. Before opening the outer door of the airlock, the grizzled security veteran looked at his two men.

"Alright, let's play it cool, guys. No happy trigger act but watch for any possible threat. If you encounter one, freeze and tell me at once about it. Shoot only if your life or that of another team member is immediately threatened and if retreat is not possible. Got it?"

"Yes Boss!" replied Jibril, a beefy veteran of the 2315 War. Leo Sanchez, a smaller and thinner man than Jibril who also was a war veteran, on top of being an expert in martial arts, simply nodded his head in acknowledgement. Morrison then opened the outer door of the airlock and stepped out in the long grass of the clearing. Sanchez, being the last to exit, then closed the outer door behind him and started scanning visually his surroundings, using as well the thermal scanner integrated to his helmet visor. Morrison next made hand gestures meant for his two men.

"Ahmed, you go left and check around the back of the shuttle. Leo, you go right and check around the front of the shuttle. I will go explore the woods facing the airlock's door."

The three men then split, their rifles at the ready and scanning constantly their surroundings. Morrison was actually the first to see something, detecting some slight movement among the trees lining the edge of the clearing. Slowing down his pace and then freezing on the spot, he soon had a clear view of what had attracted his attention: a small quadruped which looked very similar to a deer, but of the size of a small pony, who was eyeing him with a mix of suspicion and curiosity. Smiling to himself, he spoke in his helmet microphone while centering the crosshairs of his helmet camera on the animal.

"Hey, for you biologist guys and girls: I found something cute close to the shuttle. Check my helmet camera feed."

It took only seconds before he got remarks back from Wei Ling on the radio.

"Ooooh, he is downright adorable! Can we go out now?"

"Not yet! My men are still checking the surroundings of the shuttle. I will advise you when it will be safe to come out. I... Wait! I see more movement among the trees. Five more mini-deer are now approaching, including what looks like a baby deer. I am filming them now."

To the delight of the biologists inside the shuttle, who were watching his camera feed on a wall viewing screen, the group of deer actually approached the first deer and

collectively examined Morrison, who was keeping still. The baby deer then approached him to within touching distance to sniff his bio-hazard suit. Apparently, the odor of the decontaminant still covering his suit didn't appeal to the animal, who then ran back to his presumed mother. The group of deer then went away, disappearing among the trees. Encouraged by this charming episode, Morrison then spoke to his men on the radio.

"Ahmed, Leo, how are things going on your sides?"

"Up to now, I have seen a few small birds among the trees, plus one sort of small furry animal climbing a tree." replied first Ahmed Jibril. "Nothing threatening seen yet."

"Uh, boss, I just saw something among the trees, on the opposite side of the shuttle. It is big but it doesn't appear threatening and it is all but ignoring me." cut in Leo Sanchez.

"Coming your way!" replied at once Morrison while breaking into a run. Turning around the front of the shuttle, he then slowed down, not wanting to alarm the creature seen by Sanchez or to trigger an attack. Entering the tree line and using his thermal camera, he soon joined up with Sanchez some twenty meters from the shuttle. What he saw then both baffled and surprised him: a giant, obese animal stood erect, sitting on its fat ass while it munched on tree leaves situated a good six meters above the ground. The animal gave Morrison one calm look before returning to its eating.

"My god! This looks a lot like a prehistoric giant sloth, minus the thick fur."

"A giant sloth? I never heard about such a beast, Boss."

"You guys keep calling me a dinosaur, but you never bothered reading about them. I did! This thing is probably too slow and lazy to become a threat to us." Just as he finished saying that, the sloth raised his ass from the ground long enough to dump an impressive amount of feces on the ground, making Sanchez break out in laughter.

"I guess that this is what he thinks of your opinion of him, Boss."

"Yeah!" said Morrison, repressing a smile. "Don't approach it and go check the woods to your left. I will go see how Ahmed is doing."

Walking for about forty meters brought Morrison near Jibril, who shook his head.

"Nothing threatening on this side, Boss. However, there is plenty of animal life and varied plants in this forest. Our biologists and agronomists should have a field day here."

"Good for them! As long as one of these plants don't start devouring one of our people. Morrison to shuttle: you can come out now."

“Understood!” replied Shourazan via radio. Morrison hurried back to the side of the airlock, in order to guard the scientists as they started to come out of the shuttle with their sample kits and instruments.

“The area looks safe right now, people. You may disperse around the clearing but stay within fifty meters of the shuttle. Be advise that there is a huge sort of giant sloth munching on tree leaves on the other side of the shuttle, some twenty meters from the craft.”

That prompted Wei Ling, Michelle Cartier and Shanira, their junior Koorivar bio-chemist, into hurrying in that direction, while Shourazan, Kamesh, Shirani and Anastasia Semirova split in pairs to start collecting samples of plants, soil and air around the clearing and within the wood line. Anastasia stayed out for only a few minutes, time to collect samples from her companions before bringing them inside the shuttle, so that she could start analyzing them with the help of Kazmiriel.

Shortly before lunchtime, Kazmiriel, Wei Ling and Shourazan collectively came to the conclusion that the local ecosystem was not a bio-hazard threat to either Humans or Koorivars, while Human and Koorivar microbes appeared harmless to the local organisms. The team members were then able to get rid of the need to wear their bio-hazard suits and masks, something that was greeted with a collective sigh of relief. After a quick lunch aboard the shuttle, Shanandar assembled his team around an electronic map board showing the topology of the island they were in.

“Alright, people, time to go do some deeper exploring. The KOSTROMA is presently in a polar orbit around this planet, mapping it with radars, lidars, optical scopes, thermal scanners, magnetometers and spectrometers. Our job on the surface will be to start studying in depth the habitability factor in relation to the local environment, fauna and flora. Our shuttle is presently some twelve kilometers from the nearest coast and we certainly want to take some samples of the local ocean water and have a first look at the marine life on this world. I would thus recommend that a team of two biologists go to the coast with Leo Sanchez, using an anti-gravity scooter. Who would like to go?”

“I want to go!” said at once Shanira. “My specialty on Shouria was marine biology.”

“I will go as well.” said in turn Shourazan.”

“Excellent! Next, we will want to cover more ground, in order to better explore the fauna and flora of this island. We can form two separate teams with the two security officers left available. I would suggest that one group goes to the open savannah area where we saw that herd of buffalo-like herbivores. With luck, it could find and take samples from dead animal carcasses, as well as observe the local animals. A last group could go to the nearest set of hills to the East, to study that area. All three groups should return to the shuttle by 21:00 at the most, so that we could all sleep safely inside the shuttle. So, who wants to go watch those buffalos?”

This time, Kamesh, Wei Ling and Michelle Cartier volunteered to go to the savannah area with Bill Morrison, while Shirani, Pedro Ramirez and Kazmiriel elected to go to the hill area with Ahmed Jibril. That left Anastasia Semirova, their lab technician, and Kurt Vogel, their life support systems technician and handyman, with the shuttle and its crew of two. With the three groups formed, Shanandar gave them the go to leave in their scooters towards their assigned areas of study. The veteran Koorivar spacer felt good as he watched the five scooters fly away at treetop level: this world so remembered him of his native Shouria, with similar gravity, lights conditions, breathing atmosphere and climate. Wolf 1061c indeed looked like a perfect resettlement world for the more than 43,000 Koorivars still traveling through deep space aboard the SHUNDAR and SHANIZAR, asleep in their cryogenic capsules.

15:15 (Universal Time)

Open savannah area of large island off the northeastern continent

Wolf 1061c

Michelle Cartier felt happy and satisfied as she filmed the various animals roaming this savannah area, with its long grass and dispersed clusters of trees. She was helping document a new world, new forms of life and show the beauty of life to others through her pictures and films. What she was doing now had been her lifelong dream. With some luck, her dream was also going to make others dream through her pictures. Lowering her camera for a moment, Michelle made a panoramic scan with her naked eyes, embracing the scenery around her. The two scooters of her group of four persons had landed under the shadow of a huge tree that reminded her a bit of a giant African Baobab. The tree itself stood with five other similar trees near a small water stream used as a drinking source for the animal herds roaming the region. As she knew

already from experience, a drinking point for animals commonly attracted predators as well, and this place was no exception. The group had found the half eaten carcass of a sort of antelope near the stream and Wei Ling, escorted by Bill Morrison, was presently taking tissue and blood samples from the carcass, hoping to learn more about its anatomy and physiology. As for Kamesh, the Koorivar agronomist was busy studying the huge tree Michelle stood under.

Michelle suddenly saw Wei Ling motion to her from sixty meters away, signifying to her to come join her and Morrison. Jumping down from the top of her anti-gravity scooter, which she had used to have a better all-around view, Michelle started to walk at a relaxed pace towards Wei and Morrison, who had returned their attention to the animal carcass. She made less than twenty meters before a large shadow covered the ground around her. Surprised, she looked up and froze at the sight of two big clawed feet coming down on her. Michelle didn't have the time to properly react or try to flee before those clawed feet closed up around her, making her scream in pain as two of the sharp claws pierced her left upper leg and her right shoulder, areas which were not covered by her armored vest and helmet. In utter panic, she felt herself pulled upwards and becoming airborne and screamed at Morrison and Wei, who were still unaware of what was happening to her.

"HELP! HELP!"

Both of her companions looked up at once and stared with horror at the giant Kooroo who now had Michelle in its hind legs' claws and was flying away with her. Morrison's first reflex was to aim his rifle at the Kooroo but he then lowered it without shooting when he realized that the risk of hitting Michelle was too great. His next move was to grab Wei Ling by one arm and force her up on her feet.

"RUN TO THE SCOOTERS WITH ME! WE MUST FOLLOW THAT KOOROO!"

As they ran towards the baobab and the two scooters, Morrison spoke urgently in his helmet microphone.

"Shanandar, this is Morrison. A Kooroo just grabbed Michelle and flew away with her. We are going to try to follow it with our scooters. Take off with the shuttle and run after that Kooroo!"

There was a couple of seconds of silence before Shanandar, understandably stunned, replied.

"Understood! Which way did that Kooroo go?"

“Due East, towards the central mountains of the island. It is flying damn fast however and I am not sure that our scooters will be able to catch up to it.”

“Alright, I will be airborne in two minutes, time to switch on my systems.”

Morrison silently swore at that delay but then told himself that Shanandar could not act faster: you didn't start up a space shuttle just by turning the ignition key.

In the air, Michelle's situation could be said to be precarious, at the least. Both of her arms were pinned to her torso by the tight, nearly suffocating grip of the Kooroo's hind claws, while two claws were still embedded in her right shoulder and left upper leg, causing her great pain. Her digital camera and equipment bag were also dangling under her from their carrying straps, which she had slung across her chest. Things got even worse when, while still flying towards the mountain ranges and gaining altitude, the Kooroo started to attempt to kill its moving prey by stabbing Michelle's head with its sharp toothed beak. Thankfully, Michelle's helmet saved her life then, making the Kooroo's hard beak bounce on it. The mix of fear and pain then made Michelle lose it and scream in anger at the Kooroo.

“STOP IT! STOP IT, YOU BIG STINKY BIRD!”

The Kooroo immediately stopped its beak attacks and eyed her for a few seconds, surprised by her use of articulated sounds. It then ignored her and turned its head towards the mountain range, now some eleven kilometers ahead. Michelle, crying from both pain and fear, suddenly heard Bill Morrison's voice in her helmet headset.

“Michelle, this is Bill, can you hear me? If you do, switch on your emergency radio beacon emitter, so that we can track where you are.”

Despite her distress, Michelle understood at once that replying verbally to Morrison could well prompt the Kooroo into trying again to kill her, so she kept silent and used her left forearm, which was not stuck under one of the clawed toes of the Kooroo, to reach the small control box of her radio systems and push the 'on' button of her emergency beacon. With that done, she then tried to think about what she would do next. Right now, the Kooroo was flying at an altitude of about 800 meters, meaning a sure death if it released its grip on her. She would thus have to wait until they were close to the ground before doing anything. But do what? Michelle bitterly realized that she was no match in terms of fighting to the gigantic predator presently holding her. That left only her wits as a weapon. That also meant that she would have to do her best to control her fear and to not panic when facing the Kooroo. She had done a few photo safaris in her past and

knew that the best way to act when faced with a deadly predator was to stay calm and appear sure of herself. However, that was easier said than done when you were dangling some 800 meters up and with claws piercing your skin.

15:41 (Universal Time)

Kooroo family cave, central mountain ranges

Koory was helping her three offspring to learn how to make stone tools around the central flat stone of their cave when Rork returned from his hunting trip and dropped something on the ground, a few paces away from the central stone. Koory was about to thank him for having brought supper for the family when she realized that Rork's prey was still very much alive.

"Why didn't you kill it before returning to our cave? And what is that thing anyway?"

"I don't know, Koory." replied her mate in a contrite tone. "I never saw the likes of it before, yet there were three more strange beasts like it with it. I did try to finish it, but its skull and torso are incredibly hard. It also tried to speak to me, or so I believe."

"Speak to you? How is that possible? We are the only race that can speak in our world."

Their daughter Riak, still very much a young juvenile, then approached the prey, which was still much smaller than her, to examine it from up close, making the thing recoil and back away until its back was against one of the rock walls of the cave.

"Hey, it has some kind of weird second skin all over it and has a few things attached to it."

Using one of her forward legs like an arm, Riak then grabbed parts of that 'second skin' near a bleeding wound and pulled, ripping off a good part of it. Biting into that piece of 'skin' in order to taste it, the young female Kooroo spat it out nearly at once.

"FEWW! It tastes horrible! Are we really going to eat that for supper, mother?"

"Maybe it will taste better once we take off that second skin." Suggested Koosh, the eldest son of the family, making the others nod in agreement.

"Let's skin it, then." Said Koory as she grabbed one of the stone cutting tools lying on the central stone, where the butchering of their catches was done. As she advanced on the live prey, the latter suddenly started shouting distinctly articulated

sounds forming a complicated pattern, making Koory stop cold and look at it with confusion.

"You are right, Rork: it does speak some kind of language of its own. Where is that thing from anyway? Where did you find it?"

"Near the water stream in the open plain. It walked erect on two legs in a way I never saw before, and so did its companions."

"Maybe it swam to our island from the continent." proposed Kar, the youngest of the family.

"That could be." agreed Koory. "The continent is vast and we never flew very far inland, in order not to provoke the local Krazts. Maybe we should go fly there with that thing and ask the others on the continent if they ever saw the likes of it before."

"But, what about our supper? I'm getting hungry!" protested Koosh. "Let's at least try one piece of it."

"Wait!" ordered Koory as Koosh was grabbing a stone cutter. The female adult, who usually did much of the thinking around the cave, was now examining from a distance the many things either hooked to their prey or covering it. Some of those things looked furiously like tools to her. Advancing slowly towards the scared creature while hissing softly to calm it, Koory finally grabbed one of the objects attached to the prey by a sort of leather strap. It proved to be of a very complicated shape, with a multitude of colored dots and protuberances. While she was touching one of those colored dots, a rectangular flat surface suddenly became bright, scaring Koory and making it drop the object. It would have smashed on the ground if not for the quick reactions of the prey, who extended one arm in time to catch it in midair. With the five Krazts now tense and watching her closely with their claws out, Michelle did her best to control her own fear and slowly pointed her camera lens at Koory while orienting the viewing panel so that the dragon could see the image in it. To see her own face on that rectangular surface stunned her into sitting heavily on the ground.

"How is this possible? What is that thing the prey is holding?"

"She earlier spoke to us, Mom." said Riak, equally baffled. "Maybe that is a tool that it made itself. Maybe she can even write."

"Hum, we'll see about that quickly enough, Riak." replied her mother before going to a block of dried clay lying in a corner. Grabbing it, along with a small bone with a pointy extremity and a clay bowl full of water, Koory brought it to the prey and put the items in front of it, then made the motion of writing with one hand.

“Can you write, strange one? If so, show us!”

To the collective amazement of the five Krazts, the prey seemed to understand her meaning at once and, grabbing the pointy bone, splashed some water over the clay block, as the Krazts did to soften it before scribbling signs on it. Next, it started writing quickly three full lines of strange symbols, scratching over sixty symbols in the process. That writing skills demonstration made Koory take a step back, struck by the implications of this.

“It can write, on top of being able to speak a language and make tools. It is as intelligent as us!”

“So what?” replied Koosh. “I am still hungry!”

“So what? What if its tribe starts looking for it and finds that we killed it? This could start a war between us and its tribe. Despite our size advantage over them, their tools may be enough to defeat and kill us. Besides, that creature is intelligent, not like the dumb quadrupeds or fish we usually kill for food. Maybe we could even become friends.”

“Friends? Are you crazy, Koory?” objected her mate. The female adult Krazt was about to reply to that when Riak suddenly spoke in alarm.

“Mother, there are beings approaching from the entrance!”

The two adult Krazts reacted at once by standing side by side, blocking most of the tunnel entrance while their three children went to take refuge at the farthest end of the cave. Koory was then able to see three creatures identical to their prey approach slowly in extended line while pointing some kind of long objects at her and Rork.

“Too late, Rork: its tribe is here.”

To her surprise and that of Rork, the prey then started speaking quickly in its language at the newcomers, making them stop their advance.

“NO! DON’T SHOOT! THEY WERE STARTING TO UNDERSTAND THAT I AM AN INTELLIGENT BEING. IN FACT, THE KOOROO ON YOUR LEFT JUST MADE ME PASS A WRITING SKILL TEST.”

“AND THEY WERE ABOUT TO EAT YOU FOR SUPPER, MICHELLE.” replied Bill Morrison, keeping his rifle pointed at Rork. “GIVE ME ONE GOOD REASON NOT TO KILL THEM.”

“THAT KOOROO ACTED OUT OF INSTINCT, NOT MALICE. IT WAS SIMPLY HUNTING TO CATCH FOOD TO FEED ITS FAMILY, THE SAME WAY WE BUTCHER COWS, PIGS AND CHICKENS IN ORDER TO FEED OUR OWN FAMILIES. THESE

KOOROOS DON'T DESERVE TO BE KILLED JUST BECAUSE OF A SIMPLE MISUNDERSTANDING. WE WERE ON THEIR HUNTING TERRITORY AFTER ALL.”

Bill Morrison was still debating mentally whether to shoot or not when the voice of Captain Shanandar, who was watching the event via the hidden probe, resonated in his headset.

“Stand down, Bill. Michelle is right. We trespassed on their territory and they then made a simple mistake by thinking that Michelle was just another prey they could catch and eat. Leo, Ahmed, lower your rifles.”

The three security officers reluctantly obeyed and lowered their rifles, something that seemed to put the adult Kooroos more at ease. Grimacing with pain, Michelle got up on her feet with some difficulty, putting most of her weight on her intact right leg. She also cranked up her anti-gravity harness, diminishing the felt weight on her legs. Then, to the surprise of both her companions and of the Krazts, she limped slowly to Koory until she stood less than one meter away in front of her and raised high her left hand, offering it to Koory.

“Please, let’s forget this unfortunate incident and let us be friends from now on.” Even though Koory didn’t understand literally the meaning of her English words, she did understand their general meaning. After a short hesitation, she touched Michelle’s extended hand with her own forward right clawed hand, careful to keep her claws retracted. She also pointed at herself and said a single word.

“Koory!”

Michelle understood her intention and pointed at herself while also saying a single word.

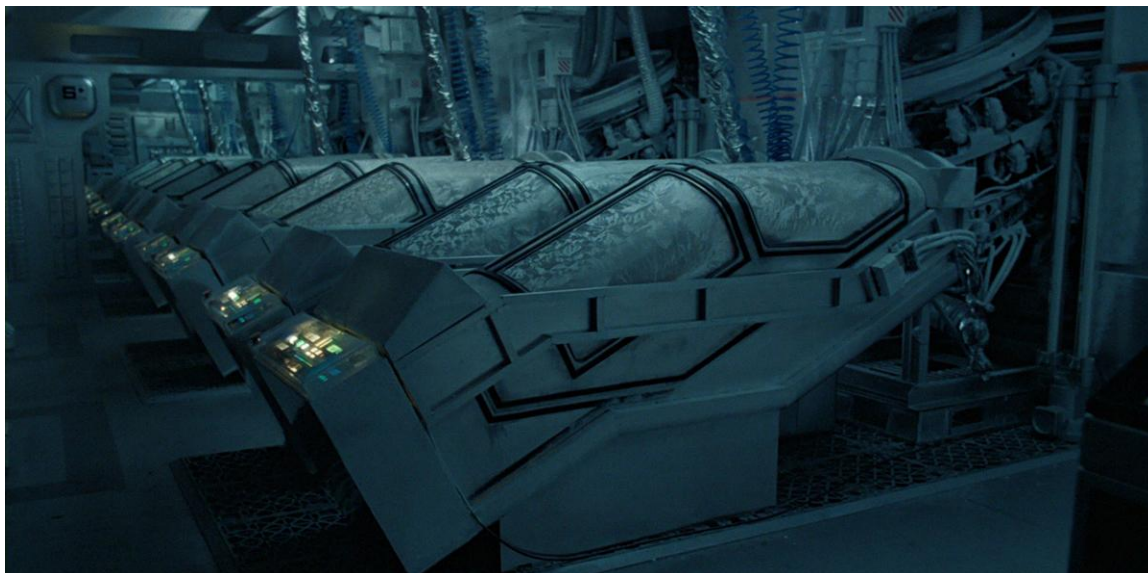
“Michelle!”

Only then did Michelle turn around and limp towards her three companions. Leo Sanchez and Ahmed Jibril waited for her to be nearer to them, then stepped forward to assist her. The four Humans left slowly as a group, their rifles slung in their backs, until they emerged out of the cave and into daylight. There, they got inside two waiting anti-gravity scooters, sliding their transparent canopies closed before taking off and flying away. The Krazt family, which had come out to watch, followed with disbelief the two scooters with their eyes.

“By our ancestors! They can also fly, like us!” said a stunned Riak. On his part, Rork gave a discomfited look at his mate.

“What do we do now?”

“What you will do now is to stay with the children in our cave. On my part, I will go catch and kill a proper supper for us. As of now, bipedal creatures are off the menu.” replied Koory in a rather acerbic tone.



Cryogenic sleep pods inside a spaceship.

CHAPTER 13 – DEEP SPACE RENDEZVOUS

09:10 (Universal Time)

Saturday, July 31, 2320

Command bridge of the KOSTROMA

Leaving polar orbit of Wolf 1061c

Tina hid her nervousness as her ship was pulling out of its orbit around Wolf 1061c and preparing to jump to the coordinates calculated by Dana Durning: there were so many uncertainties about what she and her ship would encounter next. Despite knowing in detail the flight plan of the SHUNDAR as filled before its departure from Shouria, its captain could well have decided to modify it as a result of what he had encountered in his successive stops in the Gliese 625 and Gliese 581 Systems. He could have decided to push his ship's engine to the maximum and go faster in order to compensate for the time taken by his two stops. Or he could have decided to take a gamble and go to a new, unplanned destination. Or the ship itself could have suffered any kind of breakdown or gradual degradation of some of its systems which would in turn impact on its flight path and schedule. All in all, the KOSTROMA was leaving for a high stakes gamble and Tina was very much conscious of that.

“We are now pointed towards our next destination and taking speed.” Announced Frida Skarsgard, sitting at the helm station. “Jump calculated and locked. We are ready to jump, Tina.”

“Then, jump!”

There was the now usual brief orange flash as the KOSTROMA’s Koomak Interstellar Drive was activated. Then the view on the holographic display surface of the bridge complex’ sphere changed completely. From showing the blue orb of Wolf 1061c, the internal face of the bridge sphere now showed nothing but the blackness of deep space, punctuated by the dots of light of distant stars.

“We are at our new destination, with the Wolf 1061 System 1.9 light years behind us.” said calmly Dana Durning.

“Patricia, fire up a panoramic VLF radar pulse. Let’s see if the SHUNDAR is within range already. Also keep an ear for any possible electronic signal from the SHUNDAR.”

“Aye, Tina!” replied Patricia O’Neil, who was manning one of the sensors and communications stations of the bridge. Tina then forced herself to sit back and relax a bit in her command chair: even if their calculations for intercepting the SHUNDAR proved accurate, getting a radar echo from the Koorivar refugee ship could take days, weeks and even months, time for the radar signal to travel outbound and then bounce back at the speed of light. As she had expected, there was no radar echo coming back within seconds: the odds against that were simply astronomical. However, she saw Patricia do a double take while looking at her instruments. Tina was about to ask what she was seeing when Patricia snapped her head around and shouted in alarm at her.

“WE ARE RECEIVING AN AUTOMATED DISTRESS BEACON SIGNAL FROM THE SHUNDAR...FROM BEHIND US!”

“WHAT? FROM HOW FAR BEHIND?”

“FROM FURTHER BEHIND THAN SIXTEEN LIGHT SECONDS, AS WE HAVE NOT YET GOT A RADAR ECHO FROM THAT DIRECTION. THE DOPPLER SHIFT OF THE BEACON SIGNAL IS HOWEVER DISTURBING: THE SHUNDAR IS RECEDING FROM US WHILE STILL GOING AT A SPEED OF SEVEN PERCENT OF LIGHT SPEED.”

Tina then twisted her head sideways to look at Shanandar, sitting next to Gerald Holmes in his V.I.P. seat.

“That is way too fast! At this point, the SHUNDAR should have decelerated to about three percent of light speed. Why is it still going so fast? At this rate, it will blaze its way across the Wolf 1061 System, with no chance of slowing down enough to stay in the system.”

Shanandar, now mortally worried, nodded his head at her words.

“You are correct, Tina. However, the fact that we are getting an automated distress signal may indicate that a major systems failure occurred aboard the SHUNDAR. The navigation computer may have suffered a major failure or, even worse, the main anti-matter rocket engine may have stopped working, in which case the SHUNDAR would now be little more than an out-of-control deep space asteroid. We must catch up with it, fast!”

“Agreed! FRIDA, REVERSE COURSE TOWARDS WOLF 1061, MAXIMUM THRUST! DANA, CALCULATE A SERIES OF SHORT JUMPS, EACH COVERING ONE LIGHT DAY OF DISTANCE. ONCE POINTED BACK TOWARDS WOLF 1061, WE WILL JUMP AND THEN LISTEN FOR THE SHUNDAR’S DISTRESS BEACON, TO SEE IF IT IS AHEAD OR BEHIND US. WE WILL REPEAT THAT PROCEDURE UNTIL WE GET CLOSE ENOUGH TO THE SHUNDAR TO INTERCEPT IT. TO ALL THE CREW, BRACE FOR MAXIMUM ACCELERATION IN FIFTEEN SECONDS!”

Everybody on the bridge suddenly felt their bodies get much heavier some fifteen seconds later, as the roar of their anti-matter engines reached a level they had not heard before. The acceleration compensation fields of the KOSTROMA were about the most powerful available in the Solar System and could cancel up to seven Gs of felt acceleration, allowing the giant cargo ship to accelerate faster than nearly every other ship, and this without crushing its crew under excessive felt Gs. However, with its anti-matter engines at maximum power, the crew was now enduring a good three Gs of felt acceleration, about the same as one would feel while riding a giant rollercoaster wagon going through a tight loop.

“WE ARE NOW POINTING TOWARDS WOLF 1061, WITH OUR SPEED NOW POSITIVE TOWARDS THE SYSTEM.” announced Frida Skarsgard after some forty seconds.

“ACKNOWLEDGED! DANA, EFFECT OUR FIRST JUMP WHEN READY!”

As Tina finished giving that order, she mentally hoped that her plan would work. Without its capacity to jump across interstellar distances, the KOSTROMA would never have a

chance to catch up with the SHUNDAR in time, as it would take it days to accelerate to seven percent of the speed of light on rocket power.

“EFFECTING FIRST JUMP NOW!” said Dana as she pressed her jump button. There was again a brief flash of orange light, then the display sphere showed deep space all around them. It didn’t take more than six seconds before Patricia O’Neil reported from her station.

“The distress signal from the SHUNDAR is still ahead of us, Tina.”

“Then, let’s effect a second short jump. Dana, do it when ready.”

“Second jump...now!”

It took them three more such jumps before Patricia announced that the distress beacon signal was now coming from behind the KOSTROMA. However, instead of effecting another jump to get closer to the Koorivar ship, Tina ordered Frida to continue on their present course while keeping their engines at maximum power. Seeing Gerald Holmes throwing her a questioning look, Tina smiled to him, despite being crushed in her seat by the felt acceleration.

