

The Dunari

DRAFT

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Prologue

Jilfora sings of love.
The energy of the universe
that builds
and destroys.

Jalam sings of strength.
The creator of worlds
to bear the weight
of the meek.

Jinjana sings of wisdom.
The knowledge of the void
of what is right
and wrong.

Jojen sings of spirit.
The fire of the soul
to drive
and to despair.

Jujar sings of home.
The gathering of all
of some
of one.

Jixita sings of patience.
The force of the desert wind
always blowing
in a rush.

Junarit sings of truth.
The truth of the sun and sky
revealed to all
as lies.

The Seven sing together.
They weave their songs to a golden thread
the fabric of all that is
and is not.

Jurita sings the Song of Songs.
Shaping the world from golden cloth
she makes a perfect everything
from nothing.

Part I.

Arrival

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Chark wrapped his trunk around the the heavy door handle and then used the three tentacles at the end of his trunk to tap the access code on the lock panel. The lock clicked and, leaning onto his back legs, he slid the door aside.

Inside, the room was packed with state of the art electronics, and smelled vaguely of solder and over heated transformers. The noise of the air cooling unit was a constant drone. The only windows were uncomfortably small, placed high on the wall, and partially covered by equipment. Several artificial lights supplemented the meager natural illumination.

Tarmala, the Aerosights engineer who had called Chark, was studying an oscilloscope, one of his rear legs hooked slightly behind the other. His tentacles operated the slider controls on the side of the instrument. Fanlon, a young military engineer, was looking over Tarmala's shoulder, but he twisted his head around and slid his trunk over Tarmala's back when he heard the door open.

"The Captain is here." He motioned excitedly to Chark with his trunk, extending one short tentacle in the direction of the main display grid of the oscilloscope. "Take a look!"

Tarmala stepped aside, turning his head slightly so his right eye was toward Chark in invitation and deference. Chark stepped forward, pushing his front shoulders between them. Sure enough there was a return signal. It was distinct. It was steady.

"Are you tracking this?" Chark asked.

“Absolutely, we have the Ear slewing right now,” Fanlon said.

Chark took in the instruments, quickly scanning over the myriad displays by tilting his head first to one side and then the next with a well practiced motion. Putting his trunk over his shoulder he turned his more acute left eye toward the screen. “That almost looks like ping-back,” he said after a moment, “but you’re slewing the antenna, yes? Do you lose the signal if you don’t?”

“We do.”

“So maybe it’s a real target.”

“Impossible,” said Tarmala. “Look at the return delay.” He twisted around and raised his trunk toward a unit perched precariously on a high self above the receivers. The side panel was open and hanging by one clip. “If it’s a real target it’s really far away—and big.”

Chark stepped back to study the display for a moment, flapping his ears slowly in contemplation. He turned to the plotter, tilting his head to look at the historical data scratched onto the paper in broken lines. “This doesn’t make sense,” he said finally. “According to this you earlier had the antenna pointed even higher than it is now.”

“Right,” said Tarmala, “and the return delay was unusually long even then. See...” extending his trunk he traced the green line with his second tentacle.

“It can’t be real,” said Chark. “It would be hundreds of karnons away and at that elevation it would be in space.”

Later, as was his habit when we went home, Chark walked to the lifter rather than take the base’s shuttle. He needed what exercise he could get, and he enjoyed the outdoor air. On clear days, when the Nermella wasn’t blowing much sand, he could see the Sarnowledge Mountains rising in the distance as a darkening against the yellow-green sky. Sometimes he liked to look at the mountains and reflect on the relaxed days when Junella’s old select took camping trips there. Of course that was all before the project.

The purpose of the RRRF system was to track aerocars in flight. It was a simple idea,

really. The antenna emitted a powerful pulse of radio energy and some of that energy reflected off the target to return back to the source. By timing the return delay the distance to the target could be determined. The orientation of the antenna provided the direction.

It sounded simple but making it work wasn't. They had to generate powerful bursts of radio energy. They had to measure short time intervals. They had to accurately control a large antenna. There were many places where things could go wrong and they often did.

When the lifter came, Chark climbed aboard, his military cloak making it easy for him to find a good seat. He slid his rear legs onto the back cushion and folded his front legs beneath him. He tugged briefly at his cloak with his three tentacles to straighten it. As the lifter started again he tilted his head to look out the window.

The muggy, tropical air of Lungast fostered lush fields of harsna grass lined with rigat trees. It was so different than the desert land on the Northern Plains where he and Junella had lived before. The large, rubinum-red Rujaran sun hung low over the western horizon. Its face was covered with several spot complexes. Its subdued, golden-red light filled the muggy sky and lit the yellow harsna with ghostly highlights.

Chark eyed the sun suspiciously. He was still not used to seeing it so low or so gloomy. The project was a great opportunity for him, but Junella had left her seleck to make the move. He found himself wondering how happy they could really be in such a dank and dreary place.

The lifter finally reached the large garjost tree that marked Chark's stop. It was the sight of its short, thick trunk and graceful horizontal branches more than the cry of the driver that alerted him to take notice and gather his belongings. From the stop he walked down the lane and into a circle of seven modest, interconnected homes. Their low greenstone walls blended into the rich tropical soil. A young woman new to the seleck was tending her garden. She greeted him warmly with a soft bleat. Chark went to

her and they crossed trunks briefly, entwining them, tentacles brushing against leathery skin.

Once inside his house Chark automatically adjusted the picture of Chartik sitting unobtrusively on a small shelf. It never really needed adjusting, of course, but he liked to touch it. He called out for Junella with a low, growling moan but she did not come immediately. He was about to get his pad to see if she had left a message for him when he heard her enter through the connectway to the neighbor's house.

"Oh, Chark," she said, "I had a feeling you were back."

She was wearing a light, rubinum cloak, loosely tied about each leg. Her ears were clipped to the fabric using the copper snaps Chark had given her when they were courting. They crossed trunks, lingering slightly in their embrace, and then Chark gently tapped twice behind her head where her trunk ridge merged into her spine.

"It didn't go well," she said more as a statement than a question. Somehow she always seemed to know.

"Things went fine," Chark replied. He paused and affectionately touched her ear with his first tentacle. The secret nature of the RRRF project made it impossible for him to share the details of his work. Chark took his oath seriously. She was understanding, of course.

"A quirk came up before I left," Chark said, "that's all."

They shared a light meal and then relaxed for a while playing a game of conifi with two of the seleckia and their husbands. Jiapita was the eldest seleckia and Jijar was the young gardener who had greeted Chark earlier. Junella and Jiapita's husband were experts and dominated the game, as usual, but Chark didn't mind. It was nice to have something to take his mind off his research. The work was critical to the safety of his country and the pressure was sometimes hard to bear.

"Chark forgot to tap me earlier," Jijar said playfully at one point. Chark suppressed a flutter, uncertain of how to react to her forward comment.

“He’s been distracted in many ways,” Junella said clicking her teeth. She twisted her head slightly to glance at her husband.

After the others had left, Chark got ready to sleep. He first took a few moments to look out over the back gardens. The vines his wife had planted around the base of the house were finally starting to bloom. In due course there would be flashes to provoke and ripen the delicious seeds. Chark winced slightly when he realized he had yet to fix the flash shades in their main living space. The color of their furniture was already starting to fade. Yet the distraction of his work made it hard to find time for everyday things.

“I’ll be at the hospital for a while,” Junella said from behind him, “but I should be back when you awake.”

Chark made a few notes in his diary and then went up the ramp to the beds overlooking the main floor. The light of the sun filled the room with an orange, fiery glow. Chark changed into his sleeping cloak and climbed onto his bed. As he folded his legs beneath him he tugged at his cloak to loosen it a bit. Soon he entered farth-sleep and meditated about the strange signal found earlier. Yet his mind drifted and he found himself remembering their old home on the Northern Plains and the happy times there with Chartik. In due course paren-sleep took him and his mind wandered no more.

* * *

It seemed like only moments when Chark was awakened from paren-sleep by the sound of the phone chiming. With a forced shake he roused his body and stumbled out of bed. Junella was still gone and none of the other seleckia were in the house. In a daze Chark made his way down the ramp to answer the insistent phone. The right half of his body was still partly asleep and it made him lurch awkwardly as he moved.

“Yeah?” he said ungraciously into the transceiver.

“I’m so sorry to call you at home, Captain.” It was Tarmala. “It’s just that we’ve

been tracking that target we found earlier.”

“Tracking?” Chark absent mindedly scratched his front left shoulder against the edge of the door frame.

“Yeah,” Tarmala said. “Fanlon did some calculations and it’s in orbit. We predicted that we’d be able to track it again periodically, and sure enough we can. We have more data on it now. We have some nice plots with very good return delay measurements. We want...”

“Wait, wait, wait...” Chark said. “Wait.” Tarmala stopped abruptly. Chark shifted a little and shook his right front leg. “What do you mean by orbit?”

“It’s in orbit around Rujar. It’s about 500 karnons up.”

* * *

When Chark next awoke he could hear Junella singing below, her voice a melodic rumble. He got out of bed and, looking out the window, tilted his head at the sunlight glinting off his neighbor’s roof. The sky was clear but still hazy as it always seemed to be in Lungast. A large group of spots created a blotch on the sun’s disk.

He took a cloak from his shelf and put it on, fighting briefly with the hooks. He stood by the mirror wall and brushed his trunk and face, removing a few loose scales in the process. Then he went down the ramp to join his wife.

“I thought you were going to sleep forever,” Junella said shaking her ears playfully. They crossed trunks and she clicked her teeth lightly. “Let me make you some brushtik.”

Chark went into the center room and opened the windows letting in the tropical air. He turned on the viewer to watch part of *Moment by Moment*. Junella grunted with annoyance.

“Must we have that on?” she asked. She adjusted the brushtik under the toaster, adding a touch of genic butter to each piece. “All they ever talk about is politics. Nothing important ever happens in politics.”

Chark didn't bother to lay down but instead just stood and watched the program. It was a panel discussion involving a well dressed Argenian man and someone who, due to his distinctive markings, was obviously a Forbinite.

"You are always making a big deal over nothing just as an excuse to rattle your swords," the Argenian man said. "The Yellow Road has until recently been the only official mode of transportation between our countries and, as such, essentially neutral ground."

The other panelist fluttered in obvious annoyance and replied in thickly accented Argenian. "If the new aeroport really is a Argenian military base, I'd hardly say that's nothing. It would be the most provocative action taken by a First Citizen since before the Harkite War!" He shook with barely contained anger, growling slightly, and his *grung* almost slid off his head.

"Oh come on," said Chark to the viewer. "Aerosights just wants to open commercial flights to Forbin. Jurita's Witness!"

The first panelist seemed almost pleased to have created such a reaction in his counterpart. "You know full well that the Garnick Agreements preclude any..."

"Come get your brushtik," Junella interrupted, "and turn that silly thing off."

Chark joined his wife at table, and the two of them lay down side by side sharing a common plate. Junella sang a traditional prayer to Jixita reminding them of the virtue of patience. Then they ate in silence for a while, enjoying the course grain brushtik and spicy genic. Chark wrapped his tentacles around a mug of ranan juice bringing it to his lips. "What are your next plans?" he asked his wife.

"The select is meeting Jala. I told you about it."

"Oh yes," Chark said, "another selectia so soon."

Junella fluttered softly. "I know what you mean. It is quick, but we want to be complete as soon as we can."

"Of course." Chark bobbed his head slightly. "It's just, well, we're still getting used

to Jijar and believe me when I say she takes getting used to.”

Junella shook her ears. “I like Jijar. Anyway, you know she’s a specialist in joint disorders so when you get old and creaky you’ll be glad she’s around. Besides they accepted us graciously and I am grateful for that. The least we can do is be gracious in return.”

When Chark later arrived at the base everything seemed the same as any other time. Chark immediately went to the research center. Fanlon had gone home to sleep. Tarmala was still there.

“We should meet,” Chark said to him.

A short time later Tarmala and Brogan were in Chark’s office. Chark liked Brogan. He was also a former Electrodyne employee and, although Chark never worked with him there, they could share stories about life in the industrial electronics world. Despite technically being a captain, Chark felt a greater affinity with Brogan’s civilian background than with the military mindset surrounding the project.

The three engineers gathered around Chark’s table as he clipped a pad of brikken paper in front of him, setting a short pen beside it. He raised his trunk to start the meeting. The other two men reached out and slid their tentacles up and down his trunk to signal their readiness. “Summarize your discovery for us,” he said to Tarmala.

Tarmala was glad to discuss what they had found. He presented his graphs of return delays, altitude and azimuthal slew rates, and reflection strengths. He also talked about Fanlon’s orbital calculations and showed a diagram of the orbit. Chark was impressed. Brogan studied each paper carefully and checked a few of the calculations on his spin-dial.

“It’s in an almost perfectly circular polar orbit,” Tarmala said.

“When it’s overhead, it looks like we’ll be able to track it on several orbits in succession,” Brogan added while looking at the materials.

Chark made a few notes on his pad, the clip holding the paper firmly in place as he

wrote. “We should be ready to make more detailed observations on the next pass.”

“What about the frequency test?” Tarmala asked. Brogan put down the graph he had been studying and both cocked their heads and looked at Chark.

Chark scratched the side of his face just below his left eye slowly. “I think we need to get to the bottom of this first. The research can wait a little. If this... object is something we’re going to pick up regularly we should understand it.”

“What do you think this thing is?” Brogan asked.

“It’s got to be a small moon,” Tarmala said. “They recently discovered Nermia has a moon, so why not Rujar?”

Brogan swayed his head slightly and tilted it to look at Chark with his right eye. “It makes sense. A small moon could have gone unnoticed. Astronomy is a young science, after all.”

Chark tapped the short pen against the edge of the table a few times and then fluttered slightly. “Maybe it’s something the Forbinites launched,” he said suddenly. His comment unleashed a flurry of objections, and he had to thump his trunk against the table to quiet them.

Tarmala was shaking his head, ears folded back. “This thing has to be big to generate a return like we’re seeing. Launching something like that from Rujar would require huge energy. It’s beyond our technology... and Forbin’s too.”

“Are you sure?” Chark asked.

“They’d be lording it over us if they had.”

“Maybe they will.”

Brogan fluttered briefly. “There is no point speculating. Let’s get some more data. I say we try to set up a frequency sweep reflection measurement.”

Chark swayed his head. “Yes, I agree. In the meantime I’ll inform the general. He needs to at least know of what we’ve discovered.”

* * *

Chark's team worked diligently setting up the frequency sweep measurement. It was a technique that had never been tried in an RRRF environment, and it required building some special circuitry. The team forewent paren-sleep and took only brief farth-sleep naps at the base. Junella was not happy.

"It's not good for your health," she told Chark during a phone call.

"I'll be fine, *tinka*, it's just until we get this one experiment done. It's time sensitive so we have to overload."

Although he didn't admit it to his wife, Chark enjoyed the energy and intensity of the work. It reminded him of his younger days at Electrodyne frantically trying to finish projects before their competitors could. Everyone on the team was working seamlessly together, each contributing their part toward a larger whole.

As the time of predicted reacquisition approached, the project got an unexpected visit from General Fotkey. He came in an ordinary car without any fan fare, and with only his personal secretary in his entourage. Chark met the two men in his office. As usual they were standing. Chark wondered if Fotkey ever lay down.

The general was relatively short, with his back just below the level of Chark's trunk ridge, and remarkably thin. He was wearing a casual cloak without any insignia or indication of rank, appearing instead more like a common laborer. His secretary hung back slightly and wrote notes on a brikken board hanging around his neck, his trunk curled back to write on the board as it pressed against his chest.

"I'm so sorry, General," Chark said touching his trunk briefly to the general's left shoulder. "I was in the lab getting ready. I had no idea..."

"It's fine, Captain" the general said. "I wouldn't expect you to be just sitting around the office." Despite his unassuming size and quiet tones, the general's voice was filled with confidence and strength. He was a man used to giving orders that were obeyed without question.

"How was your trip?" Chark asked politely.

“That’s not important,” Fotkey replied. “I wanted to be here when the sweep was done.”

The general paid a visit to the lab where he got a chance to see the work being done in preparation. He kept back, respectful of the engineer’s labors, but he also asked many pointed and probing questions. The atmosphere was tense. It would not have been a good time for the phase locked loop to glitch or the amplifier power supply to sag.

When all was ready Brogan double checked the calculations and Tarmala moved the Ear into position. All they had to do was wait.

“How long will it take?” Fotkey asked.

Chark looked at Brogan but Brogan just shrugged.

“Unknown.”

The arnets ticked by. The air cooling units droned on as usual. Tarmala inspected some meters and then adjusted the Ear slightly. They were blasting into space short bursts of power as great as any television station and then listening for the echo. Everyone waited.

“You do have the delay scan up to maximum, right?” Fanlon said.

“Yes, yes, of course” said Tarmala. He rubbed his tentacles together impatiently.

Suddenly the line on the ’scope jumped. “That’s it!” said Tarmala.

Fanlon looked at the Ear’s positional controls. “It’s were it should be. The orbit hasn’t changed. Our tracking plan will be fine.”

Chark made some adjustments on the frequency scanner to account for the observed signal strength. “We should get four or five arnets of observing time on this pass,” he said. “Let’s get started.”

Fotkey stayed out of the way during the actual measurements, but was anxious for an interpretation after even the first pass. The team gathered in a conference room down the hall from the lab to review the data.

“We don’t have a lot of information yet,” Chark said. “It might take a couple of

passes before we really know what we're dealing with."

Tarmala was calculating spectral transforms, switching back and forth between his pad and his spin-dial. Brogan and Fanlon were double checking his work. Fotkey sipped on a mug of water. "Do what you have to do," he said. "I want results, but I also want them to be right."

Tarmala seemed a little uncertain. "Huh. Are you getting this value?" he asked Brogan, pointing at the paper before him.

Brogan extended his trunk and slid the page closer. He studied it with first his left eye and then his right.

"What is it?" Chark asked.

Brogan passed the paper to Chark. On it were some shocking numbers. Chark felt his heart sink. He tilted his head and looked over at Fotkey. The team looked at him.

"Well..." Chark began. "This is preliminary, but it looks like this object isn't nearly as large as we assumed."

"What does that mean to me?" Fotkey asked.

"With a return signal as strong as this, it means it's highly reflective... like polished metal maybe."

The room fell silent.

"So you're saying it's artificial," Fotkey said.

"Um..." Chark stammered. "It looks that way, yes. We will confirm this result on the next pass."

Fotkey leaned back. He thumped his trunk slightly against the table, thinking. "I'll wait until then."

The data acquired on the next pass confirmed the preliminary result. The object was almost certainly artificial. Chark wrote up a hasty report, and Fotkey left with it immediately. He was taking the information directly to the First Citizen.

"This is classified at level one until you hear otherwise," he told the team. "I'll be in

touch.”

After he left everyone was in shock. “Dind,” Tarmala cursed. “Does this mean war?”

3

Chark's team did their best to ignore the implications of their foreboding discovery. If Forbinite technology had progressed to the point where Forbin could launch objects into orbit, no place in Argenia would be safe. The enemy could choose to rain down from the skies whatever destructive force they wished upon any city in the land. It would be far worse than the effect of aerocars during the Harkite War.

Yet time passed and nothing more developed with the mysterious object. Chark's team was able to observe it routinely and refined their knowledge of its orbit and size. Despite that they received no word from Fotkey or the military office. There was little to do other than resume their RRRF research.

"We have time lines to consider," Chark told them.

Chark did his best to keep his concerns out of his home and away from Junella and the other seleckia, but she could tell he was under stress. She didn't press him for the details but encouraged him to relax. They took long walks around Lungast finally getting to know a little better the city they just recently started calling home. The humid air prompted frequent clouds and rain storms that made the world seem dark and gloomy. Yet Chark found the exercise calming and cathartic. The clouds also made the flashes less dangerous as compared to walking under the cloudless sky to the north.

Eventually the seleckia decided to welcome Jala and held an induction ritual to bring her into the group. As the most recently added member, Junella was obligated to organize the event. She and Chark prepared traditional foods while Jiapita's and Jinjania's

children arranged tables, colored runners, and grass baskets. All seven homes were opened as the families roamed among interconnected houses and hid secret gifts in the empty house Jala and her husband would soon occupy.

The six seleckia conducted the ritual on the stubby lawn in the common space between the houses under the open sky, which thankfully was free of rain. Jala was there too, of course, a stately middle-aged woman with an interest in painting. The rest of the group watched from a discrete distance, lying on temporary seats or on the grass, and listening to the harmonious drone of the selekia singing to their newest member. At the conclusion of the ritual Jiapita raised her trunk and proclaimed for all to hear, “We are seven!” There were loud bleats and yowls, and Jijar’s husband set off some crackers.

One by one all the men and children formally greeted Jala and her husband to the select, brushing trunks over their faces and backs. Their only child, an adult son, was not with them but instead was on duty at the Rangard base in the southern desert and couldn’t get away. Once the formalities were finished the group socialized for the first time as a unified whole. The select had gone without complete membership for much too long.

Junella and Chark had earlier prepared trays of charara leaf and toran root for the adults, and gigat nuts for the children. Chark was in the hanaria of Jijar’s home refilling a tray and talking with two other husbands. All seemed approving of Jala, and Chark admitted that she was a nice addition to the group.

“Don’t let Jijar hear you say that,” one man said to Chark with a shake of his ears. Chark fluttered slightly.

“It could be worse,” said the other man, “at least Jijar is plenty attractive.”

“By the by,” the first man said, “did you hear about that new moon recently discovered?”

Chark tilted his head toward his friend.

“Yes,” replied the other, “I saw something about it on the viewer. It was Jar-what’s-

her-name with the lovely ears.”

“Jarloz,” the first man said.

“What’s this?” asked Chark.

“They discovered a moon going around Rujar...”

“Apparently you can even see it,” interrupted the second man, “I saw an interview with someone in Harlotts, on the night side of the Narlar, and he said it was like a bright star moving steadily across the sky.”

“Probably some high altitude aerocar. Maybe it’s a military experiment. You wouldn’t happen to know anything about that, would you Chark?” he added with a shake of his ears.

Chark fluttered nervously.

“They had an astronomer on the show. He seemed to think it was in orbit.” The second man said.

When Chark returned to the base some time later he intended to call a meeting of his team to discuss public awareness of the so-called moon. Yet before doing that he needed some guidance. He pushed aside the outer door of his office and Jenó, already there, immediately stood up.

“Call Fotkey’s office,” Chark said abruptly.

“That won’t be necessary,” Jenó replied. “I just called you but your wife said you were on the way. The general is waiting for you with someone named Lucastanonia.”

Chark paused. “Waiting now?” Jenó swayed her head toward the inner door. Chark stepped forward both annoyed that there were people in his office without permission and also anxious about what it might mean.

The two men stood when Chark entered. The general was dressed in a semi-formal suit looking more like a business man than a general. He had no entourage. Chark had never met the other man before. He was large with large ears, a long trunk, and physically precisely the opposite of the general. Yet he had a mild mannered, easy going

attitude that seemed to dispel tension whenever he spoke. He introduced himself as “Lucasa” and as “the director of the Office of Alien Affairs.” Chark had never heard of it before.

Chark politely greeted his guests and, after opening his windows, invited them to lay at his meeting table. He pulled a box of tuni from a small drawer and offered it to them. Lucasa took a sniff but Fotkey declined.

Much to Chark’s surprise Lucasa took the lead. “You might think that Parliament only wastes money on bribes, kick backs, and free vacations for government officials,” he said, glancing at Fotkey briefly. “It turns out they also waste money creating silly little departments to deal with nonsense. The Office of Alien Affairs is such a department.”

Chark shook his ears slightly. “I see,” he said, “and you work for this office?”

“I run it.”

Lucasa took another sniff of the tuni. “Basically at the OAA we spend our time thinking about invasions from space. It sounds crazy but, hey, now I’m a celebrity.”

Chark tilted his head to look at both men. Despite Lucasa’s irreverent banter, Fotkey seemed deadly serious. “There is no invasion from space,” Chark said finally.

“Oh?” Lucasa pulled an envelope out of the pouch of his cloak and laid it on the table in front of him.

“What do you know about bird flight, Captain Charkonaless?” he asked.

“It’s not my area.”

Lucasa opened the envelope, deftly holding it in place with one tentacle while sliding some papers out with the others. “Well, it turns out there is a certain gentleman in Harlotts who is a retired pediatrician. Anyway he’s very interested in birds and he likes photographing them in flight.”

Chark tilted his head questioningly. He looked over at Fotkey again but the general’s expression hadn’t changed.

“He’s quite an ingenious fellow and he’s built a camera that can follow a flying bird

and take pictures of it at high magnification. So he decided to try his camera on our new orbiting visitor to see what it would reveal.” Lucasa slid a few photographs over to Chark. “I think you will find them interesting.”

Chark drew the packet toward him and started to page through it.

“Jurita’s Witness,” he said more to himself than to the other men. The first picture was little more than a fuzzy, elongated blob. The second picture was only slightly better. Yet the third picture was amazingly clear. It showed a long, cylindrical object with several thin extensions protruding from the ends. On one end there were clearly four extensions pointing outward toward the corners of a square.

Chark looked up at Lucasa in disbelief. Fotkey said nothing.

“Keep looking,” Lucasa said. “The later pictures were taken on a different orbit and the ship was closer to his position.”

Chark flipped to the next set of pictures. They were larger and clearer than the first. In one all eight extensions, four on each end, were easily visible. The main body of the object also showed some detail. It appeared to be built around a central axis. Along the side were markings of some kind but it wasn’t possible to discern them. They might have been a structure on the side of the object, or maybe even some writing.

“Take a look at these two pictures.” Lucasa pulled two from the pile and put them side by side. “They were taken a couple of arnets apart. You can see this dark spot here... and here... it has moved between the shots.”

“It’s rotating,” Chark said immediately.

“My people think that’s to provide a kind of artificial gravity for its occupants. Based on the rotation rate and the size of the ship, the acceleration at the outer rim is very close to the gravitational force here on Rujar. It seems that our visitors are from a place not unlike here, at least in that respect.”

Chark was stunned. “Visitors? Do you mean Forbinites?”

Lucasa shook his ears vigorously and this time Fotkey finally spoke up. “This thing

is huge. Our intelligence is conclusive: there is no way Forbin could lift something like that to orbit... and certainly not in secret.”

Lucasa reached for the tuni. “So that’s where the Office of Alien Affairs comes in.”

Chark reviewed the pictures again. “This is incredible,” he said at last. He felt a deep sense of relief. Maybe there would be no war after all.

“This could be far worse than the Forbinites,” said Fotkey. “If these creatures are interested in invading there may be nothing we can do to stop them. Their technology is obviously far superior to ours.”

“Yet,” Lucasa said, “if they’re friendly we might be on the verge of a leap in technology such as the dunari have never seen.”

Chark pushed the pictures away and leaned back. He scratched his trunk thoughtfully with his tentacles.

“So we want to talk to them,” Lucasa continued, “we want you to configure the Ear for two-way communication. Do you think it can be done?”

“Sure, I don’t see why not.”

Fotkey leaned forward and slid his trunk onto the table for emphasis. “Understand this is a directive from the First Citizen. Your current research is to take second priority for now and... you will be reporting to Lucastanonia.”

“Oh?”

Lucasa clicked his teeth. “You see? I’m a celebrity.”

“One more thing,” Fotkey said with a soft flutter. “This is no longer classified. That’s also a directive from the First Citizen.”

Lucasa shook his ears and interrupted. “It helps that our pediatrician friend has already sold his pictures to *Moment by Moment*.”

Fotkey continued, “An official announcement will be forthcoming. The First Citizen plans to contact the Forbin Prefect and discuss a way of presenting some kind of unified Rujar to these... visitors.”

As the men got up to leave Lucasa clasped Chark's trunk again. "It will be a pleasure working with you, Captain Charkonaless," he said.

"Just call me Chark."

5

Jernumia trotted down Following Street Darnar with the sun at her back, head up, ears out slightly, but not excessively, and her trunk slightly curled. She was wearing a stylish business cloak in orange and red with black leggings on her rear legs. Over her left shoulder and across her back she wore an expensive belt that was symbolic of her professional status and yet appropriately feminine.

With over two million people, Varnok, the capital of Argenia, was the largest city on Rujar. Jernumia worked in the New City where the buildings were grand, modern, and beautiful. The cross streets were wide so buildings of several stories could be constructed without shading each other. Their sunward walls gleamed with glass windows while their arched shade walls were covered with artistic patterns or climbing vines. Rigat trees lined many of the streets. Their tubular leaves whistled in the ever-present Nermella and provided a natural counter-point to the sounds of the city. In the New City many of the streets had restricted vehicle access and people moved freely down the middle of them as if they were great promenades.

To a casual observer nothing was out of the ordinary. Despite the shocking news that the dunari were not alone in the universe, the people of Varnok mostly went about their business as usual, just as Jernumia was doing. She knew there had been a recent gathering on the Parliamentary Yellow of fearful people shouting demands at their government, just as there had been similar gatherings all across the country. Yet in the New City nobody seemed to care.

Jernumia came to the corner of Cross Street Hillart. She paused briefly to look up at the Tower of Regents, several streets sunward, its sharp spike penetrating the red disk of the sun, now clear of spots. The tower always seemed symbolic to her of the dunari's rising dominance over their world and yet at that moment it was more ironic than inspiring. A low fluttering growl brought her attention back to her immediate surroundings as an irritated pedestrian pushed past. Stopping too long on the busy streets wasn't advised.

She cantered across Darnar and continued along Hillart under a row of trees. The tall buildings shielded the way from the Nermella and the air was unnaturally calm. Just ahead she saw a news truck parked in a service road between two buildings. On the sidewalk stood a reporter apparently interviewing passersby.

Jernumia stopped short and considered moving to the other side of Hillart to avoid them. Then she decided to just walk by as usual. The team was busy with a young couple and they would no doubt just ignore her. Of course she wasn't so lucky.

"Now here is a professional woman," the reporter said to her just as the couple moved on. The camera aide swung around behind the reporter and pointed the camera at Jernumia.

"I don't have any time for an interview," Jernumia said curtly.

"This will only take a moment. Just a couple questions."

Jernumia sighed.

"Where do you work?" the reporter asked, extending his trunk toward her, tentacles wrapped around a microphone.

She hesitated. "I work at the legal office of Aratok."

The reporter clicked his teeth and glanced back at the camera aide. "Oh, I see. Very good. What do you do there?"

"I'm a prosecuting adviser," she replied. "I believe that was two questions, enjoy the moment."

Jernumia started to move on but the reporter shook his ears and stepped slightly in front of her. “I can see from your answers that you are, indeed, a lawyer,” he said. “Just one question... do you think the arrival of the Visitors will be good or bad for our world?”

“I certainly do not know,” said Jernumia, “now if you please I must get on.”

The reporter bobbed his head respectfully and stepped aside, moving on to the next person who stumbled into his trap. Relieved, Jernumia continued down Hillart. She only went a few paces when she heard a hoarse voice that stood out clearly against the din of the city.

“They is coming for you.”

She stopped abruptly. The voice had come from a old, broken man lying on the ground beside a wall. He had a few nondescript trinkets spread out in front of him. He lifted his trunk and pointed all four of his tentacles right at Jernumia.

“They is coming for you.”

He had an intensity in his eyes that sent a shiver down her back. Instinctively she held her pouch tightly.

Someone bumped into her from behind and walked quickly around her. The old man pointed at the newcomer as he walked away and shouted out, “They is coming for you!” Jernumia watched the man momentarily and then, with a sway of her head, continued walking. She heard the old man calling out to others, his voice fading into the sounds of the city.

The Aratok Agency was at the corner of Hillart and Following Street Varsynth. It was located in an imposing stone building fully eight stories tall. At one time, not that long ago, it was the tallest building in Varnok and maybe even the world. Jernumia trotted up the ramps, into the main entrance, and walked down the interior mall, flanked by sunward windows, to the elevators. From there she ascended four floors, looking out the elevator window down Hillart toward Parliament and the river beyond.

She found her office and took off her pouch but she was only there a few moments before Haratol, her court leader, burst in. "It's about time you got here," he said, "don't you have a standard clock?"

Jernumia did not reply.

"Do you have the summary, at least?"

"Yes, yes." She rummaged in her pouch and pulled out a paper sleeve. From there she took out a report, neatly typed, and gave it to Haratol. He cradled the paper in his trunk and flipped the pages with his tentacles as he reviewed it.

"I'll read this later, but what's the finding?"

"In Runion 52 of Arnoxium 19, there was a case in Yartagard where the Bank Reform Act was applied *ax noforia*."

"Oh?"

"The defense argued that full knowledge of the act had to be demonstrated and could not be presumed, but because the act is a matter of public record that argument slipped."

"Yes, I see that here," Haratol said as he scanned over one of the pages with his right eye.

"There's another similar case about 50 runion before..."

"Good work," Haratol said.

Jernumia bobbed her head.

Haratol turned to walk away and she called out after him. "Do you need me there?"

"No, I don't think so," he said without turning around. "You've given me what I need."

Jernumia returned to her table. She knelt down behind it and unpacked the rest of the papers from her pouch, placing each carefully into its proper tray or drawer. When she was finished she turned and looked out the window behind her. The sun hung over the city as always, sending its ruddy light into her space. She glanced up at the sky but aside from a few wispy clouds against the yellow-green background there was nothing to

see. People say everything is going to be different now, she thought, but nothing seemed different to her.

* * *

Tuskara was not about to let a garjost stump be his undoing. With grim determination he picked up his ax and started hacking at the roots yet again. Chips flew but somehow he never seemed to make much progress. He pulled on the stump with his trunk. He kicked at it with his back feet. He threw himself against it. Yet the stubborn piece of wood did not budge.

“Dind,” he swore under his breath. “*Alnaron bi yeceit!*”

“If you had a sharp ax it might help,” his wife called out from the open breezeway of their greenstone home. He had no idea how long she had been watching him.

“It’s sharp,” Tusk objected. He held up the ax as if to show Jael the edge. “I think it’s sharp,” he added to himself. He ran the blade carefully over his exposed left front leg. It didn’t feel very sharp.

“And shouldn’t you be wearing a hat?” Jael continued. “What if there’s a flash?”

Tusk fluttered slightly and resumed hacking at the stump until Jael gave up and went back inside. Several long moments passed and he finally started making some progress when he heard the clang of the lifter as it stopped along the main road. He clicked his teeth and leaned the ax up against the stump. He was panting from the exertion and grateful for the break. He held his ears open widely to catch the cooling Nermella while he waited for his children to come up the lane.

Mart trotted excitedly toward his father to see what he was doing. Tusk wrapped his trunk around Mart’s shoulders and stroked his face with his tentacles. Jinna just huffed and stomped into the house with barely a word.

“What’s with her?” Tusk asked his son.

“They were picking on her ’cause of her markings,” Mart said.

“Oh, I see.”

Tusk and Mart went inside to find Jinna arguing with her mother. “Why do *I* have to be the one with these markings.” She motioned with her trunk over her face and front legs. The distinctive bands of her Forbinite ancestors were clearly, even if only faintly visible. “I wish I looked like you, Mom, and not like Dad.”

“Jinna,” her mother started, “you’re a lovely girl. You look. . .”

“I hate it. I hate it. I hate it,” Jinna chanted. “Mart doesn’t even have these. . . things.” She left in frustration, stomping up the ramp to the upper overlook in disgust.

Jael walked to the bottom of the ramp and tilted her head to glare after her petulant daughter with her left eye. “Just be in a better mood when it’s time to do prayers.”

“She’ll be fine,” Tusk said.

At dinner the family crowded around the small table in the hanaria overlooking the street. Theirs was one of seven older homes in various states of disrepair that were gathered in a circle. The common yard was small yet two families lounged on the weedy brikken grass enjoying the moment. Jael waved her trunk up and down out the window and her two seleckia returned the greeting.

Jinna had calmed down but she didn’t say much and picked at her food. Mart, as usual, was the chatterbox.

“We talked about the Visitors.”

“Oh?” Tusk replied as he put his sarnok pod into the pod cracker.

“Yeah, we talked about why they’re here.”

“What do you think?”

Mart shrugged. Then with a loud click he said, “Maybe they can take away Jinna’s markings.”

Jinna put down her tongs with a clatter and glared at him with her angry eye. “Maybe they’ll eat your brains.”

“Now, now you two,” said Jael. “Jinna. . . you’re the oldest. Don’t let him get to

you.”

“Mom!”

Jael ignored her daughter and picked another pod from the center plate instead. “It’s just as well they haven’t done anything all this time,” she said, “whatever they want I’m sure it’s not for our benefit.”

“They’re probably just trying to figure us out,” Tusk replied.

Jael snorted slightly. “They’d be better off staying away from us. I don’t see why the First Citizen had to meet with that Forbinite about it.”

“It’s good to see Garnick being used for something positive for a change,” Tusk said.

After meal and prayers, when the children were quiet, Jael spent some time working the family budget.

“You need to get a job, Tusk” she said. “My income’s not enough. Even with the seleckia helping we’ll have trouble paying our share of the rent.”

“I know *tinka*,” Tusk said. “I saw an opening at the trans-school teaching Rabik. I was thinking of applying for it.”

Jael folded her ears close to her head. “You always say these things but you never do them. Ever since you lost your job with the military you’ve been skulking around. Apply for that position now.” She pushed the papers aside and put her trunk heavily on the table, leaning her head against her tentacles.

Tusk wrapped his trunk around his wife’s shoulders and she leaned against him. She shuddered slightly as he caressed her ears. “I will go as soon as I’ve had a bit of sleep,” Tusk said. Jael snorted.

It was several sleeps and more prodding from his wife, before Tusk finally found himself lying in front of the school master’s desk. The short, elderly man flipped through his application with well-creased tentacles. Tusk could hear a group of children chanting vowel sounds in the room next door using the same rhythm he learned when he was in school.

“You have an impressive work history,” the school master said finally.

Tusk bobbed his head. “I learned the basics of Rabik as a child while watching television, but I studied it extensively when I was a linguistics student.”

The school master eyed Tusk carefully. Tusk shifted uncomfortably. The chant next door had stopped.

“You might be over qualified.”

Tusk swayed his head briefly. “I think I could give your students an exceptional course, and I would welcome the opportunity to work with our young people.”

The school master flipped to Tusk’s references. “It says here you had a level two military clearance. It also says you were released because of a problem with charara leaf.”

“Yes,” Tusk replied, “I went through a rehabilitation program. I can assure you that is no longer a problem. There’s a certificate from the program on the last page.”

The school master flipped to the back of Tusk’s application and pretended to look at the final sheet, holding the paper close to his right eye. After a moment he looked at Tusk over the edge of the page. He returned the application. “I’m sorry,” he said. “I just don’t think you’re right for us.”

“Of course,” Tusk said softly. He took the papers and returned them to his pouch. Standing up he touched the school master’s shoulder briefly. “Thank you for your time.”

On his way out of the building he crumpled the application in his tentacles and threw it into a wastebasket beside the school entrance. “*gar’k tic narloblia*” he cursed softly in Garlonick.

Tusk stood by himself on the lifter on the way home, his tentacles wrapped around the hook. Nobody stood near him because of his markings. He was used to that. He looked out the window at all the fine houses and businesses of Pilkity and sighed. He hadn’t had a proper job in many runion. Would they have to move to, say, Nargon in the north? That was a much cheaper area to live. Jael would have to find a new select.

She'd hate the idea and so would the kids.

A large sign in the window of a shop caught Tusk's eye. He cocked his head slightly to read it. "You're not *my* visitors!" the sign cried out. He turned away and tightened his grip on the hook.

When Tusk got off the lifter the Nermella gusted and picked up some sand in the street, blowing it across his face. The leaflets of the trees rattled in the wind and the rigat tubes whistled softly. Tusk slowly walked down the lane to the circle of houses he called home.

Jinna was lying on the ramp. "How did it go?" she asked. Tusk shrugged. "You didn't get it, did you?"

"No."

"That's pathetic. How could you not get that job? Did you even apply?"

"Jinna. . ."

"I hate this family," she said going inside.

* * *

The Knoll was on the east side of the Marlock campus. It was a peaceful escape for the students from the rigors of their studies and from the bustling city of Argenhost. From the top of the Knoll, between the short larzipia trees one could see the financial district where several tall, three story buildings rose above Cross Street Warlash.

The Nermella was whistling in the rigat leaves as Colty made his way up the well worn path. He reached the bend where the paved walkway curved around a large rock. Instead of following it toward the lookout at the top of the Knoll, he continued across the grass and through some bushes. There, in an out of the way spot, was a surprisingly well groomed clearing with a small monument to the college's founder. Jingas was there waiting for him, lying on the ground with her pouch beside her.

"I thought you got lost," she said.

“Sorry I’m late,” Colty replied with a bob. “It took longer to submit my final paper-work than I expected.”

Jingas patted the ground invitingly and Colty lay down next to her. She was lovely. Her dark eyes and large, beautiful ears were mesmerizing. She had a delicate, feminine trunk, and a slender body. She had taken off her foot pads and her toe shields were meticulously cut to perfect points. Colty clicked his teeth and she did the same in response.

“You look very nice today,” he said.

Jingas spread her ears. “You flatter me too much.”

She opened her pouch and took out some plates and food. “I brought some pressed flannen with crocker sauce,” she said, “and some ligas leaves, of course.”

“Oh, ligas, sounds great,” Colty said.

Colty took a plate from her and held it with his tentacles while she put a large, slightly cooked leaf on it. He waited while she put a leaf on her plate as well. Then she held up the plate and he did the same. “We thank Jurita for this food,” she said softly. She tilted her head so her right eye faced the sky as she spoke the traditional prayer but Colty couldn’t resist looking at her instead. The two started to eat, holding the ligas in their tentacles and nibbling on the tough but flavorful leaves.

“I know the department is having a thing for you, but I thought it would be nicer for us to have our own thing.”

“Much nicer,” Colty agreed. He stretched out his back legs to relax.

“So, Parnon, huh?” Jingas said with a click of her teeth. She put the containers of crocker and flannen between them. “That’s very impressive.”

“I was surprised. I assumed I had no chance with them. You know I applied on a whim. Parnon can choose the best of the best for its faculty, and I’m just a fresh graduate with only a few minor papers to my name.”

Jingas tossed her ears and fluttered slightly. “You are the best of the best,” she said,

“you got that award for your paper... what was it again?”

“Self-reflective mono-sequences as higher dimensional number folds.”

“You see what I mean?” Jingas said, “That stuff is pretty incomprehensible to regular people like me.”

Colty took a little crocker and flannen to spread on his leaf. “It’s not, really. It’s just a cute curiosity. Nothing more.”

“You’ll do fine at Parnon,” Jingas clicked. “A place like this,” she added with a nod toward campus, “would bore you before long.”

“Maybe. I only hope I can live up to the expectations. I’ll have a lot of work to do before I can get full status. More research, more papers, more conferences, not to mention teaching.”

“You love it.”

Colty looked at Jingas as she chewed her leaf. He almost said, “I love you,” but held himself back. He wasn’t sure why.

They finished their leaves and lay back on the grass comfortably to rest. It can take some time to digest ligas, even with the flannen, and it was best not to jump up too soon after eating. The sky was beautifully clear and green without a cloud visible. The Nermella, slowed to a gentle breeze by the forest and warmed by the bright sun, played over their bodies and brought fragrant smells to their nostrils.

“It’s hard to believe we are in the middle of Argenhost,” Jingas said finally. She paused for a moment. The sounds of traffic could be heard faintly on the wind. “It’s like the city is a million karnons away.”

Colty stared into the sky pensively with his left eye.

Jingas reached out her trunk and touched his leg with one tentacle. “What are you thinking about?”

Colty paused uncertainly. “The Visitors.”

“Them again?” She pulled her trunk back and folded her ears.

“They circle around up there looking down at us, never doing anything. They’re studying us like bugs under glass.”

Jingas turned her head to look upward as if she expected to see the alien ship passing over Argenhost at that very moment. “At least they are letting us get on with our lives.”

Colty just watched the sky and Jingas slid over to lean against him. The two lay quietly together for a time and then Jingas sighed. She sat up on her front knees with her legs folded under her and regarded Colty closely.

“Yes?” he asked.

She bobbed her head a couple times. “Colty, I want you to know that I’m not going to ask you to marry me.”

Colty’s ears folded back and he turned toward her. “I . . .”

“I know, I know, you weren’t expecting that.” She bobbed her head again. “I think you are though.”

“Um . . .”

“I’m not going to because, well, because right now you love your work too much. I don’t want to distract you.”

Colty felt his heart sink. “You’re not a distraction.”

“I would be. I would have to be. I can’t be the wife of a man like you. I would take too much from you.”

“Jingas . . .”

“No, let me finish.” She took a breath. “I think you’re very special, but you work very hard, you travel a lot, and you are totally focused on your math. There is nothing wrong with any of that. It’s good. It’s right. What I need to do now, before you go to Parnon, is set you free.”

Colty got up on his front knees as well. “Jingas, I really like you. I’m sure we could work it out.”

She shook her head. “We’ve had some good times, Colty, and I’m really, really happy

I got to know you. But when you leave for Parnon I think that should be the end for us. I'm sorry."

Colty turned his head away and curled his trunk. "I'm sorry too," he said.

"You're a good guy. I know you will meet the right girl eventually."

7

Modifying the Ear to send modulated audio messages instead of RRRF pulses had been very easy. The team decided to use a simple amplitude modulation scheme on the idea that it was so basic that it could certainly be decoded by the Visitors without prior arrangement. The Office of Alien Affairs had already worked through some scenarios and the team quickly agreed to use the hyperfine hydrogen emission frequency as the carrier.

The tricky part had been figuring out what to say. After much debate between Chark's team and Lucasa's office it was finally agreed to first send a beacon in an effort to get the Visitors' attention. The beacon would consist of sets of pulses with a prime number of pulses in each set: two, then three, then five, and so forth. Such a signal, it was felt, would be unusual enough to stand out against the background din of dunari radio traffic, and also be unmistakably intended for the Visitors. Once the Visitors replied, if they did, they would take it from there.

Most of the time RRRF research continued at the Ear as usual. However, each time when the Visitors' orbit passed over Lungast the focus shifted to establishing communication with them. At first Lucasa was always there, but as time passed without any response from above, Lucasa's busy schedule started taking priority and he left the regular sessions entirely to Chark's team.

Brogan argued that they should try some other approaches: different frequencies, different modulation schemes, even a different message. "Maybe the Visitors are mon-

itoring aerocar control channels,” he suggested, “and will never listen to what we’re broadcasting now no matter how long we do it.”

Yet Chark felt consistency was important. “If we dance around the spectrum we’ll be more likely to miss each other. If I was them I’d want to make a complete survey of all frequencies. They’ll find our signal sooner or later.”

“Maybe they just don’t want to talk to us,” Fanlon said.

One particular time, much like any other, the team gathered together to listen. They had dedicated a small corner of the lab for this purpose, having moved a few comfortable seats in from the lounge. Brogan and Tarmala tried to guess the odds that they’d hear a response. Chark and Fanlon just relaxed, taking the moment as a break in their RRRF work.

Tarmala configured the Ear and quickly picked up the Visitor ship. He was practiced at it so it was easy. Brogan changed a few plugs and threw a few switches. The familiar sounds of their transmission filled the room. After the final pulse was sent the circuitry automatically switched to listening mode and the soft sound of static washed over them.

Everyone waited quietly, listening to the hypnotic hiss. Brogan leaned over to Chark. “When are you and Junella going to take that vacation?”

Suddenly the static disappeared and was replaced with shocking silence.

“Is something wrong with the listener?” Chark asked. Tarmala was already twisted around and looking at the equipment over his head.

“It’s a carrier!”

Suddenly a strange, alien voice came from the speaker. It spoke slowly, deliberately, and with a eerie, hissing screech.

“Weee requessst meeeting... at Garnick... hour 75... thiss run-ion, Argen-ian massster tie-em.”

“Jurita’s Witness...” Brogan said, his voice a whisper.

Chark sat up and anxiously pointed toward the tape recorder. “Are we recording

this?"

"Yes, yes," said Brogan quickly glancing at the device, "definitely."

Fanlon checked the Ear's slew path and made sure the plotter was working as well. Everyone crowded around the speaker.

"Weee requeusst meeeting... at Garnick... hour 75... thiss run-ion, Argen-ian massster tie-em."

"They're repeating the message," said Chark. "They want to be sure we get it. Can you configure the Ear for transmission again?"

Brogan objected, "we might miss something."

"We have to ACK."

"Weee requeusst meeeting... at Garnick... hour 75... thiss run-ion, Argen-ian massster tie-em."

Tarmala quickly went to the transmitter panel and switched a few plugs. The alien screech went silent. He threw some switches and plugged in a microphone.

"They'll be below the horizon soon," Fanlon said.

Tarmala passed the mic to Chark. "You're on the air Captain Charkonaless."

Chark held the mic to his lips, wrapping his tentacles tightly around it. He paused uncertainly and then spoke. "We hear your message and understand it." The team looked at him intently. "We hear your message and understand it." Chark paused again and then with a shrug repeated his message one more time.

"That's it," said Fanlon. "They're below the horizon."

Everyone started breathing again. "Okay," Chark said. "Okay." He rubbed his trunk ridge with his tentacles. "Get Lucasa on the phone."

* * *

The grass was lush and the gloranga flowers were in bloom. Tusk was lounging in the back yard flipping through the help wanted section of the community docket. He

wondered if he should apply for the waiter position at the Wrap-and-Go down the street. It was a humiliating thought.

He looked up at the clouds, rubinum-red, surrounded by a deep orange-green sky. The world seemed to glow in a golden light filtered through the dusty winds high above. The Nermella was little more than a gentle breeze of summer air, and despite Tusk's troubled thoughts all was at peace. After a few moments he got up and took a watering can over to the garden. Mart came out of the house to help, sent there by his mother. Tusk was glad to have him.

When they finished Tusk put the tools away, picked up the docket, and went back inside. Jinna and Jael were talking and when Jinna saw him she ran over to him.

"Dad," she said, "my friends and I want to start a seleck. Is that okay?"

"A seleck?" Tusk asked. He glanced over at Jael but she just shrugged in that helpless way parents do when their children just won't let something go.

"I think you are a little young for that."

"Lots of girls are doing it now. And it would be really good for me. It could help me get better grades."

Tusk shook his ears. "Well, that sounds good."

"So I can?"

"Um... well, I think your mother and I should talk about it."

The phone chimed and Jael stepped over to answer it.

"It would just be a starter seleck," Jinna persisted. "To help me between now and when I join a real seleck later."

"A starter seleck," Tusk said clicking his teeth.

"Tusk?" It was Jael. She held the phone in her trunk with a concerned look on her face. "There's a government person on the phone for you. It's someone named Lucastanonia."

* * *

Chark waited in the central room with his bag beside the door while Junella and Jiapita bustled in the hanaria. He hadn't traveled without his wife since the military had flown him down to Lungast to inspect possible locations for the Ear. He didn't like traveling without her now. She didn't like it either.

"Please be careful," she said standing in the arched opening of the hanaria. "Garnick is so far and we don't know what these Visitors are going to do."

"Don't worry," Jiapita's voice came from behind, "he'll be surrounded by the military."

"Why do you have to be there, anyway?"

"Lucasa trusts me," Chark said.

Junella fluttered slightly and tried to distract herself by helping Jiapita. Finally Chark heard a car pull up in the lane. It had the distinctive rattle and deep moaning engine of a military vehicle. Junella went to the door.

"I'm here for Captain Charkonaless," a young voice said.

"Yes, yes," Chark said getting up. Junella reached out for her husband as he gathered his bag. They crossed trunks, and then again. She shook slightly. Chark tapped her and then Jiapita as well.

"Why Garnick?" Junella asked.

"I don't know, *tinka*. Maybe they like the heat."

The young driver picked up Chark's bag and slung it over his back. Then the two of them walked down the stone path toward the waiting vehicle. As they drove off, Chark saw his wife standing in the doorway waving her trunk with Jiapita behind her. He put his tentacles against the window and wondered what the world would be like when he returned.

The first part of Chark's journey was an aerocar flight from Lungast to Doggenbrash. Chark had been on an aerocar only once before, and he hadn't enjoyed the experience very much. That aerocar had been cramped and noisy, and the ride was rough and bumpy. It had made him sick. So it was with trepidation that he walked out onto the

landing pavement at the Lungast base. Yet the aerocar before him was not like the little bi-wing that he had been in before. Instead it was new, modern, and big. It had two fixed, swept back wings and a tall tail.

“Captain Charkonaless, sir,” came the greeting from the pilot as Chark stepped on board. He saw not one cramped little seat as he was expecting, but rather four spacious seats, two on each side of the compartment.

“I’m impressed. Who else is joining us?”

“You must be a VIP,” the pilot replied. “It’s just you today, sir.”

Chark settled down in one of the seats and looked out the window while the pilot did his pre-flight check. The sun slanted into his right eye, its ruddy light cutting across his face and splashing onto the opposite side of the compartment. In the distance, past the runways and past the fence around the base, Chark could see the roof tops of Lungast. He saw the trees blowing in the Nermella, and he saw a bird flying from one branch to the next, probably for nuts. Chark sighed. Where he was going there were no trees, no birds, and no nuts.

“All set,” the pilot said. “Get ready, sir.” Chark sat up straight and adjusted his restraining straps while the aerocar rolled out onto the runway, facing the Nermella to get some air speed for free.

The take off was not nearly the ordeal Chark had feared. The new aerocar was obviously more powerful and could get into the air with less struggle than the one Chark had been on before. He watched with fascination as the streets and buildings of Lungast rushed under him. They were climbing steadily and as they did Chark could see more and more.

“How you doing, sir?” the pilot called out loudly to be heard over the roar of the engines.

“I’m fine,” Chark replied in kind. It was noisy but the ride was smooth and he didn’t feel queasy at all. “This is a nice bird.”

Chark settled down for the flight. At first he spent most of his time looking out the window. It's not everyday when one sees Rujar from the air. The land seemed so lush. There was yellow everywhere you looked. The towns and roads criss-crossed an endless plain of forests and fields. They flew over the Zagenhos River. He could see the twisting banks rimmed with tall trees, looking like little sticks. Far away, against distant clouds, he imagined that he could just see the wall of night. The Narlar, the boundary between everlasting day and everlasting darkness, was not far from Lungast.

“Sir... the Argenian Sea.”

Chark looked down and there he could see the shore of the great sea of Argenia. Floating carelessly were some boats and beside them a beach. Yet soon they passed over all that and were flying across the open water. It was not entirely featureless. The dark yellow-red color varied from place to place depending, Chark supposed, on the concentration of microscopic organisms living there.

They flew for many karnons over the sea. The distant shore was barely visible as a murky line against the horizon when finally the opposite shore passed under them. Chark breathed a sigh of relief. He felt more comfortable knowing there was dry land under his feet, even if it was far below.

Eventually the aerocar turned more directly west out over dryer regions on its way toward Doggenbrash. With the sun in Chark's face and the Narlar at his back the feeling that he was heading for an historic moment was strong. He read for a while, and then distracted himself with a puzzle. For a time he dozed in farth-sleep and even some paren-sleep. When he awoke he could see they were over the Northern Plains. The ground was flat and speckled with hargbush and riven weed. Chark was glad to see it. For one thing it meant they were getting close to their destination. Yet also this was the land where he grew up.