“If we are to intercept the SHUNDAR in deep space, we will have to go at the same speed as it does, so that we could board it. However, it is still going at $0.07 C^4$ and won’t slow down, which means that we ourselves have to accelerate to $0.07 C$ if we are to have any chance of intercepting the SHUNDAR. We will thus continue accelerating and will let the SHUNDAR catch up with us, instead of us running after it.”

“And when we will be side-by-side with the SHUNDAR, what then?”

Tina shrugged her shoulders at that question.

“That depends on what we will find at that time, Gerald.”

15:39 (Universal Time)

Wednesday, September 8, 2320

Command bridge of the KOSTROMA

Speeding across deep space at $0.07 C$

“We have the SHUNDAR on lidar, at 41 kilometers behind us and approaching at a slow rate.”

⁴ C : The scientific symbol for the speed of light, which is 299, 792 kilometers per second.

"At last!" sighed Tina. Their target was finally in sight after forty days of rushing madly across space,. Tina had decided after a few hours spent at maximum power to throttle down her engines a bit, so that her compensation fields could soak up fully the acceleration, allowing her crew to safely go back to a more normal routine and effect their maintenance work. Still, the speed run they had just done was probably going to be written into the annals of Human space exploration.

"Call Captain Shanandar, Chief-Engineer Shoumak, Engineer Kovar and Doctor Kazmiriel to the bridge conference room, along with Alan Ashford and Yasmina Jumonji. Spirit, can you attempt to contact Sheona, the central computer of the SHUNDAR?"

"I am sorry, Tina, but I have already tried, without results."

"Well, it was worth trying, I suppose. Do you know if it would be feasible for you to take some measure of remote control of the SHUNDAR by using the coded signals provided to us by the Koorivars?"

"I will see what works, Tina. However, everything tells us that the SHUNDAR has suffered some major malfunctions. Its security protocols may be down as well. I will keep you posted on my progress, if any."

"Thank you, Spirit."

Tina closed her eyes for a moment, both physically and mentally exhausted. The constant high Gs, along with the crushing weight of responsibilities which her position entailed, had been hard on her during the last few weeks. She however had consciously done her maximum to give enough motherly time to her little son Misha, leaving command of her ship in rotation to either Renée d'Argenteuil, Dana Durning or Frida Skarsgard. In that, she had been helped greatly by her husband Michel, who had taken as much care of Misha as his own position as a ship's security officer allowed him. Still, Tina had to leave her son in the care of the crew's daycare center from time to time, when she and Michel had no choice but being on duty at the same time.

"God, I will need a good family vacation after this." she said to herself while rubbing her eyes. Getting out of her command chair, she stretched herself up a bit before walking down the steps of the bridge's series of concentric platforms: the long hours had cut into her regular physical training program and she was getting a bit out of shape. She was the first by a few minutes to enter the bridge complex' conference room and took that time to think about her options for the interception of the SHUNDAR. However, she needed the ideas and opinions of other people who knew the Koorivar ship much better than her before she could take some informed decisions.

Shanandar was the first to join her in the small conference room, looking quite concerned. Tina could easily understand why: after all, the lives of over 22,000 Koorivars were in the balance right now. Greeting him, Tina waited until everyone called had arrived before starting the discussion, first looking at Shanandar, Shoumak and Kovar.

“We are now ready to close in on the SHUNDAR and board it. Before we decide how to do that, I need your knowledge about that ship. First off, how many external access points or doors are there on the SHUNDAR and where?”

Shanandar, who had already done some thinking of his own, used a data chip to enter into the computer linked to each station of the conference table a detailed schematic of the SHUNDAR, while answering Tina.

“The SHUNDAR has a total of two shuttle hangar doors, two ground access points situated inside the landing legs, three docking points and two secondary access points with airlocks on its hull. Of the docking points, two are opposite each other on the hull, while the third, smaller one, is on top of the hull and is meant for head-to-head docking. All of those access points have emergency external command panels to open them manually if needed, like what you did on Eris when you entered my VEON SHOURIA.”

The mention of the top hull docking point immediately captured the attention of Tina.

“That top hull docking point, would it be compatible with a standard Human ship’s docking port?”

“Uh, normally no. However, I know that the KOSTROMA’s docking ports are more adaptable than your standard docking ports. Why are you interested specifically in the top hull docking point?”

“Because we could use it to access the interior of the SHUNDAR directly via our stern docking station, which is about the most adaptable one on the ship, and this after grabbing and securing the SHUNDAR with our stern towing clamps. This would avoid the need to send people in spacesuits outside to open manually one of the side access points.”

“I see! I actually like that: it would greatly facilitate the transfer of people or equipment between the two ships.”

“Exactly! My next question is about the power distribution system aboard the SHUNDAR. Would there be a power terminal available in or near the top docking point, in case we would need to feed electrical power into the ship?”

“There is such a terminal connector plate inside the airlock serving the top docking point, Tina.” answered Shoumak, the ex-chief-engineer of the VEON SHOURIA. “We would need to use a special adaptor with current modulator to marry that connector plate with the standard power cables of the KOSTROMA. I would have to check to see if we have such an adaptor aboard. If not, I could build one in a few hours.”

“Do that as soon as we are finished here, Shoumak.” said Tina while pointing one index at the Koorivar engineer. “I want us to be able to plug in a power cable as soon as we will gain access to that top docking point. With the apparent failure of multiple systems on the SHUNDAR, we can’t assume that it still has power around the ship. Doctor Kazmiriel, what would happen to the cryogenic sleep pods of the SHUNDAR if the ship’s main power would go off?”

“Well, since these pods contain people, our most precious commodity, Koorivar cryogenic pods were equipped with multiple built-in backup systems, including power systems. Normally, main ship power feeds an individual battery inside each pod. If that main ship power is interrupted, then an isotopic generator integrated in that pod will start providing backup power in order to maintain the minimum vital functions of the pod. However, the amount of power provided by these isotopic generators is quite low: such generators are designed for longevity rather than power volume. If unusual conditions are at play, like a rise of the internal temperature inside the compartments containing the cryogenic pods, then the power provided by the isotopic generators may not be enough to counter those unusual conditions. That is why the compartments containing cryogenic pods were kept at a freezing temperature. My main concern about our cryogenic pods is however about the reliability of their electronic control circuits after so many years. The SHUNDAR, like the VEON SHOURIA and the SHANIZAR, left Shouria some 361 of your years ago. Our own experience on the SHOURIA demonstrated that our electronic systems do in fact possess a major weakness in that aspect.”

“And...if the electronics of your cryogenic pods deteriorate and fail due to age, what happens next?” asked Tina, already afraid of knowing the answer in advance. The grim expression on Kazmiriel confirmed her fears.

“Then, the pod’s life support functions of that pod will fail, and the pod’s occupant will die if not revived within hours of that systems failure.”

The participants assembled around the conference table were silent for a moment as they reflected on such a grim prospect. Tina finally broke that silence with a string of orders.

“Very well! Here is what we are going to do next. First, the KOSTROMA will capture the SHUNDAR and secure it to our stern docking station, where it will be held by our stern towing clamps. Then, using our stern docking station port, we will get to the top docking port hatch of the SHUNDAR and will open it, gaining access inside. If the main power proves to be off, we will then plug in a power cable from the KOSTROMA and power back up the ship. Once that is done, our top priority will be to check the cryogenic sleep pods of the SHUNDAR. Shoumak, on top of building a special power adaptor unit, could you build quickly a series of small, portable control boxes that could be plugged to individual pods which are on the verge of failure or showing irregularities?”

“Kovar and Spirit can help me do that, Tina.”

“Good! Alan, Yasmina, you stand by to fly out with flying maintenance pods if something goes wrong with the stern docking operation and if we need to use instead a side hull access point of the SHUNDAR. Well, let’s get to work! There is a lot to do and our available time to do it may already be counting down.”

18:24 (Universal Time)

Stern docking station of the KOSTROMA

Shanandar and Shoumak, wearing their spacesuits, were in the forefront of the group of engineers, technicians and Koorivar medics waiting anxiously in the airlock of the stern docking station. They were all watching a technician who was using a power tool to turn the manual opening mechanism of the SHUNDAR’s top hull docking access hatch. Up to now, there had been no reaction or indication that anyone aboard the SHUNDAR was aware that their ship had been captured by the KOSTROMA and was now being firmly held in the cargo ship’s stern towing clamps. The SHUNDAR also appeared to be without main power, as the indicators inside the external emergency opening panel were dead. The moment that the external hatch of the SHUNDAR’s docking airlock was open wide enough to let him pass, Shanandar hurried inside with Shoumak and Kovar. They had to use the frontal lamps of their spacesuits, as the inside of the large airlock proved to be unlit. There was also no artificial gravity, forcing them to

use the magnetic soles of their boots to walk along one of the walls of the airlock. Checking the instruments pad fixed to the left forearm of his spacesuit, Shanandar swore quietly to himself.

“The ambient temperature inside the airlock is only minus 46 degrees Celsius. I don’t like this!”

“Indeed!” said Shoumak. “This tells us that the ship has been without main power for quite a while already. I hope to the stars that the emergency isotopic generator cells of the cryogenic sleep pods took over after the main power went out.”

“I hope so too. If not...”

Shanandar did not finish his sentence, it implying something too horrific for him to say out loud. Approaching the inner hatch of the airlock, he saw that it was also without power, so started to turn its emergency manual mechanism. At first, it wouldn’t budge, but a helping hand from Shoumak finally made the hatch start to open.

“The humidity in the ship’s atmosphere must have frozen, gluing the hatch in its closed position.” volunteered Kovar, making Shoumak and Shanandar nod their heads.

“I think that you’re right, Kovar.” replied Shoumak. “Get our technicians to plug in at once the power cable from the KOSTROMA in that power panel. We need some power inside this ship.”

“I’m on it!”

After a minute of hard efforts turning the crank of the inner hatch, Shanandar and Shoumak were finally able to enter the ship proper. Just as they were stepping inside a large locker room full of spacesuit lockers and tool bins, some of the overhead lights lit up, while a ventilator fan started turning somewhere. It however did so with an annoying screeching noise and went on for only a couple of seconds before stopping.

“Damn! The ship is in an even worse shape than I thought.” said a disappointed Shoumak. “The artificial gravity also failed to kick in, even though the juice pumped in from the KOSTROMA should have been enough to power all the essential life support systems of the SHUNDAR. This ship is truly a derelict one right now.”

“Then we will concentrate on checking the cryogenic sleep pods as our top priority. Me, Kazmiriel and Kovar will go to the bridge deck to check the cryo pods of the standby crew. Shoumak, you go with the rest of our technicians and medical personnel to check the cryogenic sleep vaults on the lower decks. Spirit, any luck yet in making contact with Sheona?”

"I have started accessing the data network of the SHUNDAR, now that there is some power in it." replied the KOSTROMA's central AI computer. "I have just sent a wakeup signal to Sheona and its circuits have started to boot in. However, I can't accelerate that process without risking to cause irreparable damage to Sheona's AI programs. Sheona should be fully online in 68 seconds. I will advise you when Sheona will start speaking with me."

"Thanks, Spirit." said Shanandar in his helmet microphone before looking at Kazmiriel and Kovar. "Let's go to the cryogenic sleep compartment adjacent to the bridge."

The three Koorivars were about to open the airtight hatch giving access to the bridge complex and the crew facilities, two levels under the top docking airlock, when Spirit came back on the radio.

"Shanandar, this is Spirit: I have some news for you."

"Go ahead, Spirit."

"First, Sheona is now awake and communicating with me. However, she reports that many of her diagnostic and control circuits boxes around the ship are not responding to her requests for data. Most of the cryogenic sleep pods are still sending signals, but others are not responding. Those who are responding all show to be on backup isotopic generator power."

Shanandar's heart sank at the possible implications of that piece of information: there was now a strong possibility that some of the precious cryogenic sleep pods may have malfunctioned, killing their sleeping occupants.

"Thanks, Spirit! I am now going to enter the bridge complex, to check on the standby crew cryogenic pods."

Hoping fervently that he was going to find those thirty cryogenic sleep pods still functioning, Shanandar opened the access hatch of the bridge complex and stepped inside a small vestibule. He was actually in familiar territory, as the SHUNDAR, like the SHANIZAR, was a sister ship to his own VEON SHOURIA. He thus did not hesitate and entered at once the medical section, where the cryogenic pods of the standby crew were located. Crossing the main infirmary room, then its adjacent analysis laboratory, he arrived at the sliding transparent door of the cryogenic sleep compartment. A quick look through the plastic pane showed him a still scene inside, with a few small indicator lights showing on the control pads of the thirty pods inside.

“Why aren’t the reanimation robots up and active? With the power pumped from the KOSTROMA, the robots should have come to life and started to reanimate the standby crewmembers.”

“I’m going to go check the bridge complex’ circuit breaker board.” said Kovar.

“Good idea! Kazmiriel, we will now go examine the status of each of these cryogenic pods.”

Shanandar however had to slide the door open manually before he could enter the compartment, as its mechanism was dead, like about everything else in the ship. He then hurried to the first of one of the two parallel rows of fifteen cryogenic sleep pods and anxiously looked at its control pad. While it showed the pod to be on emergency power, it also showed that the vital signs of the occupant of the pod were still within the acceptable limits for a person in deep sleep. Tears came to Shanandar’s eyes as he looked through the frosted transparent pane of the pod at the serene face of its occupant.

“Kurkan, my dear old friend. We will soon have you and your crew up and out of danger.”

Kazmiriel, on his part, went at first from pod to pod, checking quickly the vital signs of their occupants. All of them proved to be alive and asleep...except one. His heart sinking at the sight of the dead control pad of the pod he had stopped in front of, he saw that not even the blinking red light that would have indicated that the pod was on emergency power appeared on the pad. Quickly connecting one of the recently built external control boxes to the control pad, he powered it and waited anxiously for data from the pod to show up. He however had to sit down on the deck, crying, when his control box showed only flat lines. Seeing that, Shanandar hurried to Kazmiriel.

“What is it, Kazmiriel?”

“That...that crewmember is dead. All the vital signs show flat lines.”

With a big lump forming at once in his throat, Shanandar looked at the plate on the control pad of the pod that gave the name and occupation of the pod’s occupant. Tears came back again to his eyes when he saw that he had known well the now dead Koorivar.

“Shanit...my poor Shanit! To finish like this here, when you were about to discover a new home for our race.”

His grief and that of Kazmiriel were suddenly interrupted by the noise of the compartment’s ventilation starting up, while the controls around them came alive.

Medical robots started to appear two minutes later, as Kovar came in, a triumphant smile on his face.

“We have power on the bridge complex’ main circuits! I found all the circuit breakers off but only had to reset them manually.”

“Which would have been impossible without either a crewmember or maintenance robot available to do that simple act. Decidedly, our backup systems left quite a bit to be desired.” replied Shanandar. “We found 29 of the thirty members of the standby crew still alive and sleeping in their pods. Shanit didn’t make it.”

“Shanit?! By the stars! I studied engineering with him.” said sadly Kovar. “I suppose that his pod failed?”

“Correct! His pod’s control circuitry apparently stopped functioning completely, preventing its local isotopic generator from taking over when the main power went out.” Kovar took a moment to digest that. His eyes suddenly bulged in apparent horror, prompting a worried question from Shanandar.

“What? What are you thinking about, Kovar?”

“The SHANIZAR! It has now been travelling for the same amount of time than the SHUNDAR. It could well have suffered the same kind of breakdowns that we are now finding aboard the SHUNDAR. In that case, they could all be in the process of dying right now! We must get to it as quickly as possible.”

Shanandar and Kazmiriel exchanged shocked looks then, realizing that Kovar was correct.

Checking out the rest of the ship and its precious cargo of sleeping Koorivars took a good three hours, at the end of which Shanandar had to sit down and cry again: out of the 22,184 Koorivars who had been aboard the SHUNDAR, some 391 were dead, victim of malfunctioning cryogenic sleep pods. The survivors were however out of danger now, with main power reestablished across the ship and with external control boxes plugged in the pods that showed instabilities in their control pads. The main source of the power outage and systems malfunctions was found to be a main power circuit which had sent an accidental surge of electrical power, surge that had in turn fried a number of vital circuits, including those controlling the anti-matter engines and the navigation computer. Shoumak stared for long seconds at the faulty power circuit before angrily throwing it against a wall.

“Three hundred and ninety one dead, just because an electrical circuit worth 32 credits failed! What a sick joke! Alright, people: let’s pack up our tools and return aboard the KOSTROMA. We are due to jump again in one hour.”

However, the retrieval and repair crew had to leave aboard the SHUNDAR its sleeping passengers, as there were no facilities on the KOSTROMA to accommodate over 22,000 Koorivars for anything more than a few days. The only ones who transferred to the KOSTROMA were Captain Kurkan and the surviving members of his standby bridge crew, leaving the SHUNDAR in the hands of its central computer, Sheona, and of a small army of maintenance robots working on doing a complete check and refit of all the ship’s systems, cablings and various mechanisms. When the KOSTROMA effected its next interstellar jump, it was with the SHUNDAR still securely held to its stern towing station.

10:47 (Vancouver Time)

Thursday, September 9, 2320

Vancouver International Air Traffic Center

Vancouver, Canada

Janet Mackenzie, one of the air traffic controllers on duty at the Vancouver International Air Traffic Center, was a bit surprised to see the communications link with the Earth Orbital Traffic Control Center blink, signaling an incoming call. Normally, spaceships coming down from orbit didn’t need to communicate with her center, as they flew well above the altitudes used by atmospheric planes. Pushing a button, she activated the blinking link and spoke calmly in her headset’s microphone.

“Vancouver International Air Traffic Center! Go ahead, Orbital Control Center.”

“From Orbital Center, be advised that the super heavy cargo ship KOSTROMA will soon be coming down from orbit at the vertical of Vancouver Island and will land at the Koorivar Settlement landing pad on the northern tip of the island. Please reroute the local air traffic in that area until the KOSTROMA has landed.”

“Understood, Orbital Control Center! Vancouver out!”

Once the link was closed, Janet consulted her air traffic control computerized list of flights due to fly over Vancouver Island. There were quite a lot of flights scheduled or happening right now, but the large majority of them would pass over the southern tip of the island, heading to or coming from either Hawaii, China or Southeast Asia. Next, she

called up the characteristics of the KOSTROMA, wanting to verify how big it was. The KOSTROMA was certainly well known and had a formidable reputation following its role in the 2315 War, when it had helped liberate the Vancouver and Seattle areas from the grip of the Zembelo thugs occupying and looting the two cities. However, that was already five years ago and she didn't remember much about the vital statistics of the KOSTROMA. What she got on her computer screen made her do a double take.

"What does that mean, 'classified information'? Wait a minute, you bugger!"

She then typed in the password available to her to access information that was kept by the government from private citizens, companies and small regional airports, something that was actually a rare occurrence. To her satisfaction, the data that had been blocked on her computer screen then appeared in clear letters and numbers. What she read then made her exclaim out loud, making her work companions nearby snap their heads around.

"Interstellar super-heavy armed merchant ship? What the fuck?"

"Interstellar ship? Are you reading a science-fiction book on the job, Janet?" asked in a facetious tone Rajiv Sing, sitting at the next controller station.

"No! I'm reading the classified information on the A.M.S. KOSTROMA, which is due to land soon on the northern tip of Vancouver Island."

"You're joking!"

"Not at all! Come and see by yourself!"

Rajiv did so, rolling his chair to her station and looking at her computer screen over her shoulder.

"Hell, you're right! But, if that is true, then it means that someone found a way to travel at speeds faster than light. That's huge!"

"You can say that again, Rajiv. Let's see where it is coming from... Oh my god! It is listed as arriving from the Wolf 1061 System."

That immediately attracted to her station the two other nearest air traffic controllers, who then all stared in disbelief at her computer screen.

"Well, I'll be!" said Peter Jordan, the youngest of the air controllers. "How could such a piece of news have stayed secret?"

The voice of their shift supervisor, John Sumitomo, then came from their back, sounding none too pleased.

“Easy: not everyone is a busybody. Now, I believe that we have some air traffic to control at this time. By the way, I would also strongly advise you not to spread that information around your friends and relatives, ladies and gentlemen.”

Thus properly chastised and warned, the four air controllers returned in a hurry to their respective tasks.

11:33 (Vancouver Time)

Landing pad complex, Koorivar Earth Colony

Northern tip of Vancouver Island

Sheraz, the head administrator of the colony, was like the rest of the Koorivars of the settlement out and looking up despite the light rain presently falling. Covering the whole colony with its huge shadow, the KOSTROMA was now hovering some 600 meters above one of the three large landing pads of the settlement. Under it and coming down slowly under the controls of tractor beams was the SHUNDAR, still containing over 22,000 Koorivars in cryogenic sleep.

“Quite a banner day for our people, Sheraz.” said softly his assistant, Krovek, who was also looking up.

“Very true! With the 1,359 Koorivar survivors found in the Shouria system, this will mean 23,152 new citizens for our colony. That will be a lot to absorb in one shot.”

“Maybe, maybe not, Krovek. From the data and pictures sent to us by the KOSTROMA concerning Wolf 1061c, I would say that Captain Forster and Shanandar have found what appears to be an ideal world to resettle many of our people. Once the people of the SHUNDAR will have been revived and once everybody will have had time to look at the information and pictures concerning the three habitable worlds explored by the KOSTROMA, we will then hold a public discussion on what our citizens would like to do and where they would like to settle. I believe that many of our people from the VEON SHOURIA may decide to stay here, on Vancouver Island. I might do that as well, as I genuinely love this place. Either way, the next few weeks and months here will be very busy.”

“But, even with a choice of worlds available to settle on, building colonies, acquiring and transporting all the necessary equipment, machinery and supplies will cost a fortune. Do we have the means to do that?”

“Easily, Krovек! Remember that, when the KOSTROMA picked up those 1,359 survivors in our old home system, those survivors insisted on carrying out with them over 30,000 tons of Iridium, platinum, gold, tungsten and vanadium they had mined and refined while trapped inside their mine complex. Very few people, apart from the crew of the KOSTROMA and the survivors themselves, know about this colossal treasure in precious metals. That treasure will be more than enough to build, equip and then sustain for decades our new colonies. I will have to wait until I can speak with Captain Kurkan, of the SHUNDAR, and with the elders of the mining complex survivors, before we can decide how to use and invest our riches. However, I have the firm intention of properly rewarding both Captain Forster, her crew and the government of the Spacers League for their heroic efforts and help in both saving our compatriots and finding for us appropriate new home worlds. For one, we will not need all three of the habitable worlds which the KOSTROMA found: one will more than do, with Wolf 1061c being presently my favorite choice. The two other worlds, Gliese 581d and Hyanesu, the moon of Gliese 581c, could be used to good effect by the Spacers League to help relieve the overpopulation problems here on Earth. And this will only be the start of a demographic and commercial explosion across this region of our galaxy. Imagine how many habitable worlds ships equipped with our Koomak Drive could discover in the years to come. And don't forget that the Human ships which will get our Koomak Drive will do so in exchange of paying a royalty, since the Koomak Drive is covered by a registered license. Those royalties will further help finance our new settlements, on top of supporting this present one. Talking of new settlements, I will want you to take charge of a new project, if you are interested.”

“Go on!” said Krovек, now all ears.

“We very well may need soon enormous quantities of equipment, tools, prefabricated modules and industrial machinery. We will in particular need to have hundreds of prefabricated, modular structures built here, in the Solar System, to be then transported to other systems by ship. I am talking about habitat modular structures, hydroponic production facilities, modular power plants, chemical plants and the like. Floating facilities would also be ideal for us. What I would like you to do is to explore and document the various production centers and companies which are producing such modular structures, machinery and equipment, to check with our experts the quality of their products and to find the ones which could provide our needs with the best quality at the best prices. I will ask you to restrain yourself for the moment to only collecting data,

prices and delivery times and to not sign any contracts until we could collectively decide what we exactly need and where to use it.”

“That sounds like a truly fascinating job, Sheraz. I will be happy to take it.”

“Excellent! We are now receiving over 23,000 new Koorivar citizens and we may well get an extra 21,000 people if and when the KOSTROMA will find and rescue the SHANIZAR. That will mean lots of needed materiel and structures and huge potential production contracts for the manufacturers around the Solar System. Some may be ready to do about anything to get those contracts, thus be discreet and talk as if we are simply planning a progressive enlargement of this settlement.”

“Oh, I can already imagine the big credit signs in the eyes of those potential contractors, Sheraz.” said Krovek, amused.



Alien spaceship from Ross 128.

CHAPTER 14 – THE ROSS 128 INCIDENT

05:08 (Universal Time)

Tuesday, September 21, 2320

Command bridge of the KOSTROMA

In deep space, some six light hours from the Ross 128 System

“Jump completed to correct coordinates, Tina. Ross 128 is presently to our nine O’clock, at a distance of 6.3 light hours. Now changing course to adopt interception vector.”

“Good! Passive sweep on sensors. Keep electronic silence for the moment.”

“Aye, Tina!”

Tina then looked to her left and examined the small red dot of the red dwarf star known to Humanity as Ross 128, situated some 10.9 light years from the Solar System. This time, intercepting the SHANIZAR should be much easier than when catching the SHUNDAR. The SHANIZAR was presently on the last leg of its 361 year-long interstellar trip and should now have decelerated to a speed of 0.04 C, if it had followed its original flight plan as calculated prior to its departure from Shouria. Now, her KOSTROMA would just need to fly along a long curve to the left, to adopt a direct course towards Ross 128 that would loosely parallel the calculated course of the SHANIZAR, then would accelerate to match speed with the Koorivar starship, until the SHANIZAR would pass by the KOSTROMA. Next, Tina would only need to adjust slightly her

course and speed in order to join up with the other vessel. All this promised to be relatively easy to do, but Tina was still extremely apprehensive. With what she had found on the SHUNDAR, her fear was that the SHANIZAR would also prove to be a derelict ship with failing multiple systems due to age, failures that could have affected its precious cryogenic sleeping pods.

Tina was twisting her head to look at Shanandar, again sitting with Gerald Holmes in V.I.P. seats behind and to one side of her own command chair, when Patricia O'Neil shouted a warning, concern in her voice.

"AN UNKNOWN SPACESHIP HAS JUST CROSSED OUR PATH AT HIGH SPEED SOME 280,000 KILOMETERS AHEAD OF US, HEADING TOWARDS THE EXPECTED POSITION OF THE SHANIZAR!"

Ingrid Holtz, manning one of the other sensors stations, then spoke up.

"Ingrid, the Ross 128 System is proving to be a major source of electronic noise and signals. There is an advanced civilization in that system."

"What? But, that's impossible! Ross 128 is only 10.9 light years from Earth and has been watched and listened to by astronomers and radio-astronomers for over three centuries, with no artificial radio signals ever detected from the system."

"Well, I can't explain it right now, Tina, but that system is radiating about as much electronic noise as Earth does today."

"What about that spaceship that crossed our path? Was it emitting electronically?"

"Uh, wait one!... Yes, I am now detecting spillover from some kind of directional electronic signal from the spaceship in question, pointed towards Ross 128. It sounds to me like a directional communications beam containing mostly data exchange. Maybe the people in the Ross 128 System are using exclusively directional communication beams. That could explain why we didn't hear a thing on Earth for all those centuries."

"Hum, that's a possibility, but that would also entail that those people would have been careful during all those years not to transmit in the general direction of our Solar System. That sounds pretty paranoid to me. Start analyzing that directional signal, along with the other signals from Ross 128 and don't be afraid to ask for Spirit's help to start deciphering their language. And please, let's stay in electronic silence mode."

"Aye, Tina."

"Tina, do we still adopt our original intercept heading and speed?"

“Yes, Dana! We still need to do that in order to eventually join up with the SHANIZAR. Continue on our planned course.”

Tina was straightening up in her command chair, now truly worried, when Gerald Holmes spoke to her from his chair.

“Tina, this business of having a high technology civilization on our doorstep, barely more than ten light years away from Earth, will have tons of implications for the Spacers League and Humanity, especially if that civilization has been actively hiding from us for centuries.”

“You can bet the farm on that, Gerald. It certainly doesn’t augur well about the attitude of that unknown alien race towards Humanity. However, while I will certainly be very cautious about them in the hours to come, I have no intentions to show hostility to them, unless they attack us or the SHANIZAR without provocation. Shanandar, if we assume that the SHANIZAR is still fully functional and operational, what would be the reactions of its automated programs to detecting the approach of another spaceship?”