The pilot was on the radio chattering with flight control in Doggenbrash. “You'd best buckle up again, sir,” he said. He cocked his head toward the slowly looming city in

front of them.

When Chark finally got off the aerocar he breathed deeply. The air was dry and fresh. He really did prefer it to the dank, moist air around Lungast. He had time to wander around a little before starting the next leg of his journey. He couldn't resist getting some mosen cake. It had been so long since he had any.

When he returned to the base he was greeted by a military officer. Beside him was a man of obvious Forbin descent. Chark nervously wondered what it was about.

"I'd like to introduce you to Tuskara," the officer said. Chark politely, even if reluctantly, clasped trunks with the Forbinite. "This is Captain Charkonaless," the officer continued his introductions.

"We are well met Captain," Tusk said, tilting his head slightly.

"What's going on?" Chark asked.

"I'm a language guy," Tusk said. "Apparently they think that might be useful."

"Are they expecting the Visitors to be speaking Forbin?"

Tusk snorted.

The aerocar to Garnick was specially modify to endure the heat of the deep day. The engine design had to compensate for the high temperature air intake. The top surface of the wings and fuselage were coated with reflective paint. It was also much less comfortable than the aerocar Chark took to Doggenbrash. There was barely space for the pilot along with all the supplies that were packed into the cabin. The military was not about to waste a flight to Garnick by just carrying people. So much for being a VIP, Chark thought.

The two men pushed their bags into a cranny and squeezed into the seats directly behind the pilot. Chark was not one to complain but he didn't like being in such close quarters with the Forbinite. Fortunately his seat was a little forward so he could talk to the pilot more easily.

The take off was terrifically bumpy; the complete opposite of Chark's experience at

Lungast. He started to wonder if the aerocar was breaking up just as it finally lifted off the runway. The pilot leaned back slightly and clicked his teeth. “The rubber in the tires is designed for the landing pavements of Garnick.”

The flight was uneventful but uncomfortable. Chark avoided touching Tusk. Instead he made small talk with the pilot. Tusk spent most of the time looking intently out the window, and not paying attention to anyone.

The flat plains changed to rolling hills covered with brikken grass, and they flew over karnons and karnons of open grassland. It was the ancestral home of the dunari people. They had evolved on those grasslands, in the far distance past, and small, trunked quadruped animals still grazed it. Yet as they flew, the brikken grass became progressively patchy, struggling more and more to find a living in the increasingly unforgiving desert.

Gradually the hills became larger and more rugged. Serrated crags reached toward the sky. The pilot had to climb high to stay a safe distance above the rising mountains. Chark glanced over at his traveling companion but Tusk appeared to be in farth-sleep at least.

“We’ll catch the Nermellum on the other side of these mountains,” the pilot explained. “It makes the trip a little faster.”

The frigid Nermellum wind, blowing from the deep night, passed over Rujar’s poles into the day. As the Nermellum made its way across the face of Rujar, it would provide an extra boost to their aerocar and cool them. On the ground the Nermellum moderated the heat enough for the brikken grass to grow. Yet at Garnick there would be no relief and no grass.

Garnick was located at the northern edge of the great Barlok Expanse. Directly beneath the perpetual sun, Barlok was a searing wilderness long thought to be devoid of life. It wasn’t until aerocars made exploration of Barlok feasible when strange life forms were found there, living in miniature ecosystems entirely contained in the shade of an

overhanging rock, isolated from each other by the blistering sands.

Garnick was built many runion ago by Argenia, ostensibly as a military base for training cadets in deep day survival. Everyone knew that it was really a way for Argenia to assert its dominance, some say arrogance, by creating an outpost so far forward that it was nearly on the doorstep of Forbin. Neither side ever had any designs on the wasteland that was Barlok, but the existence of an Argenian base there was a long standing thorn in the Forbin hide. Although the strategic importance of Garnick was questionable, the symbolic significance of it loomed large. During the Harkite War Garnick changed sides many times as it was taken and retaken, ultimately ending up under Argenian control again as per the treaty of Visnik.

Chark pondered why the Visitors would choose such a spot for a first meeting. Was it as he suggested to Junella? Were they more accustomed to the scorching heat of the Rujaran deep day? He felt a certain anxiety. How strange would the Visitors be? It was all very well to talk abstractly about meeting advanced aliens but when it came down to actually doing it, Chark was having second thoughts.

“The Road to Hell,” the pilot said suddenly. Chark looked up and saw him pointing toward the ground. Tusk also stirred and looked out the window. Scrawling across the barren rocks they could see the faint remains of a road. Here and there it was covered by wind blown sands but in other places it was clear.

Garnick was built before aerocars existed. Incredibly a road was cut across the harsh desert for thousands of karnons to connect the outpost with the rest of Argenian civilization. Chark tried to imagine what it must have been like to be stationed at Garnick at that time, knowing your only way home was that thin, narrow road scratched into the shifting sands.

“Are you married, Captain?” Tusk suddenly asked.

“Huh? Ah, yes,” Chark replied.

“Kids?”

Chark shifted a bit in his seat. “No we don’t have any children. We had a son, but he died from Puget’s Disease.”

“Oh, I’m sorry.”

Chark wasn’t sure why he told the Forbinite that. He didn’t normally discuss Chartik with strangers. Maybe it was something about being so far from everything, packed into a small, hot aerocar cabin together.

Tusk pulled a wallet from his pouch. He took out a couple of pictures. “My kids,” he said. “This is Mart... and here is Jinna.”

Chark looked at the pictures with some interest. They seemed like ordinary children and the boy didn’t have a trace of Forbinite markings.

“This is my wife, Jael,” Tusk said. “We live in a little town called Pilkity, not far from the Sea of Organite. Jinna likes to go swimming there.”

“Swimming?” Chark said with surprise. “She’s an adventurous girl.”

Tusk seemed pleased.

Finally, after what felt like an eternity in the air, they came to Garnick. Chark tried to stretch his legs a little in anticipation of finally getting out of his seat but there was no room.

As they descended the pilot had to circle around to approach the proper runway, giving them a good view of the base. It didn’t look like much. There was one main building of single story brick construction. There were a couple of smaller out buildings, several hangers, and a building attached to a large tower bristling with radio antenna.

“Buckle up,” the pilot said as he started his final approach. “We’ll be on the ground shortly.”

The landing wasn’t as shocking as the take off had been. The heat of the deep day had softened the tires just enough for them to absorb the worst of the bumps. Yet the runway was short and Chark felt nervous that they wouldn’t be able to stop in time. Somehow they managed it.

After touching down the pilot taxied toward one of the hanger areas. There were some people standing on the landing pavement waiting for their arrival. Both Tusk and Chark stirred impatiently. The pavement might have been hot enough to boil water, but anything seemed better than being stuck in that aerocar for even another moment. When they finally parked and the side door swung open, Chark felt a blast of baking heat fill the cabin. Standing there wearing reflective clothing was Lucasa.

“Welcome to Garnick!”

11

Chark was briefed by Lucasa in a small room at the corner of the main building. The windows were covered with insulated shades and the room was lit entirely with artificial lights. At Garnick you did what you could to keep the sun out. Also there was no conference table nor any seats. Such comforts took up valuable space for minimal return. The room was utterly barren.

“You should know,” Lucasa said, “that the Forbinites have been invited to the party. We are expecting a delegation to arrive within the hour.”

“Forbinites! What about that man who flew in with me?”

“You mean Tusk? His father was a Forbinite defector during the Harkite War. He’s worked for Fotkey before. He’s been called the most brilliant linguist in Argenia—maybe even in the world.”

“So he’s one of us?”

Lucasa swayed his head. “You provide the channel over which we can communicate with these creatures. I want Tusk to help us figure out how to actually talk to them.”

Chark was distracted. “How did the Forbinites find out about this meeting?”

“The Visitors contacted them as well. After that they are here on the good graces of the First Citizen.”

As part of the Argenian delegation Chark was on hand when the Forbinite aerocar arrived. Lucasa, Tusk, and General Fotkey, as well as some military police guards, were also present. As was traditional they met the arrivals on the landing pavement even

under the broiling sun. The reflective clothing helped, but it seemed to Chark that every breath burned his lung.

The Forbinites were larger than the Argenians, even larger than Lucasa, and had bold markings on their faces, trunks, and legs. The precise pattern was unique for each individual, but always symmetric from side to side. Their cloaks were fitted closely to their bodies covering even their undersides. Each wore a traditional *grung* on their head, a small cloth cap that clipped to their ears. Their clothing was mostly all yellow gold and decorated with the serpentine motif that symbolized their country.

Chark felt intimidated by their size and the atmosphere was tense as they approached. The guards stood at ready, trained to be alert in the presence of the enemy. One of the Forbinites stepped forward approaching Lucasa. Chark could see that it was a woman.

“I am Kenellio,” she said in Argenian with a heavy accent, “the special High Council appointee to the alien situation.”

“I am Lucastanonia, the Director of the Office of Alien Affairs. We are well met.”

Lucasa extended his trunk but the Forbinite did not return the gesture. Instead she introduced the other members of her delegation: Field Marshal Noxan of the Forbin military, and Sar. Tulturkian from the astronomy department at Farlozia University. Lucasa introduced the Argenian delegation as well.

Thankfully from Chark’s point of view the three Forbinites all spoke reasonable Argenian. Yet Noxan spoke briefly to Tusk in Forbin. Tusk swayed his head slightly in response. “I trust your father is well,” Noxan added.

“He died several runion ago.”

“My condolences.”

Tulturkian greeted Chark with enthusiasm as one scientist to another. “It’s a shame we can’t sit and talk,” he said as he clasped Chark’s trunk, “maybe in better times.”

The Forbinites were shown into the building and Chark was grateful to return to the cooled space. They removed their reflective outer cloaks and then Lucasa invited the

guests to review their quarters.

“We should like to discuss the aliens,” Kenellio replied. “You must tell us what you know.”

“Perhaps you would like to rest a little first after your long flight,” Lucasa said, “maybe have something to eat.”

“We do not need rest such as you.”

Fotkey led the way to the small conference room that Lucasa had used for his briefings. The Argenian military police brought up the rear and waited outside the door while the seven dunari crowded into the space.

“Are we to be escorted by armed guards the entire time we are here?” Noxan asked.

“You are guests of Argenia,” Fotkey replied, “but understand this is a military base.”

“I expected nothing less from the ‘hospitality’ of Argenia,” Kenellio said.

“You’re here, are you not?” Chark blurted out.

Kenellio glared at him. “We are here because we choose to be. We do not need to be here.”

“We don’t need you here either,” Chark said coolly.

Fotkey raised his trunk. “The Forbin delegation is here at the invitation of the First Citizen. I suggest we focus on the matter before us.”

Kenellio started intently at Chark until he turned his head aside. “Quite right, General,” she said.

Lucasa then asked Chark to summarize his efforts to communicate with the Visitors. Lucasa played a recording of the initial contact. Kenellio and Tulturkian listened to the alien hissing with interest. “That’s identical to the message we received,” Tulturkian said. “I think it’s the same word for word except our message was in Forbin, of course.”

“So the aliens are actively trying to engage both our nations,” Kenellio said.

Tusk snorted slightly.

“Do you have a comment?” Noxan asked with obvious disdain.

“If it takes a voice from space to bring our peoples together, I’m all for it.”

“These events do not change Forbin policy toward your nation,” Kenellio said.

“Of course not,” Tusk replied.

The meeting went on much longer than Chark expected. It was mostly without incident but tempers flared now and then. Chark found it exhausting and was glad when the Forbinites finally agreed to inspect their quarters. There was still some time before the Visitors arrived and Chark wanted to just relax as best he could before then.

Tusk touched his shoulder as the Forbinites headed down the hall with their escort. “Are you hungry? We should eat a little.”

Chark wasn’t entirely comfortable eating with a person he had just met but he needed the food and at Garnick one couldn’t be particular about social customs. Anyway, compared to the Forbinite delegation, Tusk seemed like an old friend.

The food dispensary was at the other end of the base. Like everything at Garnick it was small and cramped. There were a few tables but no privacy partitions. Eating times were normally staggered so only one other table was in use when Tusk and Chark arrived. The food was nothing special. Mostly it was dried or canned or pre-cooked in some way.

Chark took a plate and picked out an edible, even if uninspiring, collection of roots and dried fruit. Tusk was more interested in the crackers and nizar spread although he took a few roots as well.

“It’s not like Jael makes,” Tusk said as he lay down across from Chark, “but it will have to do.”

They ate in silence for a time, and avoided looking at each other out of respect for their mutual privacy.

“I don’t like the Forbinites,” Chark began. He stopped abruptly.

“They’re an arrogant bunch,” Tusk said.

“Why do they have to be that way?”

“It’s called *huzaro*... a way of being. In their case it’s a kind of bluntness. They see it as being honest. They tend to think all our polite talk means we are trying to hide something.”

“I’m an engineer, not a diplomat,” Chark replied with a sigh.

“We are all diplomats to an alien race. Who knows what *huzaro* they have.”

As the meeting time approached all seven dunari gathered in an observation room overlooking the runway where they donned reflective clothing and got ready to meet whatever came on the landing pavement of Garnick. The Forbinites objected to the procedure saying that it was unnecessary to actually stand outside in the oppressive heat.

“It’s a quaint Argenian custom that makes no sense in this situation.” Kenellio said. After much discussion it was agreed that they would wait in the observation room until the Visitors appeared and then go outside as they were landing.

Fotkey had a portable radio strapped to his front leg that he used to communicate with the control room. This allowed the delegation to keep track of events as they unfolded and Fotkey spent much time talking on the device.

Just as Chark was hooking his clothing he heard the roar of aerocar engines. Through the large observation room widows he could see a fighter speeding down the runway to take off. Shortly after another fighter followed. “Are we expecting a battle?” he asked Fotkey discretely.

“I’m not expecting anything. Just taking precautions.”

Once all was ready everyone waited in silence. It was an eerie sensation. Seven dunari, from both nations, wearing special cloaks and standing together in the middle of the wilderness waited to hear a voice from the heavens.

Chark whispered quietly to Tusk, “We are the select of Garnick, I think.”

Lucasa raised his foot and looked at his watch. “If they are punctual it should be soon.”

Outside, the barren landscape was ablaze with the bright orange light of the Rujaran sun. The lighting at Garnick was direct, coming down as it did from almost overhead, and very different than the muted light Chark had become used to at Lungast. The shadows were almost non-existent and the rocky hills about the base seemed to glow with the heat.

Fotkey scanned the sky with a small trunk telescope.

“Look!” said Tulturkian. He pointed above a ridge. In the distance there was a streak. It was very far and very high, yet it moved with unnatural speed. Chark felt a shiver down his back. They were coming.

The streak turned toward the base, approaching and descending quickly. The dunari shifted uneasily. Fotkey talked on his radio. He turned up the volume on his set. A crackle came from the speaker.

“This is Garnick base,” said a dunari voice, “to incoming craft: please identify.” The reply was quick and to the point.

“Weee requessst land.”

Chark’s heart pounded. Although everything was as expected, it all felt very surreal. He looked over at Tusk but Tusk was studying the approaching streak intently.

Fotkey clicked the button on his radio. “Go.”

The speaker crackled again. “Your request is granted. Please proceed to runway three as marked by the flashing orange lights.”

The Visitors did not reply but their aerocar, or whatever it was, raced toward the base with incredible speed. There was no chance of the Argenian fighters keeping up with such a craft. Chark suddenly felt very vulnerable. Dunari technology was obviously no match for that of the Visitors.

Fotkey pointed toward the door and the group made their way outside into the furnace-like heat of the deep day. They trotted toward the end of runway three, realizing that they had less time than expected.

“Gods of *Laronia*” Noxan said. “It’s fast.”

All was strangely quiet. There was no roar of engines or chopping of propeller blades. The craft approached in silence and without slowing down at all. Suddenly there was a bright green flash and the craft abruptly, almost instantly, slowed to a more normal speed. Chark had no idea how such incredible deceleration could be accomplished or how the occupants of the craft could possibly survive it.

Only moments later a deep booming explosion washed over the base. It seemed to fill the air and Chark could feel it in his bones. The ground shook. Everyone started, unsure what to do, and Fotkey barked orders into his radio. Yet nothing more happened. The Visitor craft flew smoothly toward the runway, going much more slowly as any aerocar might.

The craft landed easily, using only about half the runway to do so, and came to a halt not far from the dunari delegation. It was a surprisingly small vehicle. It had short, swept back wings and a stubby tail. It had a smooth body as if it was made in one piece, and it rested on landing gear of some kind. The craft gleamed in the hot sun and sparkled as if it was coated with some unusual material. Yet overall it looked amazingly normal. Kenellio was busy taking pictures.

The group waited nervously but nothing happened. Finally after a few moments Fotkey’s radio crackled again.

“Weee have communication devissse. Requessst tooo deliver.”

Fotkey turned to Lucasa. Lucasa looked at Chark.

“It’s some kind of radio,” Kenellio said. Chark shrugged.

“It sounds like they can’t come out of there,” said Tulturkian.

Fotkey held the mic to his lips. “Go ahead.”

A door of some kind opened underneath the small craft, and two trunk-like structures descended. They were holding a large, flat rectangular object. Chark fought the urge to back away. Kenellio took more pictures and Fotkey observed the process with his

telescope. "They're some kind of mechanical trunks," he said.

The trunks retracted and the door closed, leaving the rectangular object behind, standing on the ground in an upright position. The alien voice once again crackled from the speaker.

"Weee requeessst depart."

Permission was granted and the small craft was soon racing down the runway. It lifted off smoothly and turned more tightly than any dunari aerocar ever could. It receded into the distance and then, suddenly, there was another green flash followed by a powerful explosion. The craft sliced upward at extreme speed, vanishing against the glare of the sky in only moments.

Everyone turned to look at the runway where the rectangular object stood alone.

"That's it?" Chark said.

Fotkey talked some more into his radio. "Bring that thing into hanger three and start the cooling units in there." He turned to the group. "It looks like we have a present."

When the delegation arrived at hanger three the "present" was already there. Several armed guards were there as well. Before them was a large, thin slab standing upright on a narrow base. The slab was taller than even the Forbinites and maybe twice as long as a typical dunari. It appeared to be nothing more than a solid sheet of dark, unreflective material, like a wall.

Everyone was reluctant to approach the slab but Tusk had less fear. He studied the object and the various symbols that were faintly printed around the edge, but the meaning of them escaped him. Chark and Tulturkian stepped forward also to inspect the device. Chark reached out to touch the object. The surface was terrifically smooth, almost like glass, and yet felt cool to the touch. There was no reflection at all, and there were no controls to be seen.

"I don't think it's a radio," said Chark. "I think it's a viewer. I'm almost sure this smooth side is some kind of screen."

“You’d think they’d tell us how to turn it on,” Tusk said as he walked around behind the device. “Maybe we’re just too stupid to understand it.”

Tusk’s timing couldn’t have been better for the device chose that moment to act. There was a collective gasp from the group and everyone instinctively stepped back. All gazed at the dark sheet as it began to come to life. In the center some strange, alien symbols briefly appeared. Tusk tried to study them but he wasn’t able to get a proper look. The guards stood ready with their trunks on their weapons as more symbols appeared in the upper left corner of the screen and vanished. Then, suddenly, the gray dissolved into a view. . . a view of a room.

It was a room like any other, remarkable only in how ordinary it was. The room was small, with no windows, and had an attractively tiled floor. The walls were plain with a kind of spiral pattern along their base. The room looked like the sort of room Chark had seen a thousand times. It vaguely resembled the conference rooms at Electrodyne.

The device almost seemed to have vanished. It was as if they were looking through a large, open door or perhaps a window without any panes. The thin, black frame that once surrounded the dull sheet was all that marked the edge of their world from the other. Again Chark reached out his trunk.

“Captain, be careful!”

As he touched the device he could feel the surface. It was still there. It was still smooth and cool. Tentatively he looked around the frame of the device the way one might look around the edge of a door jam. Just as with a real doorway he could see past that edge to parts of the other room at either side.

“Amazing,” Chark said.

At that moment they heard sounds coming from the room. The source was out of view but obviously close. Yet as mundane as the room appeared, the sounds were strange and alien. They were a kind of chattering mixed with short clicks and long hisses. Everyone stepped back. The guards did as well.

Then, suddenly, *it* stepped into view. It came from the side and stood in the middle of the screen, motionless.

“Jurita...” someone said and then there was silence. All stood and stared. The creature was taller than a dunari, yet it was also thin and stood on only two legs. Its front legs were atrophied and hung at its sides. Its head was perched on top of its body, high above the rest of its torso on a short stalk. Its eyes were small and forward facing. It did not have a trunk but instead there was a small stub in the middle of its face where a trunk would normally be. Its ears were tiny flaps at the side of its head. Its skin, if that’s what it could be called, appeared to be thin and without scales, and had a pale color that looked utterly alien.

Roughly the creature resembled a trunkless chortak, a tree climbing animal that lived in the Gunon forests of Forbin. Yet unlike a chortak the creature was obviously wearing clothing of some kind. It was covered with a light colored fabric that wrapped around its torso and back legs.

It studied them as well. It moved its head without moving its body just as a chortak might, and looked squarely at each of them.

“It’s a two-way system,” Chark said suddenly. In retrospect it wasn’t the most inspired thing to say as the first words to an alien civilization. Yet Chark couldn’t help blurt them out when he realized the true nature of the device.

“*Yesss,*” the creature spoke slowly. “*Communication sysstem.*”

Nobody said a word.

“*It let usss... talk,*” the creature continued, “*without rissk of... sickness.*”

There was a pause and then with a deep breath Lucasa stepped forward. “I am Lucastanonia,” he said, and the creature turned to look at him. “I am the director of the Argenian Office of Alien Affairs. I bid you welcome.”

The creature took a small device from the folds of its clothing and using one of its front legs raised it up to look at it. Its toes were remarkably long and flexible and it

wrapped them around the device to hold it the way a dunari would use tentacles. “*Your language. . . difficult. We learning. I sssorry for. . . miss-takes.*” It lowered the device again and said, “*We are well met.*”

Lucasa went around the room and introduced everyone, Argenian and Forbinite alike. After each Argenian introduction the creature replied, “we are well met.” In the case of the Forbinites the creature replied in Forbin: “*Ick narla it forgonnen.*”

When the introductions were finished the delegation looked at the creature. It seemed to understand what was expected. “*I am Michael,*” it said, “*You can call me Mike.*”

13

Jael was scrubbing the floor of the hanaria when she heard a vehicle pull into the lane in front of the house. She went to the window and gasped slightly, clicking her teeth with delight. “Your father’s here!” she called out. She trotted to the door and slid it aside just as Tusk was dragging his bag from the back of the military truck. When he turned and saw his wife he spread his ears widely and shook his head in greeting.

“You’re beautiful, *tinka*,” he said coming up the walk. The two of them embraced tightly, wrapping their trunks around each other. Jinna and Mart came to the doorway and Tusk embraced them as well, affectionately stroking his children’s shoulders and faces.

“You’re home early,” Jael said.

“I ended up flying out on a waste transport. It wasn’t exactly luxury accommodations but I was tired of Garnick.”

“What are the Visitors like?” Jinna asked.

Tusk shook his ears. “Can I at least go inside first?”

With Mart’s help Tusk dragged his bag into the entryway while Jael went to call the seleckia with news of his arrival. He stood for a while in the center room just breathing in the air and smelling the familiar scents of home. Finally Jinna could be patient no longer. “When you called you told Mom they are like chortak.”

Tusk lay down on his favorite seat and his children lay down on the floor beside him. “They don’t have a trunk but instead they use their toes for gripping, almost like

tentacles. They have very strange skin with no scales, and small, round eyes on the front of their faces.”

Mart shivered. “Did you talk to them?”

“Yes I did. I even learned a little of their language.”

Tusk looked up and saw his wife standing in the doorway of the hanaria with her head tilted slightly. “They’re friendly,” he said. “They’re curious about us, and they’re looking for a place to build a telescope.”

“A telescope?” Jinna asked.

“Yes. That’s why they’re here.”

Jael started to shake and Tusk got up and went to her, wrapping his trunk around her. She reached up and held him tenderly in her tentacles. “It’s going to be fine,” Tusk said softly. “There’s nothing to fear.”

Jinna rolled onto her knees. “What’s going to happen now?”

Tusk clicked his teeth slightly. “I almost forgot!” Reaching into his cloak he took out a money slip and handed it to Jael. “A little something for my efforts.”

She looked at the amount and flapped her ears. “Oh Tusk. This is wonderful.”

“I am now the head of linguistics at the Office of Alien Affairs,” Tusk announced. “Unfortunately my new job is going to require a lot of travel. I have to leave for Varnok soon. I’ll be testifying before Parliament.”

Jael swayed her head. “My, my. . .”

“The whole world is going to know about this, *tinka*. We’re going to shout it from the rooftops.”

Tusk only stayed in Pilkity for a short time. All too quickly he had to pack his bag and say goodbye to his family again. He took a local train to Tappentos on the eastern edge of the Sea of Organite. From there he transferred to the Vinden line that went to Varnok. Across the top of his ticket was a bold warning about the Vinden Tunnel. The city had grown large and finding space for new tracks on the surface had become

difficult. The proposal to lay rails underground had been controversial and occupied the news rags for many runion. Yet, like so many things, after the deed was done everyone lost interest. Many avoided the Vinden line because of the tunnel, but Tusk had always been attracted by the adventure and was looking forward to trying it. He was in an adventurous mood.

He had been to Varnok before, of course, but not often and not lately. As his train raced into the center of the city he marveled at the tall buildings and at the bustling energy of the streets. Finally a gentle, recorded voice warned the passengers of the upcoming tunnel. As the train sped under the Luskin Insurance Building, Tusk braced himself. Artificial lights came on automatically in the cab moments before the train was enveloped in darkness. It was a small piece of night in the heart of Argenia's jewel.

The woman in the seat next to Tusk's specifically avoided looking out the window but Tusk couldn't help but watch the wall of blackness. There was no sense of motion aside from the noise and rocking of the train. There was only a great, empty void. The window was the edge of the world beyond which there was nothing. Yet in moments the emptiness ended as the train decelerated into the open, well lite expanse of Varnok Station. Tusk could hear the woman next to him breath a sigh of relief. They had made it through the void.

Tusk wrestled his bag from the luggage drawer and made his way out of the train onto the platform. Varnok Station was mostly underground with the light of the sun angling down from high windows above the the first floor roadside shops. Tusk looked for signs to lead his way to the street. The path was well marked, but the flow of people was daunting. It was nothing like Pilkity. He didn't have time to really study the signs so he made his way forward as best he could. Briefly he wondered if there were places like this on Earth.

When he reached the street level he was in the main terminal of Varnok Station. There on one side was a long row of ticket counters. There were public phones, some places to

eat, and tourist information. One wall was all windows looking out onto the street.

He bought a map and then lay down on a seat for a moment to get oriented. The station was only a few blocks from Parliament and from the Hoskin Hotel where he was staying. The Hoskin was one of the finest hotels in the city and, due in part to its proximity to the Parliament buildings, often hosted people from all corners of Argenia.

He decided to walk and, slinging his bag over his back, took to the streets. Again he had to dodge many people but at least it didn't seem so oppressively crowded in the open air. The street was in the shade and chilly but the ruddy light of the sun glanced off the third story windows of the building across the way.

He walked by shops and stores of all kinds. A chew-shop caught his eye. He paused, but only briefly. In previous times he would have felt compelled to buy a little something for later, but the idea didn't enter his mind.