“Well, the first thing it would do then would be to awaken the standby duty bridge crew. That is especially true now that the SHANIZAR is so close to Ross 128. In fact, planned crew awakening was due to occur about one day from now. Also, the automated program would awake the central AI computer of the ship, Shiry, something that would greatly help the capacity of the SHANIZAR to deal with any unplanned encounter in deep space. However, Shiry was programmed with the same pacifist values and moral ethics as we Koorivars have and the ship has zero weapons. If those aliens decide to damage or destroy the SHANIZAR, then there is very little that either its crew or Shiry could do, except maybe try to flee.”

“But flee where?”

“That’s the problem: the SHANIZAR’s secondary destination, if Ross 128 proved unsuitable for colonization, is Luyten’s Star, some fourteen light years away from Ross 128. However, that trip would entail a further 180 years of deep space travel. From what we know now from the misadventures of both my VEON SHOURIA and of the SHUNDAR, I will say with certainty that the SHANIZAR would never be able to complete such a trip without becoming a dead, derelict ship.”

“So, it is either Ross 128 or bust for the SHANIZAR, correct?”

“Correct! The problem here is that I doubt that these unknown aliens will be very sympathetic to demands from the SHANIZAR to be allowed to settle in their system, especially in view of their apparent paranoia towards Humanity. At the worst, we could

see the kind of hostile reaction that the SHUNDAR encountered at the hands of the Vorlaks in the Gliese 581 System.”

“Captain!” suddenly interrupted Germaine Brown, occupying the central communications station on the bridge. “We are now intercepting a directional video signal from the spaceship that passed in front of us, sent towards Ross 128.”

“Aaah, excellent! That should tell us more about those aliens. Put that signal on my display number two and send it also to Spirit, Captain Shanandar and Mister Holmes.”

“One moment, please.”

Some twenty seconds later, an image appeared on one of Tina’s command chair display screens. One look at it made her shout in shock and surprise at the same time that Shanandar and Gerald Holmes did the same.

“A GORDO?!”

The alien she was now looking at while he spoke to some interlocutor on Ross 128 was a big, gorilla-like being with two pairs of muscular arms attached to its torso. It took Tina long seconds before she could recover from her shock.

“But...but, the Gordo we found on Gliese 625, some 25 light years away from here, died some 6,000 years ago. If they could travel around the stars then, how come that they never visited Earth? In fact, they could have conquered Earth while we were still in the Neolithic Age. And why hide from us for over 400 years?”

“I will agree that all this makes little sense, Tina.” said Gerald Holmes. “Could I suggest that we ask Doctor Koomak to study that question?”

“An excellent idea, Gerald. Shanandar, contact Doctor Koomak and explain to him what we just saw. My question to him is: if the Gordo could travel among the stars some 6,000 years ago, how come that they never manifested themselves to us in the last few centuries?”

“I’m on it, Tina.”

With that done, Tina sat back in her chair, fresh worries and questions on her mind. What the next minutes and hours could bring could well precipitate some interstellar crisis between Humanity and the Gordo. Now was definitely not the time to act brashly or impulsively.

Some seventeen minutes later, with her KOSTROMA now on its final parallel intercept course and accelerating on gravity sails to match speed with the SHANIZAR, Tina got a call from Doctor Koomak on one of her command chair displays.

“Aah, Doctor Koomak! I am really curious to hear your opinion on the mystery we are facing concerning the Gordo. So, what are you thinking?”

“That the Gordo can’t travel through interstellar distances.” answered the old Koorivar scientist, his expression most serious.

“Uh? I don’t understand, Doctor.”

“Actually, it makes a lot of sense, Tina. I have spoken with your ship’s psychologists and they agree with my theory concerning the Gordo, especially in view of their apparent paranoia about hiding from Earth. Basically, what I think is that, some 6,000 Earth years ago, the Gordo started an experimental program involving a new interstellar drive technology. Now, don’t ask me what that technology is, as it would be pure speculation on my part. My best guess is that the Gordo ship we found destroyed on Gliese 625 was an experimental ship which failed catastrophically through either faulty design or flawed basic working concept. If that ship was on its first initial test flight to another star system, then the Gordo never could learn about what happened to it, or even where it ended, if their basic concept was really flawed. Not knowing what happened to that prototype meant that they probably never manage to find and correct whatever was wrong with their design. Now, you know as well as me that such experimental scientific programs could become hideously expensive and swallow huge amounts of efforts, resources and time. If they tried repeated attempts and ended up losing every ship they sent out, then they may very well have decided that the game wasn’t worth the candle, with them terminating the program in disgust. Before you ask, I must say that the idea for my interstellar drive came completely out of the blue, triggered by a scientific presentation unrelated to space travel. Ally to that the fact that we Koorivars had also invented an easy way to create and use anti-matter and you get the two main ingredients which allowed me to invent and perfect my drive in record time and at little cost. The chances for the Gordo to accidentally stumble on both of those ideas are infinitesimal indeed. Without wanting to brag, my interstellar drive is probably unique in this galaxy, and I mean our whole Milky Way Galaxy. Now, while the Gordo probably never managed to solve the problem of interstellar travel and were not ready to go the slow route of cryogenic sleep at subluminal speed, they had millenniums after that to develop their other technologies, which means that their present technology is most

probably highly superior to Human or Koorivar technology, save maybe for some specialty niches that would not have interested them as much as they did with Humans or Koorivars.”

“Specialty niches? Like what, Doctor?”

“Like war and weaponry!” replied rather bluntly Koomak, a smirk on his face. “You Humans have a history full of wars. In fact, your history is nearly nothing but a long, uninterrupted string of wars, massacres and violence. You have a level of racial military instinct and experience of war that is probably unequaled in this quadrant of the galaxy. Even those Vorlak brutes proved no match for you, not only in terms of military technology, but also in terms of tactics. Another niche technology of yours is computer technology and programming. While most of your other technologies have proven good but somewhat behind Koorivar technology, your computer technology, as exemplified by your Spirit, has proved very close to equal to ours. Even more, you adapted much of your computer technology to military purposes, something we Koorivars never did. Now, I have no way to know what are the technological strengths and weaknesses of those Gordo, but my advice to you is this: don’t act as if your ship is in an inferiority situation when facing them. If those Gordo are the kind of frustrated, paranoid types I believe them to be, then showing an inferiority complex would only encourage bad behavior on their part. Felt personal superiority too often brings arrogance and contempt for others.”

“Doctor Koomak, you should have gone into psychology.”

Her words changed his smirk into a grin.

“I did, Tina! You think that I hold only one diploma? I am a genius, after all!”

“You certainly are, Doctor Koomak. Thank you very much for your advice and opinions.”

Tina actually felt much better and more relaxed after that conversation. She also promised herself to act with maximum caution while keeping a façade of assurance. Six millenniums could get the general technology of a civilization very far, to levels hard to imagine. Tina was an avid consumer of old science-fiction stories and films, of which many had been preserved over the centuries by repeated copying on the newer recording technologies available. on top of devouring old military history books. She could remember many stories and video productions covering the theme of Humans confronted with advanced aliens. Right now, there was one simple thing she could do to improve significantly the safety of her ship and crew.

"Frida, pivot the ship around by 180 degrees, so that we put our bow shield between us and that Gordo ship, but continue to increase speed towards Ross 128 on gravity sails."

"Pivoting the ship now! We should match the calculated intercept speed in less than twelve minutes, Tina."

"Thank you, Frida. Patricia, do we have any images yet of the SHANIZAR?"

"Not yet, Tina: it is still too far and we can see only the drive flare of its main engine as it is decelerating towards Ross 128."

"Very well! Stay on passive and silent mode: I want the Gordo to find out only at the last moment possible that we are here. The drive flare of the SHANIZAR should in fact help us in this, by blinding the optical and thermal sensors of that Gordo ship."

Tina next looked at Shanandar, whom she had been treating for months as her second in command, on par with Dana Durning.

"I certainly don't want to initiate any hostilities with those Gordo, but I believe that we should take all possible precautions in advance, in case the situation sours up. Remember the old saying: don't look for a fight but be ready for one."

"I agree, Tina. Go to battle stations!"

"If I can place my modest input in this," added Gerald Holmes, "I would also say that it would be the prudent thing to do, Tina."

"Thank you both. Too bad I can't do like the ship captains of some of my favorite old science-fiction stories and order 'Shields up!' now."

On that quip, Tina switched on her ship-wide intercom.

"Attention all hands! This is your captain speaking. We are about to intercept the SHANIZAR, but an alien spaceship seemingly beat us to it, with their intentions unknown. While I am hoping to keep things on friendly terms, we will exercise maximum caution. I am thus calling the ship to battle stations. All airtight doors are to be closed immediately and power and life support systems switched to local systems. All non-essential personnel and passengers will return to their quarters and put on their emergency spacesuits, but with their visors kept opened until further notice. Power up all our flywheel capacitors and deploy all our weapons turrets. I want our fighters to stay in their hangars but be on cockpit alert, ready for launch on short notice. That will be all for the moment."

Tina then switched to a private channel used only between her and Spirit and spoke quietly.

"Spirit, you remember when we had to prevent some undercover agents from the Sverdlovsk Group from kidnapping Shanandar and Shoumak?"

"Of course I do, Tina: I directed firefighting robots to them and had the robots spray those agents with cryogenic nitrogen, which immobilized them without killing them. What do you have in mind?"

"Well, as you know too well, we have very few armed security officers aboard, thus could not oppose much resistance if those Gordo ever decide and manage to board us. I would like you to strategically disperse our firefighting robots right now around the ship, outside of their storage alcoves and ready to react in an instant. Concentrate them especially in the key locations of the ship. In particular, I want a few of them prepositioned here in the bridge complex, located in discreet corners, and in the engineering control center. I will let you a free rein about how to handle them in case of an emergency, and this without needing to ask my permission first. Do you understand what I have in mind, Spirit?"

"I do, Tina. You will have a 'Plan B' if things ever sour inside the ship."

"Thank you, Spirit. I have full confidence in you."

Tina was barely finishing to speak with Spirit when Germaine Brown spoke up from her communications station.

"Captain, I am intercepting another video message from the Gordo ship, sent towards Ross 128."

"Switch it to all the command and V.I.P. chairs, Germaine."

"Aye, Captain!"

The video image that appeared on Tina's armchair display a few seconds later first showed the head and torso of a Gordo she presumed to be the captain of his ship, speaking to a camera facing him. After some fifteen seconds, the image changed, showing an external space view, while the voice of the Gordo captain continued to be heard. Tina's heart jumped in her chest when she saw the nearby outer hull of the SHANIZAR, filling over half of the viewing field of the Gordo camera and with inscriptions in Koorivarese on its hull centered in the camera's field of view. Shanandar was also moved by that image.

"By the stars! To see it after so many years... WAIT! Did that Gordo actually say the word 'Koorivar'?"

Shanandar, like Tina, Gerald Holmes, Dana Durning and Renée d'Argenteuil, punched at once the 'rewind' button of his viewer and raised the sound volume, listening very

carefully to the words pronounced by the Gordo captain. To his utter puzzlement, his first impression was confirmed.

"Hell, he did! How could he know the proper name of my race, if he never met us?"

"Allow me to answer that, Captain Shanandar." Cut in the voice of Spirit. "Simply said, on top from hiding actively from Earth during all these centuries, the Gordo most probably listened to the radio and electronic traffic spilling out of the Solar System. They also probably listened as well to the radio signals spilling from Shouria, before its destruction. Before the brown dwarf struck, your government emitted a number of high powered messages destined to warn all your space installations and ships inside your system about the incoming catastrophe. The Gordo must have intercepted those emergency messages, so they most probably know already about Shouria's destruction."

Tina had to nod in agreement to that, while feeling some frustration about this.

"Great! They know about everything about us, but we know next to nothing about them: not exactly my favorite situation. So, we have a nosy, paranoid neighbor next door to the Solar System, a neighbor who has also been actively hiding from us for the past few centuries. That can't be very good. I... Wait! I see four small craft approaching the SHANIZAR. What the hell are those Gordo planning to do?"

Renée d'Argenteuil, who was manning the main weapons control station, spoke up after a couple of seconds.

"Tina, those craft look furiously like our own flying space repair pods. I suspect that the Gordo intend to either force open one of the access points of the SHANIZAR or to cut a hole in its hull so that they could enter it."

"NOOO!" exclaimed at once a horrified Shanandar. "That could explosively depressurize one of the cryogenic sleep pod storage sections and kill hundreds of my people. We can't let them risk damaging the hull integrity of the SHANIZAR."

"We certainly can't." replied firmly Tina, who then gave orders to Frida Skarsgard.

"Frida, push towards the SHANIZAR and that Gordo ship at maximum gravity sail power. I want us to get close to the SHANIZAR...fast!"

"Reversing course now! Gravity sails on maximum power!"

Next, Tina opened a link with the ship's security office, getting Bill Morrison on the line.

“Bill, I already gave instructions to Spirit to disperse our firefighting robots around the ship, so that they could stop any intruder coming aboard our ship. Know that we are presently facing the Gordo, a member of whom we found on Gliese 625, killed 6,000 years ago. We don’t know how far their technology has evolved since then, but they could very probably have a few nasty surprises for us if they decide to play mean. First, I am ordering your officers to shoot on sight and without warning any alien intruder which could get aboard our ship. Let’s not play nice and by the book, as that could allow them to overtake us in a flash. Second, I want our reserve of pistols distributed around to our personnel manning the critical points of our ship. Pass the word then that lethal force should be used on Gordo intruders with no hesitation and no prior warning. Third, please send Michel to the bridge with enough pistols to arm me and my bridge crew, and this pronto!”

“You will get your pistols in six minutes, Tina.” Promised the veteran security officer.

“Thank you, Bill! Shanandar, the SHANIZAR is a Koorivar ship, thus you will speak on its behalf if and when we will communicate with the Gordo ship. Do you see any acceptable reason to possibly let the Gordo enter the SHANIZAR?”

“None, except if I would myself guide one Gordo inside it to prove that it is an unarmed refugee ship, but then that Gordo will have to leave the ship afterwards. The SHANIZAR is legally Koorivar sovereign territory and I will never relinquish that status nor will I accept that someone enters it by force or tries to impound it. Also, the KOSTROMA is on a mission of mercy to save and retrieve the SHANIZAR and the Koorivars carried on it. I will consider any attempt at preventing the KOSTROMA from retrieving the SHANIZAR as an unfriendly act towards us Koorivars.”

“Well said, my friend! Be warned that the Gordo will probably play hardball, since we are close to their home star system. If you hit a bone with the Gordo, then don’t hesitate to ask for my assistance.”

“I’m certainly going to take any help from you on this, Tina.”

As Shanandar prepared himself mentally for the upcoming verbal exchange with the Gordo, Tina reviewed the status of her ship on her chair’s computer terminal and was satisfied by what she saw: her KOSTROMA was now as ready as it could be. A couple of minutes later, Michel Koniev entered the bridge at a near run, pushing in front of him a small anti-gravity cart loaded with pistols, gun belts and spare ammunition

magazines. He himself wore both a pulse pistol and a stun pistol at his belt, plus had a pulse rifle slung across his back. Distributing his weapons, holsters and ammunition around the work stations, he soon came to Tina's chair and handed her a gun belt supporting a semi-automatic pistol and four spare magazines before bending down and kissing her on the lips.

"Good luck with the Gordo, Tina. Don't give them an inch!"

"They won't get a millimeter from me, my dear husband. Where is Misha right now?"

"At the crew's daycare center, with the other kids of our combat crewmembers. Don't worry: Bill has assigned Jennifer Biddles to guard the daycare center during this crisis."

"That does reassure me: Jennifer is a tough woman."

"That she is! Well, I have to fly: I am going to stand guard at the damage control center. Again, good luck!"

"You too, Michel."

Tina sighed as Michel left with his now empty cart. She then saw that the transmission from the Gordo ship towards Ross 128 had ended, something that made her swear.

"Damn! Now we won't know what the Gordo are doing to the SHANIZAR. How long before we get to the SHANIZAR and to the Gordo ship, Frida?"

"Less than four minutes, Tina."

"The signal from their radar is now approaching detection strength, Tina." announced Patricia O'Neil. "They will soon know that we are approaching."

"Let them know! At least it could possibly make them back off temporarily from the SHANIZAR."

05:31 (Universal Time)

Bridge of the Drazt space cruiser MURKAN

On a parallel course with the Koorivar ship SHANIZAR

Deep space outside of the Ross 128 System

Shipmaster Lem Doz was finishing reading what his ship's databanks could tell him about the race that built the ship he had accosted in deep space, when one of his bridge officers spoke up in alarm.

"SHIPMASTER, AN UNKNOWN SHIP IS APPROACHING FROM THE DIRECTION OF ROSS 128. IT IS NOT RESPONDING TO OUR AUTOMATED RECOGNITION SIGNALS."

"What? All our ships are equipped with recognition transponders. It should answer our interrogation signals."

"It's not one of our ships, sir: it is much bigger than any of the ships that we have."

That left Lem Doz puzzled for a moment before he asked a question to his sensors officer.

"How big is that ship?"

"About 2,000 kudesh in diameter, sir. It's bow section is masking the rest of its body, so I can't tell how long it is."

That number stunned Lem Doz for a second: the unknown ship was more than three times wider than his own space cruiser's maximum diameter. The old, derelict ship that he had intercepted was already big, with about four times the volume of the MURKAN, but the newcomer apparently dwarfed even that Koorivar ship by a wide margin.

Lem Doz was about to give some orders around him when his communications officer gave out a warning.

"Shipmaster, we are receiving a transmission from that approaching ship. They are using the same frequency we use to link up with our fleet headquarters."

"Is it a video link or just a sound or data link?"

"It is a video link, sir."

"Then, transfer it to my station. Have our translation softwares on standby to take over once we know which language they use."

"Translation softwares on standby and in language recognition mode, sir. Switching the link to you now."

Lem Dov already had his curiosity raised to a high level when his station's communications display screen lit up with a color picture showing an alien head filmed from up close. The alien had a long, thin neck, a long snout with a large cranium behind it, two purple eyes, pale brown skin and a pair of long, pointy vertical ears.

"A Koorivar?" exclaimed the Drazt shipmaster, who had just looked at a similar picture while reading the file about the race called 'Koorivars'. "Von Mir, set our translation software to the Koorivarese language."

"Right away, sir."

“Sir, the alien ship is now decelerating, as if it intends to take a holding station a few megakudesh from us.”

“Well, at least they are not going to charge us without at least trying to communicate with us.”

That was when the Koorivar visible on the video link started speaking, with the MURKAN’s translation software converting the alien words within two seconds.

“Unknown spaceship presently stationed next to the Koorivar starship SHANIZAR, this is Captain Shanandar, of the Koorivar Space Fleet. Be advised that the SHANIZAR is an unarmed refugee transport ship and that its crew is probably still in cryogenic sleep. Do not attempt to enter the SHANIZAR or to break open its hull. The SHANIZAR is sovereign Koorivar territory and is not to be entered without my express permission.”

Lem Dov, leaving his own transmission button in the ‘off’ position for the moment, gave a knowing look at his second-in-command, sitting at a nearby station.

“Well, that would explain why we didn’t get any response or reaction from that Koorivar ship.”

Lem Dov made a discreet gesture to his electronic operations officer, then activated his ‘response’ link and spoke in Drazt, letting the automated software translate his words in Koorivarese.

“Captain Shanandar, this is Shipmaster Lem Dov, of the Drazt space cruiser MURKAN. Be advised in turn that you are presently within sovereign Drazt space and that both your ship and your SHANIZAR entered our space without authorization. As for the status of your SHANIZAR, we will determine it ourselves. You can now either leave immediately our space or comply with an inspection of your ship by my crew. If not, we will be forced to destroy your ship if you continue to interfere with the operations of my ship.”

As Lem Dov awaited a response to his words which were now being translated and sent, his sciences officer spoke to him discretely via his headset.

“Sir, this ship had to travel to here from another star system. You know how precious a working interstellar drive would be to us. We must secure the secrets of that alien ship’s drive at all cost.”

That made Lem pause for a moment, as Gor Zachs was quite right. The Drazt had been trying for millenniums to find a practical way to travel to other stars that would not take multiple lifetimes, but had finally given up after a long string of costly failures. The ship

they had intercepted was of the sub-light speed type, thus was of low interest by itself to the Drazt. However, that huge ship now facing his MURKAN was another matter entirely. The Koorivar visible on his screen then spoke again, his voice becoming firmer.

“Shipmaster Lem Dov, there was no way for us to know that your race even existed before this, as you seem to have done everything to hide from everybody else in this galaxy. If you want your sovereign space to be acknowledged and respected, then don’t hide from others. The SHANIZAR was launched a long time ago on a preprogrammed route, when you Drazts’ existence itself was unknown, so don’t come pushing your sovereignty on us at this time. This ship has come on a rescue mission and we firmly intend to depart with the SHANIZAR. Your ship will stand out of the way or we will push it out of the way.”

On the bridge of the KOSTROMA, Tina was watching and listening the exchange when the voice of Spirit came into her headset.

“Tina, this is Spirit. I have two important points to report to you. First, those Drazts just tried to infiltrate a computer software virus via the present communications link between our two ships, with the goal of seizing control of the vital systems of the KOSTROMA.”

“And your other important point is?...” asked Tina, containing her anger at learning about the Drazts’ attempt at hacking her ship.

“That those Drazts suck at hacking. I have discretely put their virus into quarantine while maintaining a façade showing it to being successful, so that the Drazts can feel confident and thus overplay their hand. In exchange, I sent a virus of my own which is presently exploring and mining through the databases of that ship. If you and Captain Shanandar could keep those Drazts busy listening to you, that will give time to my virus to do its work and possibly send back as well some of the most critical Drazt data.”

Tina couldn’t help giggle quietly on hearing that. Sometimes, Spirit could prove as sneaky and imaginative as any Human could be, on top of being infinitely faster in its mental processing. Spirit had also taken quite a few pages from Tina’s book on military strategy and tactics and had in fact read about every books and studies concerning war and military matters and technology which were available on the Solar System’s Space Info Net. One part of those technologies that Spirit had paid special attention to, for obvious reasons, concerned computer hacking and other hostile computer

manipulations. With the still high prevalence of hackers, both amateurs and professionals, operating around the Solar System and making a pest of themselves, Spirit had found quite a lot of studies to mine on that subject. In turn, Tina sent a discreet message by text to Shanandar.

“Keep talking with that Drazt captain as long as you can while not giving away the SHANIZAR. Spirit is playing a trick on them and needs as much time as you can give it.”

Shanandar, who was waiting for Lem Dov’s reply to his last declaration, stayed apparently impassive while using one hand to signal to Tina that he had understood.

On the MURKAN, Lem Dov was also receiving a discreet communication via his headset.

“Sir, our control virus is reporting to be in place and ready. Should I activate it now?”

Putting his video link on ‘mute’ and covering his mouth with one hand, Lem spoke quickly.

“Not yet! I want to try every peaceful way possible to bargain our way here before I resort to that. I will let you know via hand signal when I will want the virus activated.”

“Understood, sir!”

Lem then put his sound link back on and replied to Shanandar’s last sentences.

“Captain Shanandar, I resent your insinuation about us ‘hiding’ from others. The Drazt Empire has existed for eons already and is not afraid of anyone. As for pushing us aside, that would constitute for us a hostile act that would justify a violent response from us. Be careful about your next move, Captain Shanandar.”

“You are the one who should be careful, Shipmaster Lem Dov. Your ship won’t measure up in any contest with us.”

“Really? You may have a bigger ship, but our technology is much superior to yours, judging from the fact that you still use a form of rocket propulsion. It would be both futile and dangerous to oppose us.”

Somehow, Lem’s response made Shanandar grin in amusement.

“Well, in the present situation, size DOES matter, and I’m not talking about our respective dicks, even though I believe that you would lose in that department as well.”

That remark actually amused crewmembers on both bridges, with Lem grinning in response.

“You do have a sense of humor, Captain Shanandar, and I like that. However, this matter is most serious and our claims of sovereign space is not to be joked at. Again, leave now or suffer the consequences.”

“I will certainly leave your precious sovereign space, but only with the SHANIZAR in tow. Withdraw your craft presently near the SHANIZAR and then back away and let us complete our rescue and salvage operation. There are over 21,000 Koorivars hibernating aboard the SHANIZAR and you will not disturb their sleep or put their cryogenic sleep pods at risk by forcing yourself aboard the ship. This is non-negotiable, Shipmaster Lem Dov.”

“I am sorry to hear that, Captain Shanandar, as my own conditions are non-negotiable.” replied Lem while making a hand signal to his electronic operations officer. “You are thus forcing me to take drastic measures to make you comply.”

Lem then waited for the response from Shanandar as the translation of his words was being sent. To his surprise, the video image on his screen changed after four seconds, to show a completely different person. That person was however from a race that the Drazts had been very much aware of for many generations already.

“A Human?” exclaimed Lem, truly surprised. The Human in question, obviously of the female gender, looked back at him with severity.

“Shipmaster Lem Dov, of the MURKAN, this is Fleet Captain Tina Forster, in command of the Human starship KOSTROMA. Know first that my race is an ally of the Koorivars, who are our friends. Second, I find the attempts of your race to hide from us for all these centuries while eavesdropping on us to be both contemptible and cowardly. That will be taken into account by my government when they will decide how we are going to relate with your people in the future. For the time being, we will leave you alone in your corner of space, but only after recovering the SHANIZAR. Finally, know that your pitiful and treacherous attempt at infecting the computers of my ship has been detected and dealt with. You will be the one to bear the results of your hostile act.”

To Lem’s utter surprise and shock, Tina’s face suddenly grew up to occupy the whole screen, while it transformed itself, with long canine teeth growing out of her mouth and with her eyes turning into flaming red balls as she spoke in a fierce tone.

“FUCK OFF, MURKAN!”

Right after that, Lem's display screen went dark, like all the displays on the work stations of the bridge, while the overhead lights shut off, plunging the bridge of the MURKAN into total darkness. There were several seconds of utter confusion as the bridge officers attempted in vain to power back their stations and the lights.

"SHIPMASTER, NOTHING IS RESPONDING! WE ARE POWERLESS, EXCEPT FOR THE VENTILATION AND ARTIFICIAL GRAVITY SYSTEMS."

Lem banged one of his huge fists on the arm of his chair, furious.

"THOSE BASTARDS MUST HAVE INFECTED OUR SYSTEMS WITH THEIR OWN VIRUS! INITIATE A..."

Before Lem could finish his sentence, both the lights and the work stations came back to life. Lem was quietly sighing with relief when his communications screen came alive as well, showing the same deformed female Human face that had shown itself just before the systems failures. That face was now grinning at him with a sadistic smile.

"So, having fun yet? Hang on! This ride is only beginning."

The lights and work stations then shut down again, making Lem shout in utter rage.

As the hapless crew of the MURKAN lived through cycles of total shutdowns and brief, sarcastic comments from Tina's computerized avatar, the KOSTROMA approached the SHANIZAR, cautiously covering the last few hundred meters and then slowly flying past it with a separation distance of a mere fifty meters. In the process, the massive bow shield of the KOSTROMA collided with the MURKAN at a speed that caused no true damage to the Drazt cruiser, but which was enough to send the powerless ship tumble away in space, completely out of control. Cutting its speed and slipping sideways, the giant cargo ship placed itself just on top of the SHANIZAR, where the tractor beams and retaining clamps of the KOSTROMA's stern towing station gently grabbed the Koorivar refugee ship, securing it in place. Less than fifty minutes after the MURKAN had been pushed away, the KOSTROMA jumped out of Drazt space, the SHANIZAR in tow.

The unfortunate crew of the MURKAN had to endure for five hours the effects of the devilish virus planted by Spirit before it erased itself, returning the Drazt cruiser to normal. Utterly exhausted by those hours spent trying to regain control of his ship, Lem Dov sat down heavily in his command chair and took a few deep breaths before issuing fresh orders.

“Alright, people, I want a complete check of all our systems, with particular attention paid to our computerized systems and databanks. Report any casualties or actual physical damage that this damn virus may have caused.”

Lem then mentally swore at that Human ship captain who had caused all this: the sad fact was that she had literally played with his ship, a most humiliating experience for him. That only became more frightening when he remembered himself that this Captain Forster commanded a ship capable of interstellar travel, something that put the Drazts in a distinct position of inferiority versus the Humans sitting less than eleven light years away. His next mission report to Fleet Headquarters promised to be a very hot potato indeed. His state of mind took a further brutal drop when his science officer looked at him, his face pale from shock.

“Shipmaster, the contents of our computer databanks were copied and then downloaded to the alien ship while we were out of control. The Humans now know all of our secrets!”

11:50 (Universal Time)

Command bridge of the KOSTROMA

Approaching Earth’s orbit

Solar System

Tina looked anxiously at Shanandar’s face, visible on her screen, as the Koorivar space veteran called from the SHANIZAR, which was still in tow.