At the corner with the next following street, a trinket table was spread just behind a wall protecting it from the Nermella. On the table were several stone and cloth figurines of space aliens. Tusk paused to inspect them. He picked up one that looked like a dunari man with exceptionally long legs, two trunks, an over sized head, and thin slit-like eyes.

"I can do better on those prices," a short, grizzled man said. He was lying in a seat behind the table.

Tusk put the item back. "Not interested."

The Hoskin was an impressive building of stone and quartz-glass with broad steps leading up to an elegantly adorned entry. At either side were imposing, intricately carved statues of Rujar and Nergium, the two figures of ancient myth representing light and darkness.

The lobby was long and large, like a great hall with a polished marble floor and stone pillars supporting the tall ceiling. On the floor were several finely woven harsna rugs, and here and there were some large tables topped with inlaid rosenwood for the guests to use. A smartly dressed man lay at one of the tables writing in a booklet.

Tusk approached the guest counter and was greeted warmly by a young woman with a beautiful trunk sash carefully bound with a finely woven trunk cord.

“How may I help you?” she asked.

“I’m Tuskara. I believe I have a reservation.”

The woman flipped through the pages of her book. “Yes, indeed,” she said. “We have you right here, sir. It’s room 308. It has a beautiful view of the city and of the Parliamentary Yellow. *Ick narla it forgonnen.*”

“Thank you,” Tusk replied with a bob of his head. “*Ick narla nat elan.*”

Tusk knew he would have ordinarily had trouble getting a room at a high class hotel because of his Forbinite markings. Yet in Varnok that was not a problem. The Hoskin no doubt saw many Forbinite dignitaries. He was impressed they even hired staff who knew the language, at least a little.

Normally he was quick to clarify he was as much an Argenian citizen as the rest of them. Yet on that day it didn’t seem necessary. He felt proud of his heritage, and did nothing to disabuse the woman of her assumptions.

She had Tusk sign some papers. “It looks like the room has been paid for by the OAA. I believe you’re all set. Enjoy your stay.” He was about to leave when she stopped him. “Sir Tuskara? I almost forgot. There is a message here for you as well.” He took the envelop from her, noticing the emblem of the OAA in the corner.

The room, of course, was immaculate. Tusk opened the curtains and looked out. The view from the third floor was impressive. Only a block or two away, sprawled out before him, were the Parliament buildings. They were arranged in a semi-circle with a large expanse of grass between them. Walkways lined with shrubs and flowers criss-crossed the Yellow, and at the center was a fountain. He peered around the curtain at the sun, hanging above the city. There was a haze in the air, typical of tropical climates, and he saw some clouds on the horizon. It was so different than Garnick, he could hardly believe he was on the same planet.

The message was from Lucasa. "I hope you're hungry," it said. "Can you meet Chark and me for dinner at Frankens? Hour 69:100, Garnick time." He looked for a clock and found one in a drawer. He had a little time to kill.

He turned on the viewer and flipped through the channels, stopping when he came to *News in Depth*. There, much to his surprise, was Lucasa being interviewed by Jarloz. Tusk turned up the sound and stood watching the program.

"So these... *humans* as they call themselves," Jarloz was saying, "want to build what, exactly?"

"They want to build an astronomical research facility on Nermia," Lucasa replied. "Actually in orbit around Nermia."

"Why Nermia?" Jarloz asked. "Surely Rujar is much more hospitable."

Lucasa shifted a bit the way he did when he was about to launch into a long explanation. "They said it's too expensive for them to transport building materials from their home 5000 light runion away..."

"I can imagine," said Jarloz.

Tusk snorted slightly in disgust. He wondered if Mike was also watching this.

"So they mine the raw materials and fabricate what they need on site. Apparently Nermia has the necessary resources in an easily accessible place."

"I'm sure it's easy for them," Jarloz said. She flopped her perfectly manicured ears and then said, "We understand they spoke to you in Argenian. How..."

There was a knock at Tusk's door, and he turned off the viewer. It was the greeter with a tray of fresh gingin. "Compliments of the hotel, Sir Tuskara."

Frankens turned out to be six blocks south of the Hoskin at the edge of the Varsynthia River. Tusk walked again, happy to get more exercise. When he arrived, Lucasa and Chark were already there. He was lead to their partition and when they saw him they bleated softly to greet him.

Tusk touched the shoulders of both men. During the time at Garnick they had become

close. The world was changing, and they knew they were at the focus of it. They lay down again as the waiter gave Tusk a menu.

“I saw you on television with Jarloz,” Tusk said to Lucasa. “Is she as annoying in real life?”

Lucasa shook his ears slightly. “She’s actually very smart, but she has to jazz it up for the show. News is mostly about entertainment these days.”

“It’s just a little embarrassing to hear her inane comments knowing the humans are probably watching.”

Lucasa snorted. “If inane comments worry you, you’ll have a lot more to worry about when you testify in front of Parliament.”

“About that,” said Chark, “exactly what is going to happen?”

Being the director of a controversial government office, Lucasa was no stranger to Parliamentary politics. He had gone before various committees and subcommittees numerous times to justify the work of his office and to account for his minuscule budget. Now they were going to testify before the whole Parliament to brief them, in detail, on just who the Visitors are and what they want.

“They’ve heard the basics already,” Lucasa explained, “but they want to hear it from us and they want to ask questions.”

The men ate their dinner and talked for a long time. They talked about Parliament’s likely reaction to their testimony. They talked about the people’s likely reaction to the humans. They talked of a bright future where humans and dunari and Argenians and Forbinites all worked together to make the world a better place. The food was excellent, the chew was delightful, and the mood was light and optimistic.

“I understand you live around here,” Chark said to Lucasa.

“I live in the West City,” Lucasa said. “My wife teaches at the University.”

“At Parnon?” Tusk asked, “isn’t that a long commute?”

“There’s an express train. It only takes a few arnets to get out there.”

When they finally left Frankens the sky was cloudy and the Nermella was blowing strongly. The men instinctively huddled together to protect themselves from the sand and grit. It was a response evolved into their bodies millions of runion ago when their distant ancestors roamed the open plains.

“I have a car right over there,” Lucasa said pointing his trunk. “Why don’t I drive you two back to the hotel. Otherwise you might get rained on.”

17

At the front of the Parliamentary chamber a tall rostrum rose as a dominating edifice built out from the wall. On top of that rostrum the Speaker of the People normally stood beside a carved stone table where he presided over the session. Below and to the left was a seat for the First Citizen and to the right was a seat for the Second Citizen. Both seats were usually empty since Parliament conducted its business independently of the executive government.

In front of the rostrum was a polished tonstone floor spreading out in all directions. Its dark, patterned surface evocative of the shifting sands of the Argenian deserts. Slanting upward and away was row upon row of seats for the Delegates of the People. The light of the Rujaran sun filtered through windows placed high along the back and spilled onto the floor where history was routinely made.

Lucasa, Fotkey, Chark, and Tusk sat behind a long table set out not far from the First Citizen's seat, microphones ready, waiting for the session to begin. Delegates gradually filled the chamber, standing in the aisles talking with each other, or lying at their desks reviewing notes.

When Tusk was a child he once went on a tour of Parliament with his parents. At that age he didn't appreciate the ornate carvings on the pillars or the tapestries on the walls. It was the same room where Zendengiat demanded the dismantling of the Regents over 10 arnoxes ago. It was the same room where Nilokiliox inspired a despairing nation to rebuild after the Endless War.

Tusk read the inscription carved into the top molding, just below the high ceiling above the rostrum. It was written in Elocum, an ancient language that was reserved for the most formal proceedings. Loosely translated the inscription read, “Here speaks the Voice of Argenia, to the benefit of all.” Tusk snorted slightly. All unless you’re a Forbinite, he thought to himself.

After a short time the Speaker of the People ascended the rostrum and took his position beside the table. He carefully placed on its stone surface a heavy gavel. It had been many arnoxes since it had last been used, yet its presence there beside the Speaker was deeply symbolic. He stood tall and tilted his head slightly as the delegates took their places by their seats and stood. Lucasa and Fotkey also rose. Chark and Tusk followed suit. There was no microphone on the rostrum. The acoustics of the chamber were good, and the voice of Argenia could be loud.

“I convene this special session, on this date of Hour 70:050, Runion 90, Arnoxium 22 since confederation, Argenian Master Time. I invite the First Citizen of Argenia to attend. Do you agree?”

The delegates stomped their feet in a single blow.

“We are in agreement,” the Speaker said.

At that moment a small door at the side of the chamber opened. The First Citizen walked confidently across the floor and took his seat. He was wearing the cloak of office, yellow trimmed with gold. As he lay down everyone else in the chamber, except the Speaker, did so as well.

“We will now hear of matters concerning the *human* situation. The testimony will begin with that of Lucastanonia, Director of the Office of Alien Affairs. Do you have a statement?”

“Yes, Sir Speaker,” Lucasa said.

Lucasa then recounted in detail all the specifics of the human situation. Tusk knew most of it. He talked about the first pictures taken of the human ship. He talked about

Chark's attempt to communicate with the Visitors, and about the eventual response. He also talked about how the First Citizen was contacted by the Forbin Prefect. That's when the delegates started to ask questions.

"How did the Forbinites know of our communication?"

"The Forbinites were contacted directly by the humans." Lucasa replied. "It was not us who told them of the meeting at Garnick."

"And so the Forbinites invited themselves to our secure military base?"

"No, they were invited by the First Citizen on my recommendation. The humans were unaware of the true nature of Garnick. They suggested it because they thought it was neutral ground."

Lucasa continued by describing the details of the meeting itself. He focused on how the humans were interested in getting to know the Argenian and Forbin languages better. This raised some concerns as well.

"Why would they want to know both languages?" one delegate asked. Tusk fluttered softly to himself. Fortunately the microphone in front of him was off.

"The humans understand we are two nations," Lucasa said. "They're trying to avoid taking sides in our conflicts and aim to interact with both Argenia and Forbin equally."

"So you're saying," the delegate continued, "that any technology they give to us they will also give to Forbin."

Lucasa lowered his head briefly and then turned back to the microphone. "There was no talk of technology transfer. The focus was on learning how to communicate better and on their explaining to us why they're here."

Lucasa then went on to talk about the observatory orbiting Nermia the humans wanted to build. "Their ship is called *Summer Breeze*. We were told it is a scientific vessel with a crew of only 21. Its purpose was to follow up on an earlier automated survey looking for a suitable location for their observatory."

"So they've visited Rujar before?" asked a delegate.

“Only an automated survey from a distance. The humans were clear that they didn’t realize we were here until *Summer Breeze* arrived.”

A delegate in the back of the hall stood up suddenly. Such locations were reserved for the juniors, typically just elected by their districts. “I request right of first question,” he called out loudly.

The Speaker turned toward Lucasa. “Do you acknowledge right of first question?”

Lucasa bobbed his head.

“I’m... I’m a bit flabbergasted by the questions so far; no disrespect intended but they seem so provincial. Lucastanonia, did you ask how many other civilizations are out there? Are we about to become part of some kind of interstellar federation?”

“We asked, yes. It turns out there is no ‘interstellar federation’ as you said. In fact, we are the first civilization the humans have encountered. Furthermore they described Rujar as very remote for them.”

The young delegate seemed satisfied so Lucasa continued. “The humans are interested in establishing diplomatic relations with both Argenia and Forbin. They’re sending another ship, the *Golden Light*, with two ambassadors on board, one to each of our countries.” Lucasa consulted his notes. “The ambassador to Argenia is named... let me see if I can get this right... *Tomar’all*.” Lucasa turned to Tusk, “Is that right?”

Tusk turned on his microphone and leaned forward. “*Thomas Marshall*”

“When they get here they want to talk, officially, about the observatory,” Lucasa said. Then he leaned forward and spoke directly and deliberately into the microphone. His voice louder and more distinct than usual. “They have concerns about the suitability of our solar system for their project. They don’t want to invade our space or embroil themselves in our political turmoil.”

“What turmoil?” one delegate shouted out indignantly. “We’ve been at peace with Forbin for many runion now.” Other delegates voiced similar feelings and the chamber was astir with activity.

“Maybe we don’t want them here,” another delegate cried out. “I, for one, am not comfortable with the idea of an alien race, with who-knows-what motivation and who-knows-what abilities creating some sort of machine on another planet in our solar system. It’s a location that just happens to be out of our reach and out of our sight. Who knows what its *real* purpose might be?”

Many other delegates shouted out their support with cries of “Yea be yea.”

“What are you talking about?” said another delegate loudly. “Think of what we could stand to gain from these humans.” He pointed his trunk upward to emphasize his point. “Their technology is obviously considerable. With their help we could potentially cure diseases, improve our transportation and communication systems, and solve our energy problems. This is not a time to be fearful. Where is the Argenian boldness we so love to speak of in this chamber?”

“Yea be yea!”

Several other delegates shouted their objections and then, suddenly, the Speaker stomped his foot and let out a long bellowing bleat. It was a disconcertingly primitive sound in the great hall of Argenian government.

“Gentlemen,” he said finally. “We have time to debate this matter later. Right now, let me remind you, we are here for the testimony of these experts and to ask *clarifying* questions only.”

Tusk watched the First Citizen carefully. As was traditional he did not say a word since, technically, he was outside the scope of his jurisdiction and only present by invitation. Yet it was clear that he was being very attentive and listening closely to all that was said.

After the clamor abated Lucasa continued. “Another point the humans made clear was that they regard this entire system as our space and they won’t build anything on Nermia without permission from both Argenia *and* Forbin. They understand this is not something we’ve had to think about before, but when the ambassadors arrive they will

be looking to negotiate with us about this.”

“We have no jurisdiction over Nermia,” said one delegate, “and certainly neither does Forbin. What they ask is absurd.”

“What if we refuse to answer?” said a delegate from the back.

“I think,” replied Lucasa, “they would simply build their observatory elsewhere. What impact that might have on future relations with them is not clear.”

“Maybe we should assert jurisdiction over Nermia,” another delegate said. “We could talk with Forbin and sketch out a rough understanding.”

“The Forbinites would never participate in such talks. The idea is ludicrous.”

The Speaker again bellowed. “Clarifying questions *only*, gentlemen.” Once again after the delegates settled down he indicated to Lucasa that he could continue.

“That’s all I have, Sir Speaker,”

Next it was Fotkey’s turn. The Speaker introduced him as “General Fotnarkey, Supreme Commander of the Argenian Armed Forces.”

“Do you have a statement?”

“Yes, Sir Speaker, I do,” Fotkey replied.

As expected, Fotkey gave his military analysis of the humans. Tusk found it distasteful that they would be evaluating the humans in terms of threats and countermeasures but he supposed that, at some level at least, it was necessary. During his stay at Garnick he had spent a lot of time, more than anyone else, talking with Mike. They mostly talked about nouns, verb tenses, and sentence phrase structure. Still, after working with Mike so much Tusk felt a certain affinity for him.

“Although we only saw evidence of a single aerocar-like device,” Fotkey was saying, “it was clear that their technology is far superior to ours. That said, my perception is that the ship currently in orbit around Rujar is too small to be much of a threat by itself. However, they admitted to sending another ship and it is unknown how many others might be on the way.”

“What do you know about this other ship?” one delegate asked.

“The humans claim it is bringing equipment for their construction project, but we have no intelligence to substantiate that claim.”

Fotkey paused and then continued. “I would advise preparedness. We have no independent confirmation of their intentions, and so it would be wise to expect the worst. Our defenses might not be sufficient, but then again we don’t really know their capabilities.”

Tusk checked his watch and looked over at Chark. He was fidgeting with some papers in front of him. Tusk thought that he probably should have at least written down some notes about what he was going to say.

“It’s important to note,” Fotkey continued, “that so far the humans have done nothing aggressive. I regard that as a hopeful sign. Nevertheless I think it would be unsafe to assume their non-aggressive behavior will continue indefinitely.”

Fotkey then gave a summary of the non-classified standing of the Argenian armed forces. His conclusion was that they were ready for battle should that prove necessary.

Next it was Chark’s turn to testify. He mostly focused on the technical aspects of their communication. He briefly described the device the humans used at Garnick.

“Why are the humans afraid of meeting face to face?” asked a delegate. “Is our air unbreathable by them?”

Chark explained that the humans were concerned about biological contamination. “They said that Rujaran life and Earth life might be ‘incompatible’ making us immune to each other’s diseases. However, they would need to examine some samples of Rujaran life before making that determination.”

“What kind of ‘samples?’ ”

“Bacteria, fungus, that sort of thing.”

Chark went on to explain that the battery in the communications device used at Garnick had run low, and the humans retrieved the device to recharge it. “We agreed

to communicate via conventional radio in the meantime, and I've already applied to the CB for an official frequency allocation."

"Are you saying," asked a delegate, "that we could get a message to the humans at any time?"

"My people are setting up the necessary equipment as we speak. In fact, we intend to establish a permanent communication station at Lungast."

Chark then explained that the humans wanted to deliver another communications device by the time the ambassadors arrived. "We gave them the specifications of our standard power outlets. They intend to build a converter circuit of some kind. We will literally be able to plug their equipment into our outlets."

This created some clamor in the chamber. "Was that wise, Captain Charkonaless?" one delegate asked. "I don't approve of you revealing information about our systems without authorization."

Chark leaned back and glanced briefly at Lucasa.

"Let me reassure you," Chark said, "there is no chance of them being able to attack our power system through a standard outlet. Our systems are heavily fused and filtered."

"Who knows what they can do?"

There was more shouting from the delegates and several of them tried talking at once. Again the Speaker bellowed.

"Sir Speaker," said one delegate finally. "I submit that without specific knowledge it is easy for our imaginations to run wild. Yet we can't let ourselves become afraid of shadows. I for one accept our expert's testimony. Please continue Captain Charkonaless."

Chark finished up with a few general comments about human electronics technology as he saw it. Then he closed his testimony and it was Tusk's turn. Tusk took a deep breath and leaned forward toward his microphone. His heart was pounding.

The Speaker introduced him. "Now we will hear from Tuskara, Head Linguist at the

Office of Alien Affairs. Do you have a statement?"

"Um. . ." Tusk said. "Yes, I do."

Tusk began, tentatively, to describe his experience talking with the humans. He felt uncertain at first, but as he talked he grew more confident. "Their language is complex. It is also very difficult for us to speak, but that is mostly because they use consonant sounds that are hard for us to make with our vocal equipment. Yet it seems to work both ways; they have difficulty speaking our language as well."

Nobody seemed interested in the linguistic details of English versus Argenian so Tusk skipped to the more pragmatic aspects of their communication. "Their technology makes it easier for us both. They have an electronic speech synthesis system that can translate speech on the fly. I spent a lot of my time working with one human in particular to help him tune the device to Argenian and Forbin."

"You assisted the humans with Forbinite communication?" one delegate asked. He was obviously quite shocked and Tusk felt suddenly nervous. He didn't want to land in prison as a traitor due to his testimony before Parliament.

"Ah. . ." Tusk hesitated. "The humans are intent on learning both languages. If it wasn't me it would have been one of the Forbinite representatives. I happen to know both languages and the humans were comfortable working with me."

Nobody seemed to object to Tusk's explanation so he continued. "I was also able to learn a little of their language. They did nothing to prevent that and, in fact, encouraged it."

"Can you understand them well enough to following conversations between them?" asked a delegate.

"Only partially," Tusk said. "I hope to continue learning. I'm planning to return to Lungast with Chark. . . ah. . . Captain Charkonaless and continue working with the humans over the communications link he's establishing there."

The delegates asked a few additional questions about how communication with the

humans would work, but soon Tusk's testimony was over. He switched off his microphone and leaned back onto his seat with great relief.

The Speaker then stomped his foot twice. "Now that testimony is complete, the leaders of the three associations will each make a preliminary statement." He tilted his head slightly to look at an elder statesman lying in the front row. "Hap?"

Haptair was the most senior member of Parliament. It was said by some that he carried more influence than even the Second Citizen. With slow, painstaking movements he rose from his seat and shuffled out onto the floor, turning to face the hall.

"It is..." he coughed and cleared his throat and then tried again with a voice that was surprisingly full and vibrant. "It is the inclination of the Narosta Association to be optimistic in the face of the unknown. We agree that this is a time of great opportunity; opportunity that we must not squander out of fear. Yet it is also natural to be cautious in a situation such as this. Thus we will advocate a carefully measured approach that will move Argenia forward boldly and yet also safely."

After Haptair lay back down, the Speaker nodded to another delegate just two seats away. The delegate, considerably younger, stood up and walked confidently onto the floor.

"The wisdom of my esteemed colleague can not be doubted. Yet his words offer little in the way of concrete counsel. It is likely that we are at the mercy of these humans, and that all we say or do here will be for naught. Yet if they do have any sense of decency and are willing to negotiate with us honestly, then it is the position of the Polictaria Association that we encourage them to build their... whatever it is... somewhere else. We can't debate territory on another planet. What is its ultimate value to us? What reasonable payment could we demand? If the humans renege, to what court do we appeal for restitution?"

Finally the Speaker nodded to Zarloloti, impeccably dressed as always, lying at the end of the row near the wall. He rose and walked onto the floor with a casual, unhurried

pace.

“The Limzar Association finds it strange that we are discussing the humans as if they are dunari. These creatures are aliens from beyond the world. They have never known the beauty of Rujar or any of the Seven’s other great works. What makes us think they share our concerns? What makes us think we can negotiate with them at all? We are insects to them. We are something to be ignored when we aren’t in their way and brushed aside when we are. The Limzar supports the position of the Polictaria Association; the humans should not be allowed in our midst. I pray to Jurita that we even have that choice.”

With that the Speaker closed the session, bellowing the dismissal, taking the gavel, and descending from the rostrum. The First Citizen exited through the same door from which he entered as the delegates immediately started to mull about, talking again among themselves.

Tusk stood up and stretched. He put his trunk over Chark’s shoulder. “It’s going to be a longer road than I thought.”

* * *

The First Citizen’s offices were located in a relatively unassuming two story building across the street from Parliament. The grounds were beautifully groomed and covered with thick, yellow grass, studded with red flowers. The building itself was one of the first government buildings in Varnok, constructed in simpler times before viewers, aerocars, and humans.

General Fotkey trotted up the steps dressed in full uniform and showed his identification to the security guard on duty. The guard knew Fotkey, of course, but checked the paperwork carefully anyway. The guard then slid aside the broad door and Fotkey stepped into the main lobby of the building. On the floor was a mosaic of the seal of Argenia, permanently illuminated by the sunlight shining through tall side windows.

Fotkey walked across the pool of light and was warmly greeted by a receptionist at the counter on the far wall.

“We are well met General,” he said. “Go on up. He’s expecting you.”

Fotkey climbed the curved ramp to an upper floor and then down a wide hall to another security guard. As he approached the guard turned and knocked on a dark narwood door. He opened it a crack and stuck his head just inside for a moment. Then the guard stood back and let Fotkey enter.

“General!” The First Citizen was standing beside his table. He stepped forward, meeting Fotkey, and the two men clasped trunks briefly. Fotkey touched the First Citizen on the shoulder, and then he heard the door click behind him.

The First Citizen motioned to Fotkey to lay down and they both positioned themselves on adjacent seats in front of the First Table. “There is quite a lot to discuss,” the First Citizen said. “To start, give me an update on the special weapons program.”

Fotkey shifted uneasily and glanced briefly toward the closed door where he had come in. “We have eight devices complete, and four more are in various stages of production.”

“How is security?”

“The Forbinites seem to be buying our cover story that we’re using Rangard for deep day tank experiments.”

The First Citizen slowly stroked the side of his face with one tentacle. “And now we have a new consideration.”

“The humans.”

“It’s important they don’t find out about the special weapons.”

“I agree,” Fotkey said, “they may be our only defense against them.”

The First Citizen tilted his head and fluttered softly. “It is my fervent hope that we never have to use them in any case. Frankly, I’m more concerned about the humans telling the Forbinites.”

Fotkey bobbed his head briefly.

“Since we know very little about the surveillance capabilities of the humans, I want to put production on hold for a time. Finish the devices in progress but don’t start constructing any new devices.”

Fotkey hesitated. “Are you sure that’s wise, sir, considering what we know about the Forbinite program?”

“It’s a different world now, General,” the First Citizen interrupted. “We need to understand this new world before we lunge ahead with old plans.”

“Yes sir,” Fotkey said reluctantly.

The First Citizen smoothed his cloak with his trunk the way he did when he was about to change the subject. “What is your personal assessment of the humans? Are they sincere about this telescope project they’re talking about?”

Fotkey took a deep breath. The question was almost impossible to answer. He looked down and thought for a moment. Finally he looked up. “I think they are sincere.”

The First Citizen swayed his head. “That’s my impression also. I’m going to grant them permission to build on Nermia and invite the Forbin Prefect to do the same.”

“Yes sir.”

“The Prefect won’t be able to refuse. He’ll be much too worried about us making friends with these humans.”

“Yes,” Fotkey said, “a technology transfer from them would give us a strategic advantage.”

The First Citizen clicked his teeth slightly. “You are a military man, General, and you are good at what you do, but sometimes you don’t think big enough.”

19

When Jernumia arrived at the office everyone was strangely subdued. She ignored it and instead unpacked her pouch as usual, putting each piece of paper in its appropriate place. Lying down behind her desk she opened her case book and went over the checklist. There was still the matter of precedent finding for her current case. After reviewing the details again she packed up a few papers and made her way toward the door.

“I’ll be in the law library,” she told the receptionist.

“Not now,” Haratol said overhearing her, “the First Citizen is about to speak on the viewer.”

“Yes, yes,” Jernumia replied, “I’m sure that’s very important but I have *your* case to prepare.”

“You don’t need to work so fanatically,” Haratol said, “you have nothing to prove here.”

“I only want to prove the defendant guilty,” she said curtly, “if he is,” she added.

She pushed by Haratol, her pouch looped over her back and headed for the door. As she went into the hallway she passed by the small huddle room where people often relaxed and socialized. She almost never went inside, but today there was a group of her colleagues gathered around the viewer. On the screen was a picture of the Parliamentary Yellow, now covered by a large crowd.

Jernumia hesitated.

“Take a moment to listen,” Haratol said as he came up behind her, “his speeches are

never long.”

Jernumia glanced at the wall clock and decided she could afford a few moments. It was, after all, an historic event. The others, all standing in the room, made space for her as she entered. Jarloz was talking on the viewer.

“This will be the first public appearance of the First Citizen since the arrival of the humans. Kopta, what do you think he will be covering today?” The camera changed to a shot of the studio where Jarloz had a guest Jernumia didn’t recognize.

“I think the people of Argenia are hungry for leadership and for reassurance. We don’t know how to act or how to feel. People want the First Citizen to tell them.”

“This First Citizen has been criticized, especially by the Limzar Association, for having a lack of vision,” Jarloz continued. “Do you think that criticism will hurt his credibility now?”

“I don’t think so. In exceptional times people often forget...”

Jarloz raised her trunk slightly and appeared to be listening intently to the ear piece she had hooked over her head.

“I’m sorry Kopta, but the First Citizen is about to start. We will come back at the end of the speech.”

The scene changed again. This time it focused on a podium erected at the sunlit side of the Yellow. There, with banners of Argenia at either side, a single man stood ready. He raised his trunk and then spoke into the microphone.

“To all gathered here,” he began, “the First Citizen of Argenia!”

The man stepped aside and the First Citizen walked lightly up to the podium. There were loud bleats across the Yellow and the First Citizen flopped his ears and waved his trunk.

“Always a politician,” Haratol said at Jernumia’s side.

Jernumia said nothing but instead watched as the First Citizen finally lowered his trunk and moved to speak.

“Now we know that we are not alone in the universe,” he began. “This discovery has caused us concern and, yes, even fear. That’s natural. We fear what we do not understand and, lacking understanding, assume the worst possible outcome. Yet these Visitors, these humans, appear to be much like us. They are curious explorers seeking to deepen their knowledge of the universe. They come here not to overthrow our society but instead to build an astronomical observatory.