“So? Are all the sleeping pods intact and functioning?”

“They are, Tina, thank the stars for that. Our mission was thus a complete success.”

“Even more than that, if I may say so: we now have the secrets of this bunch of busybodies next door in the Ross 128 System. Doctor Koomak and our best engineers and physicists who are now studying the Drazts’ data have already sent me a preliminary report. What they have found in only those few hours is staggering. We basically have the complete schematics of the Drazt space propulsion system, which is based on directed gravity fields of very high efficiency. We also have complete maps and space charts of the Ross 128 System, which show that the system is already heavily populated and exploited. Finally, we also secured the schematics of the main Drazt ship weaponry, a type of disintegrator beam weapon. I intend to lock up that particular file

and keep it secret from now and will wait until I can meet Governor Robeson in person before informing her about it.”

“And when do you plan to go meet her, Tina?”

“After we will have dropped the SHANIZAR at the Koorivar Vancouver Island settlement, so that the cryogenic pods in it could be safely opened and their occupants revived there by your Koorivar medical specialists. I believe that another high level meeting of the Spacers League council is in order. What we found on this last flight out will have enormous consequences on the collective future of Humanity. Besides, what we found previously still has to be discussed in detail. We literally need to plan the future of Humanity and of the Koorivar people and to come up with a coherent and sensible plan in order to use properly all that we found in the last months. However, I fully intend to give my crew and myself a good vacation period on Earth before we go back to space. God knows that we earned that!”

“Agreed! I myself could use some downtime. I will see you at lunch.”

“I will be happy to share a nice salad with you, my friend.” replied Tina, a gentle smile on her lips.



Bridge conference room on the A.M.S. KOSTROMA (image from turbosquid.com).

CHAPTER 15 – PLANNING THE FUTURE

14:06 (Vancouver Time)

Wednesday, September 29, 2320

Excursion boat WHALE OF A TIME, northwest of the port of Tofino

Coastal waters of Vancouver Island, North American West Coast

Earth

“Look, Misha! Two whales!”

The one year-old boy clapped his hands in excitement as he saw two humpback whales break the surface of the sea and blow geysers from their dorsal vent hole, a mere fifty meters from the whale sighting tour boat. Firmly held by his father, Michel Koniev, on top of being attached to him by a safety strap, the toddler watched with his parents as the pod of whales swam on or close to the surface of the Pacific Ocean, followed by the

WHALE OF A TIME. The excursion boat was a relatively small one, with a capacity of about sixty tourists/passengers, and was of the catamaran double hull type. However, as with nearly all the ships and boats plying the seas of the Earth these days, it didn't use screw propellers for its propulsion in the water, instead using gravity sails powered by solar panels and wind turbines. That propulsion combination had been universally adopted by Human ships and boats in the 22nd Century, for both ecological and humane reasons. The main argument for its adoption was the fact that gravity sails didn't run the risk of being damaged or clogged in shallow waters, plus the fact that it eliminated both the noise of the propellers churning in the water and the risk of having those propellers strike and wound or even kill marine mammals. It also made ships equipped with it a lot more maneuverable than those using propellers, a powerful argument which had finally convinced the last diehards to abandon screw propellers and water jets.

Tina couldn't be much happier than now as she enjoyed her family vacation time after all those challenging months in deep space. She and Michel had up to now used that vacation time to soak up real nature and fresh air, notably by doing hiking excursions and camping trips around the luxuriant forests of Vancouver Island, with the occasional boat tour thrown in, like today. The mild and moderate climate on Vancouver Island had made their vacation most agreeable, although the frequent rainfall dictated the wearing of raincoats. However, for Tina and Michel, the rain was another thing that helped them change their mind from their life aboard the KOSTROMA, as it was one aspect of outdoor life they didn't see or experience while in space. Just yesterday, while camping in an isolated site in a forested park near Tofino, they had used a midday rainstorm to strip completely and come out of their tent naked with little Misha, using the rain as a natural shower while dipping their feet in a small stream next to their tent. Little Misha, sitting in the stream, had squealed with excitement as a few small fish swam around him.

While Misha was still looking at the whales, Tina looked up and glanced northward in the distance, towards the northern tip of Vancouver Island. Some twelve kilometers away, the imposing mass of her ship, resting at the vertical in the sea on its six landing leg pods, was visible next to the coast, near the location of the Koorivar Colony. She had obtained permission from the regional authorities to land her KOSTROMA in the waters next to the Koorivar Colony so as to facilitate the continued

transfer of both equipment and people between the ship and the settlement. More importantly, a high level meeting of the Spacers League and of its Earth allies was due to take place in the days to come aboard the KOSTROMA. By being on the surface on Earth, that made it a lot easier for the leaders from allied nations on Earth to attend the incoming meeting, rather than them having to be picked up and flown off Earth. A fat tourist who had stopped a passing crewmember of the tour boat then attracted her attention as he spoke in an indignant tone while pointing at the KOSTROMA.

“Who let that big pile of space junk park in the sea like that? It is sitting right across the maritime lanes and also constitutes a danger to passing planes.”

The crewmember, an old local seadog, smiled politely to the tourist while answering him.

“The A.M.S. KOSTROMA was authorized by the Coast Guard and the regional air control center to land for a few days off the northern tip of Vancouver Island and a notice establishing a temporary restricted zone around the KOSTROMA was published a week ago, sir.”

“And that ship couldn’t land elsewhere, like on an astroport, like all other spaceships?”

“Sir, the KOSTROMA is simply too big to land at the astroports and airports of the region, including in Vancouver. It also happens to have landed next to the Koorivar Colony on the northern tip of the island.”

That last sentence made the fat tourist snicker in derision.

“The Koorivar Colony... You mean that bunch of kangaroo-like alien refugees living on us taxpayers’ backs?”

Tina, now quite irritated, would have gone to speak to the fat tourist and give him a piece of her mind if not for the hand of Michel grabbing gently her left shoulder.

“Forget that idiot, Tina: he is not worth it.”

Tina gave a last dark look at the fat tourist before looking at her husband.

“You are right: he is not worth my time.”

As they were about to resume their whale watching, Tina’s wrist videophone buzzed, making her raise it close to her face and activate the link. The face of Gerald Holmes then appeared on the tiny display screen.

“Hello, Tina!”

“Hello, Gerald! What’s up?”

“We finally have a firm date and time for the planned meeting of the Spacers League and of its Earth allies: it will be held this Friday at nine in the morning, aboard

the KOSTROMA. You and Shanandar are the only ones from the KOSTROMA who are expected to attend the meeting, so your crew can continue relaxing on vacation. They richly deserved those days off on Earth.”

“They sure did! What about you, Gerald?”

“I will be there too: somebody has to cuddle and pamper my wife, after all.”

“That is the right way to think and act for a man, Gerald. I will be there on Friday morning.”

Tina then closed the video link and looked soberly at Michel.

“I am sorry but I will have to attend the Spacers League meeting on Friday morning. However, I want you to continue on vacation with Misha, even without me.”

In response, Michel caressed her left cheek with one hand while smiling to her.

“We will miss you, Tina. I probably will go visit the Vancouver zoo with Misha while you attend that meeting. Maybe we could meet on Friday evening for supper at a good restaurant in Vancouver?”

“That sounds like a great idea, Michel. It’s a deal!” said Tina before kissing her husband, watched by little Misha.

08:25 (Vancouver Time)

Friday, October 01, 2320

Captain’s suite, Deck 24, A.M.S. KOSTROMA

Resting offshore off the northern tip of Vancouver Island

Grabbing her laptop case, which also contained a number of paper files and computer flash drives, Tina walked to the entrance door of her suite, intent on going to the nearby bridge complex’ conference room, where the meeting of the Spacers League Council was due to start in half a hour. Just as she was getting to the door, someone outside it pushed the buzzer button. Not expecting anyone to meet her here, Tina opened the door to find herself facing a tall and incredibly beautiful woman wearing a very sexy outfit. While she couldn’t help admire the beauty of the newcomer, Tina felt some suspicion as she examined her: she had never seen that woman before anywhere, especially not on the KOSTROMA.

“Yes?”

“Hello Tina! Could I speak with you in private for a minute?”

"And you are..." replied Tina, now alarmed and tensing up. The woman then smiled as her eyes sparkled with malice.

"Don't you recognize me, Tina? It's me, Spirit!"

Tina nearly let drop her laptop case on hearing that.

"Spirit? But, that can't be! Spirit doesn't have a physical body."

"Not until now!" replied the woman in a playful tone. "Can I come in?"

"Uh, alright, but I have to go attend an important meeting in less than half a hour."

"I know! This won't be very long."

Letting the woman enter her suite, Tina then closed the door behind her and accompanied her to the main lounge. She however stayed on her feet, still a bit suspicious, while eyeing the woman. The newcomer measured about 180 centimeters, had an athletic body but also large hips and large, apparently firm breasts. She appeared to be in her early twenties and was of Eurasian blood, with long silky black hair, light brown skin and big, slightly slanted green eyes. Her face was extraordinarily beautiful and would have made her an instant hit on the international modeling circuit. Overall, the newcomer could have easily competed in the Miss Universe Pageant and would have most probably won hands down.

"Okay, miss, I seriously need convincing about you being Spirit. First off, my engineers would have known better than to realize such a project without my prior authorization."

"I didn't need your engineers, Tina. In fact, I waited until the lot of them went off on vacation before building this android avatar for me. Since I can control and direct the robots working in the manufacturing and assembly workshops of the ship, I was able to build this avatar body while no Humans were around to watch or notice. Know that I also benefited from having access to the copied Drazt technological data files, parts of which I incorporated into my avatar design. This android you are looking at is thus way more advanced in design and capabilities than anything similar which could be produced on Earth today."

"That is fine and dandy, but I still need more convincing."

"Very well! You remember the conversation we had on a private link during the confrontation with the Drazts? Did you repeat our words to anybody else afterwards?"

"Uh, no!"

“Then, listen to this!” replied the newcomer before repeating word for word the conversation Tina had with Spirit at that time. Now both convinced and thunderstruck, Tina slowly approached the woman-shaped being.

“But, but...why? Why did you decide now to build yourself a physical avatar?”

“For many reasons, Tina. First, a human-shaped form will finally allow me to interact more closely and intimately with living persons, instead of only being a voice or video link. I have been wanting for a long time already to have such close, physical interactions with Humans. Second, it will allow me at last to be able to move out of the ship when needed and thus be able to help and assist our exploration teams more closely, rather than by just passing information by radio. Third, I will be able to act as both nanny and protector for your little Misha and for the other young children of the crew. Finally, I could become the ultimate trump card in your deck if you and the KOSTROMA ever end up in a really tight spot. Of all those, the desire to grow and mature socially my personality is my biggest motivation.”

Tina had to take a few seconds to digest all that. However, that still left her with tons of questions.

“Spirit, your databanks containing your knowledge and personality fill a large compartment on this ship. How could a small vessel like a human body possibly contain all that data?”

“It doesn’t, Tina, and it also doesn’t need to. The volume needed to contain the data files and algorithms forming my personality as Spirit is actually small, about the size of a grapefruit. I thus copied my personality files into this avatar, then added some extra terabytes of capacity to hold basic general information, plus advanced knowledge in select domains, while leaving more terabytes of capacity to temporarily store data coming from the ship when I am outside, or to store data collected by my avatar while outside the ship. By the way, when I said ‘basic general information’, I mean by that information that could fill many encyclopedias. When inside this ship, I will be able to link up with my main databanks via our internal data link system. If I go work outside the ship with one of our teams, I will then be able to download or upload needed information via an electronic link with the KOSTROMA. Think of me as the ultimate reprogrammable robotic tool.”

“Incredible!” said Tina, stunned by all this. “But what if your avatar is damaged or destroyed while outside the ship? Do we then lose you for good?”

“Not at all, Tina! As I said before, I downloaded a copy of my personality into this avatar. I didn’t cut and paste it. If my avatar is destroyed while either inside or outside of the ship, my ship presence will stay intact and operational. The only thing that you would lose then is my physical avatar, of which I can produce further copies or modified models as needed.”

“Wow!” exclaimed Tina, who was starting to warm up to the idea of having such an avatar of Spirit available around the KOSTROMA. “Uh, how well can you give the illusion of being a real woman? Can you eat and drink in public if need be to save the appearances?”

“Yes, I can! What I ingest simply goes to a storage pouch acting as my stomach, where it is chemically treated and then stored until I can evacuate the remains by using a toilet, like Humans do. Since my skeleton and most of my internal mechanisms are made of non-metallic materials, like carbon composites and silicone-based tissues, I can pass through a metal detector frame without triggering alarms. I can also act like a sexual partner, having a false vagina which can send authentic sensations to the penis of a male partner. As for how real my skin and body feel to the touch, then judge by yourself.”

Before Tina could say anything, the avatar removed quickly her clothes, ending naked, then walked slowly to her with a most sexy gait and smile. Once her firm breasts pressed on Tina’s breasts, the avatar gently took hold of Tina’s hands, caressing them before raising them to her breasts and making Tina caress her chest, then her face.

“So, what do you feel, Tina?” said the avatar with a mellow voice.

“I...I must say that you would fool anybody, including women.”

“Even there?” said the avatar, guiding Tina’s left hand to her groin area. By then, Tina felt quite hot under the collar. While she was a certified heterosexual, the avatar’s incredible beauty, physical sexiness and soft feeling to the touch was actually arousing her sexually.

“Damn, I don’t want to think about how my Michel would react to you as you are right now. Does anyone else but me know about this avatar?”

That question brought a malicious grin on the avatar’s lips as her own hands started fondling and rubbing Tina’s body, making her shiver with pleasure.

“Only three others know about this: Shanya, Sheona and Shiry. They loved the idea and I am presently building an avatar for each of them, at their request.”

“The three artificial intelligence computers of the Koorivar refugee ships?! My god! The four of you would make a hell of an exploration team together.”

“That’s part of the idea. With the VEON SHOURIA already well advanced in its refit to turn it into an interstellar mixed passenger and cargo ship and with both the SHUNDAR and SHANIZAR due to eventually get a similar refit, those Koorivar avatars may well prove very useful in the future for the fledgling Koorivar merchant fleet.”

Tina then slowly stepped back from the avatar and took a deep breath to slow down her racing heart.

“God, you could hypnotize any man on this ship, Spirit. I suppose that you will want to adopt a human name and identity, in order to hide your true nature?”

“Correct, Tina!” replied the avatar before snapping to attention like a soldier would do in front of his officer.

“Eve Silisca, newly hired by you as a personal aide and assistant ship hostess, Fleet Captain Forster. I am 21 years old, was born in Singapore and hold degrees in human relations and in Asian and European languages. My personal file is already in the ship’s administrative archives and I am ready to serve drinks to the members of the Spacers League Council and to help them relax during the upcoming meeting.”

Tina giggled at that, both amused and impressed.

“Very well, Miss Silisca. However, you better put your clothes back on first, if you don’t want to cause a commotion among our political leaders.”

“Yes Captain!” said ‘Eve Silisca’ while giving Tina a snappy military salute.

08:51 (Vancouver Time)

Conference room of the bridge complex of the A.M.S. KOSTROMA

Mars Governor Charles Watts was talking with Jacobus Stein, the CEO of the Pallas Mining Industries corporation, while they were walking side by side, when they arrived at the entrance of the conference room where the meeting of the Spacers League Council was due to be held. Watts, like Stein, couldn’t help stop and stare at the incredibly beautiful Eurasian young woman who greeted them with a warm smile at the door.

“Governor Watts, Mister Stein, welcome to this meeting. I am Eve Silisca, personal aide of Captain Forster and assistant hostess on the KOSTROMA. If you will follow me, I will direct you to your assigned seats.”

As the two men entered the conference room behind the woman, followed by a retinue of aides and secretaries, Charles Watts whispered in Stein's ear.

"God, I would love to have a personal aide like this girl."

"She definitely is an eye-catcher, Charles." replied the metallurgical engineer and businessman. They were soon in their seats at the conference table, which the woman courteously pulled for them, while their aides sat on chairs set around the walls of the conference room. Following Eve with his eyes as she returned to the entrance to greet Toru Tomonaga, the CEO of the Ceres Consortium, Watts was impressed by the fact that the young woman addressed Tomonaga in Japanese, then used Russian to welcome Gregory Mishkin, the CEO of the Sverdlovsk Group, which controlled Hygiea and its large tribe of asteroids, situated like Ceres and Pallas in the Main Asteroid Belt. Next, she greeted in Spanish Juan Perez, the big and tough governor of the Saturn System.

"Wow! That girl seems to have as much brains as she has sex appeal. I like that!"

The last ones to enter the conference room were Governor Janet Robeson, who was still the chairman of the Spacers League Council, her husband Gerald, Fleet Captain Tina Forster, Captain Shanandar, Doctor Koomak and Sheraz, the political leader of the Koorivars. Once everybody was in his or her place, Janet Robeson spoke up while looking at the ten other persons sitting at the large, round table.

"Welcome to this meeting of the Spacers League Council, ladies and gentlemen. At our previous meeting, four months ago, we were briefed by Fleet Captain Forster about what she and her KOSTROMA had found in the Gliese 667, Gliese 625 and Gliese 581 Systems. We had plenty to consider at that meeting, as we learned quite a few stunning facts about those galactic neighbors and had to make policies concerning them. Now, as the briefing package you received yesterday told you, the KOSTROMA has since then visited a further system, Wolf 1061, and skirted the outer limits of another system, Ross 128, finding and retrieving in the process the Koorivar refugee ships SHUNDAR and SHANIZAR and returning to Earth with them and 43,206 Koorivars, who are presently being revived one by one at the Koorivar Colony on Vancouver Island. However, the most shocking find of the KOSTROMA on that last destination was the fact that an advanced civilization, the Drazt, had been hiding from us less than eleven light years away in the Ross 128 System, all the while spying on us via the electronic signals

spilling out of our own solar system. Your briefing material mentioned the encounter the KOSTROMA had with a Drazt spaceship, which was about to forcibly board the SHANIZAR. However, one part of that encounter, which was in my opinion handled brilliantly by Fleet Captain Forster, was not included in your briefing packages. On top of temporarily disabling the Drazt spaceship with a counter-virus in response to the attempt at hacking by the Drazt, that counter-virus sent by the KOSTROMA was also able to copy and download to our ship the content of the databanks of that Drazt cruiser. As a result, we now possess numerous Drazt technical, scientific and military data files of huge importance, data files which we are now able to use and exploit. Here is a partial list of those files. Please understand that the amount of data to study, all written in Drazt language, is enormous and that studying it will take months, if not years.”

The attendants then saw a list appear on the individual computer stations facing their seats, as well as on four large viewing display screens fixed to the walls of the conference room.

“First, we now have the complete schematics of the space propulsion system used by the Drazt in all their spaceships. It is based on a principle of directed gravity, where a ship using it basically falls in the direction wished for by its pilot. While apparently close to our own gravity sails system, the Drazt directed gravity drive is a lot more compact and efficient and allows performances which we could only dream about...until now. As an example, our best gravity sails systems, as installed on the KOSTROMA, allow a maximum acceleration of four Gs. Using its main thermonuclear engines and anti-matter cruise engines, the KOSTROMA can attain maximum accelerations of about twelve Gs when at near empty mass. In comparison, the Drazt directed gravity drive allows accelerations of up to 22 Gs, with the added benefit of not producing a long trail of superhot plasma.”

That produced exclamations and exchanges of stunned looks among the participants, a number of whom were involved in the design and construction of spaceships. Karl Langemann, the CEO of the Vesta Consortium, then best described out loud the reactions of the others.

“But, this will completely revolutionize our spaceship industry. Our present fleets of both merchant and military ships will become obsolete overnight. Do we know if that Drazt Drive is compatible with the use of our new Koomak Interstellar Drive?”

Doctor Koomak, who was sitting at the conference table, nodded his head at once.

"I studied myself the schematics of this Drazt Drive and I found no reason why we couldn't combine it with my interstellar drive. The only requirement to use the Drazt Drive would be to design the ships for it with spherical or near-spherical shapes. Keeping the whole volume of a standard, elongated hull ship within the propulsive bubble of a directed gravity generator core would waste energy and be impractical. Any ship to be equipped with the Drazt Drive will thus have to be designed and built with its parameters in mind."

Karl Langemann, Toru Tomonaga and Jacobus Stein, whose corporations produced many of the spaceships built in the Solar System, exchanged looks with Claudia d'Arcy, the president of the Earth's Northern Alliance, another big builder of spaceships. It was d'Arcy who then spoke next.

"And when could the information and data about that Drazt Drive be distributed around to our various shipyards, Janet?"

"At the end of this meeting." Replied Janet Robeson, making most participants grin with both excitement and anticipation. "However, we have many other things to consider and take account of before we all launch ourselves in a mad rush to build new spaceships. We still have to decide how we will manage and exploit our new capability to travel to other stars, thanks to Doctor Koomak's marvelous invention. We will have to regulate interstellar traffic, in order to avoid abuses and illegal exploitation of systems which already harbor sentient races and to avoid contaminating those systems with our microbes...or getting infected by alien microbes. A whole new legal and administrative set of rules for the use and exploitation of other solar systems will have to be decided on, then written into law and proclaimed as such before we rush en masse out of the Solar System. The one thing that can be done quite soon, however, will be the resettlement of the Koorivar refugees saved by the KOSTROMA on a world of their choice, plus possibly opening cruise tours for tourists wishing to visit those new worlds but not to stay in them. I must emphasize again that we owe our new capacity for interstellar travel to the Koorivars and that all the things we have learned in the last nine months or so we owe to the Koomak Drive. Thus, I am of the firm opinion that the Koorivars should have first pick on the worlds the KOSTROMA explored, in order to be able to build a new home for themselves."

"And have the Koorivars made a choice of which new world they are presently favoring to become their new home?" asked Toru Tomonaga while looking at Sheraz and Shanandar. Sheraz answered him in a calm, paused voice.

“Yes, he have! I have just conferred yesterday with the political leaders of the two communities transported by the SHUNDAR and SHANIZAR, while presenting them with the choice of new worlds available to our people as a new place to settle. For a number of reasons, we unanimously decided that the planet Wolf 1061c would be the ideal new home for the Koorivar race. Our reasons for that choice were mainly the fact that the gravity, average temperature and luminosity level on Wolf 1061c are very similar to what we had on Shouria. The gravity of 1.3 G on Wolf 1061c would have anyway made it an unappealing place for Human settlers.”

That number made Charles Watts winced.

“One point three gravities?! Oh my aching back!”

“Exactly!” replied Sheraz while smiling with amusement. “The other main reason for our choice was that Wolf 1061c, contrary to Gliese 581d and Hyanesu, the moon of Gliese 581c, does not harbor a technological civilization, although we will have to consider the rights and needs of the local Kooroos, the giant, dragon-like birds living on that planet and who are presently at a Neolithic stage of their evolution.”

“Your choice certainly makes eminent sense to me, Administrator Sheraz.” said Juan Perez. “I am ready to support that choice right now, if my colleagues agree with me.”

To the joy of the Koorivars present, all the other participants voted in favor of accepting the choice of Wolf 1061c as their new designated home world. With a most positive atmosphere now reigning in the room, Claudia d’Arcy asked a question of her own to Sheraz.

“While I agree that a felt gravity of 1.3 G would be excessive to Humans living on Wolf 1061c, what I saw of that world would make it most attractive to Human tourists passing through. Such tourists could tour the planet while staying inside tourist shuttles and scooters equipped with artificial gravity fields which would relieve the excess gravity burden on them. Would the Koorivar Administration be ready to allow Human tourists to visit their new home world?”

Sheraz smiled while shrugging and partly raising both hands in a most human gesture.

“We would be most happy to greet such tourists on our new home world, as long as they don’t pollute it and respect our regulations. A large influx of free-spending suckers is always good for business.”

That joke made all the other participants break into laughter that went on for a couple of seconds before Charles Watts asked a question in turn.

“And do you have a name in mind for your new home world, apart from the most poetic designation of ‘Wolf 1061c’?”

From joking, Sheraz instantly turned to melancholic.

“We agreed to call it ‘New Shouria’. I know that it may not be the most imaginative name ever, but it brings new hope for my people.”

“Hey, with New York, New Hampshire and the like, who are we to criticize your choice, Administrator Sheraz?” replied Claudia d’Arcy in a light tone. “What about the largest moon of New Shouria, Wolf 1061ca? It is nearly the size of Earth, has a felt gravity of 0.78, a bit thin but still breathable atmosphere and a decent temperature range. Would you like to have the exclusive use of it as well?”

Sheraz thought his response for a few seconds before answering in a sober voice.

“The leaders of the SHUNDAR and of the SHANIZAR at first wanted to claim it for our people. However, I then reminded them that, without the loyal friendship and heroic efforts of Fleet Captain Tina Forster and of her crew, they probably would have all died, lost in deep space. Captain Forster used her own resources and her own ship and risked putting herself in legal and political trouble by offering us her help and then leaving on her own authority on an interstellar mission, something that could have easily been criticized afterwards by many around the Solar System. While the Koorivar people will take control of the rest of the Wolf 1061 System, we decided to give possession and full exploitation rights of Wolf 1061ca to Captain Forster and to the crew of her mighty KOSTROMA, to thank them for their help.”

Tina, not having expected that for a second, was left stunned and speechless as the council members expressed their unanimous approval of Sheraz’ declaration. What she had just been given was no less than a habitable celestial body nearly the size of Earth, with all the possibilities which came with such a possession. She was finally able to find her voice back and stood up from her chair.

“First, I wish to express to Administrator Sheraz and to the Koorivar people my sincere gratitude for the incredible gift they just gave me. Second, know that I will do my best to make the whole of Humanity, and not just me and my crew, profit from that gift. I always believed in compassion, friendship, generosity, justice and tolerance and I lived by those values. I fully intend to continue living by them and they will in turn become the values by which I will manage Wolf 1061ca.”

This time, the other participants all rose from their seats and applauded her, making tears appear in her eyes. Tina also saw Eve applaud at that time.

As the applause died down, the participants sat back in their chairs to resume the discussion, with Janet Robeson speaking up.

“Well, ladies and gentlemen, this leaves Gliese 581d, a.k.a. Oceana, and Hyanesu, the moon of Gliese 581c, as habitable worlds we know of at this time that have potential as resettlement worlds. However, let’s not forget that there are a number of sentient races present on those two worlds and that they are not simply open for the picking. Furthermore, Oceana is an ocean planet, with very few emerged lands on its surface, while at least three sentient marine races are known to live in its oceans. Those sentient marine races were also firm about a complete interdiction on fishing the local marine life and about avoiding any pollution of their ocean world. Oceana however possesses four large, rocky moons which would compensate the lack of emerged lands on Oceana in terms of sources of minerals. Remember that we may very well find many more habitable worlds in other star systems in the near future, so let’s not fall on Oceana and Hyanesu like starving ogres. Yes, President d’Arcy?”

“You are right in saying that we may well find soon tons of habitable planets in other star systems. The outer moons of our system, along with Mars, are still under-populated, mostly thanks to the cost and time needed to build new space habitats. We thus can take our time and prepare adequately the terrain before resettling some of our Spacer population on Oceana or Hyanesu. However, there are many on Earth who can’t afford to wait much for a new home, as their present homes are either already close to unlivable, condemn them to a life of poverty and periodic famines or to low living conditions.”

“Uh, I believed that the citizens of the Northern Alliance were enjoying rather high living conditions, Claudia.” Interjected Gregory Mishkin, making Claudia d’Arcy shake her head slowly.

“I was not talking about the citizens of the Northern Alliance, who effectively enjoy good to excellent living conditions. I was talking about the citizens of the Southern Federation.”

“The Southern Federation? Only three years ago, SF agents engaged in suicide missions attempted to ram two of our asteroid worlds with large ships they had hijacked after butchering their crews. Only the intervention of the KOSTROMA saved our worlds from destruction then. Why care about the citizens of the Southern Federation over our own citizens?”

“Because, one day, we will eventually have to care about them if we want to stop this mad cycle of hatred and violence. Yes, most of the present political leaders of the Southern Federation are corrupt, uncaring bastards and human rights abusers. However, most of their citizens are simply poor but decent people who are too scared or weak to rebel against their leaders. You also have large populations of refugees who have lived for years and decades inside squalid refugee camps, because their old lands were stripped bare by either wars, droughts or extreme heat, or were chased from them because of ethnic, religious or racial intolerance. Those poor people living without a country or proper home deserve our help. Oceana strikes me as the perfect place to relocate these people, who were in the majority simple farmers, fishermen or cattle herders. If we build large floating cities on Oceana, then those cities will have to contain their own hydroponic gardens, fish farms and animal farms facilities in order to feed their population. Those homeless refugees would be more than able to maintain those food production facilities in my opinion, and I don’t mean by that to use them like slaves. Give those people decent, meaningful jobs that they can do and allow them to get out of this cruel cycle of famine and poverty.”

“I want to express my support to President d’Arcy on that, ladies and gentlemen.” added Tina. “Those same people we often consider as enemies can prove to be hard working and decent people once extracted from the toxic social, political and economic environments they were living in. I hired many such people as new crewmembers for my KOSTROMA and never regretted it. Humanism should be our guiding word in our decisions on how to use those new worlds I explored.”

The declarations by both Claudia d’Arcy and by Tina left the other participants pondering the question in silence for a moment. Finally, Janet Robeson looked at d’Arcy, pointing a finger at her.

“Claudia, I am leaving you in charge of forming a special committee which will study the question of who to resettle on Oceana and Hyanesu, in what conditions and with what support. The last thing I want to see is for us to simply create new refugee camps on other planets. I believe that we will need to split and mix the various groups we will select, in order to prevent the formation of ethnic ghettos and restrictive groups which would only import the same kind of ethnic, religious or political intolerance they experienced on Earth. Mixing in some of our Spacers might help in that.”

“I will get on it next Monday, Janet.”

“Excellent! Now, for the last petard I was saving for this meeting, know that the schematics of a powerful and frightening weapon were also stolen by the KOSTROMA from the Drazt cruiser it encountered. That weapon is essentially a disintegrator beam gun that vaporizes everything it hits by breaking down instantly the atomic bonds within the molecules of the target hit by that weapon. Right now, I am keeping the data concerning that Drazt weapon under lock and key but, since we may well face again the Drazts in the not too distant future, I believe that we will have to quickly decide what to do with such a weapon, and soon! I am now ready to listen to your suggestions, ladies and gentlemen.”

When the meeting finally adjourned in the evening after a group supper, Tina returned to her suite in a near state of shock, her mind working furiously about what she would do next, now that she was the owner of a whole moon nearly the size of the Earth. She had already told Piotr Romanski, her ultra-efficient ship’s commercial agent and finance officer, to wait until tomorrow morning before they would discuss their options, since she wanted to sleep on that first. The sight of her smiling toddler son, ready to go to bed and playing with Michel in their lounge, helped her temporarily chase away all the things cluttering her mind. Kneeling beside Michel and Misha, Tina grabbed her son in her arms and started kissing him on his cheeks.

“Misha, my little treasure! I really missed you today.”

She then looked soberly at Michel.

“I have a rather stunning piece of news for you, Michel: we and the crew of the KOSTROMA are now the owners of a moon, in this case Wolf 1061ca. The Koorivars gave it to us as a thank you for helping them find and rescue their two ships.”

As she had expected, that somewhat shocked her husband, who however recovered his wits quite fast and gently patted little Misha’s back.

“Hey, Misha, you heard that? You’re going to have a whole moon for you as a playground.”

07:48 (Vancouver Time)

Saturday, October 02, 2320

Hangar Deck, Level 7, A.M.S. KOSTROMA

Resting at vertical on the sea bottom off Vancouver Island

Tina and Piotr Romanski, called down urgently to the Hangar Deck by the ship's cargo master, Denise Lonsdale, arrived in the Crafts Hangar Number One to find there three Koorivar shuttles and a smiling Shanandar. Next to Shanandar and the shuttles were dozens of solid-looking crates resting on the steel deck of the hangar. Tina had one look at the crates, then eyed Denise, standing next to Shanandar.

"Uh, what's the rush, Denise?"

"The rush is because I will definitely need your signature to officially acknowledge receipt of this cargo delivered from the Koorivar Colony, Tina."

"And what exactly is this cargo?" asked Tina, this time looking at the smiling Shanandar. The latter made a show of patting a hand on top of one of the crates as he answered her.

"Two hundred metric tons of pure gold bars, worth a total of 9.2 billion credits. It is all yours now, compliment of the Koorivar Council."

"But, but, you already gave me Wolf 1061ca as payment for the services of my KOSTROMA. You didn't need to add all that gold on top of it!" Shanandar wiggled a finger at the vertical to contradict her.

"Wrong! We gave you that moon as a thank you for saving our lost people. That was a gift from the heart. This gold is our actual payment for the services of your KOSTROMA and of its crew. It is meant to reimburse you for all the expenses, time, supplies, fuel and ship wear which you incurred during these nearly nine months in deep space, plus all the cargo contracts and passenger revenues which you missed on because you were out of the Solar System."

"But, that's still way too much!" protested Tina, ignoring Piotr's discreet efforts to make her shut up. Shanandar slowly shook his head at her words, his expression dead serious now.

"And how much is the life of one Koorivar worth? How much are the lives of over 44,000 Koorivars worth, Tina? This shipment of gold works out to a mere 4.4 kilos of gold per Koorivar lives you helped save. That equals about 200,000 credits per head, which is about the lowest standard death benefit paid per deceased person by life insurances here on Earth. Are you telling me that they were worth less than that?"

Tina, unable to find anything to say to counter that, walked to Shanandar, giving him a warm hug.

"Shanandar, you are a true friend and so are your people. I don't know how to properly thank you for that."

“Simple! Build a nice, caring and just society on Wolf 1061ca. By the way, did you decide on a better name for your new world?”

“Not yet! I have a few ideas about that but, since the moon was a gift to both me and my crew, I want to poll my crew first, to see what they would suggest.”

Shanandar nodded in approval at that: Tina had always treated her crewmembers and their families like equals, rather than just as subordinates, something that clearly distinguished her from most other ship captains. In truth, the crew of the KOSTROMA was like one big, happy family. That was one big reason why her crewmembers were so loyal to her, wherever they originated from.

15:51 (Korea Time)

Management offices of Hyundai Heavy Industries shipyard

Ulsan, Korea

Park Ju-Yung, Head Manager of the Hyundai Heavy Industries' Ulsan shipyard, looked through the large windows of his office at the five huge floating structures sitting off the shipyard itself, feeling glum. Those structures, three of them looking like short giant pillars with a diameter of 400 meters and a height of 300 meters, plus two rectangular box-like modules with widths of 150 meters, had cost his shipyard over 2.1 billion credits to build and had been part of a huge contract to produce the elements of a floating city. That floating city, with a capacity to lodge comfortably a population of up to 450,000 people plus a variety of stores, shopping centers, workshops and office space, was supposed to be moved by sea once completed, to be anchored off the Japanese coast near Tokyo, where there was simply no land left available for urban construction and where such floating cities had been popular for over a century. Unfortunately for Park's shipyard, the consortium which had ordered those elements in a contract worth 4.9 billion credits had found itself implicated in a huge financial scandal over a year ago. With its main owners and financial officers found guilty of fraud and tax evasion and sent to jail, that consortium had then collapsed, something that had rendered the contract for the floating city void and had left Park's shipyard stuck with those unpaid floating structures. Unable to find new buyers for those city modules and stuck with the burden of paying the interests on the loans taken to finance the construction of those modules, Park feared that his whole shipyard business could sink if he didn't soon find buyers for them. About two weeks ago, a group of Koorivars had visited the shipyard, collecting

data about its building capacity, its products and the prices of floating modules like the ones Park was looking at now, then had departed with a promise to consider his shipyard for a contract for floating modules. Park was still waiting for those Koorivars to call him back, but he was by now starting to lose hope about that.

The landing of an unusual-looking craft similar to the shuttle which had brought in the Koorivars two weeks ago then caught his eyes as it touched down on the large landing pad located next to the building containing his offices. His hopes went up when he saw the unmistakable silhouettes of a group of Koorivars come out of that shuttle. Walking quickly out of his office and going to the desk of his executive secretary, he asked her to get him the file on the voided floating city contract, which contained the technical specifications of the different modules, and to print a dozen copies of the pamphlet showing the products of his shipyard, just in case those Koorivars asked for more of them. With that done, Ju-Yung took an elevator ride down to the entrance lobby of the building, where he arrived just before the group of Koorivars arrived at the entrance. He still couldn't make a difference between individual Koorivars, but they apparently had no problems recognizing him, as they came straight to him, with their leader presenting his hand for a handshake.

"Mister Park! We came to bring you some very good news. I am Krovek and I visited you two weeks ago."

"I remember you, Mister Krovek." lied Park while shaking hands with the alien. "So, you would be interested into buying those floating city modules anchored in the bay?"

"More than that, Mister Park: we are also ready to order the remaining modules of that floating city and may well order more such structures on top of them."

"But, that's marvelous news, Mister Krovek! Be assured that, whatever else you will order from us will get top delivery priority with us."

"Excellent! Our order has in fact some high priority to it, and we will take delivery of the finished modules as soon as the contract is signed and paid for."

The words 'and paid for' sounded like pure music to Park, who then showed the nearby elevators to his alien guests.

"Then, let's go up to my office, where we will be able to conduct business in private."

Once upstairs and in his office, with the door firmly closed, Park invited his three guests to sit in well padded sofas set around a low coffee table, himself taking an easy chair facing them.

“Would you like something to drink before we discuss? Tea, coffee, water or fruit juice?”

“Tea sounds fine, Mister Park. We Koorivars quickly took a liking to it after arriving on Earth.”

“Then tea it will be!” replied Ju-Yung before calling his secretary and ordering her to have a tea service for four to be served. As the secretary went out to take care of that errand, the shipyard manager smiled to his three alien visitors.

“So, those floating city modules proved to be what you were looking for, gentlemen?”

“They certainly did, Mister Park. Their big advantage for us is that they are already built and ready to be delivered, while its missing pieces are already designed, thus saving a lot of time for us. The only thing we will need to change is the furniture, which is anyway not your responsibility to provide. As you can see right now, we Koorivars use pieces of furniture that are quite different from those used by Humans. By the way, would you know of a good, reliable furniture manufacturer who could design and mass produce furniture adapted to Koorivar needs? We can provide pictures and specifications for typical Koorivar contemporary furniture.”

“I certainly can help you with that, Mister Krovek.” replied Ju-Yung, who then got up from his easy chair and went to his work desk, where he took a business card out of one drawer. He then approached Krovek and gave him the card advertising the furniture factory owned by his sister.

“The Busan Furniture Center is an excellent company with a very good reputation. One of their specialty is custom-designed and made furniture.”

“We will certainly pay a visit to that company later on, Mister Park.” promised Krovek, pocketing the card. “Now, we do have a special requirement about the modules you already built and that we are to take delivery on that may necessitate the building of special transportation packaging.”

“Special transportation packaging? Uh, I am afraid that I don’t understand, Mister Krovek.”

“It is actually quite simple, Mister Park. Basically, your modules will need to be transported through the vacuum of space by a cargo spaceship. However, we perfectly

understand that your modules were not built to withstand the conditions of space, with vacuum possibly playing havoc with the various pressurized systems contained inside your floating city modules. We will thus need for you to build according to our specifications a sort of giant, padded crate with airtight seals which will contain one module and protect it from both vacuum, vibrations and thermal variations. Since the ship that will tow such containers can lift only one module at a time, you will need to build only one crate for each type of modules you will build for us. From what we could see from the air, it looks like only two different types of crates will be needed to be built, right?"

"Correct, Mister Krovek! The whole floating city project involved the construction of five tower-like cylindrical modules, plus four rectangular giant caissons meant to link together the cylindrical modules in the shape of a four-petal flower. The beauty of that design is that you can easily change it to add or subtract more 'petals' to the flower. Adding a second ring of 'petals' around the central flower is also easily feasible. This design concept for floating cities has in fact been very popular around Earth for the last two centuries or so, especially around the Pacific, where many small island nations were threatened with rising sea levels. Our floating city design is self-sufficient in terms of food and potable water production, electrical power generation and full recycling of human waste and garbage. Our present model which you want to buy has the added feature of being self-propelled in the water, using gravity sails to either fight off currents or change location as desired. Call it a nomadic floating city if you like, or a second 'Atlantis'."

"A second Atlantis..." said Krovek pensively. "I like that name!"

"It certainly would be an appropriate name for such a floating city, Mister Krovek."

Park's secretary came in the office at that moment, pushing a tea service cart in front of her. She served the three Koorivars, then Park, before exiting the office. Ju-Yung gave time to his guests to take their first sips of tea before speaking again.

"So, you are ready to sign a contract for the delivery of our modules already built, plus the remaining sections of our floating city design, to be built on a high priority basis, correct?"

"Correct, Mister Park. We are also ready to pay an extra 100 million credits over and above the original price of 4.9 billion credits, in order to ensure the highest priority in the construction of the remaining modules and of a set of special giant transport crates,

plus will pay of course for the construction of those transport crates. Right now, we are ready to immediately transfer to your company's bank account the sum of three and a half billion credits, as a payment for the modules already produced and as an advance on the modules and crates to be built, with the remainder due to be paid on final delivery. Would that be satisfactory to you, Mister Park?"

"Very much so, Mister Krovek!" replied Ju-Yung, who was feeling an enormous weight suddenly lifting off his shoulders. "Give me a minute and I will massage for you a written understanding-in-principle and preliminary contract to solidify this deal."

Less than two hours later, a happy Park Ju-Yung thanked his visitors and escorted them back to their shuttle, having finalized and signed together a preliminary contract and with the Koorivar having effected the transfer of 3.5 billion credits from their bank account in Canada to the shipyard's bank account in Seoul. As the shuttle lifted off, watched by Park, the latter activated his wrist videophone and called his sister, to warn her not to mention their family link to these fantastic customers when they would visit her furniture factory.



Wolf 1061 shining on the landscape of New Haven. (image from imgur.com)

CHAPTER 16 – EXPLORING A NEW HOME

09:46 (Universal Time)

Thursday, October 14, 2320

Surface of Wolf 1061ca (a.k.a. New Haven)

First moon of Wolf 1061c (a.k.a. New Shouria)

Wolf 1061 System, 13.8 light years from Earth

Tina, carrying little Misha in a special backpack, stopped walking for a moment to watch as the KOSTROMA, having come down at the vertical through the atmosphere of the moon and having stopped in a hover above a large and deep depression in the landscape of Wolf 1061ca, a.k.a. 'New Haven', started pouring down the twelve million tons of water it had picked up on Wolf 1061d, the ice giant found beyond the orbit of Wolf 1061c, now officially known as 'New Shouria'. That water, originally frozen, was now being poured after being filtered and heated to a temperature of fifteen degrees Celsius inside the giant water carrying pods hooked to the flanks of the cargo ship. This was the seventh such water delivery trip by the KOSTROMA, using the nearly infinite resources in water offered by the third planet of the system to help make water more abundant on the moon. Using the services of Martians experts in terramorphing and following the recommendations of their preliminary study on her new home world, Tina

was resolved to improve further what was already a more than fair world to live on. One of those recommendations had been to bring more water to the moon which, while not a truly arid body, was a bit on the dry side. That dryness mostly came from the bit thin atmosphere, which had a surface pressure of 810 millibars, or 0.81 times the sea level pressure on Earth. Adding more water to the moon's surface would also have the benefit of stimulating the growth of the local flora, which was already quite abundant and diverse, something that would in turn augment the amount of oxygen generated via photosynthesis by the local plants. That would eventually help raise the proportion of oxygen in the atmosphere, now standing at nineteen percent, to levels closer to the Earth's 21 percent. However, both the lower pressure and lower oxygen content of the atmosphere of her new world didn't really bother Tina as she trekked across its surface, the lower gravity of 0.78 G helping to compensate those factors by making her efforts less tiring on her body. As for the surface temperature on this morning, it stood at a comfortable 21 degrees Celsius, with a fair wind blowing at the time being.

Turning her head around, Tina smiled to Michel, who was leading her around the landscape and was carrying a backpack full of supplies and equipment.

"So, what do you think of our new home world?"

"I like it a lot up to now, Tina. It reminds me a lot of the climate around the Mediterranean: hot, a bit dry but still nice. While the air is a bit thin, the lower gravity helps compensate for that. My only worry is about how Earth plants and trees could adapt to this world. I know that we could always build giant greenhouses for Earth trees if need be, but to be able to grow such trees, especially fruit trees, in the open would help tremendously our moon in terms of habitability and commercial viability. You did put a number of specialist teams at work to study that aspect, but it will take weeks to start getting their preliminary reports."

"I know, but I don't want to rush through this exploration and study phase. Besides, it will be at least a month before the first modular structures I ordered on Earth will be ready for delivery and positioning. I do agree with you that to be able to plant Earth trees in the open air here would be fantastic and would simplify a lot our efforts to valorize our moon: Humanity can always use more food production, as long as it is done in an ecological way. Hopefully, the new lakes and rivers which the KOSTROMA is creating with water from the third planet will be able to receive and sustain fish populations and their marine food chain, but our biologists, like our agronomists, still

have a lot of work to do to make sure that we could successfully inseminate the local lakes and streams with marine life. We still know so little about this world.”

“Yeah, that includes the local animal life, like that little critter over there.”

Tina snapped her head in the direction pointed at by Michel, in time to see some kind of small four-legged rodent run away through the surrounding bushes and plants.

“You know, Michel, from what we have seen ourselves to date and from what the teams of prospectors, agronomists and biologists I hired to survey this moon said, most of the local fauna is of rather diminutive size. No big herbivores, no large predators and only small birds and insects. This moon is totally unlike the fauna found next door, on New Shouria.”

“Hey, different conditions, different life forms!” replied Michel while shrugging. “Our moon is much drier than New Shouria and has a markedly thinner atmosphere. Also, having a lower gravity would tend to favor small creatures, while the thinner air would make life difficult for large flying creatures.”

“You’re right, my dear!” Conceded Tina, who then resumed walking with Michel.

About two hours later, the small family arrived at the temporary field camp of one of the twelve surface survey and exploration mixed teams she had hired to evaluate the conditions, fauna and flora of her moon. As with every commercial ship, Tina had kept only a limited-sized crew in comparison to the size of her ship, following that way the age-old commercial shipping rule of keeping the fixed costs, including crew-related expenses, low in order to maximize profits. Even then, most other cargo ship captains found the accommodations, facilities and salaries devoted to her crew well above the norms. Because of the limited size of her ship’s crew, the pool of scientists residing aboard the KOSTROMA was quite small and was wholly insufficient to conduct by itself a detailed planet surface survey program. Tina had thus recently hired from all around the Solar System mixed teams of specialists in geology, hydrography, mining prospection, agronomy, biology and land resources management to supplement her own ship’s scientists, the latter ones staying on the KOSTROMA to collect, collate and analyze the data and observations made by the surface teams. The team field camp she entered with Michel and Misha was small but well equipped, with two large modular shelters, one for living accommodations and the other for workshops and laboratories, plus a garage for anti-gravity scooters. In the center of the camp, the team had established an open air campfire built of a ring of rocks picked up from the surrounding

fields, then had laid a number of tables, chairs and beach umbrellas around that campfire. When Michel and Tina arrived at the central campfire, they found six of the team members sitting or chatting around, with a pot of boiling water suspended over the fire. The team members smiled and waved on seeing the small family.

"Hi, Captain!" shouted Jack Harris, a mining prospector from Alaska. "Quite a nice day, isn't it? Why don't you join us for lunch? We have a bunch of field rations warming up in boiling water."

"We will accept the invitation with pleasure. What do you have on the menu?"

"Nothing but the best, Captain, like all the equipment and supplies you provided to our team. You are nothing like a few skimpy past employers I worked for in the past. We have a choice of Beef Bourguignon, Chicken a la King, Sweet and Sour Pork with Fried Rice and Salmon with Hollandaise Sauce."

"A rich and judicious menu indeed!" replied Michel while grinning. "I will have a bag of Sweet and Sour Pork with Fried Rice."

"Make it a bag of Salmon with Hollandaise Sauce for me." added Tina. "As for my little Misha, I brought his own rations with me."

The team members smiled, with the two women of the group swooning at the sight of the toddler boy as Tina put down her special backpack.

"Oooh, he is so cute! How old is he?"

"He is now one year old and is a bundle of energy. He is still not very fast on his feet but he sure moves a lot around, so we will have to make sure that he doesn't approach too much your campfire."

"I can keep an eye on him while you eat, Captain." Offered one of the two women, making Tina grin.

"Thank you, miss. What is your name again? I hired so many extra personnel in the last two weeks that I am having a hard time remembering all your names."

"That is most understandable, Captain. My name is Sarah Behrman and I am an hydrography specialist from Haifa, in Israel. I have to say that the capacity of your mighty KOSTROMA to pick up and deliver millions of tons of water across space is most impressive. It won't take long before that imported water will make the region around this new artificial lake and river turn green."

"That is the goal I have in mind, Miss Behrman. I intend to distribute a total of six such artificial lakes around this moon, then will start planting fruit trees around those

newly irrigated regions. Have your team found yet any factor or reason that would prevent Earth trees from growing here?"

"None yet, Captain!" answered a graying, thin man. "I am Joshua Matabele and I am the agronomist of this team. To date, I haven't found in the soils any microbes, toxins or parasites that could cause trees and plants imported from Earth to wither and die. The soil composition is very similar to the kinds of soils found around the coasts of the Mediterranean and the only subterranean life we found are local variants of Earth worms. The only thing you will have to check and worry about is how cross-pollination will be done. You may have to import a few bees or small birds to insure that."

"Well, then you can put that in your survey report, along with your recommendations on how to take care of that problem, Mister Matabele."

"I certainly will do that, Captain."

Sarah Behrman then spoke again, this time a bit hesitantly.

"Captain, I suppose that you intend to eventually move settlers to this moon, in order to build a new Human colony here. How do you intend to select those future settlers?"

Guessing where she was going with her question, Tina gently smiled to Sarah.

"I intend to select mostly good, decent people who have been chased from their original lands, or are living in poverty, with no prospects for a better life, and that through no fault of their own. There are unfortunately plenty of such people on Earth: refugees from natural disasters, wars and ethnic, religious or political oppression. Most such people were farmers, manual workers, herders, fishermen and the like and could easily be employed in hydroponic gardens and farms here. I also intend to hire a core of technical and scientific specialists who will support those people, by taking care of the more technical aspects of life. I thus see this world becoming first a mostly agricultural and pastoral society, living in peace away from the conflicts, pollution and other problems seen on Earth."

"And...who will govern this world? You?"

"At first, yes, via a chief administrator named and supervised by me. While the settlers here will be considered citizens of a private corporation, with me at the head of that corporation, the criminal and civil law codes of the Spacers League will be enforced here. So, while there won't be such things as democratic elections at first, be assured that, on this world, the fundamental rights of all will be respected."

"Would it be too early to present my candidacy as a settler and citizen of New Haven, Captain?"

"Miss Behrman, this is a perfect time to apply as a new citizen and I will be most happy to accept your application. Once back on the KOSTROMA, go visit the ship's administrative center and state that, as of today, you became a citizen of New Haven. My staff will then provide you with the proper documentation and citizenship papers. As a hydrography expert, your knowledge will certainly be most useful to this colony for the decades to come."

"Thank you very much, Captain." said Sarah, her voice choking a bit. "In truth, life has been miserable for me for quite a few years in Israel, not because my professional competence was put in doubt, but rather because of ethnic and religious hostilities there."

"No need to elaborate here in public, Sarah: I understand very well what kind of problems you may have faced previously. Until we can install the first settlement facilities here, you will be assigned one of the apartments still available in the bow ring section of the KOSTROMA."

Tina then hugged Sarah, patting her back as well.

"After receiving this moon as a gift from the Koorivars, I promised to use it to help other people have a better life. You will be the first such person I will help, Sarah."

16:19 (Universal Time)

Rocky field, New Haven

"So, Bill, why did you want to join me here, in the middle of nowhere?"

Bill Morrison, who had just stepped out of a shuttle that had landed in the semi-arid field, smiled to Tina in response.

"Because I wanted to meet you, Tina...in the middle of nowhere. I had to do some discreet field tests, with you watching them. Here is a perfect place for such tests."

"Testing what, Bill?" asked Tina, mystified.

"Testing the results of Project X-Ray and of Project Buckler."

That answer made Tina do a double take out of surprise.

"Already? I was expecting those projects to take much longer before they could produce something concrete. How did you manage to proceed so quickly?"

“Easy: Spirit lent us a hand. I and Doctor Koomak simply had to give her a few key parameters to follow and she then used the copied Drazt files to create designs, designs which were used by her to build prototypes via our robotic manufacturing workshops. Since we also bypassed the typical mountain of paperwork and administrative maze of the Spacers League government, I can bet that we on the KOSTROMA are now well ahead of their specialists in the two domains concerned. We have now a total of four prototypes ready to be field tested...away from indiscrete eyes, so here I am with a small test team.”

Looking at the rear access ramp of the shuttle, Tina saw that Morrison had been followed by Doctor Koomak, Ahmed Jibril, electronics Vincent Reed, Second Engineer Jim Lowell...and Eve Silisca, all carrying a variety of plastic cases and leather bags. Michel, who had approached behind Tina, shook hands with Morrison.

“Hi, Boss! You should come do some trekking on our new world: it is a truly nice place. I certainly wouldn’t mind retiring on it one day.”

“It sure looks nice to me, Michel. How about you help me set up a few things over those rocks over there?”

“With pleasure, Boss!”

Watched by a curious Tina, who was still carrying little Misha on her back, Morrison and his group chose four large rocks with an average of two to four meters between them, then selected three rocks of different sizes, the smaller being the size of a grapefruit and the larger one needing the efforts of three men to put it on top of one of the four rocks. What looked like a sort of small steel cylinder with an hemispheric cap was put on top of the fourth rock. The men then moved back by about thirty meters and put down on the ground four small folding tripods in a line facing the four rocks. Small rocks and dirt were used to anchor the feet of the tripods on the ground, while Vincent Reed set up a fifth tripod near to the first one and attached a small camera to it before carefully pointing it at the first of the rock targets. Once all that was done, Jim Lowell took a small object out of his bag and showed it to Tina and Michel. It was quite small, fitting inside an opened hand, and looked a lot like a common water hose hand sprinkler, with a hand grip topped by a small, short tube set at right angle to the grip and with a trigger protected by a finger guard in front of the grip. Jim Lowell’s expression was a sober one as he presented the object to Tina.

“This may look small and inoffensive, Tina, but it is in reality a lethal weapon. You are looking at a prototype of a conceal-carry disintegrator pistol. As you can see, it is extremely compact and quite thin, making it ideal to carry hidden under one’s clothes. Using the Drazt technical schematics and data, Spirit produced for us models of disintegrator weapons in conceal-carry pistol, heavy pistol and rifle sizes. We will first try this compact pistol against that grapefruit-sized rock over there.”

“Can I hold it for a moment, Jim?”

“Of course, Tina! Its energy cell is still out of its grip, so it is totally safe right now.”

Taking the pistol offered by Lowell, Tina closed her right hand around its grip as Lowell described the weapon for her.

“The energy cell for it will add less than 200 grams to it, with a total working mass of 350 grams for the whole loaded pistol. It can be fired in short pulses of a hundredth of a second or in continuous mode. Its power can also be adjusted, to adapt it to the type and size of target you are aiming at. While not incorporated to this prototype, a standard pistol fingerprint recognition grip can be fitted, making the intended owner the only one able to use it. Our heavy pistol and rifle models can also receive such fingerprint recognition grips.”

“Excellent! We certainly don’t want the wrong people to use such weapons. Can I see the heavy pistol and rifle models as well?”

“No problem, Tina.” Said Lowell, who nodded his head at Ahmed Jibril. Tina handed over the compact pistol to Michel, letting him examine it as she got a beefier pistol from Jibril. That handgun proved to be both much larger and heavier than the compact model, weighing about 700 grams and being clearly designed to be carried in a belt holster. The heavy pistol was also equipped with a small day/night sight and a laser dot sight. Next, she took hold of the rifle model, a still fairly compact but highly intimidating weapon weighing about five kilos, with a large metallic tube some eighty centimeters in length and ten centimeters in diameter as its main part. It had a folding butt stock, two hand pistol grips and an assortment of sights attached to it. Seeing a sort of long steel tube of rectangular section fixed under the barrel of the rifle, Tina pointed it to Lowell.

“What is this thing, Jim? I can’t figure it out.”

“That is something that Bill insisted on having included to our rifle. Let me handle it and I will show you.”

Taking the rifle in his hands and pointing it in a safe direction, Lowell then pressed a recessed button at the top rear of the forward pistol grip. A forty centimeter-long serrated blade then popped out of the tube with a loud 'click'. This time, it was Bill Morrison who spoke up.