“Is it true? How can we be sure? There is no way to answer rationally. Instead we must listen to our feelings. I believe any civilization advanced enough to travel between the stars will also be advanced enough to treat us with respect and consideration despite our backward nature. The evidence is exactly this. While we fret about their intentions what the humans have actually done is plain enough: they’ve worked at communicating with us so that they can *negotiate* with us to use our space. If they wanted to destroy us, I very much doubt we’d be having this discussion.”

He leaned into the microphone slightly. “I therefor implore you, the people of Argenia, and your Parliament, as well as the Prefect of Forbin to grant the humans the permission they seek. . .”

Suddenly a shot rang out and the First Citizen stumbled back from the podium. Everyone in the room gasped and Jernumia instinctively stepped forward as if to help. A second shot was fired and the First Citizen fell to the ground. In moments the podium was swarming with IIB agents but the First Citizen could not be seen.

“Someone has fired on the First Citizen,” Jarloz said. The camera swung to the left where it scanned over the side of the Hoskin Hotel. “Someone has fired on the First Citizen of Argenia!”

* * *

Colty waited impatiently in the Fargon conference room. Fargon, the home of the mathematics department, was on the Old Campus and one of the original Parnon Uni-

versity buildings. It was a historic structure with a graceful elegance that the newer buildings on the South Campus lacked. Even a simple conference room was decorated with intricate moldings and a beautifully polished floor. Colty had always thought it fitting that the department of mathematics, representing one of the oldest intellectual fields, should be in such a venerable building.

Dargonick and Lucastanonia came into the room interrupting Colty's reflections. Sar. Dargonick was the leading professor of the mathematics department and well known to Colty, but Lucasa, the Argenian ambassador to Earth, was someone he had only seen on the viewer.

Colty stood up while Dargon did the introductions. "We are well met, Sir Lucastanonia," he said as he touched the ambassador's shoulder respectfully.

The three men lay down around the table and Lucasa took some papers out of his pouch, clipping a few to the available table clips. Dargon looked uneasy. "We're expecting a fourth party," he said, "Sar. Rocallanon from the physics department should be here any moment."

Lucasa fluttered slightly and leaned back but said nothing. Dargon tried to fill the time with small talk. He asked Colty how he liked Parnon.

"I'm really enjoying it," Colty said politely. Then after a pause he added, "What is this meeting about, anyway?"

Lucasa leaned forward again, grateful for having a reason to speak. "As you know, it has always been the intention for some human scientists and engineers to come to Rujar to educate our people." He unclipped one of the papers sitting on the table in front of him and slid it over to Colty. "It seems like that's going to happen sooner than we thought. Apparently one of their scientists is en-route to Rujar even as we speak. This individual is an astrophysicist and would like to observe the construction of their telescope."

At that moment Rocallanon arrived. As the leading professor in the physics depart-

ment he wore the formal cloak of enlightenment, and on his chest the insignia of the Argenian Order of Physical Scientists. "I was delayed," he said as he entered the room.

Dargon did the introductions again and Rocalla clasped trunks briefly with Lucasa and Colty. "Where are we?"

"I was just explaining to Sar. Coltinarly about the human coming to Parnon," Lucasa said.

"Oh, good," Rocalla said as he lay down. "Please go on."

"It's coming to Parnon?" Colty asked. "You mean to the human compound at the base?"

"More than that," Lucasa said. "She teaches at the human equivalent of a university. She has expressed interest in being a visiting professor here at Parnon while she waits for the observatory to be completed. We are actually very lucky to have her. She is apparently one of their most respected scientists."

Colty was shocked. "Are you saying it's going to be wandering the halls and teaching classes?"

"She."

"What?"

"*She* will be wandering the halls and teaching classes. Yes, that's the idea."

"Like a farg Forbinite," Rocalla said softly, "with their females doing science."

Colty struggled to absorb the unsettling idea of a human on the Parnon campus. It was one thing for them to have a small compound on the military base just outside town. The proximity of Parnon to Varnok made such a presence there understandable even if unpleasant. Yet one never saw any humans in the city of Parnon itself. Even the special vans that occasionally transported them to Varnok were a rare sight.

"What does this have to do with me?" Colty asked.

It was Dargon who answered. "Of course you know it's traditional for a visiting professor to have a host who can help him find his way around and generally get oriented

to the campus. This human has specifically requested a host from the mathematics department.”

Colty folded his ears back against his head. “Wait a moment... are you suggesting that *I* be its host?”

“It doesn’t make sense,” Rocalla said. “It... she... is a physicist so it only seems natural that someone from the physics department be her host.”

Dargon looked at Lucasa.

“She was clear about her desires,” Lucasa said. “We received a message directly from her about it.”

“Perhaps the humans don’t understand how our academic disciplines are organized,” Rocalla said. He turned to Colty. “I don’t doubt your work is important in your field, but you’re a pure mathematician and your research is just not relevant to physics. In contrast, I have many publications in the area of stellar dynamics. I’m sure the human and I would have much more to talk about.”

Dargon looked uncomfortable. He curled his trunk slightly. “Of course the role of host is not intended to be primarily academic.”

“I don’t like the idea either,” Colty said. “I’m a new instructor. I need time to develop my full status presentation. I also don’t know the university that well myself.”

Lucasa slowly twirled a pencil in his tentacles. He looked over at Dargon.

“I actually recommended you, Colty,” Dargon said. “I thought that perhaps since you are younger you might be more open to the adventure. Think of what it might do for your career.”

“I don’t see how it will help him,” Rocalla said. “He’s in the wrong field.”

Lucasa fluttered. “There is also the matter of her office. We’ll need to do some renovations to make a suitable space for her. Renovating space in Fargon is quite impossible.”

“It’s going to have an office too?” Colty asked.

Dargon disregarded Colty’s rhetorical question. “What’s wrong with 105? That’s a

free office.”

Lucasa swayed his head. “The problem is that we have to add an air cooling unit and toilet facilities. Fargon is a small, historic building so making those kinds of changes is very difficult. Cogart is much easier to change. We were thinking of using the mini-conference room there, 227.”

“That’s just down the hall from my office,” Rocalla said with satisfaction.

“Wait,” Colty said, “what’s this about toilet facilities?”

“The humans aren’t that different from us,” Lucasa explained. “They need such things just as we do.”

“What about the compound?”

Lucasa shrugged. “If she spends significant time on campus, as expected, she’ll want something a little closer. That part will actually be easy for us. The humans will install it. They seem intent on recycling all organics. We don’t even need to bother with waste ducts.”

“I submit,” Rocalla interrupted, “that the humans are unfamiliar with the way we do things and that once the situation is explained to them they will agree that someone from the physics department would make a better host.”

Lucasa twirled his pencil. He glanced at Dargon and then Colty. “I can get a message to her,” he said at last, “and maybe ask for clarification.”

“I think you should do that,” said Rocalla.

“Sar. Coltarily?”

“Yes, certainly.”

“Okay,” said Lucasa. “It will take some time. She’s about 3000 light runion away right now. In the meantime it makes sense to go forward with the renovations of Cogart 227 in any case.”

Satisfied with the outcome of the meeting, Rocalla moved to get up. However, Lucasa did not budge and Rocalla hesitated.

“One last thing,” Lucasa said. “Her name is *Rachel*.”

* * *

After the meeting Colty returned to his office to continue his work. As a junior faculty without full status his space was little more than a closet. His one window faced north and received no direct sun. On his small table, amid a collection of books and papers, sat an artificial light that he used on the gloomy, rainy times that frequented Parnon. He had an awkward, uncomfortable seat for the occasional student, his wasn't much better, and a bookcase along the wall that made his narrow space seem even narrower.

He lay down at his table and flipped through a paper on lars-extended co-sequences. He had read it several times before but he kept coming back to the proof of Theorem Five. The technique used was standard yet Colty's instincts told him there was something wrong with it. He pondered the reasoning again but he had trouble concentrating. The meeting with Dargon and Lucasa had rattled him.

With a fluttering growl he skipped to the end of the paper and scanned down the reference list. The author seemed to rely heavily on one reference in particular that was in a Forbin journal. Colty wondered if he could get a copy of it. He decided a walk would do him good so he packed the paper into his pouch, locked his office, and headed out onto the Yellow.

Fargon was just one building that surrounded a broad, beautifully tended expanse of thick grass, criss-crossed by walkways, dotted with gardens, and lined by large rigat trees. The sound of their tubular leaves singing softly soothed Colty's agitated mind.

He walked briskly along the wide, brick path that lead from the spire of Tartuk Hall on one end of the Yellow to the library on the other. The library was an impressive stone building with a wide, arched entrance below tall sunward windows. Just outside the door several students stood huddled around a table offering a petition. Tied to the legs of the table, and flapping in the Nermella, was a sign with a quote from the Limzar

Association's position statement: "The humans haven't done any harm, nor have they done any good."

Colty ignored the provocative sign and slid the library door aside. He walked across the polished tonstone floor in the large inner court beneath the high, domed ceiling. All was quiet and serene; an oasis of thought in a troubled world. He came to the librarian's counter where an attractive young woman was busily checking in books.

"Good singing, Joleia," Colty said.

"Sar. Coltinarly," she replied with a click of her teeth. "What can I do for you today?"

He took the paper out of his pouch. "I'm hoping to get an Argenian translation of this article."

She took the paper and looked at the citation closely with her right eye. "This won't even be a challenge," she said. "The National Library probably has the journal and we can get one of our staff translators to make the translation for you."

"That's wonderful, thank you."

"If you can wait, I'll call Varnok right now and let you know."

She walked back to a table behind the counter and picked up the phone. Colty could hear indistinct sounds from outside. There was some shouting and bleating. After a few moments Joleia returned. "It's on its way. I'll send you a note in campus mail when the translation is ready."

"Thank you so much." He paused and then motioned toward the main entrance with his trunk. "What's going on out there anyway?"

Joleia fluttered disapprovingly. "Freedom of speech," she said. "Is there anything else that you need?"

He hesitated. "Actually I do have one other question. There's going to be a performance of the Yarlantan thrumbatas at the concert hall at the end of the reunion. I... I was wondering if you would be free to come with me to hear them."

Joleia spread her ears slightly and clicked her teeth several times. "Sar. Coltinarly,

are you asking me out?"

Colty clicked his teeth as well. "It appears that I am."

"In that case, the answer is yes!"

* * *

The rest of the reunion passed uneventfully. Colty divided his time between preparing for classes, grading assignments, and trying to get some work done on his research. Yet progress was painfully slow. His topic was stellating co-sequences, a natural extension of his dictatorium work on mono-sequences. There was, however, scant literature on the subject. The most recent paper was almost 100 reunion old and largely treated the material as closed. Yet to Colty's eye it seemed like there was something more.

He was glad for the distraction when the time for the concert finally arrived. In his apartment he first changed into a professor's cloak but then thought better of it. Joleia was a sophisticated woman, but not at all the snobby type. He didn't want to overplay it, so he switched to casual garb and felt more comfortable in the process.

He waited for Joleia on the stone patio at the entrance to the concert hall. A cloth banner for the Yarlantan thrumbatas was tied to a large pole in the center of the patio, flapping in the Nermella. It was warm and he watched the people stroll by. Students, faculty, staff, and citizens of Parnon all came to see the performance. He looked out over the street toward Old Campus where he could see the spire of Tartuk Hall rising above the trees. Beyond that, outside of town, was the military base and the enigmatic human compound.

"Lost in thought, Sar. Coltinarly?"

He turned to see Joleia standing near him. She was wearing a beautiful rubinum cloak trimmed with orange and gold. On her head she wore a matching cap. Behind her but standing with her were two other women about her age.

He clicked his teeth at her. "Please... 'Colty' is fine."

Joleia introduced the two women as seleckia and Colty gently touched each woman's shoulder as he bobbed his head politely. They both seemed as pleasant as Joleia which was in Colty's mind both encouraging and unsurprising.

The four of them entered the hall and were directed toward their seats on the west side. As was traditional Joleia's seleckia lay beside her and opposite Colty. As they settled he looked around. He had never been in the Parnon concert hall before. It was, of course, open to the sky with walls to direct the Nermella away from the audience. The barriers were carefully designed to let in the sun while at the same time reducing wind noise and trapping the sound from the performers.

The seats were arranged in a circle around a central stage except for the east side. Seats there would have been facing the sun and not very useful so instead the entrance ramp for the stage was in that direction. On the stage were several thrumbatas waiting for the start of the performance.

"You look very nice," Colty said.

"You do too. Thanks for inviting me."

The two chatted casually for a time as the hall gradually filled with people. Colty found it easy to talk to Joleia. Her quiet, relaxed manner was refreshing. As she spoke it was obvious that she was observant and intelligent.

"Do you think the humans have music and concerts like this?" Joleia asked.

"I have no idea," Colty said. He hesitated and then added, "you know, I've been asked to host a human visiting professor."

Joleia tilted her head with surprise. "Really? A human professor is coming to Parnon?"

"Yes. It will be here in a few runion."

"That's wonderful! The department must think highly of you to give you the honor of hosting it."

Colty shifted uncomfortably. "I haven't agreed to do it. I'm not sure I'll have time

since I'm working on full status."

"I understand. Of course." Joleia looked pensive and Colty wondered what she was thinking. "At least the humans are still interested in us despite the Junar attempting to assassinate the First Citizen."

"You think it's good for them to be interested?"

"Of course! Imagine the library they must have."

Colty shook his ears, but Joleia continued more seriously. "What must they think of us when we have these religious fanatics trying to gun down our own leaders?"

"I guess that doesn't make a good impression."

Joleia fluttered softly to herself. "If I was them I would stay far away from the likes of us until we've grown up a little more."

After several arnets the two performers walked down the ramp and onto the stage. They turned back to back and raised their trunks while the audience stomped their feet. The performers waited a few moments for the applause to stop. Finally when the hall was completely quiet they walked, without looking back at each other, to their instruments.

Lying on specially designed seats with one leg wrapped around the backs of their thrumbatas, they raised their trunks to the strings. Glancing at each other they paused, nodded slightly, and started to play.

The music flowed from the stage and filled the hall, mixing with the breeze and rising into the open sky. Colty cocked his head slightly to let the complex melody wash over him without distraction. The interplay of the notes formed a pattern in his mind. It had a beautiful structure that constantly changed and flowed, like an elegant proof.

After a time he turned and looked at Joleia, but she was listening intently as well and appeared to be lost in her own world. The performers were renowned players and justifiably so. When the first kos ended, they paused briefly and immediately started the second kos. Yarlantan's music never seemed to stop but always transitioned smoothly

into a fresh kos, changing in style and mood as it did. When played by the masters it was more than music. It was a story in sound.

When the concert was over the hall exploded with enthusiastic stomping. Joleia flapped her ears with pleasure.

“That was lovely,” Colty said loudly to be heard over the din.

The performers knelt as bleats of approval sounded from the crowd. When they rose they waved their trunks and then exited the stage.

After the concert Colty returned to his apartment to relax and sleep a little. Things had gone well with Joleia and he hoped they would get together again. After cleaning up he went through his checklist to ensure that his space was all in order. Finally, he pulled down the mesh screens on the windows to block the harsh light of any flashes, pausing for a moment to notice a few fresh spots on the disk of the sun. He lay on his bed, his mind filled with thoughts of co-sequences and thrumbatas, of music and mathematics, of Jingas and Joleia. Farth-sleep dulled his reason until paren-sleep stopped his mind.

* * *

Colty was in his office reviewing student papers when Lucasa kicked at the door frame. He was surprised to see the ambassador.

“Lucastanonia,” he said. “I had no idea you were coming.”

“This is an unofficial visit. May I come in?”

Colty took the books off his spare seat so Lucasa could lay down and stacked them up on his table instead. “I’m sorry I don’t have much space here,” he explained. Despite his large size Lucasa didn’t seem concerned.

“Have you given any more thought to the idea of hosting our human guest?”

“I’ve tried not to,” Colty admitted. “I thought it was decided that Sar. Rocallanon would be a more appropriate host.”

“It was decided that I would contact her, and I wanted to show you her reply.” He

took a folder from his pouch, removed a single sheet of paper with the letterhead of the OAA, and passed it to Colty. “These are her words translated to Argenian, of course.”

Colty hesitated yet he had little choice but to take the paper and read it. The note was short.

Ambassador Lucastanonia,

Thank you for describing the situation at Parnon University in more detail. It’s true that I do not know your culture nor anything about the university’s policies and traditions. I suggested a mathematician only because I consider myself to be a mathematician as well. I do not wish to cause problems, and I apologize for any confusion I have created. I will leave it up to you and the university’s faculty to decide who should be my host.

Rachel

“She writes graciously, don’t you think?” Lucasa said.

Colty was struck by how ordinary the note seemed. It could have been written by a dunari professor from any one of a hundred colleges or universities sprinkled over Argenia. He had to remind himself that it was actually written by a member of an alien race who was currently thousands of light runion away.

“She says she’s a mathematician,” Colty said. “Didn’t you say she was a physicist?”

Lucasa shrugged. “I don’t think they distinguish those fields the way we do.”

“So in other words, it doesn’t really matter to her from which department her host comes.”

“It might not matter to her,” Lucasa said, “but it does to me. I’m hoping that you’re willing to do it.”

Colty looked over the note again, lingering on the phrase, “*I do not wish to cause problems*”

Lucasa clicked his teeth softly. “You don’t get into a position like mine without a

certain ability to read people. I like what I read from you, Sar. Coltinarly, a lot better than what I read from Rocalla.”

Colty bobbed his head slightly. “Okay, I’ll . . . I’ll do it.”

“Good!”

“I just hope I don’t regret it.”

“Don’t worry,” Lucasa said. “You’ll have the full support of my office. In fact, I want you to meet my linguist Tuskara. He can brief you on what we know about the humans, including things the press does not report.” Lucasa shook his ears slightly. “You’ll like him. He has an amazing way of making the humans seem like dunari.”

23

Colty stood on the landing pavement of the Parnon base under a temporary tent. He was surprised by how few people were there. Lucasa, Tusk, the university chancellor, and Rocalla were the only dunari representatives, besides himself. The human ambassador was also present, standing off to the side talking to Lucasa. Colty had never seen a human in real life before, and it was eerie to watch it moving its otherworldly body as it talked. He felt like he should go and join the conversation but he couldn't bring himself to do it.

The press was there as well but only a few local reporters, one of whom was from the student newspaper. The humans were old news, and the arrival of one individual no longer captured national attention. One of the reporters interviewed Colty briefly but Colty gave carefully prepared answers designed to sound good in print. He kept his real feelings to himself.

Parked to the side was one of the modified vans commissioned by the Office of Alien Affairs. It would be used to transport the human to the compound at the edge of the base. Operated by an OAA driver the van would also serve as her personal taxi service, taking her from the compound to the university and back.

The compound itself had been a storage building. The OAA, together with the military, renovated and secured the building for the benefit of the human visitors. The humans themselves did some additional renovations inside, the exact nature of which was not known. No dunari had ever been in the compound since the humans took

residency, and Colty did not like to think about what manner of activities took place there.

Colty stood with Rocalla and Tusk mostly just listening to their conversation. He didn't feel like he had anything to add. Instead he worried about pronouncing the human's name properly. He didn't want to start their relationship off by making a fool of himself.

"There!"

In the distance Colty could see a fast moving streak. Even though it was obviously still karnons away, it seemed like it would be there in moments. The group assembled in preparation. Lucasa and the human ambassador were first, followed by the chancellor, Rocalla, Tusk, and finally Colty, all in a curved arc.

Despite the great distance, Colty could see the distinctive green glow surrounding the craft. It was much easier to pick out than he expected. Suddenly there was a bright, green flash and almost instantly the craft began to move more like a dunari aerocar. A few moments later, a deep noise rumbled over them like distant thunder on the desert.

"That's the transition," Tusk explained. "It's really quite something when it happens right over your head."

Once the craft landed it taxied over to the vicinity of the tent and stopped. Colty was surprised at how small it was. It looked hardly any larger than the OAA van. A hatch opened and a single bipedal figure climbed out. It started walking toward the assembly, swinging its front legs in time with its back legs despite their not touching the ground. The dunari greeters made last minute adjustments to their clothing, their ears, and their trunk cords.

As the human drew closer she slowed down and approached the head of the line. Although taller than a dunari, she was not nearly as tall as Colty had expected. She was wearing plain, light colored clothing that covered her body and back legs but her face and front legs were bare. She had a kind of mane of black fur growing from her

head, tied in the back, and small, forward facing eyes. Yet it was her human skin that seemed the most alien. Instead of the creased scales common among animals of Rujar, her skin was smooth and lightly colored. It was unlike any skin Colty had ever seen.

The human ambassador stepped forward and the two humans grasped each other's front legs almost the way dunari clasp trunks. Colty wondered if it was a gesture done for their benefit. He could hear the human ambassador speaking in Argenian. His voice was smooth and well practiced.

"Welcome, Sar. Rachel. It's an honor to have you here."

"Thank. . . you," she said haltingly. She also spoke directly in Argenian without the aid of a machine translator. Her voice was strange to Colty's ears. It was high pitched but soft and light, almost like an airy whisper. It hissed and clicked slightly and she spoke slowly but her diction was good and her speech was easily understood. "I. . . glad to-be here. We are well met."

"We are well met."

Lucasa then stepped forward.

"We welcome you, Sar. Ra'hel, to Rujar, the Barnal province of Argenia, and to the city of Parnon. I am Lucastanonia, Argenia's ambassador to Earth. Greetings."

"Thank. . . you, Luc. . . Lucas'anona," she said. "I. . . appreciate that. We are well met."

A couple of reporters snapped some pictures. Despite tradition, Lucasa did not touch the human.

Lucasa then turned to his right and introduced the chancellor of the university. The human looked directly at him with her small, round eyes. "We are well met," she replied slowly after his introduction. Her soft voice was in stark contrast to the deep, rumbling, raspy sound of dunari speech.

"We are so pleased to have you with us. Let me know if there is anything you need."

Rocalla was introduced as a professor of physics. "It's an honor to meet you," he said. "I look forward to talking with you."

“We are well met,” she repeated. Colty was surprised at how polite she was. Although she was no doubt following a protocol that had been described to her, she seemed oddly sincere.

When Tusk was introduced he bobbed his head slightly and then spoke to her in her own language. It sounded like little more than noise to Colty’s ears but she seemed pleased. She replied to Tusk in her language as well. It was an utterly alien sound coming from her, and it made Colty’s skin crawl.

Lucasa then introduced Colty as “Sar. Coltinarly” and as her host. As he had been told to expect, she looked directly at him while Lucasa talked. Her resemblance to a chortak was remarkable. Colty was fascinated by her circular pupils. He wondered what impact that shape had on her vision.

“We are well met, Sar. . . Ra’el,” he said after Lucasa finished. He knew that he had destroyed her name after all. “I look forward to getting to know you.”

“Thank. . . you,” she replied slowly. “I. . . appreciate your hosspitality. We are well met.”

After the introductions she stepped back slightly and nodded toward the reporters as a group. They took several pictures of her, first by herself and then standing with Lucasa and the human ambassador. Colty studied her carefully but her expression appeared emotionless and impossible to read. Finally she got into the van that would take her to the compound. The introductions had been short and to the point. She didn’t make a speech nor did she answer any questions from the reporters.

“They often seem rather cold,” Tusk explained after the van drove off. “I sometimes get the feeling they aren’t quite sure what to say to us.”

Colty was relieved it was over. He returned to his office where he spent some time working. He found it comforting to be thinking about math again in his dark, cramped space. The encounter at the base seemed almost unreal by comparison. He knew he had to be at Cogart in time for the presentations but meanwhile he was grateful for a

few moments of normal life. A couple of students stopped by unexpectedly to ask about the latest assignment and that kept him nicely distracted for a time. After they left he decided to visit the library. He felt a need to talk with Joleia.

She was in her office when Colty arrived but as soon as she saw him she came out to speak with him. “How did it go?” she asked.

“Nerve wracking,” Colty said, “but fine, I think.”

“It must be exciting to meet a human face to face.”

“They are strange creatures. It seemed so distant. It spoke Argenian but was very formal.”

“It’s probably strange for her too.”

“I suppose so,” Colty replied.

The two went outside into the library courtyard and lay for a while under a small rigat tree to talk. Colty found it a great relief to speak with Joleia and soon he felt much more relaxed.

“Have you ever been to Dolarta’s?” she asked.

“Is that the improv club on Following Street Tanis?”

“Yes. I like to go there sometimes to listen to music. It’s not the Yarlantan thrumbatas but it’s still fun. Would you like to go with me sometime?”

Colty clicked his teeth. “That would be wonderful.”

The time with Joleia flew by, and all too soon he needed to leave for Cogart. He thanked her for a nice chat, took a deep breath, and stood up. “Good luck,” she said as he headed down the path.

When he got to Cogart he saw a small group standing near the side entrance beside an access road. He recognized Lucasa, Tusk, and Rocalla but there were a few other people as well. Dargon was not there. The university chancellor was not there. Nobody from the press was there. It looked like nothing more than an impromptu gathering like so many such gatherings that take place all the time around campus.

Colty joined the group and was greeted by Tusk. Only a few moments later, the human's van pulled up the service road and came to a halt not far from them. Everyone quieted and stood nervously waiting while Lucasa walked over to the van. The driver got out and opened the back door, sliding a ramp down to the ground. Moments later the alien stepped out.

She walked down the ramp easily. It amazed Colty that she could keep her balance so well on only two legs. He was also struck by her clothing. She had evidently changed since her arrival. Unlike the humans he'd seen on the viewer she was dressed rather colorfully. She wore a kind of tunic that covered the upper part of her body and her front legs. It was light yellow with tan trim and red highlights. On her back legs were leggings in a similar style. On the left side of her chest, small yet distinctive, was some kind of symbol in black. Colty wondered what it meant. Her fur was tied in a bundle and hung down the back of her neck to her shoulders.

"It's good to see you again," Lucasa said.

"Yesss, thank you," she replied quietly.

She greeted Tusk, Rocalla, and finally Colty. As before she looked at Colty directly when she spoke to him.

"This way," Lucasa said. He indicated the side door into Cogart with his trunk.

"We thought you might enjoy a short tour of our labs first," Rocalla said.

"Yesss," she replied, "that fine."

They entered the first floor of Cogart with Rocalla in the lead, side stepping, Lucasa and Tusk on either side of the human, and Colty just behind Tusk. As they walked down the hall the human's head nearly reached the ceiling despite the modern, spacious construction. Colty doubted if she would even fit in the halls of Fargon.

Rocalla talked more or less constantly describing the labs and giving an overview of the research done in each. He spoke with pride about the equipment they had, emphasizing its uniqueness. "Parnon has one of the most respected physical science research facilities

in all of Argenia. I look forward to talking with you about the equipment you use.”

The human looked around each lab with obvious curiosity but she didn't say much. She listened attentively to Rocalla which only seemed to encourage him. She was particularly interested in the signs. She tried to pronounce the words printed above each door. “Magnet-ics... Struct-ural Phys-ics... Crys-tall-ography.” Rocalla tried to help her but she seemed to rely more on Tusk when it came to linguistic matters. Tusk spoke to her now and then in her own language but that seemed to annoy her.

“Mussst prac-tice,” she said to him.

Colty was surprised at how like a dunari she seemed. She certainly didn't come across as a creature with an all powerful intellect. She made many mistakes trying to speak Argenian and struggled at correcting them just like anyone learning the language might. He found himself thinking about what it must be like for her being the only human surrounded by dunari. Colty wondered if she was afraid.

After the labs the group passed by the lecture hall in the center of the building. Rocalla opened the doors and invited her to go inside.

“Thiss where teach?” she asked.

“Yes,” Rocalla replied. “This is the space we use for the introductory classes. The advanced classes are taught in smaller rooms on the second level.”

The room was strangely empty of students, no doubt cleared out for the tour, but the board was covered, as usual, with many exercises and notes. The human looked at the board curiously. Rocalla demonstrated it by writing a small formula in the corner. She watched him closely and then picked up a piece of chalk with her amazingly dexterous front toes. She drew a curved line on the board which seemed to please her.

“What made from?” she asked holding up the chalk.

“It's chalk,” Rocalla said.

“It's made from calcium sulfate,” Tusk said.

“Cal-cium... sul-fate,” she repeated slowly.

The group then went to the second floor where she was shown her office. The air cooling unit installed by the humans was running and Colty was shocked at how cold it was. She didn't seem to mind. In fact she walked up to the unit and briefly raised her front feet so that the cold air would blow on them.

"Thank much very," she said to Rocalla. "I . . . appreciate what you are done for me."

"You are most welcome," Rocalla replied.

She closed the door to her office and Rocalla locked it and then gave her the key. He nervously held it out in his tentacles and let it dangle from a short chain while she wrapped her toes around it.

"There is a large conference room at the end of the hall where we will have the presentations,"

When they reached the conference room there were already a number of people gathered. Colty recognized a few of the faculty from physical sciences, but most of the people were unknown to him. He felt like an outsider, in some ways even more alien than the human.

As she entered, the people nearest to the door stepped back. Colty couldn't tell if they were just trying to give her space or if they were reluctant to be close to her. She was conspicuous not only in her humanness, but also in her height, standing well above even Lucasa.

Rocalla directed her toward the front where he invited her to lay down on a seat there. She paused and then lowered her body by bending her back legs. Instead of lying down the way a dunari might, she folded her legs underneath her, keeping her torso upright. This made her seem taller than ever. It was a strange posture and looked decidedly uncomfortable but she didn't seem to mind.

Everyone else also took their seats. Tusk and Colty lay down on either side of the human and Lucasa next to Tusk. Rocalla stepped up to the podium and waited for everyone to settle. When all was quiet he spoke. No microphone was needed in the

small space.

“We are here to welcome Sar. Ra’hel, a visiting professor from. . . Earth to the physics department of Parnon University.”

The group stomped their feet. The human jumped slightly and looked around curiously. Colty reluctantly leaned toward her. “It’s traditional to stand up at this point.”

She raised herself back up and turned toward the room. When the stomping ended she lowered herself to her seat as before. “Thank,” she said softly to Colty. He was again taken by how ordinary she seemed.

“We have a few presentations,” Rocalla continued, “to help our guest get familiar with the research being done here. We promise to keep it short.” Several people shook their ears slightly. The human looked around uncertainly. “Without further ado let me introduce Nartoga, a dictatorium student in the crystallography group.”

The student came up to the podium from the back of the room. He avoided looking at the human and spoke too quickly. He talked about the work being done in his group using highly technical language, drawing many diagrams of crystals on the blackboard that Colty did not understand.

The human watched the presentation intently, but Colty found her impossible to read. She looked bored, but for all he knew she was fascinated. At the end of the presentation there were some questions from the audience. The human looked around as they were asked, but she did not have any questions herself.

As the next student came up to give his talk, the human reached into a small pouch in her clothing and took out a slightly flexible cup-shaped object. It had a clear tube dangling from it that led back into her pouch. She put the cup over her mouth and stubby nose and took several deep breaths. She then quickly returned the device attempting, it seemed, to be as discrete as possible.

They sat through several other presentations all of which Colty did not understand. He wondered again what he was doing there. However it did give him a chance to study

the human. He looked at her discretely with his left eye. Her body was strange, but not hideous. Her resemblance to a chortak, an ordinary Rujaran animal, made her seem more familiar than he expected. She wasn't identical of course. Her front toes were far more flexible, her head was higher and larger, and her skin was altogether alien. Yet her basic shape and even her demeanor was not as strange as Colty feared it would be. He wondered if there were any animals on Earth that resembled the dunari and, if so, what they might be like.

The last presentation was by Rocalla himself. He spoke in a loud voice and with a confidence that the other presenters, mostly students, had lacked. He talked about his work on stellar evolution with an emphasis on the outstanding problem of how stars derive their energy. He showed that no model involving the burning of fuel in the ordinary sense could account for the longevity of stars, even after considering the primordial heat of compression, and he speculated that some unknown source of energy must be involved. Unlike the other presenters he frequently looked at the human. As before she watched the presentation carefully but otherwise made no sign.

When Rocalla was finished there were a few questions from the audience and then everyone politely stomped their feet. The human did the same with one of her front feet, something she had learned while watching everyone else. Rocalla returned to the podium. "I would now like to invite our guest to say a few words, if she would like, about her work as well." He spoke directly to the human. "It's traditional for a visiting professor to do a short presentation, but under these unusual and special circumstances I think it is fine if you'd rather not."

"I undersstand," she said. "I say some words."

The human stood up and walked to the front of the room. She turned and paused. Colty could see her looking over the audience. "I mathemat'ian," she began. "I search for... in-consisstencies in laws of physssics as we understand them." Colty sat up a bit. "There is problem."

She turned and using her dexterous front toes picked up a piece of chalk just as a dunari might do with his tentacles. She looked at it briefly and then stretched out her leg and started to draw on the board. She drew an elongated oval, at a slight angle, and roughly filled it in with chalk. From each end of the oval she drew a large, curving arc that wrapped three quarters the way around and spiraled outward slightly.

“This our galaxy,” she said. “It has bar of starsss in center 280,000 light run-ionsss long,” She touched the chalk to the oval and spoke slowly and softly, “two major branchesss, and some minor branchesss I not show.”

Rocalla was riveted and several students scribbled down some notes. As far as Colty knew the exact shape of the galaxy was not previously known.

“There is clustersss. Very tight.” She curled the toes on one of her front legs into a ball. “You call them ssspherical clustersss. Many of them go around galaxy.” She made a waving motion above her drawing. “But... some go right around bar.” She moved one of her legs as if to show an object rising up out of the board, around the oval, and then back into the board. “Very strange orbitsss. Do not make sense.”

She put down the chalk and looked at her toes. She seemed disturbed by the chalk dust on them but she tried to ignore it. “I think our theory of ssspace-time not quite right. Maybe structure of space hasss special symmetriesss. Maybe explain strange orbitsss.”

She walked over to the podium but she was much taller than it was. “From Earth can’t see far side of galaxy much. Earth in center of disk. Too much starsss in way. Ru-jar on top of disk above clouds of starsss. I come here to make measurementsss of far side spherical clustersss. Get better numbersss... check my theory.”

She paused. “That all I have.”

It had been a short talk but in that time she had already revealed things never before known. There was a palpable energy in the room.

“What did you mean when you said ‘structure of space?’ ” Rocalla asked.

The human seemed at a loss. She glanced toward Tusk who cocked his head slightly in readiness. "Space..." the human began, "hasss physical... realness. Even empty it isss filled..." She glanced out the window and ran one of her front feet through the fur on her head. She spoke in her own language briefly and softly, but more to herself than to the audience. "Um... space has math structure. Can study it. I... I sorry. I do not know wordsss."

The room fell silent.

"Maybe we can talk more about it another time," Rocalla said. The human nodded her head in a surprisingly dunari way.

"What is strange about the orbits?" someone from the back asked. Colty couldn't see who it was.

"They is not..." she struggled again. This time she spoke to Tusk in her language.

"Random?" Tusk said. "It means arbitrary."

"No," she said. She made a kind of stirring motion with her front leg. "More mixed up." She spoke some more in her language.

"Chaotic," Tusk said. "I think you mean chaotic. It means like you said: complex and unpredictable."

"I so sssorry. I need to learn so much before I right talk."

"You're doing fine," said Tusk.

She took a breath and then raised her foot toward the back of the room. "The orbitsss are not... chaotic. Them... locked."

"Your people have interstellar space flight," another student said, "can't you just send a ship to the center of the galaxy to get the measurements you need?"

She nodded her head slightly. Colty wasn't sure what it meant. "It too far." She picked up the chalk again and drew a mark on her diagram about two thirds the way from the center and between the main spiral branches. "This Earth." She then drew another mark right next to the first one. The two marks were touching slightly. "This

Rujar.” She put the chalk back down. “You see how close we is? Yet this as far we go.”

Again the room was profoundly silent.

She pointed one of her flexible toes at the mark for Earth and then moved it slowly toward the center of the oval. “This very long way. We have probe going to center galaxy. Take many run-ionsss.”

She turned back toward the audience. “Much easier look from here. You have nice view.” Colty clicked his teeth softly. Was that a joke?

“Are you going to teach any classes?” someone asked.

She hesitated and then glanced toward Rocalla. He got up and walked to the podium. “We will give our guest a chance to get acclimated. After that, we’ll see.”

“I would like teach,” she said.

There were no other questions and the human went back to her seat. Colty noticed a film of water on her skin that was not there before. It made her seem completely alien and Colty fought a strong revulsion.

Rocalla said a few final words to wrap up the event. “Again we welcome you, Sar. Ra’hel. If you have any questions or need anything I’m sure any one in the department would be happy to help. Of course you can also ask your host, Sar. Coltinarly.”

“Thank,” she replied.

The event ended and people got up. As everyone was leaving Rocalla came over to her. He talked about her presentation but Colty didn’t pay attention. He had reached his limit. He had nothing to say to the alien, to Rocalla, or for that matter to anyone else. Discretely he slipped out the door and made his way down the empty halls of Cogart.

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Colty was in his office puzzling over a paper on co-sequence correlation. He was having trouble with one of the proofs. He took out his notebook and flipped back several pages. Partfolio's work on mono-sequence rotation seemed inconsistent with the co-sequence correlation theorem. Colty wrote a few formula on a fresh page of his notebook and stared at them with his right eye. His concentration was broken by the chiming of his phone.

"Yes," he said brusquely as he answered.

It was Joleia. "Colty?"

"Oh, hi! Yes, it's me."

"I don't mean to disturb you, but I just wanted to let you know that the human is here at the library. It... she was asking about math books."

"Math books?"

"Yes, but I guess I shouldn't have bothered you. I'm sorry."

"It's fine," Colty said. "I was thinking of taking a break anyway. I suppose I should go over there and do my hostly duty."

It was a beautiful moment. The Nermella was blowing lightly and the sky was filled with brightly colored patches of clouds. Yet Colty didn't notice the breeze, the sky, or much of anything else as he walked rapidly down the path toward the library. It was exactly an interruption such as he feared would happen.

When Colty got to the librarian's counter Joleia was there. She pointed toward the

ramp. He nodded and took a deep breath. He knew the way very well, and bounded up the ramp to the second floor. At the top of the ramp was a small lounge for study or reading but it was empty. He walked down the wide aisle past engineering, past chemistry, and past physics and finally to mathematics at the end. Colty slowed and looked down the stacks at either side of the aisle but he saw nobody. The smaller lounge at the end of the aisle was also empty. It seemed as if the human had already left.

Yet behind the lounge in the corner of the building was a section of elementary texts. There he found her on the floor with her rear legs folded beneath her and her body upright the way she had been during the presentations. She had two books on the floor beside her and she held another in her flexible front toes.

As Colty approached she looked up. "Um... hello," she said tentatively.

"Good singing," Colty said.

She looked at him closely. "Sar. Coltinarly?"

Colty wasn't surprised that she had trouble recognizing him. He hadn't made much of an impression at their first meeting. He swayed his head but she just watched him uncertainly. "Yes," he added finally.

"Good...ssing-ingg," she said. She parted her lips slightly and bared her teeth. Colty instinctively folded his ears against his head and stepped back, bumping into the bookshelf in the process. He had no idea what the strange creature was about to do, and he was suddenly aware of how alone they were.

The human abruptly covered her teeth again. "I sorry," she said, "I am happy you iss here."

"It's fine," Colty replied nervously. "We just need to get used to each other."

"I find good readsss here." She held up a book on elementary algebra. Colty felt braver and stepped closer to her so they were properly next to each other. Even with her legs folded under her she was almost as tall as Colty was standing. Yet without her towering over him she did seem a bit less intimidating.

“That’s very basic material,” Colty said as he looked at the cover of the book.

“I needsss learn your math writing. It hard for me.”

Colty noticed what appeared to be a piece of glass leaning up against the bookshelf, about the size of a sheet of paper. Yet it was covered with symbols in an alien script. The human saw him looking at it and she picked it up.

“My machine,” she said. She touched the surface with her toes and then, much to Colty’s amazement, folded it in half and then in quarters. She put it into a small pouch that she had strapped around her waist. “I should take notesss dunari way. How you do it?”

“I just use standard research notebooks. You can get them at the university supply store.”

“Can you show?” she asked. “Am-basss-ador Lucas’anona gave me money.” She took a small bag out of her pouch and showed Colty a few bills.

“That’s more than enough. In fact, you probably shouldn’t carry that much around.”

“Oh.”

“Are you sure you want to go to the store? I could get you the notebooks you need.” Colty wasn’t thrilled by the prospect of taking yet more time away from his work. Yet it seemed like the appropriate thing to offer.

“It safe? I will like to see.”

Colty agreed to escort her and she put the books back on the shelf, carefully returning each to its rightful spot. “You can check those out at the counter and take them with you,” Colty said.

“I can?” She seemed surprised. “How otherssss read?”

“That’s how it works here.” He was struck by the creature’s unassuming attitude. “Any of these.” He waved his trunk as if to indicate the entire shelf.

She picked a couple of the books off the shelf again and looked at them. She seemed undecided for a moment but then put one back. “I take thiss one,” she said, holding

the other up slightly.

Colty stepped aside and pointed the way with his trunk. "It's this way back to the counter, Sar. Ra'el."

She raised herself up on her hind legs, a process that both fascinated and disconcerted him. Then they walked toward the library entrance side by side. She said, "You can just call me *Rachel* if you like."

When they reached the main lobby of the library there was a short line at the counter. The people waiting saw them coming and shifted uncomfortably. The human seemed fine waiting off to the side some distance away. Colty looked for Joleia, but didn't see her.

When everyone in the line had been served they approached the counter where a woman who looked as old as the library itself waited for them with obvious disdain in her eyes. "What can I do for you, Sar. Coltinarly?"

"She wants to check out this book," Colty explained. He gestured toward the book the human was holding. She put it on the counter, retracting her front leg quickly.

The librarian looked at her balefully. "Do you have a library card or student ID?" she said curtly.

To Colty's surprise the human opened her pouch and took out a brand new visiting professor card, complete with her picture. The librarian studied the card suspiciously as if she thought it might be some kind of trick.

"She's a visiting," Colty said as if the librarian didn't know.

The librarian fluttered and recorded the book with the human's name and ID number, which she copied from the card, into her borrower's log. The human watched the process with interest.

"How long me keep?" she asked.

"Standard check out is one runion," the librarian said without looking at her.

The human took the book and the two of them made their way toward the entrance.

She walked slowly and Colty felt frustrated by the delay. When they reached the inner court the human paused and looked up at the great, domed ceiling. She raised one of her front legs and extended a long toe to point at the inscription carved beneath the high windows. “What do words mean?” she asked.

“I don’t know.”

“Maybe Tusk know.”

“Probably. The entrance is right over here.”

Colty watched the reaction of people as they made their way across campus. Some simply stared and others avoided looking at them at all. Most kept their distance by using other paths or walking on the grass to go around them. The human looked around warily, clutching her book close to her body with her front legs.

They came to a garden full of tulara flowers in bloom. The human stopped to look at them. Behind the flowers was some nara bush, its broad yellow-gold leaves curled slightly in the sun. She lowered herself to get a closer look by bending her rear legs. On the ground beneath the nara leaves was a thin vine dotted with tiny red flowers.

She asked lots of questions about the plants. What were they called? Did they need to be watered? Did they grow naturally around Parnon? At first Colty kept his answers brief but her curiosity was infectious, and soon he started wondering about the answers himself. He guessed there were no flowers on Earth. The human acted as if she’d never seen one before.

In the middle of the Yellow they came to a seat. The human stopped to ask what it was.

“It’s a place to lie down and rest. Students sometimes come here to study or to just enjoy the sun. You’ll find them all around campus.”

She lowered herself onto the seat in her usual way with her legs folded underneath her. She pointed to the top of the spire on Tartuk Hall and asked about the ring.

“It’s Parnon’s symbol,” Colty explained. “The top represents thought, ideas. The bot-

tom represents things, actions. Ideas to actions and actions to ideas,” he said repeating the university’s motto.

“Oh.”

Colty lay down beside her. For some reason he didn’t feel as hurried as he had earlier.

“How old Parnon?” she asked.

“I really don’t know. It’s old. It was one of the first universities chartered during the age of the Regents. That was before confederation. One of the first Regents, I forget who exactly, decided that he wanted his reign to be known as a time of enlightenment. So he created two universities to be centers of learning. Parnon was one and Parlola was the other. Parlola doesn’t exist anymore...”

Colty stopped abruptly. He became aware that the human had turned to look at him. Her forward facing eyes with the strange, round pupils regarded him closely. He shifted uncomfortably. “I’m sorry,” he said. “I was rambling.”

“It interessting,” she said.

“I don’t really know much about it. I’m new at Parnon myself. I’m not a very useful host.”

“You good. You not fear me.” She looked out across the grass toward the steps of Tartuk Hall. “I apreiate that you take time.”

They lay quietly for a moment. “How did you pronounce your name again?” he asked.

“*Rachel*”

He took a breath. “Ra... hel”

“Yesss!” she smiled briefly but quickly suppressed it.

“I’m Colty.”

Rachel reached into a pocket and took out the same clear, flexible cup she had during the presentations. As before she put the cup over her face and breathed deeply several times. She quickly returned the cup to her pocket and then noticed Colty watching her.

“What is that?” he asked.

“It just ox-i-gen,” she replied. “Your air has less ox-i-gen than Earth air. It helpsss me to have a little more.”

“So you need that to survive here?”

The human shrugged in a very dunari-like way. “My body get used to air here in future.”

They lay together for several moments before Rachel finally suggested they continue on their way. A gust of wind kicked up some dust on the path as they walked. Rachel’s hair blew in the breeze.

“It alwayssss windy,” she said, “ssso they tell me.”

“It’s the Nermella,” Colty explained. “It blows, more or less, all the time. Sometimes it brings dust from the desert but here at Parnon it mostly brings clouds from the sea.”

They came to the opposite side of the Yellow and the path took them between two buildings. Rachel seemed fascinated with the landscaping. The shadows from the buildings formed the outlines of gardens and walkways. Inside the permanently shaded areas were plants adapted to such life while the sun loving flowers were planted in the open.

She compared the shapes of the shadows with the shapes of the tops of the buildings, looking back and forth between the two. “It amazing you do thiss,” she said.

“What do you mean?” Colty asked.

She pointed along the walk where it had been lined up against the shadow of Minar Hall. “You plan on shadow being here alwayssss.”

“Of course. Where else would it be?”

“My sun brighter and hotter. It yellow, not red. Earth far away from it. Earth not . . . locked.” She raised up one of her front legs and held it out to the sky. “As Earth turn sun movesss across sky.” Then she looked at the ground and gestured over it. “Shadowsss move across ground.”

It was hard to imagine. “It must get very hot with the sun high in the sky.”

“It get warm, not hot. Only short time. Then night.”

“Night?”

“Yesss.” She pointed at the ground and moved her leg in a slow arc again. “Earth turn. Sun on other side for a time. Then rise. On Earth you don’t go to night. The night come to you.”

Colty was fascinated and horrified at the same time. “How do the plants survive it? Do you even have plants?”

“Plantsss used to it. Like that for billionsss of run-ions. It strange here for me. Day alwaysss. Sun never move. Confusesss my body. We sleep at night. At compound we switch light and dark so more natural for usss.”

It was hard for Colty to think of anything more unnatural than purposely alternating between day and night. How could their society operate like that? he wondered. What kind of creatures could live on such a world? He realized with a start that he was walking next to one of those creatures.

They came to Following Street Tanis, a road that formed the boundary between the university’s Old Campus and the town of Parnon itself. There was significant traffic on the road and many pedestrians on the sidewalk. Rachel seemed nervous. “How far?” she asked.

“It’s just up there,” Colty said pointing down the other side of the street a short distance.

She hesitated. “That fine.”

As they walked along the sidewalk Colty became very aware that they were being stared at. He heard whispered voices behind him and people moved out of the way as they approached. His heart pounded. He wasn’t used to being a spectacle. He glanced over at Rachel. She had her head down, looking at the sidewalk in front of her. She didn’t seem to notice the reactions of others.

They came to a crosswalk, stopping a short distance back from the road behind a small group of dunari gathered there. “We need to wait here,” Colty said, “until the

sign says we can go.” He indicated the crossing signal on the other side of the street.

“That fine,” she said softly. She didn’t look up.

A military officer stepped up to the crosswalk and the other dunari seemed to relax a little. He looked steadily at the human but said nothing. When the light changed the group moved across the street. Colty waited slightly so they would follow behind. Rachel held her body close to herself.

Once they got inside the store Rachel seemed to relax a little. Very few people were shopping and the aisles protected them from the staring eyes of onlookers. Rachel also got interested in all the items for sale and started asking many questions about them. What were they for? How much did they cost? Why were there so many different kinds of paper clips? They were questions from a stranger in a strange land. Colty had to remind himself that this was the same creature who only an hour before had told the physics department of Parnon University that space itself had structure.

With Colty’s help she picked out a small notebook and a pen for writing. He was amazed at how easily she held the pen between her long front toes. He never would have guessed that any kind of bony appendage could have the necessarily dexterity to accurately manipulate a writing implement.

“What these?” she asked regarding a rack of photo sheets. Colty explained they were for decoration.

“A collection of nice things to look at.”

She was fascinated. One sheet featured images of Morgolan Park. “It beautiful,” she said looking at a picture of a snow capped mountain. “I think I need decoration for office.”

“Human!” The two looked up to find three young men, probably students, standing at the end of the aisle. The one who spoke stepped forward with his friends just behind.

“What do you want here?” he said with a demanding tone.

“I... I want decoration.” She glanced at Colty.

“We don’t want you here,” the student said in a loud voice. “Go back where you came from!” He stepped forward menacingly.

Rachel stepped backward and ran into the rack sending several photo sheets clattering to the floor. Without thinking Colty put himself between the human and the approaching anger. “Look,” he said calmly. “We’re just here to get a few things. This is not the time or place for this.”

“Is there a problem?” The manager of the store was standing at the end of the aisle looking generally displeased. His ears were back, his legs were locked straight, and he fluttered softly.

The student looked back and then again at Colty. He pointed his trunk at Rachel. “You watch yourself.” He slapped the backs of his friends. “Let’s go.”

After they left Rachel started to pick up the photo sheets that had fallen on the floor. The manager motioned to Colty. “Get it out of here,” he said in a low voice.

Colty returned to help Rachel. “I so sssorry,” she said. “Made chaotic messs.”

“It’s okay. Let’s just pay for what we have and head back to campus.”

Rachel’s leg shook as she put the photo sheets back on the rack. Colty understood that she was distraught. She replaced the photo sheet of Morgolan Park but as she turned to go, Colty grabbed it again.

A small crowd had gathered as a result of the altercation but Rachel did not look at anyone. She kept her head down and went to the cashier with Colty. She put down her notepad and pen. Colty added the photo sheet. She fumbled with her pouch. Her amazing front toes didn’t seem to work as well as usual. “I’ve got it,” Colty said handing the cashier a bill. “You can pay me later.”

“Thanks for coming,” the cashier said as she gave Rachel a bag. Rachel didn’t reply but instead took the bag and headed for the door.

The two made their way back to campus in silence. Colty wasn’t sure what to say. “I’m sorry about what happened,” he said finally. “It’s my fault. I should have gotten

what you needed.”

“It fine,” she said, “This how we learn about each other.”

Part II.

Teacher

31

Colty walked up the side ramp of the Cogart lecture hall to the back row. The students looked at him curiously. He was sure none of them recognized him or understood why he was there. He lay on a seat in the corner and watched the rest of the class wander in. At Parnon the opening of every course was scheduled and all students were expected to be there at the same time.

From his vantage point almost a full story above the lecture floor he could easily see the entire room. The walls were plain, the seats were functional, and all was in a modern style designed more to save money than for aesthetic appeal. Light from the meshed windows illuminated the chalkboard without creating too much glare for the lecturer to see. White sun panels hung from the ceiling to reflect some of that light throughout the rest of the space.

The opening time drew near and yet no instructor appeared. Some students lay quietly, notebooks ready. Some chatted awkwardly with their neighbors. Colty eyed the large line clock on the wall above the chalkboard. The class grew restless. It wouldn't do if the class opened late. If Parnon expected the students to be there, the instructor had to be there as well.

Suddenly the door opened and *she* walked in, carrying the course book in her arms. She didn't look at the students but instead carefully climbed the steps to the platform. She put the course book on the podium and faced the hall. She was wearing thin, white clothing around her torso but her arms and most of her legs were bare, exposing her

strange pale skin openly. The black hair on her head was pulled back as usual and hung below her shoulders.

Silence.

“Hello,” she said tentatively. Her alien voice was soft but carried surprisingly well. Colty could hear her fine even at the back. “My name is Ra’hel and this is Introductory Physics. I will be your instructor.”

“Dind,” someone swore rather loudly.

Colty heard a noise coming from his right. Two students had just left through the back doors. Rachel seemed not to notice. She walked to the blackboard and, picking up a piece of chalk in her fingers, wrote some notes. “My office is in 227,” she said pointing in the general direction. “I will be there when I can, but I have a pad beside the door so you can leave a message if I’m not around.” She turned back to the class. “Of course I will leave a pad here as well.”

“I’m having trouble understanding your accent,” one student called out suddenly.

She turned toward the source of the sound but the student did not identify himself. “I apologize,” she said. She stepped forward to the edge of the platform in front of the podium. It was something a dunari professor would never do. Colty wondered if he should be making notes. “I’ve been practicing, but I know I need more practice. If you don’t understand my speech please say. It will help me learn.”

A student in the middle of the hall called out, “Are you a girl?” There was some embarrassed shifting, and Rachel paused uncertainly.

“Our genders are a bit different than yours, but essentially yes, I’m a girl.”

Another student at the far side raised his trunk abruptly, his first tentacle pointing straight up insistently. “How can you teach us?” he asked without waiting to be acknowledged, “What do you know about how we learn?” There was a murmur of voices in the hall.

Rachel paced across the platform, still in front of the podium, and ran her fingers

through her hair. "I understand..." she raised her voice. "I understand your concerns."

The class settled down and Rachel continued. "I have the course book so I know what material to cover." She stopped at the end of the platform nearest the student who had asked the question. "Last term I attended one of Sar. Rocallanon's classes so I got a good idea of style of teaching used here. With your help I think I do a good job for you."

Colty overheard one of the students right in front of him whisper to his neighbor, "At least it's not a Forbinite."

Rachel walked back to the center of the platform. She paused and looked over the class. Nobody said anything. She finally stepped behind the podium and opened the course book.

"Shall we begin?"

She carefully transcribed the notes on vectors onto the board, pausing occasionally to highlight some point. Her style was very methodical and she followed the course book closely. Colty clicked his teeth softly with approval.

Relieved by the normalcy of her presentation most students dutifully copied the notes into their notebooks. Nobody asked any questions, and although Rachel paused and looked at the class often they just waited for her to continue.

Finally she wrote the first exercises on the board: several simple problems in vector manipulation. The students started to work the problems but Colty watched Rachel. She seemed grateful for the break and leaned against the wall to rest. She took a few breaths from her oxygen canister. Then she pulled a small device from another pocket in her clothing, unfolded it, and used it to fan air over her face as she gazed out the window. As was traditional she didn't acknowledge Colty at all. They would meet afterward to discuss any issues Colty identified.