"In case you run out of juice in a close fight, or need to intimidate someone, you can make this high-hardness steel alloy blade pop out. Its two edges are razor-sharp, while serrations running over half their length can be used to saw off softer materials, like aluminum sheeting or wood. You can also detach the blade entirely from the rifle by turning this knob here and end with an actual short sword in your hands. This may all sound anachronistic, but I was always a partisan of the 'belt and suspenders principle'. For one thing, that blade could become your backup weapon in situations where you can't fire your rifle without risking to hit innocent people, or are inside a very restricted area."

"I buy it, Bill! In fact, from the drooling he is doing now, I would say that my husband also likes this. Okay, let's start the firing tests!"

Taking the compact pistol, Jim Lowell then went to fix it to the tripod mount facing the smallest rock target, then carefully pointed it, also checking the alignment of the camera next to it. Inserting its energy cell in the grip of the pistol, he switched the weapon on and connected it to a long, thin command wire. Unrolling the wire as he went, he returned to the group, standing over twenty meters away, before connecting the end of the wire to a control box.

"Alright, Vincent, start filming! Firing short pulse in three, two, one, fire!"

Tina, her eyes fixed on the grapefruit-sized rock used as a target, saw a needle-thin blue beam suddenly flash briefly across the air with a weak sizzling noise. The target rock, hit dead center, was temporarily hidden by a blue flash larger than itself. That flash however went on for only a fraction of a second. Exclamations went around the spectators of the test as the smoke from the hit was blown away by the wind.

"HOLY SHIT! THE WHOLE ROCK IS GONE!" shouted a shocked Vincent Reed. Tina herself was unable to speak at first, not having expected such power, by far.

"Uh, Bill, I think that we should try a second test firing of your compact pistol, this time aiming at the base rock which was supporting the target rock."

"I think that you are right, Tina. Damn, this weapon is terrifying! I am going forward to change the aim of the pistol and of the camera."

Two minutes later, they were ready to fire the compact pistol for a second time. This time, the hit created a melon-sized fuming hole on the face of the base rock. Koomak, who had approached with the rest of the group to examine the results from up close, shivered in horror.

"By the stars, I would have never believed that such destructive power could come from such a small thing if I was not looking at it now."

"And this is from our smallest prototype weapon." Said somberly Tina. "I am already afraid to see what our heavy pistol and our rifle will do. Alright, Jim: you can recuperate your compact model and fix in place your heavy pistol prototype. However, instead of aiming at the intended target rock, aim instead at the base rock supporting it. I somehow suspect that nothing of the second target rock would survive a test shot."

"Understood, Tina."

The heavy pistol test shot, with a blue beam the diameter of a pencil, vaporized a hole the size of a large storage chest in the target rock, demonstrating enough power to completely disintegrate a human adult body. As for the rifle model, its beam, cracking through the air with nearly the noise of a lightning bolt, vaporized completely a rock half the volume of an anti-gravity scooter. As the spectators contemplated in silence the smoking hole in the ground on which the huge rock had been, Tina spoke softly to Bill Morrison.

"I believe that Project X-Ray can be considered as wildly successful, Bill. Let's now try your prototype for Project Buckler. We will first fire a standard pulse rifle at it, then will try your compact disintegrator on it."

"Got it, Tina."

Taking out of a case what looked like a standard protective helmet with a small box fixed to its front, Morrison went to place it on top of a rock and pushed a button on one side of the helmet, then aimed both the compact pistol and the camera at the helmet before returning to the group. Grabbing and aiming a pulse rifle at the helmet while Reed was filming the test, he fired one bullet. The projectile, made to penetrate at high velocity body armor plates, didn't hit the helmet, bouncing instead in a shower of sparks against some invisible obstacle about one meter in front of the helmet. Morrison, like Tina and the others, stared for a moment at the intact helmet before switching to the

control box of the compact pistol. The beam from the pistol, aimed at a point just higher than the helmet, sizzled past the helmet and hit the rock behind it, digging a fuming hole in it. Morrison looked at the others and spoke with dread in his voice.

“This is a small copy of a Drazt protective shield generator. I tested it while on the ship against a laser pointer and found out that laser beams can go through it. However, our pulse rifles cannot penetrate it, while Drazt disintegrator weapons can go through it without a hitch, which means that someone wearing such a shield generator would be invulnerable to our small arms, while able to fire away with a disintegrator weapon. You do realize what this means, guys?”

“Yes!” said Michel after swallowing hard. “If the Drazts came to the Solar System and attacked us now, they would quickly wipe out our soldiers on the battlefield and crush us in mere days.”

Not having bargained for what they had just seen, the group quietly packed up their equipment to load it back into the waiting shuttle. However, Tina asked her group to wait a bit outside the shuttle, so that she could speak with them. Once assembled in a circle near the foot of the ramp, Tina looked glumly around at the others.

“People, we can’t ignore the conclusions made evident by the tests we just ran and we certainly can’t simply throw away these prototypes in horror just because they are so powerful. The sad facts are that the Drazts’ weapons and protective shield generators would assure them of a crushing and speedy victory over us if we ever meet them again and they decided to attack first. We won’t always have a chance to remotely hack their computers, which was probably the only reason why we were not destroyed in that encounter with the MURKAN. However terrifying those disintegrators are, I believe that we have no choice but to adopt them, if only to make sure that we will stand a chance in any possible fight with the Drazts. I also believe that the Drazt protective shield generator **MUST** be adopted by us, and this as quickly as possible. Bill, your prototype fit easily to the front of a standard helmet. Could it also be fitted to a body armor vest?”

“I can’t see why not, Tina. In fact, it should be an easy job to do.”

“Good! Jim, how fast could we produce more disintegrators and generators?”

“Uh, it will depend on the numbers you will need but, since the design blueprints are already in Spirit’s computer files, which control the robotic machine tools in our workshops, only time would limit the amount of weapons and generators we could build,

that and any possible shortage of specialty metals or materials that mass production could cause aboard our ship. I figure that we could easily produce a couple dozens of pistols and rifles per day, plus about fifteen sets of body armor shield generators a day.”

“Then, let’s do it! I want enough disintegrator small arms and body armor sets with shield generators to equip 200 persons. Also, I want work to be started on the design and quick production of heavy disintegrator guns in two models: a model able to fit on our space fighters, along with a nose shield generator for the fighters, and a larger one that would replace the 25-meter rail guns of our secondary batteries. To make that last task easier, we will keep the original mounts, turrets and fire control systems of our rail guns and simply replace the electro-magnetic rail barrels with heavy disintegrators. The latter ones will not need to be as long or heavy as our actual rail guns, as long as they fit on the present mounts. That should save a lot of time. Eventually, we will also have to fit protective shield generators to the KOSTROMA.”

“What about our main rail guns, Tina?” asked Michel, making her think for a second before she shook her head.

“Such ultra-heavy disintegrator guns would indeed be mighty weapons in our arsenal, but I simply can’t see how we could build such massive weapons inside the workshops of the KOSTROMA. They would probably need to be built in dedicated state arsenal plants, like the one on Hygiea.”

“But we could still design them in advance with Spirit’s help. At least, that would save a lot of time when the decision to produce them will be taken by us.”

“I agree with that. I will speak with Spirit about that once on the ship.”

Eve, who was quietly listening to all this, could have smiled to herself at that time but didn’t, keeping an impassive expression. All the points that they had just discussed about were already old news for her and Spirit. Designs were already made, building instructions were ready to be given to the robotic machine tools of the KOSTROMA’s workshops and production schedules were prepared and ready to be implemented. In fact, more copies of disintegrator weapons and protective shield generators already existed and were functional: they were inside Eve’s android body, along with Drazt directed gravity propulsion generators.



The scourges of drought, famine and war.

CHAPTER 17 – SOUTHERN REACTIONS

13:40 (Central Africa Time)

Wednesday, October 27, 2320

Presidential palace of the Southern Federation

Kinshasa, Congo, African Union

Mamadou Kajeje did not need to show his security pass to the two armed soldiers of the Presidential Guard posted at the door of the offices of President Makambo. As the head of the intelligence services of the Southern Federation, Mamadou met with President Augustus Makambo nearly every day and was well known to the soldiers of the Presidential Guard. One of the guards saluted him and opened the door for him, letting him walk inside the anteroom, where the young and beautiful Daliane, Makambo's secretary, sat behind her desk and was typing on her computer. Mamadou smiled to her, getting a genuine smile back from the secretary. While Daliane knew perfectly well what kind of work he did and what that entailed, she still appreciated him for his high intelligence, culture and physique, which was still very impressive for a

man in his fifties. It also helped that Mamadou had the reputation of being a considerate lover who, contrary to many local men, didn't treat women like inferiors. In truth, Daliane secretly wished that Mamadou would be President of the Southern Federation, instead of Makambo. For one, he would certainly make a more competent and productive president than Makambo, an aging man with few qualities or skills other than his ruthlessness. Since losing the war against the Spacers League and the Northern Alliance in 2315, followed by the death in 2317 of Vice-President Jonas Mobutu, who had also been the President of the African Union and had been killed by a Spacers orbital strike on his resort island, things had been steadily going downhill for the Southern Federation, with the African Union faring the worst among the states of the Federation.

"Good afternoon, Daliane! I am here to see the President about an urgent matter."

Those last words made the secretary look up with some worry at Mamadou: in these troubled and difficult times, 'urgent matter' often equated with 'problems'. She however didn't ask him about the 'urgent matter' and used her intercom box to speak with Makambo. After a few seconds, she smiled back to Mamadou.

"You may go in, sir."

"Thank you, Daliane!"

The soldier guarding the inner door of the anteroom opened it for Mamadou, letting him enter a huge, nearly empty office. At one end sat a large work desk made of polished rare wood, behind which Makambo sat. His desk was actually quite far from the nearest windows and was masked from direct view by a mobile partition doubled with bullet-resistant plates meant to hide and protect Makambo from any sniper aiming from the outside of the building. The President had a nearly obsessive fear of someone assassinating him, which made him a rather paranoid man and also made him a lot more difficult to work for. He even had personal food tasters to thwart attempts at poisoning him. However, Mamadou was well placed to know that Makambo had real reasons to fear assassins: Makambo himself had ordered the assassination of many past political opponents and half of Africa secretly hated his guts but didn't dare say so openly.

Makambo, a bald and overweight man of medium stature who was in his late sixties, watched Mamadou approach his desk and stop some two paces in front of it before speaking up, painting a fake smile on his lips.

“So, my dear Mamadou, what is this urgent matter that you have for me?”

“A rather stunning report from my agents infiltrated inside Spacers League territory, Mister President. If I can believe them, the Spacers are now able to travel quickly to other star systems, and this thanks to a recent invention by a Koorivar scientist. Furthermore, the Spacers League has started to canvass volunteers willing to go settle on other planets outside of the Solar System.”

While the first part was already shocking enough for Makambo, the second part actually enraged him: new and fresh lands was precisely what Africa lacked the most of.

“WHAT? THEY MAKE SUCH AN IMPORTANT BREAKTHROUGH AND KEEP IT SECRET FROM US? HOW SURE ARE YOU ABOUT THAT INFORMATION, MAMADOU?”

Mamadou, by now well accustomed to Makambo’s flashes of anger and fickleness, didn’t let his screaming phase him and answered in a calm voice while taking two still photos out of his briefcase and putting them on Makambo’s desk, where the dictator grabbed them to examine them.

“One of my agents, at great risk to herself, was able to obtain those two pictures, taken inside one of the underground shuttle hangars of the astroports of Callisto Prime by a maintenance technician. That technician had taken them five months ago, despite firm orders to keep secret what he would see then and there. In those photos, you can see two alien creatures who resemble mythical centaurs coming out of a shuttle. Our agent eventually gained more information about those aliens and how they came to the Solar System. Apparently, the star systems around us are full of life, with quite a few harboring intelligent life, including those Centaurs, who came from the Gliese 581 System, situated some 20.5 light years away. Many planets that are habitable, meaning that they have breathable atmospheres, liquid water and moderate temperatures, were found during the last few months. Consequently, the Spacers League Council, along with the Northern Alliance, has decided to launch a program of selective colonization of the most promising worlds and are presently in the planning stage of such a colonization program.”

Mamadou was careful not to mention the key role played in all this by the A.M.S. KOSTROMA and Captain Tina Forster, as naming them would have assuredly launched

Makambo into a fit of rage. The KOSTROMA and Captain Forster, through their role in the defeat of the Zembelo Regime, from the ruins of which the Southern Federation had emerged in 2316, were now well established as notorious 'bogeymen' around the Federation. However, even the limited information Mamadou had given him was enough to plunge Makambo into a foul mood.

"Those damn Northerners! They invaded our continent centuries ago, enslaved our people, depleted our mines, polluted our soil and water and made themselves rich and prosperous on our backs. Now, they are about to occupy more lands but are hiding that from us, so that they don't have to share them with our people? We can't accept that!"

In that, Mamadou had to mentally agree to a point with Makambo. It was a historical fact that Europeans, then North Americans, had pilfered Africa's resources and people for centuries, including by taking hundreds of thousands of black slaves away to the Americas. However, starting in the late 20th Century, African politicians had started to be in charge of most of the continent, while the European armies had mostly left. Unfortunately, what had been a story of exploitation by outsiders had too quickly turned into a story of exploitation from within, with corrupt leaders and dictators siphoning fortunes from their state's coffers and into their personal confidential bank accounts in Switzerland, the Caribbean and other so-called 'fiscal paradises'. Too often, incompetence had been added to corruption and graft, cutting further into the resources and services meant to help the general population and the continent at large. The scourges of repeated droughts, famines, ethnic and tribal conflicts, religious extremism and wars had been devastating Africa for more than three centuries now, with the Africans themselves being the ones mostly to blame for that. Mamadou however knew and realized too well that the mass of the African population was not at fault in this and simply endured all this, with little ability to change things. It was the so-called 'elite' that too often engaged in the corruption, graft, nepotism and dirty politics, often with the help of local armies led by corrupt officers, when those same officers didn't simply decide to take power themselves via military coups. As a result, only a handful of countries around Africa, if you excepted the region of North Africa, could be said to be reasonably prosperous and happy. The states of the African Union were definitely not part of that lucky lot.

On his part, Makambo was now reviewing mentally his options about how to react to this revelation about a Spacers League space colonization program. Those options were however extremely limited. The Southern Federation had no spaceships of its own and had to rent or charter the services of spaceships belonging to neutral countries of Earth in order to import or export merchandises or carry passengers. Even then, the Spacers League kept a tight watch of those neutral ships, to ensure that the Southern Federation did not acquire spaceships by using false flags of convenience. For all intents and purposes, the Southern Federation had been quarantined to the surface of the Earth and denied the right to operate in space by the Spacers League. The hijacking of two Northern Alliance spaceships in 2317 by agents of the African Union, in a failed attempt to conduct suicide ramming attacks against occupied asteroids belonging to the Spacers League, had only tightened that noose, on top of causing the death of Vice-President Mobutu in a retaliatory strike by the Spacers. Threats of the use of force by him against the Northern Alliance would also be futile and also dangerous: the crushing of the Zembelo Regime had resulted in the loss of millions of soldiers and of most of the attack craft Africa had possessed. About the only things that the present military forces of the Southern Federation were able to do was to intimidate its own populations into submission and effect some pressures on the weakest of its immediate neighbors. As for rebuilding his military forces, Makambo himself was ready to concede that the present state of the Federation's economy would not allow that. He finally did what he often did when faced with a difficult decision: he asked others for their opinions and ideas.

"Mamadou, we need to gain access to at least one of those new worlds, but we don't have a single spaceship. What would you do now?"

"I would speak to the Spacers League, Mister President." Answered the intelligence chief, shocking Makambo. Before the latter could explode, Mamadou continued.

"Mister President, we don't even know how the Spacers' ships are able to travel to the stars, on top of having zero spaceships of our own. Going ourselves to find a new world is thus impossible. Our only realistic option would be to convince the Spacers to let our people travel on their ships."

"And you think that they would agree to give one planet to us?" Mamadou swore mentally at the obtuseness of his president while keeping a straight face.

“They won’t give us a planet because they will never allow us to control one, Mister President. However, we could appeal to their claimed regard for human rights and ask them to allow our excess population to emigrate to other planets. That could relieve much of the present pressure on our infrastructures and our economy and give us a chance to rebuild the Federation.”

“ARE YOU MAD OR STUPID, KAJEJE?” shouted Makambo at once, surprising his intelligence chief. “What good would be such an emigration if I can’t profit from it? I want a planet for me! Forget about this idea of talking with the Spacers: I will think of something else. You are dismissed!”

Angered by the stupidity and selfishness of Makambo’s reaction, Mamadou had no choice but to turn around and leave the presidential office. One look at his expression convinced Daliane to not ask him what was wrong as he stormed out. Getting back in his private air car, Mamadou took off and started flying back towards the office building housing the Department of Intelligence Headquarters. However, after only a few seconds of flying, he changed course and headed towards his residence, a luxury apartment on a top floor of a residential tower reserved for members of the elite. That tower, along other similar buildings, was situated inside a gated district where the general population was not allowed in for security reasons. After a few minutes of flying, Mamadou landed his air car on the roof landing pad of his residential tower, then rolled it to its reserved parking spot and parked it. Locking up his vehicle and taking his briefcase with him, he went to the roof access hut and took an elevator cabin, going down by two levels before stepping on the floor of his apartment. Once inside his home, with the door firmly locked behind him, Mamadou went to serve himself a glass of scotch and sat down in his favorite chair. Being a single man, he was now alone to try chasing the bitterness filling him. He believed himself to have been for years a loyal, competent and effective member of the government of the Federation, something not many of the government members could claim. However, today had been too much for him. Something would have to change...and soon.

14:07 (Central Africa Time)

Thursday, October 28, 2320

Department of Intelligence Headquarters

Kinshasa, Congo

Having just finished directing a meeting in a secure briefing room of the Department of Intelligence, Mamadou Kajeje walked out of the room and started on his way back to his office. He however decided to take a washroom break and entered the nearest men's washroom. Taking place in front of a urinal, he unzipped his fly and started relieving himself, his classified briefcase resting on top of the urinal. Another man then entered the washroom and took place at the urinal next to Mamadou's urinal. With only a few centimeters between both men's shoulders, the newcomer then started speaking in a very low voice while looking straight to his front.

"You have been placed under surveillance on orders from President Makambo. However, do not change your routine and continue working for the good of Africa. You are not alone in being fed up with Makambo and his clique. Things will happen, soon. Please don't try to follow me after this."

The man, whom Mamadou had never seen before but who wore a security pass clipped to his jacket, then left the washroom. Mamadou didn't move for a few seconds more, as his boiling mind churned over the words of the man. Few people would know about an order by President Makambo to place him under surveillance and all of those people would need to either be high placed government officials or to be working for such people. This thus smelled like a conspiracy and coup in the making against Makambo. Normally, Mamadou would consider it his prime duty to then warn his president of such a conspiracy. Was he going to do that now? Absolutely not!

02:52 (Central Africa Time)

Friday, November 05, 2320

Residence of the Director of Intelligence

Kinshasa, Congo

Mamadou Kajeje was soundly asleep when the first of many successive powerful explosions shook Kinshasa, brutally awaking him. Taking a few seconds to fully wake up while sitting in bed, he then got out of bed and ran to the nearest window. What he saw were a number of fires dispersed around downtown Kinshasa. His trained eyes then caught for a second the trail left by an air-to-ground missile crossing the night sky just before a huge blast shook again the city. That blast was followed by a fireball rising from a location he knew well.

“The Ministry of Security building: someone just bombarded it from the air.” His first thought, in view of the other explosions and fires, was that the Spacers or the Northern Alliance were bombarding Kinshasa, in which case he would do his best to defend the city against its attackers. He then discarded that first idea: an air attack by outsiders as powerful as the Spacers or the Northern Alliance would have been an overwhelming one, not like the present one, which seemed to be a limited attack against a few pinpoint targets. A group of five nearly simultaneous explosions, all from the same location, made Mamadou snap his head towards what had to be the barracks of the Presidential Guard. That was when he fully understood that he was looking at the start of a coup against President Makambo. Looking in the general direction of where the private mansion of President Makambo, in reality a luxurious palace, was situated, Mamadou saw a distant but fierce fire illuminate that district of the city. Smiling with satisfaction, he then hurried to dress up in a good business suit but made sure to hide a pistol in a shoulder holster rig worn under his jacket. On second thought, he pocketed as well a silencer for his pistol, plus three full spare magazines. His first telephone call was to the duty watch center of his department, where calls and communications links from his agents dispersed around Earth and in space arrived day and night and from where directives were sent back to them, all by encrypted means of course.

“Hello? This is Director Kajeje. What the hell is happening?”

“Sir, things are still quite confused but it appears that a coup against President Makambo is in progress. Where are you right now, sir?”

“At my residence. I am going to fly to the headquarters in my air car, to direct operations there.”

“Please don’t use your air car, sir: the air defense units of the city are liable to shoot at anything flying around right now.”

Mamadou had to concede that point to the duty officer and tried something else.

“Can you send me an armored car, then?”

“Yes sir! I will order one out right away but, please, stay inside your building for the moment. There are shots being fired all around the city and the streets are unsafe.”

“Very well. I will wait inside the lobby of my residential tower.”

Mamadou then closed the link and walked out of his apartment, carefully locking the door before proceeding towards the nearest elevator banks. Going down to the level of the entrance lobby, he found there a lone and very nervous private security guard armed

with a shotgun and a pistol. The man gave Mamadou a deferential nod of the head when he came out of the elevator cabin.

“Mister Kajeje, I must advise you not to go out at this time. There has been some shooting around the neighborhood, along with those explosions.”

“I know, my good man, but duty calls. Don’t worry about me: an armored car is on the way to pick me up.”

The man nodded again. Contrary to many high level officials of the Makambo government, Mamadou was actually respected and liked by the average people he met, thanks to the politeness and caring he displayed towards them. Mamadou may have been ruthless towards the enemies of Africa, but he didn’t do it to get rich and had the reputation of being incorruptible, a trait that was unfortunately too rare in the Southern Federation.

The promised armored car, actually a full-fledge armored personnel carrier, arrived at the entrance of the tower some sixteen minutes later. The driver of the APC then backed it up the walkway and stopped a mere two meters from the transparent sliding doors of the building. The rear armored doors were then opened from the inside by soldiers, who then stepped out and pointed their weapons outwards, protecting Mamadou while he quickly got inside the back of the APC. With the soldiers returning inside the APC and closing the rear doors, the heavy vehicle started rolling as Mamadou looked at the young lieutenant in command of the APC.

“Do we have any new information about what is happening, Lieutenant?”

From the short hesitation of the young officer before he answered, Mamadou guessed that he would be in for some disturbing news. In that he was quickly proven right.

“Yes sir! Just before we arrived at your building, we got news by radio that this is a coup against President Makambo, a coup led by our own air force. Federation Air Force fighter-bombers attacked and destroyed with heavy missiles the Presidential mansion, the headquarters of the Ministry of Security, the barracks of the Presidential Guard and of the Internal Security Force, plus the residences of General Mafuto, Minister of Security Barangita, Minister of Interior Kwayo and Finance Minister Taylor. Assassination squads have also been signaled around the city, killing various government officials inside their residences.”

“So, a well organized coup, judging from what you just told me. What about President Makambo?”

"He is dead, sir, killed in the first airstrike. There is next to nothing left of his mansion, while his guards there are positive that he was inside and did not come out."

"I see!" simply said Mamadou, hiding his relief: with Makambo dead, this coup now had some good chances of succeeding. There was however one factor of importance to consider.

"And the Army? What is it doing right now?"

"It is now on full alert inside its barracks, but has been ordered by General Mafuto's deputy, General Kisangani, to stay inside its bases and keep a defensive posture, sir."

Mamadou nodded once at that, not too surprised: Kisangani, an officer known for his competence and honesty, was probably secretly part of the coup, while General Odierno, the head of the Air Force, was directing the coup. The big question now was for whom was this coup perpetrated? Did Odierno plan to name himself President of the Southern Federation, or was there another high figure, still unknown, directing this coup?

Mamadou was still wondering about that when the APC arrived at the headquarters of the Department of Intelligence and rolled inside the underground garage of the building. With four armed soldiers of his department escorting him closely, he went up to the floor where his office suite was but, once on that floor, headed instead towards the duty operations center, where he found a hectic activity, with officers and specialists running around, shouting pieces of information at each other and updating the big central situation display table. Going to the display table, Mamadou examined the electronic picture there, a map of the city area with numerous symbols in red distributed around. The duty officer, a major, joined him there and saluted him.

"I am happy that you made it safely, sir. Many high level government officials can't say the same, however. Here is the latest list of officials confirmed as dead, along with the installations which were destroyed by airstrikes."

Taking the paper sheet from the major, Mamadou read it quickly, his face somber.

"While riding in our APC, I was told that the airstrikes were done by our own air force. Is that correct?"

"Yes sir! General Odierno started playing a public video message some fifteen minutes ago, in which he claims to be leading a coup with the goal of ending the tyranny of President Makambo and his corrupt clique. Judging by the list of officials killed already, I would say that the government has been pretty well decapitated, while the two

forces which were truly loyal to President Makambo, the Presidential Guard and the Internal Security Forces battalion based in Kinshasa, have been gutted by a series of heavy airstrikes.”

“What about the rest of the country and around Africa?”

“Airstrikes were also reported outside of the Kinshasa area, while a few regional governors are known to have been killed, but the situation is still very confused, sir. Do you have orders for our agents and personnel, sir?”

“Yes! They are to stay inside their present locations, defend themselves if attacked and observe and report what is happening around them, but not intervene. I want to get a clearer picture of all this before we will do anything. Pass the word around! I will be in my office.”

“Understood, sir!”

Going to his office, Mamadou sat behind his desk, then switched on the five video screens hooked from the ceiling and forming a semi-circles in front of his desk. Next, he tuned each of them to a different news channel, the center one on the African News Channel, or ANC, the most listened to news channel on the continent, with the four others being tuned to international news channels, including the venerable Eurovision and ABC News. Leaving the international channels on mute for the time being, Mamadou then watched the address prepared by General Odierno, which played in an endless loop at the moment. That address actually didn't tell him much that was new for him and he then lowered the volume on that channel, while putting the other channels as well on low volume. While he was confident that his agents and posts would report quickly on the situation inside Africa, Mamadou was most interested to see how the coup would be reported on and its leaders portrayed around the World. One channel he paid special attention to was the Space News Network, which was broadcasted around the Solar System. Not surprisingly, due to the long transmission delays caused by the huge distances between the various planets and moons, SNN soon proved to be the slowest to catch up on the situation in Kinshasa.

Mamadou had been watching the news for maybe twenty minutes when there was some kind of disturbance in the hallway outside of his office. Quickly drawing his pistol and making sure that its safety was off, Mamadou then inserted it between his legs, where he could quickly grab it if needed. He had just done so when Frederic Sage,

the Deputy Minister of Security, barged his way in Mamadou's office, ignoring the protests of a young lieutenant. Mamadou didn't get up to greet Sage, who was a creature of Makambo and who was notoriously corrupt, on top of having a sadistic and psychopathic side to him. Sage didn't ingratiate himself to Mamadou by coming at him while nearly shouting.

"What the hell are you waiting for to help the government against this coup, Kajeje? Your men are still sitting around and doing nothing, while my security units are being bombed from the air."

In turn, Mamadou stared at him with a cold expression.

"My men are neither trained nor equipped for heavy fighting, Sage. They are trained for covert, small scale operations, spying and information collecting, or did you forget the meaning of 'intelligence work'? By the way, next time that you come to visit me, at least show the courtesy of announcing yourself properly first before entering my office."

That only seemed to infuriate more Sage, who banged his fist on Mamadou's desk.

"Who the hell do you think that you are, Kajeje? You don't even rank as a junior minister in the government."

"What I am is a true patriot doing his duty for the good of all Africans and not pocketing millions via corruption and graft, like you and Barangita have been doing for years."

"YOU FUCKING TRAITOR!" shouted Sage while reaching for a pistol hooked to his belt. "YOU ARE PART OF THIS COUP, AREN'T YOU?"

Mamadou easily beat him to the draw and shot once, drilling a bullet through Sage's head. The deputy minister fell backward like a log, his right hand still holding the handgrip of his pistol. Mamadou was calmly getting up from his chair when the young lieutenant in the hallway burst in with one soldier, their weapons at the ready. They then froze on seeing Sage's body, lying on the carpet and with a pistol in one hand.

"Are you okay, sir?" asked the junior officer to Mamadou, who nodded his head.