After a few moments she realized several students were watching her, and she hastily put the fan away. Standing up straight again she spoke to the class. "Does everyone

understand how to work these problems?" Hearing no response she started to write the answers down next to each question. "You should be sure you can derive these..."

"Do you teach on Earth?"

Rachel stopped and turned back toward the class still holding the chalk up slightly. "Yes... ah, yes I do," she said.

"Like this?"

Rachel put the chalk down and tried to brush the dust off her fingers.

"Let it finish putting up the answers," another student blurted out.

"Would you be quiet?" yet another student said, "As Jurita's Witness it's just a question."

The class shifted uneasily. Colty tensed wondering if he should do something.

"I really don't care. I just want the answers to the problems."

Rachel held her hands up. "Please, please... no upssset. I... will finish writing out the answers in just a moment. In the meantime is natural to be curious."

She paused for a moment and the class settled down again. "My classes on Earth are different. We use our technology to organize them, and we present the material in a different way."

Nobody said anything more so Rachel finished the answers and, after consulting the course book, started on the next topic. The rest of the presentation was uneventful. Rachel moved through the material at the carefully prescribed pace and by the end of the class she had introduced the basic equations of motion and had derived the idealized trajectory of a projectile.

Finally a soft but clear beeping started and Rachel touched a small device she was apparently wearing on her waist to silence it.

"That is the end of my presentation for now," she announced. "I will leave additional materials on the board. Please come to my office sometime to introduce yourself. I will let you know when we have our next sssynchronized meeting."

Rachel stood well away from the students as they filed out. She looked exhausted. Her skin was damp and she fanned herself often. Colty hung back and carefully approached her after everyone else had left.

“How did I do?” she asked.

“It was fine. I think it was fine.”

“Good,” she said rubbing her forehead.

“Don’t go in front of the podium. It’s considered inappropriate to be that familiar with the students.”

“I sorry. I must return to my office to cool.”

* * *

Colty went to Fargon, grateful to be back in more familiar territory. He returned to his office and spent several moments reviewing his notebooks and organizing his thoughts. He wasn’t used to being unprepared and the feeling unsettled him. Being host to the human hadn’t taken as much time as he expected, for she mostly kept to herself either in her office or in the library. Yet because of her class he hadn’t had the opportunity to properly meditate on his work and he found himself having trouble focusing.

Finally the appointed time arrived. He rubbed his trunk ridge with his tentacles and then returned his materials to their prescribed places in the trays of his table or on his shelves. He carefully closed his most recent notebook and tucked it into the wide pocket of his cloak. Then, locking his office behind him, headed down the long leeward hall to the Overseer room at the end.

Colty took a deep breath and pulled aside the heavy wooden door. The room behind was small and overflowed with history and tradition. It was in this room where Potarian first presented his masterpiece *Components of Numbers*. It was in this room where Rustuk proved the Finite Folding Theorem by, as the story goes, scratching folding notations into the wall while being grilled by an unforgiving Overseer.

Slowly, almost reverently, Colty walked across the ornately tiled floor. It was inlaid with colored wood forming an image of the emblem of Menola, the ancient symbol of mathematical purity. At the front, on a raised platform covered with garn stones, were three heavy, wooden seats facing toward the center. The platform extended along the adjacent wall under wide windows of lightly colored rosen glass. Lying on the seats were Colty's Overseers, awaiting him. They were the three most established faculty members in the department who would ultimately decide if he was to be granted full status.

Sar. Dargonick greeted him. "Thanks for coming, Colty," he said good naturedly. Sar. Molanalor and Sar. Tarnockalia said nothing. Tarnock seemed to be intently studying a document on the small desk attached to his seat.

"As you know this is just routine," Dargon said. "It's the start of your fourth term and we need to check in with you."

"Of course."

"I hope you've been settling in well," Dargon continued.

"Yes, I think so," Colty replied. "I have a small apartment..."

"Tell us about your research," Tarnock interrupted.

Colty hesitated but his Overseers just waited. He wondered if he should take out his notebook but in the end he didn't. "Um... I've been looking at co-sequences," he started. "The topic is a natural extension of my dictatorship on monosequences and my literature searches show that it hasn't been extensively researched."

Molan pushed aside a booklet that Colty recognized as his dictatorship. "Hasn't Sar. Nulari and his group at the Walash Institute already covered co-sequences?"

"I'm familiar with his publications of course," Colty said. "His work is very general. I'm actually looking specifically at co-sequences with stellating bases."

"Why?" asked Tarnock. He regarded Colty coolly as if waiting for an answer he thought Colty could not provide.

Colty shifted on his feet slightly. He had often asked himself that same question.

“Well. . . um. . . it seems to me that there is a relationship between stellating co-sequences and prime numbers.”

“It seems to you?” Tarnock said with a flutter. He flicked his trunk to the side dismissively. “What kind of relationship?”

Colty adjusted his cloak slightly. He took a deep breath to calm his nerves. “I’m. . . I’m not sure. . . yet.”

“Colty,” Dargon jumped in, “your interest in co-sequences is understandable given your background, but we’re concerned that it’s not a rich enough area to satisfy Parnon’s expectations of its professors.”

“At best there might be a minor paper in it,” Tarnock said.

Molan turned toward Tarnock. “Yet if stellating co-sequences are in some way primal, that’s an interesting result, yes?”

“If it’s true,” Tarnock said, “but then what? The field is a dead end. It’s probably not true anyway.”

Colty raised his voice slightly to break back into the conversation, “I feel like there is a rich structure there. . . although,” he added more softly, “I’m having trouble discovering it.”

“There is no rich structure in co-sequence theory,” Tarnock said. “Nulari has already said everything worth saying in that area.”

Dargon fluttered softly. “Colty, we have big expectations for you, and we just think you can aim a little higher. Given that it is your fourth term already and you haven’t made progress on co-sequences, perhaps you should give some thought to another topic.”

Colty held his ears close to his head. “You. . . you’re right. You make a good point. I’ve also been doing some reading about graph extension fields.”

“Excellent,” said Tarnock. “That’s an important area, and nobody else in the department is working on it.”

“That topic is also well aligned with your specialty,” Dargon said.

“Yes,” Colty replied softly.

Dargon made some notes on a pad in front of him while Colty waited patiently. Finally he looked up and Colty stood ready to be released. “One more thing,” Dargon said. “How are things going with our guest?”

“I just came from her opening session,” Colty replied.

“Do you talk with... her... it’s a *her*, yes?” said Molan.

“Yes,” Colty said. “She comes to me regularly but she asks about little things. The last time we spoke she asked if every building on campus had skylights.”

“Do you ever talk about math?” Dargon asked.

“Sometimes she has questions about things she’s read, but she learns quickly, and doesn’t need a lot of explanation. She... well, to be honest she’s very ordinary.”

After Colty left his overseers, he spent the rest of the runion trying to forget about co-sequence theory and, for that matter, about his research entirely. He prepared for classes. He spent time with Joleia. He distracted himself by helping Rachel. Her class seemed to go smoothly, and she made good progress through the course book. He even found the time to explain the rules of conifi to her, a game with a rich and fascinating mathematical structure. He was pleased that Rachel seemed to appreciate it.

It was late in the runion when Colty finally spent nearly an entire hour in the library gathering resources for his new research direction. Returning to his office he spread three papers on graph extension fields across his desk. Each was a classic that introduced a distinct branch of the topic. He read the abstracts and flipped through the pages. Graph extension fields was an active area with mathematicians from all over Argenia and Forbin working on it. The extent of the literature was daunting.

Colty took a deep breath and leaned back. He needed to find a niche where he could carve out a useful and significant contribution. He picked up one of the papers and skimmed it. The figures illustrating the primitive graph operations were certainly pretty. Yet Colty did not feel inspired. I’m a number theorist at heart, he thought,

not really a combinatorialist, and certainly not an algebraist. Had he chosen the wrong specialty?

He tossed the paper back onto his table and, making some space, opened his notebook to a blank page. Down the side he wrote in big letters, "GEF." He let his mind wander a bit, reflecting on various aspects of the subject. Do Hubert graph operations commute? he asked himself. He drew a couple of figures on the page. "Of course not," he said out loud. It was an entirely trivial observation.

Colty sighed. After a moment he closed his notebook. He felt a need to take a walk. Locking his office he headed outside with the intention of just walking once or twice around the Yellow. Yet he found himself heading for Cogart instead. For some reason he felt an urge to talk to Rachel.

The atmosphere in the physical sciences building was very different than in Fargon. Everyone seemed to move a little more quickly, and the sound of feet against the hard floors clicked a little more loudly. "Is Ra'hel here?" Colty asked at the main desk.

Jarnol tilted her head toward the human's office. "Last I knew," she said.

Colty walked down the hall. Rocalla's office door was open and Colty could hear him talking to someone. As he approached he recognized Rachel's soft voice.

"... it's frustrating for me," Rocalla was saying, "to be working on problems for which you already know the solutions. You say you are here to teach us. Why not give me some direction at least?"

"I understand..." Rachel began. At that moment Colty lightly kicked the base of the door frame. Rachel stopped and turned. "Oh, Colty," she said with pleasure.

"I just came over to check in with you," Colty said, "but if you're busy I'll come back another time."

"It's fine," said Rachel. She turned toward Rocalla who looked distinctly annoyed by the interruption. "We can talk about this more later. Okay?"

"Sure."

“I was about to go to the library,” Rachel said to Colty. “Will you walk with me?”

Rachel led the way back toward the entrance of the building. She seemed anxious to get out of Cogart and, without speaking, walked more quickly than normal. When they finally got outside she paused. The sun lit the clouds with bright rubinum light and cast a tinge over the buildings and grounds of Parnon. Three spot complexes were obvious on the sun’s bright disk. The Nermella gusted strongly and Rachel smiled. It was an expression Colty had come to know and understand. It pleased him to see it.

“It is so nice to be outside,” she said. She reached up and gathered her hair into a bunch and tied it with some kind of clip.

Colty watched with fascination. “Is that uncomfortable?” he asked.

“Oh no,” she said. “and tying it back keeps the Nermella from blowing it in my face.”

They started toward the library. When they got to the main walkway Rachel turned toward Colty. “You came at the perfect time,” she said in a loud voice to be heard over the blowing wind. “I needed an excuse to be somewhere else.”

“Why was that?”

“Sar. Rocallanon wants me to tell him where stars get their energy, but I can’t.”

“You don’t know?” Colty asked.

“Oh, I know,” Rachel replied. “It’s just... I’m not supposed to talk about certain things.” She hesitated. “You see there are some on Earth who feel it is too early for me to be here. My government only allowed it because I agreed to... to be discrete about certain topics.”

“Your people want to maintain the advantage,” Colty said.

“No, oh no,” She stopped and faced Colty directly. “I’m a scientist and a teacher. I’d love to tell you everything I know. It’s just... knowledge can be dangerous. For your own protection we don’t want to teach too much too fast.” She ran her hand through her hair. “I understand this,” she continued, “but I don’t like it any more than Rocalla does.”

Colty reflected on the odd idea that knowledge could be dangerous to the knower, as the two of them continued to walk. “Have you explained this to Rocalla?” he asked finally.

“Yes,” Rachel said. “I’ve tried. He thinks I’m being... um... e-va-sive.”

“Evasive.”

They came to one of the gardens along the path and Rachel stopped to look at it. “Oh look,” she said as she stooped down. There growing close to the ground where the same tiny red flowers she had asked about the first hour they met. “These are called topolia flowers. They bloom along the vine in sequence from the root toward the end.”

Colty flapped his ears with surprise. “How do you know that?”

“I read about it. What do you think I do in the library all that time?” she added with a smile.

Colty clicked his teeth loudly and Rachel watched him closely.

“That means you are amused, right?” she asked. “When you click your teeth together like that?”

“Well, uh, it can mean that, yes,” he replied. “It can also just mean we’re pleased with something or happy to see someone.”

“So if I do it,” Rachel clicked her teeth together a few times, “how does that come across?”

“That’s a bit eerie, honestly,” Colty said. “A little shocking even. I don’t think you should do that.”

The two of them lay on seats next to the garden for a short time. Colty felt surprisingly at ease. “Do you have flowers on Earth?” he asked.

“Oh yes,” Rachel said. “Many beautiful flowers. They are not like here though. Plants on Earth are green but the blooms are different colors.”

“Green plants,” Colty said softly, trying to imagine it.

The Nermella gusted strongly and Rachel looked up at the rigat branches over their

head. She closed her eyes and appeared to listen to the whistling of the air as it rushed through the leaves. Colty watched her silently.

“I’ve decided to give up on stellating co-sequences,” he said.

She turned to look at him.

“My overseers convinced me that the work is probably a dead end.”

“I thought you told me they had fascinating structure.”

“It seemed like they had fascinating structure. I can’t prove any of my conjectures so I guess I don’t know.”

He looked out over the Yellow as he spoke, and then the two of them lay silently for a while. When Colty turned toward Rachel he found her looking at him.

“What will you study instead?” she asked.

“Graph extension fields. It’s an important topic.” Rachel didn’t reply but seemed to reflect. He watched her for a moment. “I don’t suppose you know anything about stellating co-sequences.” As soon as the words left his mouth he regretted saying them. He didn’t want to sound like Rocalla, and he certainly didn’t want to just be told the answer.

“I don’t,” Rachel replied. “Honestly, I’ve never heard of anything like them.”

“That’s more evidence that they probably aren’t worth pursuing.”

Rachel looked at Colty closely, studying his expression. After a moment she asked, “how do you feel about this new direction?”

“It’s fine.”

“Yes?”

“Sure.”

She made a low humming sound that seemed to come from deep inside her body. It was a sound Colty never heard her make before. He turned to look at her.

“You don’t like doing what everyone else is doing,” she said.

“What makes you say that?”

“I’m getting to know you.”

Suddenly there was a soft, beeping sound almost like the chirping of a cican bug. Rachel took from her pouch the device she simply called her “machine” and unfolded it. Colty could see its surface covered with exotic human symbols that she seemed to study briefly. Then she quickly folded her machine up again.

“A flash is coming.”

Colty tilted his head to look up at the large disk of the sun, shading his eye slightly with his trunk. There was a rich collection of spots but the glare of light made it difficult to see much else.

“We should get inside,” Colty said, “let’s get over to the library.”

The two of them got up and started walking again, more quickly than before. Everyone else went about their business as usual without human technology to alert them. Just as they reached the far side of the Yellow the sun started to brighten and the color of the sky started to change. The hue first went from a rubinum-red to a sandy orange and then to an eerie, otherworldly green. Many people ran to the shade cast by a tree or a building. Yet others didn’t care and stood quite happily beneath the changing sky.

Colty and Rachel trotted up the steps of the library but Rachel stopped before going in. Standing beside a buttress to protect them, she turned to look across the Yellow to witness a Rujaran flash.

Ripples of light flowed across the scene: pink, yellow, and golden orange. The clouds flashed and flickered with riotous color. Yet the intensity grew and the light became almost purely white, a harsh glaring brightness that was yet completely silent.

All about the Yellow the bulbs of the rigat trees opened, spreading their triangular petals to expose the luxuriant red of their pulp to the nourishing light. Thousands of blooms transformed the non-descript trees into towers of color. Rachel gasped and spoke excitedly in her own language, more to herself than to Colty.

“It is best not to look too long at the flash,” Colty said holding his trunk in front of

his right eye.

After several long moments the intensity began to wane. The white light gave way to ripples of yellow and orange and then even that stopped. Rachel moved away from the wall of the library and looked up at the sky. Colty joined her at her side. Although the sun was returning to normal, long streamers of color stretched out across the sky as shimmering, flickering sheets of green, red, and gold. It would be many arnets before the after effects of the flash were completely gone. Rachel watched the spectacle transfixed and then finally turned to Colty.

“That was incredible!” she exclaimed.

“You’ve never seen a flash?”

“There are no flashes on Earth. The sun always looks the same.”

“You are lucky then. Honestly they just cause trouble. There are always a lot of accidents during a flash and they interfere with radio transmissions.”

Rachel wasn’t paying attention. Instead she turned back to the sky.

* * *

Early the next runion, Colty lay at the desk in his office with student papers stacked neatly in two piles before him. On his left were the papers he had not yet graded and on his right were the papers he had finished grading. He scowled slightly at the paper in front of him. The student obviously hadn’t been paying attention in class. How else could he have missed even the most basic points? Colty held the pen in his tentacles and started writing notes neatly on the page. As he wrote he heard a knock from the general direction of the door.

“Yes?” he said without looking up. There was no reply, and Colty finished the comment he had been writing. “Can I help you?” he turned to see Rachel standing patiently in the doorway. “Oh,” Colty said, “come in, please.”

“I don’t mean to disturb your work.”

“It’s fine,” Colty replied. “Any excuse to take a break from grading papers is welcome.”

Rachel knelt down on the seat beside Colty’s desk. She was quite close to him but he had gotten used to her so he didn’t mind.

“I came here to give you something,” she said. She opened the pouch tied around her waist and took out what looked like a small book. She put the book on Colty’s desk where he could see the title printed in Argenian, *The Mathematics of Logic*.

“What’s this?” Colty asked. The title was intriguing but he didn’t recognize it. Also the author’s name was unusual.

“It’s a gift. For you.”

“That’s not necessary.”

“Please, I would like you to have it.”

Colty clicked his teeth and flapped his ears slowly. He slid the book toward him a little. “Well then, thank you,” he said and Rachel smiled. He flipped open the book and started paging through it. It was filled with symbols he had never seen. “Where did you get this?”

“From the library on *Golden Light*. It’s a classic. I studied from this book myself when I was a student.”

Like a rush the full impact of what she was saying swept over him. “Wait. This. . .”

“Yes,” Rachel continued, “it’s one of our books.”

“But the text is in Argenian.”

“I had it translated. We have machines that can do most of it. This is technical material, though, so I did help a little. I’m afraid the translation isn’t perfect. It’s a shame because the original is so beautifully written.”

Colty studied one page carefully. The mixture of Argenian words and alien symbols was both surreal and exciting. “This is wonderful, Ra’hel. I am very grateful.”

“I should warn you that the material gets fairly challenging by the end. However, I

think you will like that.”

“I do like that,” Colty said with a click of his teeth. “What’s the point of reading things that are obvious?”

Rachel laughed lightly.

“I’m surprised you’re sharing this, after what you told me,” Colty added.

“It’s fine. Thankfully my government feels abstract mathematics is safe because it is so far from the applications.”

“Yes, quite useless.” Colty clicked his teeth again as Rachel chuckled.

“Anyway, they can’t complain about what they don’t know.” She added slyly.

After Rachel left Colty settled down again with the student papers. He looked over the paper he had been commenting to remind himself about the work. He wrote a few more notes on the page and then circled a line of reasoning that looked approximately correct. He reflected for a moment and wrote a grade at the top of the paper. Then he neatly added it to the stack of finished work.

He leaned back and fluttered slightly. There were still quite a few papers to review. He glanced at the small book Rachel had given him. Again he flipped open the cover and looked at the title page. He turned to the first chapter and started to read. In his mind he heard words written by an alien intelligence who lived thousands of light runion away. Yet he understood those words.

When engaging in a precise discussion about the nature of reasoning itself, it is first of utmost importance to distinguish between the logic and the meta-logic...

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Contrary to his expectations Colty found himself enjoying Rachel's physics class. He had taken a similar class when he was a student, of course, but it was good to get a review. He even recognized some of the problems on rotating reference frames and angular momentum that had appealed to his mathematical mind. Monitoring Rachel's class made him feel nostalgic about his time at Marlock.

The students, being students, and first term students at that, didn't take to the course as enthusiastically. When Colty stopped in between scheduled lectures, there were usually only a few students in the back, apparently chattering amongst themselves instead of working the problems Rachel left on the board. The pad was usually empty, and as far as Colty knew not one student had come to Rachel's office. It was understandable, but not entirely acceptable. Colty felt like he should say something, but he wasn't sure just what.

During Rachel's fourth scheduled lecture Colty lay in his usual seat while she went through yet another electrostatics problem. She carefully transcribed the steps from the course book, but the class was restless. Some students copied the example into their notebooks but others just sat and stared more or less blankly. Colty even saw a couple of them in farth-sleep. Several students spoke to each other in hushed voices, obviously not paying attention at all.

Rachel finished putting the example on the board and then turned to the class. She consulted the course book again, reading the notes there briefly before she spoke. "In

this example,” she began, “the first electrosource is fixed while the second is attached to this spring-loaded rocker. As the rocker moves the distance between the two sources change, and so you must employ both the spring force formula and the electroforce formula in a single balancing equation.”

She looked over the class. “Does that make sense?”

The students simply waited.

Rachel walked through the math. She set up the balancing equation by opposing the rocker torque produced by the spring against the torque produced by the electroforce. Using some basic algebra she then solved the equation for the rocker angle in terms of the electrosource strength and the spring flexure constant.

“Are there any questions?”

Nobody said a word.

She flipped to the next page of the course book and paused while she reviewed it. She twisted her head in a very non-dunari way and looked up at the line clock above the board. “I’m almost out of time. There are some problems here for you to do. Let me copy them to the board.”

Most of the students dutifully opened their notes and got ready to record the problems. Rachel wheeled the podium around so that she could easily consult the course book while she wrote on the board. All was silent in the hall except for the soft scratching sound of chalk against hard slate. When she finished she turned toward the class again. “Please work these problems and submit your answers to the slot for this course as usual.” She paused. “That is all for now.”

Aside from monitoring Rachel’s class Colty didn’t see her very often. He was busy with his own classes and struggled to make progress on graph extension fields. Yet his mind constantly returned to the problem of stellating co-sequences. Like a well worn stone in his pouch, he couldn’t help but turn it over and over.

“Isn’t it appropriate as a host to invite a visiting professor to share food?” Joleia asked

him later that runion. The two of them were lying on seats in the library courtyard taking a short break.

“What are you saying?” Colty replied.

“I’m just saying you should be a better host.”

Colty looked at her incredulously. “It’s appropriate, if the host and guest are getting along. However, it isn’t expected, and anyway this is a different situation.”

“You and Ra’hel get along. We could invite her to *Juju* this runion. You wouldn’t even have to talk to her much. She could lay with my select. She is a woman after all.”

“What would Jijana think about that?”

“She’ll love it. Everyone else will probably see it as an adventure.”

With Joleia’s prodding Colty soon found himself kicking the door frame of the human’s office in Cogart. The door opened a crack at first but when Rachel saw who it was she invited him in happily.

Colty was shocked by how cold the space was, and Rachel hastily adjusted the air cooling unit. “I sorry. I’m more comfortable with the cool air.”

Her office was very sparsely decorated. It was hard to believe she had been at the University for almost four runion; it looked like she had just moved in. She had a simple table with a phone and a few empty shelves. Above the table was the photo sheet she bought at the store in town shortly after her arrival, but otherwise the walls were blank. She had a large window but with the mesh more closed than Colty liked. The course book for her class was lying on the bottom tray of her table but there were no other books, no papers, and no notes to be seen.

Rachel knelt on the seat in front of her table, bending her legs under her the way she did, and gestured toward another seat to the side. Colty just stood.

“I.. um.. Joleia and I want to invite you to *Juju*. It’s a runional celebration that some selectks do. We thought you might enjoy socializing a little.”

She looked at him for a moment with an expression he couldn’t read. “I’ve heard of

it. Will there be many people there?"

"Just Joleia's select and few guys like me, companions of the selectia. No children."

Rachel looked down and thought for a moment and then, as if abruptly coming to a decision, looked back at Colty and smiled. "I'd be happy to come. Thank you."

The rest of the reunion passed uneventfully. Colty and Rachel hardly crossed paths outside of her class and even Joleia was busy with cataloging new acquisitions. Colty was apprehensive about Juju with Rachel there. Not everyone accepted her, and he worried that it had been a mistake to invite her into a social situation with so many who didn't know her.

When Juju came and he arrived at the hall, most of the selectia were already preparing food in the hanaria and chattering among themselves. Rocktar was arranging seats around two large, round tables at diagonal corners of the hall. Jujaran streamers were tied to wall clips around the space, their bright yellow-red colors creating a festive atmosphere. The ceiling windows were slid aside letting fresh air and light into the building. The Nermella gusted strongly with hot, moist air but most of the wind flowed smoothly over the rounded roof and only a gentle breeze filled the hall to softly rustle the streamers.

"We are well met," Colty said in mock formality.

Rocktar clicked his teeth. "I'm glad to see another male here. I don't think the other two are going to make it this time."

Joleia's select was new and composed entirely of young women. Even Jijana, the oldest, was only 20 reunion Joleia's senior. Only one selectia was married and three were without companions. Rocktar was about Colty's age, and by profession a banker in Varnok. Colty helped him finish arranging the seats.

"We're getting an electronic tabulator at the bank," Rocktar began. He always tried to engage Colty in matters mathematical. "It's something Electrodyne produces. It's supposed to be faster and more accurate than the models from Calctronics."

“How are these things different than punch calculators?” Colty asked.

“They’re much different. For one thing they can be configured to do different kinds of calculations. . .”

“Colty!” Standing in the doorway to the hanaria Joleia beckoned to him with her trunk.

Leaving Rocktar to finish the seating, he followed Joleia into the hanaria. There platters of toran root and flannen were spread over the counter. The smell of roasted barak filled the air. Down the long, narrow space the seleckia chopped, scrapped, rolled, and mashed the various components of their Juju feast. When Colty entered Jijana paused and faced him.

“She’s bringing her own food, yes?”

“What is this creature like?” came a voice from the back.

“She’s very soft spoken and polite,” Joleia called in return.

“One of Jurita’s wonders,” came another voice.

“That may be,” said Rocktar. He was standing directly behind Colty, “but does that mean we have to share food with it.”

Preparations continued and before long Colty found himself lying at one of the tables with Rocktar and Polis. The new arrival was Jimlara’s husband, and a technician at the Parnon medical center. Colty never knew quite what to say to Polis but it mattered little as Polis seemed happy to talk even to stone. Rocktar tried to interest Polis in tabulation machines while Colty watched the clouds, brightly lit with rubinum, race past the ceiling windows. They seemed to be moving from the north, an unusual direction and a sign that a worstora was on its way.

“She is here!” Joleia called out. The men and several seleckia turned to see the tall, slender figure of the human standing tentatively next to the door frame of the main entrance. Joleia went to greet her and Rachel, recognizing her, came forward. She was wearing light tan clothing trimmed with gold that left her arms exposed but that

covered her legs. Around her neck she wore a kind of silver chain that glinted even in the subdued light. Her hair was tied back, as usual, and she carried a small translucent container made of some unknown and perhaps unknowable material.

“I wasn’t sure if this was the right place,” she said in her soft voice.

“Oh yes,” replied Joleia.

Everyone gathered around as introductions were made. Rachel looked very intently at each person. “I don’t think I’ll be able to remember all the new names,” she said.

“We should make name cards,” Jimlara said.

Joleia turned to Rachel, touching her arm briefly with her tentacles. “How do you pronounce your name again?”

“Most people call me Ra’hel.”

“Ah,” Jijana said, “but this is Juju. Perhaps we should call you Jahelle.”

Rachel tilted her head slightly in a remarkably dunari gesture and then, in a uniquely human way, she smiled, careful to keep her lips together so as to avoid alarming her hosts. “I would like that.”

Food was brought forth and laid out upon the tables. Joleia got a plate for Rachel. Opening the container she had brought, and much to the interest of all, Rachel took out her food and arranged it carefully on the plate. She had several large, red berries and something like garconal covered with a thick spread. She also had what looked like nuts and a small cake of some kind. Her meal seemed at the same time both exotic and mundane.

“Those nuts look good,” Jernum said.