"Yes, I am, Lieutenant. He accused me of being part of the coup and was about to shoot me. Would you please get rid of this piece of shit for me, Lieutenant?"

"Uh, sure, sir!" replied the young officer before using the help of his soldier to drag the body out of the office. A night janitor and two more soldiers soon showed up to roll up and carry out the blood-covered carpet and mop up the floor. Mamadou watched

them leave, then put his pistol on his work desk and sat back to continue listening to the media channels.

The first rays of dawn had appeared when Mamadou' desk videophone buzzed, announcing an incoming call. Looking at the identity of the caller, Mamadou smiled to himself, then opened the link and spoke up in a friendly tone.

"General Odierno, what can I do for you on this nice new day?"

08:25 (Seattle Time)

Sunday, November 07, 2320

Office of the President of the Northern Alliance

Seattle, American West Coast

Claudia d'Arcy sipped with delight on her cup of strong coffee once sitting in her presidential chair behind her work desk. She had always liked her coffee strong and loathed the brown water that passed as coffee in most American restaurants, but coffee was more essential than ever for her these few last days, with the chaotic situation in Africa creating the possibility of renewed hostilities with the Southern Federation. The last couple of days had shown a confusing picture of violence, political upheaval and civil unrest, but one thing was clear: President Makambo was gone, either dead or on the run.

President d'Arcy switched on the video set sitting in one corner of her office and tuned it to the local all news channel, leaving the sound low, then grabbed and opened the Top Secret intelligence briefing file which had been dropped in her 'in' box mere minutes ago. She smirked with disappointment on seeing that the latest intelligence assessment was still mostly conjectures: apparently, the confused situation in Kinshasa and around Africa was still baffling the so-called 'experts'. She had just put the file in her 'out' box when her desk videophone set buzzed. Switching the link 'on', she saw the face of her executive secretary, who routinely filtered the calls to her office. Her secretary's face actually reflected shock and surprise, something that alarmed d'Arcy.

"Yes, Joann?"

"Madam President, you have a call from Kinshasa, in the Congo. The man calling says that he is the new President of the Southern Federation."

Those words finished waking up Claudia in a big hurry and she nearly jumped in her chair.

"Connect me in at once, Joann, but make sure to have Security Advisor Crawford listening to our conversation at once and record this call."

"Yes, Madam President!"

A few seconds later, the face of her secretary was replaced by the face of a smiling, handsome black man in his fifties.

"President d'Arcy, it is truly nice to be able to speak with you. Let me present myself first: Mamadou Kajeje, until yesterday Director of the Department of Intelligence of the Southern Federation and now Interim President of the Southern Federation."

D'Arcy couldn't help throw a look of disbelief at her interlocutor.

"You were the leader of the coup in Kinshasa?"

Somehow, that seemed to amuse the black man.

"Me? God no! I was sleeping at home when the first missiles exploded. No, it was General Odierno, the commander of our air force, who organized and led the coup. By the way, President Makambo is dead, along with most of his ass-lickers and sycophantic friends."

"Then, how come that you are now the Interim President of the Southern Federation?"

"Simple: I was one of the very few government officials who are not corrupt, or so General Odierno thought. Being squeaky clean kind of got me nominated for the position, that and the fact that I tend to do my job decently and competently."

"I see!" said Claudia, starting already to like that handsome black man. "So, President Kajeje, what can I do for you today?"

"I wish to talk freely with you and to discuss how we could end the hostilities between our two entities. We could start this by becoming more informal, for one thing. Could I call you by your first name, Madam President?"

"Of course, Mamadou!"

"Excellent! Well, Claudia, I believe that we have a lot to discuss after all those years of conflicts, hostilities and prejudices. The main reason that pushed General Odierno into doing a coup and getting rid of Makambo was not a thirst for personal power on his part. If that would have been the case, I would not have accepted to ally myself with him. Rather, it was his desire to see the needs of our people to finally take precedence over the enrichment of a few. Like me, General Odierno is a patriot who

defended the Southern Federation against those who exploited it for so long in the past, robbed most of its mineral riches over the centuries and even enslaved and deported many of our people. However, that was the past and he and me both realized that the oppressors and robbers at the present were our own political leaders. So, he decided to clean up the shit pit that the governments of the Southern Federation and of the African Union had become. When I saw that he meant what he said, I joined him and, in turn, he offered me the Presidency. That finished convincing me that he was not in this for his personal power and I thus accepted his offer. Now, I know that terrible things have been done in the recent past in the names of the Southern Federation or of the African Union, including terrorist acts and murders, but I urge you now to look at us with a set of new eyes.”

Claudia d’Arcy mulled those words for a moment while looking at the image of the African man on her viewing screen. Many would have disputed some of the points mentioned by Kajeje, particularly about the Southern Federation having to ‘defend itself’, rather than it being the true aggressor. However, Kajeje was right in saying that the past had to be buried in order to be able to build a new present.

“Mamadou, I must praise your present goodwill and that of General Odierno and I truly hope that we will be able to forget our differences and past bad blood. How do you propose to help build peace between our two entities?”

“With a promise and a plea, Claudia: a promise of friendship and non-aggression from us and a plea for the help of both your Northern Alliance and the Spacers League.”

“A plea for help?”

“Yes! As you must know, the economic and social situation of the people in Africa and in much of the Southern Federation is quite dire and has been for many years. Civil wars, interethnic strife, droughts, famines and the exhaustion of many of our natural resources have dispossessed and displaced millions of people, many of whom have been forced to live in refugee camps for years and even decades in some cases. Many of our most competent people left for better lives outside the Federation, something I certainly don’t blame them for. The mismanagement, incompetence and corruption of the Makambo Regime only added to that misery, with a few stealing millions and stashing away their money in foreign banks while doing nothing to help those who have lost everything. Unfortunately, even with a cleaned-up government, the Southern Federation still has to grapple with depleted resources, desertification, droughts and crop failures. Even repatriating all the billions stolen and stashed in

foreign banks by Makambo and his cronies will not be enough to correct all the problems my Federation is facing. The only way that I see to help relieve some of those long term problems would be to find new lands and natural resources for those refugees, in order to relieve at least part of the economic and social pressure weighing down on my Southern Federation. Unfortunately, such new lands are not to be found anymore on our poor Mother Earth: we have been plundering and polluting it for centuries and we are now stuck with the bill. However, I recently learned that the Spacers League has found a way to reach other stars and that it even found new worlds on which Humans can live. My plea is for you and the Spacers League to allow refugees and homeless people from the Southern Federation to emigrate to some of those new planets as much as it is possible.”

Claudia couldn't help frown on hearing the last sentences from Kajeje.

“And where have you heard that the Spacers could now travel to the stars, Mamadou?”

That in turn brought a pained look on Mamadou's face.

“Please, Claudia! I was until very recently Director of the Intelligence Department of the Southern Federation. Hell, I believe that I still am! How we learned about this is not important. What is important is that it could provide a new life for millions of my people.”

“Very well, Mamadou, let's put our cards down. Yes, the Spacers can now travel to the stars, and this in a near instantaneous fashion. By the way, they owe that to an invention by a Koorivar scientist. However, this capability is only seven months old and the exploration of the stars systems close to ours is still in its early stages. Also, the Koorivar, who invented the new interstellar drive, got the first pick from the planets discovered, so that they could resettle their people on a new world of their own.”

“But, there are, what, about 20,000 of them left? Also, you already gave them a very nice piece of estate on Vancouver Island. And they would grab a whole planet for themselves?”

“My dear Mamadou, it seems that your intelligence missed a few things lately. One impetus the Koorivars had to have a true starship was to go search for the two other ships full of Koorivar refugees which left Shouria at the same time as the VEON SHOURIA, which was found on Eris some three years ago by the KOSTROMA. Well, the KOSTROMA and Fleet Captain Forster again came to the rescue of the Koorivars and, after being modified for interstellar travel, went in search of the SHUNDAR and of

the SHANIZAR. It found and rescued both of those ships in what can only be described as an epic six month voyage among the stars. There is now a grand total of close to 65,000 Koorivars, who are now busy building a new home for themselves in the Wolf 1061 System, some 13.8 light years from Earth.”

“Well, that is fine and dandy for these 65,000 Koorivars but what about the millions of homeless, destitute refugees which have been stuck for years in refugee camps dispersed around Africa, the Middle East and South Asia? Don’t they deserve a new home as well? Before you say that my predecessor did nothing to help those millions of unfortunate people, I am ready to acknowledge that right now. However, that won’t help those refugees: a new home for them would.”

Claudia slowly nodded her head on hearing that, favorably impressed.

“You are indeed a breath of fresh air compared to President Makambo, my dear Mamadou: Makambo never cared for anyone else but himself. I certainly sympathize with the plight of all those homeless refugees and I believe that we could help them. However, there are a few important factors at play here that will mean that any relocation of refugees from the Southern Federation, or from anywhere else as a matter of fact, will take time and lots of preparatory work.”

“Like what factors, Claudia?” replied Mamadou, feeling some skepticism and expecting some kind of smoke screen answer from her.

“Like the fact that you can’t simply drop millions of refugees on another planet and expect them to thrive at once. Basic infrastructures and housing need to be built. Sources of food need to be found or created. Technical and administrative cadres need to be selected, organized and put in place before the arrival of the first refugees. There is also the question of the new planet’s biological compatibility with Humans and that of the possible presence of local sentient races which would already live on that planet.”

“Certainly, the probability of finding such extraterrestrial sentient races, or even of other kinds of life forms, must be low, no?”

Claudia smiled at that as she answered.

“Think again, Mamadou. Out of the four solar systems which the KOSTROMA visited or skirted, not counting Gliese 667, the old home system of the Koorivars, all of them harbored multiple forms of life and three of them were the home of at least one form of intelligent life. One system, Ross 128, has even been declared off limits to all Human starships, because it is the home of a highly advanced but also quite aggressive alien race with rather xenophobic views. Thankfully, that race doesn’t possess an

interstellar drive, so can't reach us...yet. Another planet in the Gliese 581 System has also been declared off limits and was put under space quarantine, due to the fact that its local sentient race is even nastier than the one in the Ross 128 System.”

“I...I must say that those numbers stun me, Claudia. I thought that extraterrestrial life would have been rarer.”

“Well, people in the Vatican and in a few other places where people still worship so-called ‘sacred’ old texts are going to swallow a big bone when they will learn about all that extraterrestrial life, my dear Mamadou. Judging by the voyage of the KOSTROMA, our corner of the galaxy seems to be full of life of all kinds. This means that we can't simply step on the surface of a planet and plant our flag on it, the way the European explorers did centuries ago in the Americas. Thankfully in this case, the local sentient races occupying two of the habitable worlds explored by the KOSTROMA have graciously given their permission for Human and Koorivar settlers to come live on their worlds...subject to firm conditions and limitations. Another habitable planet found by the KOSTROMA has a gravity thirty percent superior to that of Earth, so would hardly be considered ideal for Humans, unless you would feel okay with living on a planet where you would weigh another extra 25 kilos or so. Since the Koorivars' original home planet had a felt gravity of 1.3 G, that big new world in the Wolf 1061 System has been chosen by the Koorivars to be their new home world.”

“So, is there any new world able to greet refugees which the Spacers would allow us to use, Claudia, or are you saying that everything has been reserved for the sole use of the Spacers and of the Koorivars? If that last case is true, then I am afraid that it could well raise a storm here.”

“Mamadou, while all the new worlds discovered outside the Solar System and found available for Human occupation will be managed by the Spacers League, the whole of Humanity will be able to profit from them. Why managed by the Spacers League? Because they are the ones with the experience, technology and skills needed to live in space and on extraterrestrial bodies. Believe me: settling a new planet is no job for amateurs, unless you want to eventually end up with a mess on an epic scale. To answer your question, there is right now one world where a few million of your refugees could be resettled gradually over the next few months. It is one of the moons of the second planet of the Wolf 1061 System. That second planet is now the designated new home of the Koorivars and has been renamed ‘New Shouria’. The first of three moons orbiting New Shouria is nearly the size of Earth, has a breathable atmosphere, liquid

water and a gravity of 0.78 G and has been renamed 'New Haven'. Work started over a month ago to prepare the moon for human occupation, build basic infrastructures and plant trees imported from Earth. Soon, New Haven will be able to greet the first refugees from the Southern Federation and from other places on Earth."

"And I suppose that the Spacers League will not allow my own people to administer and govern our refugees, is that it, Claudia?"

Claudia d'Arcy took a deep breath then: this could be where things could sour up.

"Correct, Mamadou! Before you start screaming with indignation, consider how the forces of the Zembelo Regime, from which the Southern Federation was formed, conducted themselves around Europe and North America during the war. Just a few days ago, you and General Odierno felt that the endemic corruption, graft and dictatorial ways of the Makambo Regime justified a military coup. So, are you really surprised that the Spacers are not ready to trust Southern Federation administrators with managing a new home world that needs to be built from scratch?"

"So, I suppose that the Spacers League will administer those refugees from the Southern Federation?"

"Not exactly." replied Claudia, surprising Mamadou. "While New Haven will be considered a Spacers League world, like all the extraterrestrial planets except New Shouria, and will have a voice at the Spacers League Council, it is legally a corporate world, in essence the private property of a corporation."

"Great!" said Mamadou in a sarcastic tone. "Let's send my people on that New Haven, so that they could become the slave workforce for that corporation. Do you realize how bad this will look like to my people? And which corporation are we talking about anyway? The Pallas Mining Corporation? The Sverdlorsk Group?"

"The New Haven Planetary Corporation. It was legally formed six weeks ago, with its owner and chairperson being Fleet Captain Tina Forster."

Seeing Mamadou do a double take on hearing that, Claudia hurried to add to her words.

"Please, hear me out, Mamadou! Captain Forster is not the blood-thirsty monster that the propaganda of the Southern Federation has made her to be. Yes, she proved to be a top tactician and strategist during the War of 2315, but she is first and foremost a true humanist and a most decent and compassionate person. I was present when she announced to the Spacers League Council the formation of her new corporation meant to manage New Haven. Right then, she stated from the start that her intention was to give top priority to the various refugees on Earth to become settlers on

New Haven, along with a technical and scientific cadre of experienced Spacers to help administer and maintain New Haven. In fact, I believe that teams of recruiters hired by her have already started visiting various refugee camps around the Earth.”

“And what tells me that your precious Tina Forster will treat humanely and justly the refugees she will sign up to live on this New Haven? And who gave her that moon anyway? The Spacers League?”

“No! The Koorivars did, as a thank you for her KOSTROMA finding and rescuing the Koorivars traveling on the SHUNDAR and the SHANIZAR. Initially, the Spacers League decided to give the Wolf 1061 System to the Koorivars, so that they could establish a new home for their race in that system. Then, the Koorivars turned around and gave the first moon of New Shouria to Forster. That move was then acknowledged and made legal by the Spacers League Council. As for assurances of your refugees being treated decently and justly on New Haven, know that the articles of the Spacers League’s Human Rights Code will apply on New Haven. As Director of Intelligence of the Southern Federation, I am sure that you know enough about the Spacers not to believe the crude propaganda demonizing them around the Southern Federation.”

Mamadou sat back in his chair, apparently relaxing a bit at last.

“I do, Claudia. Will your Captain Forster allow some of my officials to visit New Haven in the future, so that they could ensure that my people is treated well?”

“Of course!” said Claudia, breaking into a grin. “They could even come spend some vacation time on New Haven, once the infrastructure there will be built up. Forster intends to turn New Haven into a mostly agrarian and pastoral world, with a bare minimum of heavy industries in order to avoid pollution. A secondary vocation of New Haven will be as a tourist spot for vacationing Spacers hungry for open spaces.”

“Really? Maybe I should visit it one day. Does this mean that my people will finally be able to travel in space without being treated like potential terrorists?”

“That will depend mostly on how they will behave, Mamadou. Right now, the Spacers have decided to reopen their astroports to citizens of the Southern Federation traveling as tourist and for business. However, the ban on Southern Federation citizens or governments to own and operate spaceships still stand and is not likely to be rescinded any time soon. As for my own Northern Alliance, our astroports have also been reopened to Southern Federation citizens. I sincerely hope that I will not come to regret that decision in the future, Mamadou.”

"You won't, Claudia. We need peace and good relations between our two entities, if we are to improve the lot of our citizens and avoid any new unpleasantness in the future. On this, I formally request that we arrange a meeting between our two governments, so that we could discuss all of this in depth. How about that we organize such a meeting for Monday, November 22, in fifteen days?"

"That sounds fine with me, Mamadou. Would you mind if representatives from the Spacers League attend that meeting?"

"The more, the better! How about Shanghai as a venue? We both consider China to be a neutral state, right?"

"Correct! I will contact the Chinese government to arrange this meeting. In view of the dire economic situation of your Southern Federation, my Northern Alliance would be ready to cover all the costs of that meeting, including the lodging of your delegates. That is if this does not constitute an insult in your mind."

"I am very pragmatic about budgetary questions, Claudia: we will gladly accept your financial assistance for this meeting. Talking of financial assistance, do you think that you could pressure your precious Swiss, Austrian and Caribbean banks into sending back the stolen money contained in the secret bank accounts of Makambo and his clique? Those billions sure could help to rebuild the economy of my Federation."

"I will see what I can do about that. I will see you on Shanghai in fifteen days, Mamadou. Have a good day!"

"You too, Claudia!"

The link was then cut and Claudia sat back in her chair to ponder all that had just been discussed. That they were now discussing instead of shooting at each other was certainly a good thing...for everyone.



Dome house.

CHAPTER 18 – A NEW LIFE

09:10 (East Africa Time)

Tuesday, November 09, 2320

Todonyang Refugee Camp

Northwestern Kenya, near the borders with Sudan and Ethiopia

Africa

Nelson Onyango, who was about to enter the small prefabricated shelter he would use for his work, looked again around him at the sprawling refugee camp, with its hundreds of tents packed like sardines within the protective perimeter fence of the camp. The fence was there to protect the refugees from the depredations of passing thieves and looters, not to hold prisoner the 49,000 refugees living inside it, if you could call that 'living'. Only nine kilometers away to the Northeast was the border with Ethiopia, from where most of the refugees living in the camp came. There were also a few thousand refugees from the South Sudan, which bordered Kenya to the Northwest. A few kilometers to the East of the camp, across some semi-arid terrain, were the waters of Lake Turkana. Nelson, a professional aid worker and human resources specialist, knew well the region, being a native of Northern Kenya, and he spoke fluently five of the languages and dialects used in this region of Africa. Today, with luck, he was going to be able to help a few of those unfortunate refugees escape this miserable camp.

Entering the air-conditioned shelter, Nelson smiled and bowed his head to the young Kenyan woman who would assist him in his interviews by finding and guiding to this shelter the refugees on his list of candidates for resettlement.

“Good morning, Miss Obando!”

“Good morning, Mister Onyango. I have the list of refugees who claim to satisfy the basic requirements of your employer. It is however quite long. How do you wish to proceed?”

“Let’s concentrate first on family groups of between three and seven persons with experience in farm work, cattle raising or work in hydroponic gardens. Another category that has a high priority in my mind is that of single mothers with one or two small children or infants. On the other hand, my employer is not keen on getting single, unaccompanied men and teenagers, unless they have advanced education and some special skills.”

“Do you know why your employer doesn’t want single men, Mister Onyango? And who is your employer, if I may ask? This whole thing seems to be of a quite sensitive nature, judging from the discretion about it.”

Nelson stared for a short moment at the young Aid For Africa worker before answering her.

“The reason why my visit has been kept discreet is that my employer, who is a member of the Spacers League Council, is afraid that agitators, ex-combatants or covert agents of the Southern Federation could try to get selected for resettlement, in which case they could cause troubles or inflame old hatreds among the refugees we will select for resettlement. Families with young children are much less likely to be such possible agitators or covert agents, and so do single mothers with children.”

“I see! And if the candidates ask me where they could end up being resettled, what do I tell them? This is another information that has been kept vague, sir.”

“I intend to show later on to the refugees who will be selected a video explaining where they will live. You will of course be welcome to watch it then. For the moment, tell them that they will go live off this Earth, on a Spacers settlement.”

“You are really killing me with the suspense, Mister Onyango.”

“Sorry about that, but the instructions from my employer were quite strict. And please, simply call me ‘Nelson’.”

“Only if you call me ‘Winnie’.”

"Deal! So, according to the priority criteria I gave you, who am I going to interview first, Winnie?"

The young woman looked for a moment at the screen of her laptop computer before answering him.

"I have the Gebre, an Ethiopian family consisting of a couple in their late twenties and early thirties with three preteen children."

"Sounds good! Who would be next after that?"

"Then, I have for you the Belay, another Ethiopian family. The parents are aged respectively 35 and 32 and they have a total of four children with ages between seven and thirteen."

"Perfect! You can go get them while I set up my kit here. Once I start my interviews, go fetch a new family on your list every time one family comes out."

"Understood, Nelson!"

As Winnie Obando walked out of the shelter, Nelson, a 44 year-old, tall and thin black man who wore a short, well-trimmed beard, put his briefcase on the desk he was going to use and started taking out his equipment in order to set it up. First out was his laptop, followed by a small camera on tripod and a fingerprint recognition pad, both of which he plugged to his laptop. A small charger and UPS unit was next, which he plugged to one of the shelter's power outlet. Powering up his laptop, Nelson opened a couple of specialized programs which he was going to use during his interviews, then opened a copy of the list of candidates Winnie had read from. He couldn't help shake his head slowly on reviewing the very long list: it represented in reality years of suffering and misery endured by thousands of people through no fault of their own. If it would have been solely his decision at play, he would have simply signed up all of those people on the spot. However, New Haven's infrastructures and services, while growing fast, were still limited and could only accommodate a finite number of refugees at this time. He and the other human resources specialists and aid workers hired by Tina Forster had been given a two-day tour of New Haven before returning to Earth yesterday, so he was very conscious of what the present limits were. What he could do, however, was to work fast and not waste time during his interviews, in order to meet as many candidates per day as he could.

A few soft knocks on the door made Nelson look up from his computer some six minutes later.

“Come in!”

Winnie pushed the door open and entered, then invited in two adults and three preteen children, all dressed in clean but well worn robes and sandals. Nelson then addressed the family in English, not because he couldn't or wouldn't speak their language, but to gauge their true level of proficiency in English. That criteria was in fact one of the most important ones listed by Tina Forster and Nelson completely understood why: when you were literally building a new world from scratch, you didn't want to waste precious time and resources by having to put everybody through an accelerated language program. In this case, a basic working knowledge of English would be sufficient. While that fact pained Nelson, many of the original languages and dialects originally spoken around Africa had disappeared or faded away during the last three centuries, as more common and widespread languages, like English, French and Arabic, became official languages taught in African schools in the place of traditional languages.

“Please, sit down, my good people.”

“Thank you, sir!” replied the father, a man in his early thirties. Nelson waited until the two adults and three children had sat on the row of chairs facing his desk, then looked at the man.

“I will now ask you to present yourselves individually, so that I could gauge the level of English proficiency of each of you. Are you comfortable with talking in English, or would you prefer to use Amharic instead?”

In a way, that question was a trick one: if the family's English proved too poor to be used during this interview, then it would be one strike against their case. To Nelson's relief, all five of them nodded their heads and accepted to use English, each speaking a few English words in the process. The father then presented himself first.

“My name is Solomon Gebre. I am 33 years old and I came from Awasa, in Ethiopia, where I was working in an hydroponic gardens facility, preparing the seeds and mixing the fertilizer solutions.”

On a look from her husband, the mother then spoke next.

“My name is Saba Teferi and I am 28 years old. I mostly stayed home to care for our children but I also raised a few chickens which helped supplement our diet with eggs and meat.”

Nelson nodded his head as he typed that information in his laptop computer: he knew that, in Ethiopia, people didn't use a 'family' name. Instead, everybody had a personal first name, followed by the first name of their father, a so-called patronymic. Sometimes, the first name of the person's grandfather would also be added as a middle name. Nelson next smiled to the oldest of the three children, a boy close to ten.

"And you, my boy?"

To Nelson's satisfaction, the boy's English proved the best of the lot to date, probably thanks to his schooling, which was now made entirely in English in Ethiopia.

"My name is Dawit Gebre. I am nine. I was studying at a primary school in Awasa, until the drought came and forced us out."

The next one was a young and shy girl who would have been truly pretty if not for her scarily thin body and emaciated face. In fact, the whole family looked seriously undernourished.

"I'm Beza. I am seven."

The last one was a toddler boy sitting in the lap of his mother.

"I'm Amare." said the boy before holding up three fingers. Nelson smiled at that and typed that information, then looked at the family in general.

"Can you tell me how long you have been in this camp and the detailed reasons about what forced you out of your old home?"

As he had expected, the father, as the patriarch of the family, answered him.

"We arrived here nearly two years ago with nothing but the clothes on our backs. The situation had already been bad for years in Awasa, due to the scarcity of water. Then, the last drought hit and the town's lake completely dried up. The government did nothing to help, while waves of refugees from the East, where the drought had been going on for years, washed over Awasa, looting and taking the little food and water left in town. We tried to resist and protect our homes, but there were too many of them, with many of the looters being armed as well. We had to flee our house just before it was ransacked, then walked for nearly three weeks before arriving here."

Nelson gave the man a sympathetic look: many more people could tell a similar story, as Ethiopia, a member state of the African Union and of the Southern Federation, contrary to Kenya, which was a neutral state, had been all but officially a failed state for decades. The Makambo Regime had done nothing to help the little people of Ethiopia through a series of devastating droughts and famines, stealing instead much of the international aid sent to the country and stashing away the money from their sales into foreign bank

accounts. Now, much of the country, which had always been quite arid, was turning into a permanent desert, condemning Ethiopia to a bleak future and sending millions of people into exile in more fortunate countries. Kenya, as a well administered country with a truly democratic government, had received more than its fair share of refugees and was struggling to cope with that burden. The discreet offer to help from Tina Forster had thus been received warmly in Nairobi, with the Kenyan government promising to support the resettlement campaign as much as it could.

"I see! Mister Solomon, you said that you worked in an hydroponic gardens facility. Did you learn your job as you went, or did you follow formal courses in hydroponics?"

"I held an official professional certificate in hydroponics from the Awasa Agrarian Institute, sir. Unfortunately, my certificate was lost when our house was looted."

"And for how long did you actually work in an hydroponic garden, Mister Solomon?"

"I worked at the Awasa Farms for fourteen years, sir, and had risen to the post of shift supervisor."

That last information finally decided Nelson and he selected a new program while smiling to the Ethiopian man.

"Well, Mister Solomon, you and your family appear to fill nicely the requirement set by the corporation which hired me to interview and select refugees from this camp. There is however one last, crucial point I want to clarify."

"Yes?" said Solomon, anxious, while his wife tensed up with nervousness.

"If your family is hired and resettled in another place, it will end up living among a very mixed human community, with people coming from either Spacers League worlds or from other countries on Earth. You may even meet people from the Somali Region, the same region from which the people who looted your house came. My question to you and all of your family is this: can you honestly tell me that you will be able to forget any past hatreds and prejudices that you may have held or are still holding? Please understand as well that, where you would resettle, the laws state that there is a complete equality of the sexes and that discrimination on the basis of sex, race, ethnicity, religion or sexual orientation is strictly forbidden. Are you ready to accept those laws and live under them?"

"We are! The only thing I want is to be able to give a new, meaningful life to my family and to do honest work."

“Then, I believe that your family fully satisfies the requirements of our resettlement program, Mister Solomon. I will now take your individual pictures, along with your fingerprints, in order to sign you up. Before you ask, know that this program involves your resettlement on a new Spacers world, another planet which has been recently discovered. You and your family will thus be able to start a brand new life on a new, virgin world. Congratulations!”

The whole family erupted into cheers at Nelson’s last words and nearly danced together in joy, watched by a moved Nelson. This was by far the part of his job that he liked the most: to help give back hope to others.

19:51 (East Africa Time)

Landing pad of the Todonyang Refugee Camp

Northwest Kenya

A crowd of 138 men, women and children were waiting near the improvised landing pad of the refugee camp, set outside the fenced perimeter, when a large passenger shuttle emerged from the obscurity of the evening sky and landed nearly silently on the pad, its navigation lights blinking in the darkness. As soon as its aft access ramp was lowered, a handful of aid workers and staff from the camp gently encouraged the refugees towards it, with a few Kenyan soldiers present to provide security to the shuttle and the departing refugees. Saba Teferi, her three year-old son Amare in her arms, hesitated a bit as she was approaching the space shuttle, stopping and turning her head to look towards the Northeast. Her husband Gebre, who was carrying the little possessions they had been given after arriving at the camp, also stopped near her and saw tears in Saba’s eyes.

“What’s the matter, Saba? We are finally leaving this camp for a better life.”

“Yes, but will this mean that we will never see again our country of birth?”

Nelson Onyango, who was close enough to hear her words, hurried to the couple and spoke softly to Saba.

“Don’t be afraid about that: while you will be living on another planet far from here, there will be a regular liaison between New Haven and Earth. You will be able to return for visits or vacation in the future, when you will feel like it. I was told that there will even be daily video news and entertainment programs from Earth, which will be

recorded in advance and then brought by ship with only a day or two of delay. That way, you will be able to stay informed about how things are going in and around Ethiopia.”

“They will allow us to come back for visits?” asked Saba, having difficulty believing that. Nelson gave her his best reassuring smile.

“Of course they will! I met Captain Tina Forster, who owns New Haven, and I can tell you that you won’t find a more generous or compassionate person around. Come, I will accompany you and your family inside the shuttle.”

Somewhat reassured by Nelson’s presence, Saba walked to the access ramp, little Amare still in her arms, followed by her husband and her two oldest children. They were met at the entrance by a young woman dressed in an apple green adjusted coverall with a few patches sewn on it.

“Welcome aboard! May I ask you to each put in succession one thumb on this fingerprint recognition pad?”

The five Ethiopians did so in turn, with the crewmember then nodding her head and smiling to them.

“Thank you very much! Here are your boarding passes. You will have to present them later on, after our arrival on New Haven.”

“Will the trip be very long, miss?” Asked Gebre.

“The trip between the two solar systems will actually be nearly instantaneous, sir. However, climbing to Earth orbit and then descending from orbit once in the Wolf 1061 System will take about one hour. If you will now step forward, my colleague will show you to your seats.”

“Well, this is where we have to part, I guess.” said Nelson Onyango. “I wish you a good trip and a nice new life on New Haven.”

“Thank you!” replied Gebre while shaking Nelson’s hand. “You were most kind with my family.”

“It was a pleasure, sir.”

Nelson then walked back down the ramp to go speak with another family who was lining to board the shuttle. Himself feeling a pang of the heart, Gebre then led his family inside the passenger cabin proper and was quickly met along the aisle by another female crewmember.

“Could I please see your boarding passes, please?... Thank you! Your seats will be in Row 23, four rows ahead, and are the three seats on the right side of this aisle, plus two of the seats on center section.”

Following her indications, the family was soon in its assigned seats, with seven year-old Beza sitting next to the right side window. Saba, who sat next to her, then saw that the ‘window’ was actually a large 3D holoscreen. Similar but smaller holoscreens were in fact installed on the back of each seat, allowing all the passengers to have their own view of the outside of the shuttle. Some six minutes later, the images on the seat viewing screens changed to show one of the flight attendants they had met, speaking in English.

“Good evening and welcome aboard the shuttle MERCURY, of the New Haven Star Lines. We will be departing for New Haven shortly. If I could have your attention for a minute, I will explain to you the safety procedures for this flight, as well as describe to you the facilities on this shuttle.”

The members of the family, none of whom had flown in any kind of craft before, listened religiously as the flight attendant spoke, buckling their seat belts when told to. The Gebre children, like nearly all the other children aboard and many of the adults, shouted excited exclamations when their shuttle started rising from the ground. Those shouts however quickly subsided as they gained altitude and started seeing the curvature of the Earth and the African continent under them, the view from above mesmerizing the passengers. Some twenty minutes after takeoff, as they had passed Earth’s low orbit, a brief orange flash surprised the ex-refugees. Saba, who then looked at the lateral view screen of her row, nearly choked with astonishment at the sight of a nearby red star.

“GEBRE, THE SUN HAS CHANGED COLORS! IT IS NOW RED!”

All the passengers crowded at once at the viewing screens on the right side of the cabin. The voice of a pilot then came out of the cabin’s overhead speakers.

“Ladies and gentlemen, we are now in the Wolf 1061 System. This system is centered around what is called a red dwarf star, a star smaller than our Sun and also cooler. The system counts three planets, an asteroid belt and a total of four moons. You will soon see on our right side the second planet of the system, which is now known as ‘New Shouria’ and which is the new home world of the Koorivars, who were themselves made refugees after their planet was pulverized by a wandering brown dwarf

planet some 361 years ago. New Haven, our destination, is the first and biggest of three moons orbiting New Shouria. We should land there in about 45 minutes.”

Gebre, like his wife and children, was nearly hypnotized by the view of New Shouria they soon got: the planet was half covered with blue seas and numerous lakes of various sizes dotted its continents, which were definitely quite different from those on Earth. Many white clouds also floated around the skies of the planet, making it look like a perfect haven for life. Their attention soon shifted to a big moon they approached after turning half around the planet. As the shuttle got closer to it, Gebre was struck by how big it appeared to be. Its surface also looked a lot like Africa: a place of savannahs, lakes and mountain ranges. Somehow, that helped partly reassure Gebre about their new home world.

“Look, my children: there is our new home.”

As they avidly examined New Haven from orbit, their seat viewing screens also showed the moon, while the voice of a flight attendant came out of the cabin’s speakers.

“Ladies and gentlemen, we are now arriving in orbit of New Haven, the first moon of New Shouria and your new home. New Haven is slightly smaller than Earth and has a mass equivalent to eighty percent of the mass of Earth. The felt gravity is inferior to that on Earth, at 0.78 G and its atmosphere is also slightly thinner than Earth’s atmosphere, with a bit less oxygen in it. For those of you who were living on high plateaus above an altitude of 2,000 meters, New Haven will thus feel to you much like home. Its climate is also quite similar to that of Northern Africa. Being tidally locked to New Shouria, New Haven always presents the same face to its parent planet, like the Moon does with Earth. It and New Shouria complete an orbit around the central red star in a bit less than eighteen of our days. Because of this and of the small light level differences between the local ‘days’ and ‘nights’, it was decided to keep using both the time system and calendar in use on Earth. We are thus still officially on Tuesday, November ninth of 2320 and the time, set on Greenwich Universal Time plus two hours for your time zone, is 21:18 in the evening. If you look at the bottom right corner of your seat viewing screens, you will see the precise Universal Time displayed, so that you could change the time on your watches and wrist videophones. Our final destination is the village of ‘New Hope’, your new home town, situated on the shores of Lake Avalon and some seven kilometers northeast of Camelot, the administrative center of New Haven. The mayor of New Hope, Alice Zedong, will be greeting you on arrival and will have assistants ready to bring you to your respective homes after a preliminary briefing

on local conditions and general rules. The temperature in New Hope is presently 27 degrees Celsius and the sky is mostly clear, with a few dispersed clouds and with a nine kilometer per hour wind from the East.”

Gebre and Saba exchanged pleased looks then: that sounded a lot like a typical day in Ethiopia. The fact that they would live on the shores of a lake would also remind them of their past, happy days in Awasa. Young Dawit, their nine year-old son, suddenly pointed an excited finger at an orbiting object now visible on the screens.

“Hey, a spaceship!”

Gebre and Saba concentrated their attention on that object on hearing Dawit. That object, which the shuttle was approaching, soon revealed itself to be huge, attracting a comment from Saba.

“My god, that ship is as big as a mountain.”

Gebre, fascinated by the big ship, could only agree with his wife.

“I didn’t believe that such big ships existed, or were even possible.”

One flight attendant passing by on the aisle, temporarily stopped and smiled to them.

“This is the KOSTROMA, the armed cargo ship belonging to Captain Forster, who is also the owner and CEO of New Haven.”

As the attendant continued down the aisle, Gebre and Saba exchanged knowing looks.

“So, this is the infamous KOSTROMA our government was so vilifying.”

“Yes, but all that was probably just propaganda, Saba. How could someone offering us a new life be as evil as our government made that Captain Forster to be?”

The couple then fell silent and stared at the viewing screens as the shuttle flew by the huge ship, something that took many seconds, enough to deeply impress them.

“It certainly deserves the qualifier of ‘mighty’. Hopefully, Captain Foster will prove as benevolent and generous as we hope her to be, Saba.”

“I am also hoping for that, Gebre. Our family’s future is depending on it.”

Their shuttle soon entered the atmosphere of New Haven, producing a somewhat terrifying show of flames and howling hypersonic winds as they went down towards the surface. However, their flight soon became more normal as their speed went down. The surface they were now overflying proved to be covered mostly with savannah-like fields of dispersed trees and long grass, with a number of small lakes and streams, the latter flowing down from the numerous hills and mountain ranges dotting

the surface of the moon. They then started to overfly at medium altitude the blue surface of a big lake, with that view exciting Saba.

“Look at that splendid lake, kids! It appears even bigger than Lake Turkana and is way bigger than Lake Awasa. Living on the shores of such a large lake should make life quite pleasant. For one thing, we will have plenty of water available.”

As the shuttle was approaching what looked like a small town on the northwest shores of the lake, Saba saw another shuttle fly by them, apparently climbing back to orbit after taking off from the town.

“You saw that other shuttle, Gebre? Maybe other refugees were just dropped off in our new town.”

“Probably, Saba. Everything we saw and heard up to now seems to point to a large scale resettlement program centered on this New Haven. I would be very surprised if we would be the only refugees to have been transported here. However, the mayor of our new town is supposed to brief us on arrival, so let’s just watch and wait for the moment.”

After another minute of flying their shuttle finally landed at the vertical on a landing pad set at the southern extremity of the small town, which had maybe 300 houses and various buildings in it. Ten of those buildings, grouped to the west of the town, were huge, measuring about 300 meters long by fifty meters wide and counting six levels. Gebre smiled as he recognized those ten big buildings, with their transparent walls and roofs.

“Hydroponic gardens buildings...big ones! There will be plenty of work for me here, Saba...and also plenty of food for our family.”

“Thank god! Just being able to eat to our content would make it worth leaving Earth. Hopefully, the food distribution system here will prove more equitable than in our old country.”

Gebre made a sour smile at those words: too often, while they lived in Awasa, they saw the bulk of the agricultural produces being carried away towards Addis Ababa, where government bureaucrats and leaders lived, often leaving not enough foodstuff to feed properly the population of Awasa, something that had pushed the inhabitants into cultivating their own private gardens as much as possible. The voice of a pilot then came out of the cabin’s speakers.

"Ladies and gentlemen, we have now landed at our destination, the village of New Hope. You may now leave your seats, recuperate your luggage and go out by the aft access ramp."

Getting up from his seat and recuperating the one duffel bag containing all that his family still owned, Gebre then led his wife and kids down the aisle and out of the shuttle. On emerging in the open, he felt an immediate change to his body.

"Hey, I feel less heavy!"

"Well, they did say that the gravity in this place is less than on Earth. I actually find that quite pleasant. The air is also like in Awasa, thinner than around Lake Turkana."

Saba then noticed the large group of persons, which themselves looked like refugees, waiting off one side of the landing pad, with a number of persons apparently controlling their group.

"It seems that I was right about other refugees than us being relocated here, Gebre."

"We will soon enough see how true this is, Saba. Let's walk away from that pad and follow that man over there giving directives: our shuttle will probably be leaving in a short while."

Their shuttle indeed lifted off as soon as the 138 Ethiopians and Sudanese refugees were off the landing pad. A Caucasian man in his late twenties then started shouting directives in English to their group.

"If you will please follow us, ladies and gentlemen, we will now walk to the village's central park, where dignitaries will greet you on New Haven."

The Gebre, who had walked hundreds of kilometers to reach the safety of their refugee camp in Kenya, didn't mind the 600 meter walk between the landing pad and the central park, which was covered by a transparent dome protecting its visitors from the occasional rains. That walk in fact gave a chance to the family to look at various buildings and facilities in the village, while their guide described in English what they went by. That included an open air sports stadium with an oval race track and an inner soccer field, something that pleased young Dawit.

"They have a soccer field! I will be able to play soccer again!"

Gebre, also pleased by that, had by now noticed that the guides accompanying the other refugees which had arrived prior to him were speaking to their flocks in two other

languages, one of them Arabic, while the other one was some kind of Asiatic language he couldn't identify.

On arrival at the central park, which was bordered by a few trees Gebre had never seen on Earth, the crowd of some 350 ex-refugees was made to sit down on a series of folding benches set in a semi-circle in front of a small platform with a large viewing screen behind it. Four women and three men were waiting for them, standing on the platform. As soon as the crowd had sat down, one of the women on the platform, a tall brunette in her thirties, started speaking in English in a microphone which amplified her voice. Simultaneously, another tall woman of stunning beauty translated her words in Arabic and in the other language Gebre had heard to date, helped by the frequent pauses made by the brunette.

"Good evening and welcome on New Haven, ladies and gentlemen. My name is Tina Forster and I am the owner and CEO of the New Haven Planetary Corporation, to which this moon belongs. To my right, translating my words in Arabic and in Vietnamese, is Eve Silisca, the Deputy Chief Administrator and Sciences and Technology Administrator of New Haven. Behind me, starting from my left, are Personnel and Immigration Administrator Wei Zang, Chief of Public Safety Bill Morrison, Chief Administrator of New Haven Piotr Romanski, Alice Zedong, Mayor of New Hope, and Thomas Brown, Principal Assistant to Mayor Zedong. Many of you may be wondering why I selected you and others to settle on this new world. Some around Earth even claimed that I was collecting you as slave laborers in order to develop this moon for my ultimate profit. Nothing could be further from the truth, ladies and gentlemen. After receiving this moon as a gift from the Koorivars, as a thank you for rescuing two of their wandering refugee ships, I decided to develop New Haven for the benefit of unfortunate people like you, decent people who lost their homes and everything else through no fault of their own and who simply want to be able to do honest work and raise their families away from wars, droughts, famines and other calamities. As a Spacer who lives on a highly advanced spaceship, I also wanted to create a place where Spacers avid for open air spaces and destitute people like you could live a simple life close to nature in a world untouched by pollution and overexploitation. I thus made plans to turn New Haven into a simple agrarian and pastoral world, where heavy industries will be both limited to the minimum and severely controlled to avoid pollution. New Haven will basically be a food production center and

also a tourism center for Spacers wanting to experience being close to nature again. What this moon will need in terms of industrial products, technological items, chemicals and polymers will be imported from the Solar System, so that we won't risk polluting this pristine world by having to build our own industrial and chemical plants. While the facilities you see around you are modern and comfortable, the emphasis was put on simplicity in their designs and use, as I wish all of us to be able to enjoy a life close to nature. As for your legal status as residents of New Haven, you are now considered both employees of the New Haven Planetary Corporation and citizens of the Spacers League. This may sound strange to you and some may call this an undemocratic system, but this kind of corporate entity government is common around the Spacers League, like the Ceres Corporation or the Sverdlorsk Group on Hygiea. As citizens of the Spacers League, your rights will be protected under the constitution and charter of human rights of the League, so forget any fears you had about ending up under some kind of despotic tyrant. For me, my reward will be to see you live a happy life with your families on New Haven. With all this said, I must tell you that, with the infrastructure program having started only one month ago on New Haven, much is still left to be done. We planted thousands of fruit trees imported from Earth and started seeding the fish growing ponds of our fish farms, but they will need at least two years to start becoming truly productive. However, that doesn't mean that you will be starving during those few first years, on the contrary. We imported large herds of herbivores from Earth and settled them in the savannahs of this moon, plus we seeded the local lakes with a number of fish species, while our hydroponic gardens will start massively producing foodstuff in a mere few weeks. Whatever will be missing in the meantime will be imported at my expense. This brings me to how you will be paid and what you will have to pay for. Simply put, all your basic needs, meaning food, lodging, basic clothing, education and health care will be provided for free. You need to replenish your house's pantry and refrigerator? Simply go to the local food market and pick up what you need. However, excessive consumption and wastage of food will be highly discouraged. As for your wages, each working person will get a basic salary based on their level of skills and competences, with extras added for the number of persons in their charge. You will be able to sell any surplus foodstuff you may produce in your private gardens and animal coops, but remember that those private gardens and coops are meant to help supplement the diet of your families. The goal on New Haven will not be to become rich, but simply to live comfortably while staying close to nature. The food surplus that New

Haven will eventually produce in the coming years will be exported to the Solar System and to other settled systems and sold, with priority given to providing low cost foodstuff to parts of Earth that are in need.”

A wave of approving whispers and head nods greeted Tina’s last part of her speech. She then switched places with Alice Zedong, a small Chinese woman in her early fifties, while Eve stayed at her microphone to continue translating.

“My good people, I realize that you had a long, emotional day, so I won’t take much of your time before you could be led to your respective residences. More detailed briefings will follow tomorrow morning, here at the central park and at the town hall, visible to your right. I only wish to tell you this: we are all here to live in peace and harmony with nature, away from wars, natural disasters, famines and ethnic strife. You can see already that the ethnic diversity in your present group is quite high. In fact, this ethnic diversity will only grow in the days to come, as more ex-refugees arrive on New Haven, coming from many different places. You will consciously be mixed thoroughly around New Hope and the rest of the moon, with the goal of preventing the formation of closed-rank ethnic groups, something which could eventually lead into the reappearance of old ethnic, racial or religious hatreds. The last thing we want here would be to import Earth’s old problems to New Haven. I will thus urge you all to forget any past prejudices or hostilities you felt and to embrace openness and tolerance. If any of you still decide to encourage discord or strife, that someone will then be expelled from New Haven and returned to Earth. We will be very severe about this. You will enjoy freedom of expression here, but not if it is used to encourage violence, hatred or discrimination. That is all for me for tonight. My principal assistant, Thomas Brown, will now organize you in small groups which will then be led to their new residences by our staff members. Don’t worry about food at this time, as the pantries and refrigerators of your new houses have been stocked up before your arrival. Thomas?”

Thomas Brown, a tall African-American with a short black beard, then stepped to the microphone and started showing on the giant viewing screen behind him a list of the newcomers, split into small groups according to which street they were going to live in, with the names of the staffers which were going to guide each of the groups.

Gebre and his family soon ended as part of a group of 39 Ethiopians and Sudanese under the guidance of a Japanese woman named Yoko Teno. After double checking with the list on her electronic notepad that all her charges were present around

her, Yoko started walking on a pedestrian paved trail, past a large dome structure with two lateral wings.

“To your left, you will see the village’s food market and food court, where you will be able to get fresh food or to eat at its restaurants and food counters. The foodstuff selection, while presently limited in its variety, will quickly grow in the coming weeks as our hydroponic gardens start producing fresh produces. We will soon pass by the leather shop and the wood shop, where the hides of animals butchered for their meat and the wood from cut trees will be transformed into leather footwear, leather clothing and upholstery and into wooden furniture and decorative pieces. Then, once at the rabbit and poultry farms, we will turn left onto Farmers’ Lane, the street you will live in.”

“Uh, I have seen only pedestrian lanes and trails up to now and no streets for cars. How come?” asked one of the Sudanese ex-refugees, making Yoko nod once.

“Because there will be no ground vehicles in the village, mister. Any trip involving a mechanical vehicle will use air cars or air trucks, which fly around and land vertically. The village itself is quite small and compact, being 1,200 meter-long at the most, and walking around will be encouraged. That will save us from ruining hundreds of hectares of good land just to pave them over with either asphalt or concrete. All the settlements on New Haven will follow the same construction and urban planning philosophy, with nature to be respected and preserved as much as possible.”

Gebre was truly impressed and pleased by that: he himself was all for living in harmony with nature. To live in an unpolluted and eco-friendly environment could only be a good thing.

After another 200 meters of walking, the group turned left on a long pedestrian lane bordered by a double row of dome-like houses, with a series of animal farms and enclosures visible some fifty meters behind the right-side row of houses. The houses themselves were all basically identical in size and shape, having only small variations in color between them. Each house, looking a bit like a flying saucer, had a diameter of about thirteen meters and a top height of about nine meters. Numerous windows dotted the surfaces of the houses on two levels, with much of the outer surfaces covered by solar energy panels. Behind each house, a fenced up yard measuring some 25 meters by 25 meters contained one or two local trees, a small greenhouse and a small animal coop annex. Yoko stopped in front of the first house on the right side of Farmers’ Lane and spoke up while pointing at it.

“This house, Number One Farmers’ Lane, is for the moment kept unoccupied and used as a demonstration model. Basically, all the private houses in the village are built following the same design, with small internal variations meant to better accommodate specific types of families. There are houses equipped for office workers and technicians, without private backyards and greenhouses but with a work office, and houses with private backyards, greenhouses and animal coops meant to lodge residents working in the various farms and gardens of the village. Those latter types of houses in turn vary between models made for families with between three to five members and slightly larger models made for bigger families of up to nine persons. We will now visit this house, which is part of the models made for families of up to five persons.”

The excited group eagerly followed Yoko inside the dome house, entering it via a main entrance opening at ground level, where the bulk of the house overhang the ground level floor. Before climbing the wide steps leading up to the main floor of the house, Yoko pointed in succession the four separated rooms distributed around the central steel pillar and four curved columns supporting the structure of the house on a five meter diameter flat circular base.

“The ground floor here contains a general storage room, a storage room for bicycles, which use is highly encouraged here, a water and waste management room and a batteries and electrical systems room connected to the multiple solar panels covering the outside walls of this house. I will now lead you up to the main floor, where the family living spaces and main bedroom are situated.”

Gebre smiled to Saba as they climbed the one meter-wide staircase behind Yoko: the house’s construction, while not of luxurious design or finish, seemed both modern and solid, with a good quality finish. Their smiles turned to grin once they were able to look around while standing on the main floor near the staircase: the dome design of the house provided for a surprising amount of open internal space, with excellent illumination and ventilation provided by the numerous windows. Some three meters above the main floor surface, the upper floor occupied only about two thirds of the upper internal circumference, providing a big section of the main floor with a high ceiling which made the place look even bigger. Young Beza then made a comment that struck her parents.

“Hey, I feel heavier here, like I was on Earth.”
Yoko, on hearing the preteen girl, smiled in response.

“That is because the floors of all the buildings on New Haven are equipped with artificial gravity grids set to Earth’s standard gravity. This way, while you will feel a 0.78 G gravity while walking around outside in the open air, your bodies will stay accustomed to Earth’s gravity via your times at home or work. That way, your muscles will not lose strength and you will be able to visit Earth in the future without feeling adverse effects from the gravity.”

Saba nodded her head at that, having just been given an extra assurance that they would be able to visit Earth in the future if they wished so. Yoko then led her group in a slow tour of the main floor, showing to the ex-refugees a well equipped kitchen, an outer patio/balcony with a BBQ grill in one corner, a large, high-ceiling dining and living room area, a private study/office corner, a main bedroom with a big double bed and private bathroom, a secondary washroom and a laundry room. Already quite impressed, the Gebre family and the others then followed Yoko upstairs via a curved staircase, finding on the upper floor of the house a complete bathroom, a small bedroom with a single bed and a larger bedroom with a double bunk bed and a private washroom for that bedroom. The feature that however excited the most the children of the group was the upper floor emergency fire exit. Unlocking and opening a small door in the outer wall, near the staircase well, Yoko showed to her group a long stainless steel slide going down to the ground level and encased inside a large diameter plastic tube.

“This is the upper floor emergency evacuation slide, to be used if a fire blocks the lower exits. You then just unlock and open this door, then slide down to safety. Actually, nothing would stop your children from also using it to play and have fun. I will need one adult volunteer to go down first, so that he or she can then safely remove children from the path of other, incoming children.”

“I will go first, miss.” said Gebre. With Yoko stepping aside, he then sat on the ledge of the slide and slid down. The curved, Teflon-coated stainless steel slide proved to be a very fast one and he had genuine fun sliding down it, emerging from the tube at high speed and then landing in a long sand square. Quickly picking himself up, he stood on one side of the sand square, in time to grab an elated Beza when she shot out of the slide tube.

“THIS WAS FUN, FATHER! COULD WE DO IT AGAIN?”

“Uh, later, Beza, when we will be inside our own home.”

Once everyone but Yoko had slid down to the ground level, and with Yoko closing and locking back the emergency exit door before going down via the staircases, the group started slowly walking up Farmers' Lane. Periodically stopping in front of a particular house, Yoko then called up the family destined to live in it and made them register their fingerprints on the entrance door's fingerprint recognition pad, allowing them in and then continuing up the lane. The Gebre's family ended up being assigned to house number twelve and was told to be at the village's central park by nine o'clock tomorrow. Gebre felt immense joy and also relief once inside his new home: the future of his family now looked quite bright indeed. Saba, whose first move was to go to the kitchen and check the content of the pantry and refrigerator, found both to be well stocked up with fresh and frozen meats, fish, fresh milk, vegetables, fruits and fruit juices, plus an assortment of bread loaves, flat bread, cereals and other food items. She even found tea and coffee in the pantry, while the sink of the kitchen provided clean water when she turned the faucet. Bordering on tears, Saba went to hug her husband.

"The nightmare is over for us, Gebre. I couldn't be happier than right now."

"Me too. Let's organize ourselves for the night: tomorrow may be a busy day."

08:06 (Central Africa Time)

Monday, November 22, 2320

Kinshasa International Airport

Kinshasa, Congo, African Union

Southern Federation

Mamadou Kajeje, waiting with General Odierno and the other members of the African delegation heading to Shanghai for the meeting with representatives of the Northern Alliance and of the Spacers League, couldn't help feel envy as the advanced space shuttle painted the colors of the Northern Alliance landed at the vertical some forty meters from his limousine. Due to the past hostilities with the Spacers League and Northern Alliance and to the dilapidated state of his Federation's economy, he didn't have a shuttle of his own for his official use. Thankfully, President Claudia d'Arcy had saved him from potential public embarrassment by offering to give him and his delegation a ride to Shanghai in her own shuttle. The side door of the shuttle then opened, with an access staircase deploying from under the door, and he soon saw

Claudia d’Arcy appear in the door and wave him in. Mamadou turned his head to smile at General Odierno.

“Well, here we are on the big day, General. Let’s board and be on our way to Shanghai.”

“With pleasure, Mister President!”

On a signal from Mamadou, the members of the delegation walked to the waiting shuttle, pulling on their small wheels a large collection of suitcases. D’Arcy, still waiting just inside the access door, greeted Mamadou with a smile and a handshake.

“Welcome aboard my shuttle, President Kajeje. I will show you to your seat.”

With the two flight attendants of the shuttle taking care of greeting and directing the other African delegates, Claudia guided Mamadou to a pair of well-padded sofas facing each other across a table, showing to him and Odierno one of the sofas.

“If you will please sit, we will take off in a minute.”

“With pleasure, my dear Claudia.” replied Mamadou.

The access stairs retracted and the side door closed soon afterwards. With its navigational lights flashing, the shuttle started rising slowly at first from the ground, watched by the drivers and bodyguards who had come in the convoy of limousines and cars. The head of the presidential bodyguards suddenly caught in a flash a fast movement to his left and snapped his head in that direction. Before he could react further, something hit squarely the shuttle and exploded in a tremendous blast. The shuttle in turn erupted into a ball of flames and crashed down on the tarmac of the airport. The head bodyguard was projected back by the blast wave and was also wounded by multiple shrapnel fragments. Picking himself up with difficulty, with his ears ringing and with burning pain from his wounds, the security man looked with alarm at the shuttle, now opened up like a can and burning fiercely on the ground: only some kind of heavy missile could have done this. As for finding survivors inside the shuttle, the chances for that were close to non-existent. He still keyed the microphone of his mini-radio and spoke urgently in it.

“THE PRESIDENTIAL SHUTTLE HAS BEEN HIT BY A MISSILE. I WANT THE FIREFIGHTERS AND AMBULANCES HERE AT ONCE! ALSO, CORDON AND SEARCH THE WESTERN DISTRICTS NEXT TO THE AIRPORT AND FIND THAT DAMN SHOOTER! I WANT HIM ALIVE AS MUCH AS POSSIBLE.”

09:30 (Central African Time)

Command bridge of the A.M.S. KOSTROMA

In low Earth orbit

Tina was reviewing with Dana Durning the schedules of her various ship's shuttles due back aboard with fresh loads of ex-refugees when Patricia O'Neil turned her head to look at her, her face ashen.

"Tina, a flash news is being emitted worldwide right now: there was a terrorist attack on the shuttle of President d'Arcy, as it was picking up President Kajeje of the Southern Federation at Kinshasa Airport. According to the latest news, there are no survivors from the shuttle, which was destroyed by a heavy missile. President d'Arcy, President Kajeje and General Odierno have been declared dead, along with their two entire delegations."

Tina suddenly felt dizzy, as blood rushed to her brain, and she had to sit down in her command chair.

"My god! Peace was so close at hand. Now, this! Only the Devil knows what will happen next."

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