“Everything looks good to you,” Jimlara said clicking her teeth.

“You mustn’t eat them,” Rachel said seriously. “I was told they contain substances that are poisonous to you.”

Rachel’s food was taken to the table and set before her place, along with everyone else’s plate. Finally, standing in the center of the room beneath the largest ceiling window,

Jijana called the feast. The group assembled around her, lying on the ground. Rachel knelt beside Joleia approximately to Jijana's right. Colty, Rocktar, and Polis lay in the back, largely out of the way but still part of the group.

Moments before the room had been filled with the sounds of talking and the bustle of activity. Yet as the group took their places around Jijana they grew solemn. Rachel clasped her hands on her lap and waited.

Jijana raised her trunk toward the cloudy sky above, tentacles open. She then began to sing. Her voice started soft and low, like a distance rumble, but grew in intensity and pitch until it became a strong undulating hum. The other selekia joined her, one at a time, their well practiced voices both in opposition to and harmonizing with Jijana's lead.

Colty watched Rachel as she sat quietly taking in the experience. Her eyes moved to each singer as they joined. Finally Rachel closed her eyes as the combined song of all seven women washed over them and through them to vibrate into their very bones.

Abruptly the sound stopped and, except for the Nermella rushing over the rooftop, silence filled the room. Nobody moved. Jijana called out, "We proclaim the moment of Jujar. May all of us share in her peace. May we bring her peace to all whom we touch."

"Our love is my love," Jijana said loudly.

"Our strength is my strength," the selekia replied.

"Our wisdom is my wisdom."

"Our spirit is my spirit."

"Our home is my home."

"Our patience is my patience."

"Our truth is my truth," Jijana finished.

Jijana lowered her trunk and again all was silent. One moment passed, and then another. Finally Jijana said, "Let's eat!"

The selekia made their way toward one table while the men made their way toward

the other. Joleia again touched Rachel's arm and lead her toward the table with the women. Rachel looked over her shoulder briefly.

"They eat separately?"

"Yes," said Joleia, "don't worry. It's fine."

"Once the seleck is more mature," Jijana explained, "there will be more men and things will be better balanced."

"Who is Jujar?" Rachel asked.

"She is Fifth of the Seven," Joleia said, "she created community."

"Before Jujar," Jijana continued, "we were nothing more than animals."

They took their places at the table. Rachel knelt between Joleia on her left and Jernum on her right. The plate of alien food she had brought was carefully set in front of her. Nobody moved to eat and Rachel again waited patiently.

"We bless the food first," Joleia quietly explained. "Don't worry, it will only take a moment."

When all were ready Jijana raised her plate before her. Everyone else, even Rachel, did the same. Then, as if on cue, the seleckia began to chant.

"Asam nolan."

Each person put their plate down in front of the person on their right.

"Nolan fornor."

Everyone then then picked up the new plate that had appeared before them.

"Fornor itok."

Everyone again passed their plate to the right.

"Itok jinok."

The pattern repeated with each phrase of the blessing flowing from the phrase before. Rachel did not know the words but she participated in the movement, caught up by the energy that seemed to swirl around the table. The growling rumble of the dunari voices and the fluid, choreographed motion had an almost hypnotic quality, and Rachel found

herself naturally staring upward through the ceiling window toward the ruddy clouds.

Finally after eight passes everyone's plate was once again returned to them. The chanting stopped as abruptly as it had started and Jijana said softly in Argenian, "We thank you, Jurita, for this food." Then, suddenly, the eating began and the group burst forth with social chatter.

"How's that telescope coming?" Jattaka asked from across the table.

"Actually, it's ahead of schedule."

"You *are* an advanced race," said Jernum and everyone in the vicinity shook their ears. Rachel smiled, not worrying so much about her teeth.

"We've even decided on its name," Rachel said.

"It didn't have one before?"

"It had a project designation but not a real name. The tradition is to name telescopes only after construction has begun so a name can be found that suits the flavor of the place where it will be located."

Jijana bobbed her head slightly. "So what name have you chosen?"

"It will be called *Nitooli*," Rachel said.

The seleckia looked at her questioningly.

"It's actually a name Tusk. . . Tuskara suggested. A nitooli is a holy man in a certain tribe of nomads from before the time of the Regents," Rachel explained. "When taken by urges from beyond, the nitooli would climb the highest mountain in the vicinity and stare out across the desert for many long moments until he received a vision from the gods."

"And so also your telescope will stare into the sky," Jijana said, "are you expecting any visions?" The seleckia shook their ears.

"I don't know what we'll see," Rachel answered seriously, "that's what we're here."

Rachel continued with answering questions about the telescope and about her work as an astronomer. Jijana eventually raised her trunk showed the seleckia a small ornately

decorated ball with a flattened side so that it would rest steadily on the table. Several of the women bleated and there was some scattered stomping.

“It’s the Juju stone,” Joleia explained. “Our truth is my truth.”

Jijana held the stone in her tentacles and pressed it firmly onto the table next to her plate. She cocked her head slightly. “I see. . . a tall rigat tree covered with mosen flowers. . . growing in the Parnon trash dump.” She paused and let go of the stone.

“*Har-za!*” the seleckia cried out loudly.

“You share with the group,” Joleia continued softly to Rachel, “some wondrous work of Jurita. It could be anything, but it has to be something real; something you’ve actually seen. It reminds us there are miracles around us every day.”

The stone then moved to Jimlara on Jijana’s right. She tapped the stone lightly a few times. Then with a click of her teeth she said, “I see Polis finally finishing the new walk to our house.”

“Har-za?” Joleia said in her normal voice and the seleckia shook their ears.

Jimlara gripped the stone more firmly and pushed it against the table. She thought for a moment. “I see children rolling in the grass, unconcerned about their future.”

“*Har-za!*”

As the stone was passed around the table the group continued to eat and talk. Some of the visions were serious and deep. Some were silly and funny. All were seen as works of the creator of the universe. After each vision everyone, even Rachel, shouted “Har-za” with increasing power and clarity.

When the stone reached Joleia she held it in her tentacles for only a moment before pressing it to the table.

“I see the light shining through the library windows and over the books, tables, and people. I see quiet, warmth, and safety.”

“*Har-za!*”

Rachel held out her hand and Joleia passed the stone to her. She took a deep breath

and pressed it to the table.

“I see a waterfall in a lush forest spilling into a deep, clear pool.”

“Har-za!”

After everyone finished eating, Jijana called the closing blessing and the seleckia then busied themselves cleaning up the remains of the meal. Rachel helped by moving plates and other dishes into the hanaria and by packing her scraps back into the translucent container she had brought. She spoke briefly with Colty but was soon swept back into the conversation with the other women.

Once things were in order, Jattaka took out her tinar and started playing a soft, bubbly melody. People gathered around in smaller groups, some lying on seats, some standing, talking together. Rachel found herself with Joleia, Colty, and Jimlara. She knelt on a small pad that had been found in a closet while the dunari stood so that their faces were all at about the same level.

“That was a lovely vision,” Joleia said to Rachel, “when you had the stone. Is that a place near Parnon?”

Rachel smiled slightly. “Actually it’s a place on Earth not far from the home my parents had in the mountains when I was a child.”

“Then Earth must be beautiful.”

“Parts are.”

“Ra’hel, I hear you are a teacher,” Jimlara said.

“Jimlara teaches also,” Joleia explained, “at the underschool here in Parnon.”

“How is it going?” Jimlara asked.

“It’s fine, I guess.” Rachel glanced at Colty. “Actually I don’t feel like it’s going that well.”

“You’re doing fine,” Colty said. “You are very precise and that’s good for them to see.”

“What’s not going well?” asked Jimlara.

“The students don’t seem very engaged. Also the style of teaching feels unnatural to me. I’m just not used to the way you do it here.”

“Why not teach the way you do it?”

Rachel hesitated and Colty replied instead. “The university has certain traditions.”

“Maybe her approach is better,” Jimlara said. “It’s an incredible opportunity for your students to have Ra’hel as a teacher. I don’t understand why the university doesn’t encourage her to do whatever she wants.”

Colty flapped his ears slightly, “To be honest, I don’t think it was ever discussed.”

Joleia put her trunk over Colty’s back. “He is such an academic sometimes.”

The conversations continued and shortly gargon nuts were passed around. Joleia offered some to Rachel but she declined. “I can’t risk eating any of your food without it being analyzed first.”

As time passed the sky grew gradually cloudier and darker. The Nermella increased in strength still blowing from the north. The gathered dunari became uneasy, looking frequently out the ceiling windows at the mottled, rubinum clouds rushing past.

“We should close the windows,” Jijana called out, “a worstora is coming.”

Rocktar took the hook from the wall by the entrance and started to slid the windows to their closed position. Standing on the tips of her feet Rachel was able to just reach the window handles without the help of a hook and assisted with closing the many windows around the room.

“Can we get some artificial light, please?” a voice called out.

“I don’t think this building has any,” Jimlara said. We’ll have to go outside, under the canopy.

At that moment a low rumble enveloped the hall and seemed to vibrate the air around them.

“My trunk sash!” Jattaka called out, “I think I left it in the hanaria.” She took a step toward the hanaria door but hesitated.

“You can pick it up after the storm clears,” said Jijana.

Jattaka took another tentative step but then wrapped her trunk around her shoulders and fluttered softly.

Rachel was standing near her. “What’s wrong?”

“I don’t want to leave it, but it’s too dark in there now.”

“I’ll get it for you.” With that Rachel sprang forward and disappeared into the gloom beyond the hanaria door. She was only gone a moment before returning to the grateful Jattaka with her sash.

Following Jijana the group went out onto the walkway in front of the building. There, under a rigid canopy the Nermella gusted strongly yet the overcast light of the Rujaran sun was brighter than the light inside. Rachel was wedged between Jattaka and Joleia, huddled against the building. Along the street other people were similarly gathered under other canopies, short roofs, or entrance arches.

Just after everyone assembled, a bright, searing flash split the sky followed by a crack and a powerful explosion of thunder. The seleckia shifted uneasily, and Jattaka muttered a brief prayer just as a second flash filled the landscape with its white light.

“A worstora,” Joleia said leaning toward Rachel. She spoke loudly to be heard above the rushing wind. “Do you have anything like this on Earth?”

“Actually, yes,” Rachel replied, smiling slightly.

In only a moment or so the rain started. It came heavily, roaring down from the sky in great sheets of water. Thunder shook the air and lightening flashed again and again. Soon the road in front of them was a flowing stream. The seleckia chanted in their low voices, rumbling almost like the distant thunder.

Finally the rain abated and the clouds thinned. The sky brightened and the dunari grew more at ease. All the people returned inside the buildings and the walkways cleared. Pools of water spotted the street.

Rachel paused at the doorway to speak with Colty. “I need to get back to the com-

pound. This is really the middle of my usual sleeping time.”

“Of course.”

“I didn’t get a chance to talk with you much.”

“I should have told you what Joleia had in mind,” Colty replied.

“It was fine, wonderful really. But I did want to give you this.” She took a small, loosely wrapped package from her pouch and held it out to Colty.

Deftly he cradled the package in his trunk and used his tentacles to pull open the covering paper. Inside was another small book. The title glimmered in the brightening sun, *A Theory of Numbers*.

“Joleia told me you were almost finished with the first one.”

“Thank you, Ra’hel,” Colty said.

Rachel put one arm on Colty’s back and patted him softly with her hand. “I hope you enjoy it.”

41

Marvia Base was a few karnons outside Varnok on the north side of the Varsynthia valley. Unlike most bases, Marvia was primarily administrative, holding the military's main offices. It had basic defenses, including a section of elite fighters intended to protect the base and also Varnok from Forbin air attack. Situated deeply in Argenian territory Marvia had never been reached by Forbin forces in Argenian history but in such matters caution was always indicated.

A military car pulled up to the gate at Marvia and was greeted by the guards on duty. After a few hasty words it was let through. The car drove between the well maintained two story buildings and around a neatly landscaped rotary at the far end of the base. From there it went a short distance beyond the main campus to the athletic building where it parked next to a half karnon oval running track.

A soldier wearing the uniform of the Messenger Service climbed out of the car and trotted over to General Fotkey's personal secretary who was standing beside the track. On the far side of the oval, wearing a tight running jacket and moving at a gallop was the general himself. His secretary held a stopwatch in his tentacles.

"Urgent word for the general, sir," the messenger said.

"The general hates to be interrupted during his run," the secretary replied. He didn't look at the messenger but instead watched Fotkey intently as he rounded the end of the oval.

"This can't wait, sir," the messenger said. With that he immediately began to gallop

toward Fotkey.

“Oh, you are going to regret that!” the secretary called out after him.

The messenger intercepted Fotkey just as the oval started to turn back toward the gate. They were too far away for the secretary to hear what they were saying, but he could see Fotkey waving his trunk in annoyance at first. Then he stopped. The two talked for a moment and then Fotkey turned and started galloping directly toward where the secretary was standing. When he got into shouting distance he called out.

“Make my aerocar ready,” he said.

“Yes, sir,” the secretary replied.

“I’m going to change,” Fotkey said in a more normal voice as he reached the secretary.

“Pull my car around back and get me to Parnon at once.”

“Where are we going?”

“Shunalia.”

In the southern part of Argenia, not far from the Sumar Sea the broad valley of the Shunal stretched north and south for many karnons. On the west side of the valley rose the Tukonook Mountains, the second highest range on Rujar known. Their rocky ramparts blocked the Nermella and enclosed the moist air from the sea making a region of unusual lushness considering its location in the middle day. Clouds often formed in the Shunal valley and the unnaturally still air was thick with humidity.

Fotkey’s aerocar landed at a makeshift aeroport in Shunalia, the largest town in the valley. He was greeted by a small entourage of military personnel including Yutar, an investigator in the Security Division.

The general had only two words for Yutar: “Show me.”

Fotkey was taken by military car to a small base outside the city. On the way he was briefed. “They left the checkpoint here at Shunalia at hour 62:065,” Yutar said. “The checkpoint at Hark’s Corner radioed here at 63:010. They were twenty arnets overdue then.”

“Why did Hark’s Corner wait a full twenty arnets?” Fotkey growled. He fluttered loudly.

“The roads are sometimes slow. This is fregon migration season so it’s not unusual to have to wait for a herd of them to pass,” Yutar explained. “After that call, both Shunalia and Hark’s Corner sent out trucks. That’s when they found them.”

They arrived at the clinic and Fotkey quickly climbed out of the car and trotted to the doorway. He was greeted by the physician on duty.

“This way, sir,” the physician said.

In the back room, lying on surgical tables were the bodies of two, young Argenian solders. They were covered with a long sheet, displaying the symbol of their country. Fotkey stepped up to the first table and pulled back the sheet. The body had been laid out neatly but a large hole had been blasted into the side of the head. The sheet was stained with orange blood still seeping from the wound.

Fotkey fluttered. He pulled the sheet back further to find more wounds in the solder’s chest and back. His clothes were stained with blood and matted to his body.

“We’ve recovered a couple of the bullets,” Yutar said. They are standard issue Forbin autorifle bullets, thirty-five caliber.

“Thirty-five?”

“Yes, strange,” Yutar replied, “Harkite War vintage.”

Fotkey covered the solder with the sheet again. “Clean this man up.” He walked to the next table and pulled back the second sheet. As with the first solder, the second had a large hole in the side of his head. He also had smaller wounds on his shoulder and front leg. Fotkey fluttered again.

“The wounds on his legs don’t look serious.”

“No,” the physician said. “They probably hurt. He would have fallen down but they didn’t kill him. It was the shot to the head that did that.”

“Execution style,” Fotkey said softly. “Show me the truck.”

Yutar led Fotkey out of the clinic and then several paces to the garage a short distance away. Inside was a rather non-descript truck of the kind you might see anywhere. It had Transportation Agency markings and looked like a road construction vehicle. Fotkey went to the back.

“Open it.”

They swung the doors wide and Fotkey looked in. There wasn't much to see. In the middle of the cargo area was a low frame designed to hold the device but it had obviously been cut.

“They had torches with them,” Yutar explained. “They knew what to expect.”

“So we have a leak,” Fotkey said softly.

“No doubt.”

“Seal the Rangard base immediately,” Fotkey said. “Nobody gets in or out until we resolve this.”

“Already done,” said Yutar.

Fotkey climbed into the truck to get a closer look. The frame had been cut with obvious efficiency. Only the minimum number of braces that needed to be sliced where touched.

“We found the button on the floor here,” Yutar said.

The men climbed back out and Yutar led the general to a small table with several items laid out. Yutar opened an envelope and took out a simple button with some thread still attached.

“It's Forbinite,” Yutar said, “but the strange thing is that they don't use this style on their uniforms any more.”

Fotkey studied the button closely. He seemed disgusted.

“It may be that we are dealing with a rouge faction,” Yutar said. “They are using old ammunition and old clothing. This might not be the work of the normal Forbin military.”

Fotkey did not reply at first. He turned the button over in his tentacles studying it with his right eye. "If I were doing an operation like this," he said at last, "I wouldn't wear my uniform at all."

"You think it is a set-up of some kind?"

Fotkey passed the button back to Yutar. "You tell me."

After examining the truck Fotkey insisted on going out to the scene. "There isn't much there now," Yutar explained. "We've moved everything back here for detailed study."

"Nevertheless I want to see it," Fotkey replied.

The truck had been found at the end of a short service road and behind a small rise that blocked it from the highway. Yutar explained that it looked like they had been stopped on the main road and killed there. The attackers probably then drove the truck out of the way so they could remove the device.

"That's bold of them," Fotkey said, "to attack like that on the open highway."

"There isn't a lot of traffic to Hark's Corner," Yutar explained.

"The attack must have been unexpected," Fotkey said looking down the road to get a feeling for the terrain. "The drivers are trained soldiers of the Argentinian military. They wouldn't have just allowed uniformed Forbinites to approach freely."

"Perhaps the attackers were disguised in some way."

"Then what of the button?"

Yutar showed Fotkey where the truck had been parked, slightly off the road, and pointed out additional tire tracks that were clearly from another vehicle. "It looks like another truck," he said, "probably smaller than the one we used, a sand carrier perhaps or a naraza transport. There are a lot of naraza ranches in this part of the Shunal so a vehicle like that would be inconspicuous."

Fotkey scanned over the mountains to the west, in the direction of Forbin. The rocky peaks of the Tukonook rose up through the hazy air and towered over them. Their flanks

covered with yellow forests touched with red.

“Is there a way over the mountains here?” Fotkey asked.

“No, sir,” Yutar said. “The nearest pass is Palarbia at least 100 karnons to the north and that’s a very rough road. I doubt you could get a naraza transport, or anything similar, over it.”

Fotkey studied the mountains with a grim expression. “What about an aerocar? Could the Forbinites have one that could lift something that heavy over the ridge?”

“We’ll have to ask the Intelligence Service. I’m skeptical, but it’s our best guess right now.” Yutar paused and then added. “I’m sure the humans could do it.”

Fotkey fluttered loudly. “And why would the humans be interested in delivering a secret Argenian weapon to Forbin? As far as we can tell they don’t even know about it.”

“The Forbinites aren’t supposed to have known about it either,” Yutar reminded him.

Fotkey turned and studied the long, lonely highway again. As he watched a single car sped down the road. It was an older, private vehicle, probably on its way from Hark’s Corner with business in Shunalia. It was the first vehicle they had seen since arriving. Fotkey followed the car with his eyes as it receded into the distance and then he looked to the east, in the direction of the Argenian heartland.

“Something about this doesn’t feel right to me,” he said at last. “This is a fine spot to mount an ambush but a terrible spot to get the spoils back to Forbin.”

“You suspect it is not the Forbinites?”

“Old ammunition. . . old clothing. . . it’s as if they rummaged around in Forbinite cast offs looking for something to throw us off track,” Fotkey replied. “How far is the Sumar Sea from here?”

“Not far,” Yutar said. “It’s only 50 karnons from Shunalia to the port of Ikatty.”

“And from there by boat to Hazenfat or Nuk,” Fotkey said.

“Yes, sir.”

Fotkey thought for a moment. "I will, of course, need a full report from you as well as regular updates."

"Of course," Yutar said. "We've been searching the area for evidence of an aerocar and we've been talking with people in Hark's Corner and Shunalia but, unfortunately, we haven't come up with much yet."

"Continue your efforts," Fotkey said. "In the meantime get me back to my plane. I have work to do."

They drove back to the base in relative silence. Fotkey pondered all the evidence he had been presented. When they arrived a young communications officer was waiting for them.

"General, Inspector," he began. "We just received word that an officer at Rangard has committed suicide."

"Who?" Fotkey demanded.

"Captain Dolappit."

"Dolap!" Fotkey repeated.

"There's more," the officer said. "The investigators there found encrypted Forbin messages in his personal materials. They're working on decoding them now."

Fotkey swayed his head slowly. "Thank you," he said. "You are dismissed."

After the officer left Fotkey and Yutar walked back toward Fotkey's aerocar. "Isn't it convenient," Yutar said wryly, "for the source of the leak to identify himself like that, complete with evidence incriminating Forbin?"

"Too convenient," Fotkey replied.

* * *

Colty found his usual seat and waited patiently for the scheduled lecture to start. The students, as they always did, talked quietly or got their notes on electroforce ready. Yet when Rachel finally appeared she was not carrying the course book. Instead she held a

walkway brick from the resurfacing project outside Tartuk Hall.

She stepped lightly up the steps to the platform and carefully put the brick on the floor out of the way. The students found their seats and grew quiet as Rachel, without looking at the class, wheeled the podium off to the side, pushing it up against the wall by the end of the board. She then grabbed hold of the metal table, wrapping her hands around the legs just under the top and, leaning back, dragged the table to the middle of the platform. The students watched, puzzled by her strange behavior.

Finally, when everything was arranged to her satisfaction, Rachel stood in the center of the platform immediately behind the table.

“Shall we begin?” she asked.

She raised one arm into the air above her, fingers straight, waiting. The room grew silent. Nobody dared to speak or move and all eyes were on her. After a moment, and without a word, she curled her fingers into a tight ball and then, bending her knees slightly, brought her fist down against the table with a rapid stroke. An explosive, metallic bang echoed throughout the hall. Everyone was startled. Many cried out from the unexpected suddenness of it.

“Why didn’t my hand go through the table?” Rachel asked.

The students shifted, uncertain if they should answer. Rachel walked to one end of the platform and spoke directly to the class. “It seems like a simple question. Surely you must have some answer.” She waited.

Suddenly a voice called out from the other side of the hall: “Because you didn’t hit it hard enough!” There was a flurry of shaking ears and Rachel laughed lightly. She walked across the platform and looked into the class.

“Who said that?”

With reluctance a student about three quarters the way back, along the wall raised his trunk.

“What’s your name?”

“I’m Hiptarik.”

Rachel nodded her head slightly. “A good answer Hiptarik, but not the one I’m looking for.” She turned to pick up the brick, and put it on the center of the table. Then she knelt on the platform and looked carefully at the brick by peeking just over the edge of the table. She reached up and touched the top of the table with one hand.

“It’s made of atoms, yes? And so is the brick. We know atoms are mostly empty space.” She stood up again and, putting both palms on the brick, leaned forward and pressed down on it with almost her full weight. “Why doesn’t the brick just pass through the table, its atoms slipping between the those of the metal, and then after that, through the floor and eventually all the way to the center of Rujar?”

She raised the brick above her head as if to fling it against the table top. “Maybe it just needs a little help.” Yet instead she hesitated and then set the brick back down. “Well, you get the idea.”

Nobody said a word.

“Jilarnia—you have a lovely name, by the way—what do you think?”

A young woman a few rows back in the center started. “Me?”

“Yes, you.”

“I . . .” she looked around anxiously, “I don’t know.”

“Imagine yourself as a very tiny mite crawling on the table top. You are so small you can actually see the atoms.” Rachel knelt down again and pointed at the where the brick sat unmoving. “What do you see?”

“Little balls, I guess, kind of pressed against each other.”

Rachel stood up and scanned over the class. “Ticgon are you here?”

“Um, yeah.” A trunk was raised on Rachel’s left.

“What are these balls Jilarnia spoke of?”

“Atoms.”

“Yes, and atoms are . . .”

A voice called out from the right. "It's the chemical bonds. That's why the brick doesn't go through the table. The bonds hold the atoms together."

"Thank you, Hiptarik," Rachel said, "but please don't interrupt the thoughts of others."

"Sorry."

"The bonds give materials their strength," Rachel continued, "but what are these bonds, exactly? Ticgon?"

"Ah... well they're little wooden sticks in chemistry class." Again the class shook their ears.

Suddenly an annoyed voice came from the back, "What does this have to do with electroforce? Isn't that the topic of today's lecture?" The student was only a few seats down from Colty.

Rachel tilted her head. "You think my question has nothing to do with electroforce?"

"It's the atomic particles," came another voice, this time from near the front. "The black electrosources orbiting the atomic cores repel and prevent the atoms from passing through each other."

"That's crazy," said the student from the back. "That's a tiny force. It would be negligible."

"Yeah but there are many, many atomic particles per square area. The total repulsion would be a lot. Besides, what else could it be? It's not magic."

Rachel leaned back against the table and crossed her ankles without saying a word.

"But then," the student in the back continued, "if you pushed hard enough the brick would go through the table, yet it never does no matter how hard you push."

"Why not let Ra'hel explain it?"

The class grew silent and all eyes turned to Rachel. She smiled slightly. "You are doing a fine job without me. Yet perhaps the time has come for us to explore the plausibility of this idea with some calculations."

She went to the board and began to write down some figures and formulas. She did not consult the course book because there was no course book to consult. Instead starting from first principles she simply derived the equations she needed, pausing now and then to ask the students how to do certain steps. Finally she took a spin dial from her pouch and did some quick computations, manipulating the dial without its stand by holding it in one hand while she used her other hand to operate the pointer leg.

As the class continued Colty noticed that Rachel asked far more questions than she answered. It was as if she pulled knowledge from the students that, in some sense, they already had. Her questions guided them toward the right conclusions, but ultimately they were conclusions the students derived themselves.

Rachel finally summarized the lecture standing in the middle of the platform out in the open. There was no podium to stand behind. She spoke with an energy and passion that Colty had never heard her use.

“We have seen that the electroforce is what gives materials their rigidity and strength. We have also seen that it is the electroforce that provides the energy of chemical reactions... reactions that drive your vehicles and power our bodies. If the electroforce did not exist or behaved differently than it does, the universe would be a very different place.”

Rachel leaned forward and held one hand out to focus the class. “Yet the real lesson here today is about the importance of intuition. The equations and calculations are important too, but to understand the universe you must feel it, you must live it, as a tiny mite or as a giant sun. You must try to know the universe as Jurita does, and see it as She can see it.”

She paused and the class waited attentively. “That is all for now.”

“Are there problems?”

“Oh, ah, finish reading the section in the text about the electroforce. I’ll put some problems on the board before I leave.”

The students filed out and Rachel sat down on the top step of the platform. She took a few breaths from her oxygen canister. Colty approached her just as the last students were leaving.

“It was different,” he said.

“I just hope I don’t get in trouble for it. I guess you’ll be telling the department.”

Colty clicked his teeth. “Only if they ask.”

43

Fotkey slid open the door to the conference room on the second floor of the Argentinian Executive Offices. The First and Second citizens were there, lying side by side at the end of a large, polished black rosewood table. The table was lit by reflecting panels mounted on the ceiling, catching the sun.

Fotkey stood at attention. "I'm sorry I'm late."

"You're not late," the First Citizen said, "but you know that." He gestured toward a seat at the opposite end of the table. Fotkey put his pouch on the smooth surface before lying down. When Fotkey got positioned the First Citizen spread his tentacles in a gesture of beckoning.

"The investigation is continuing," Fotkey began. "The encrypted messages found in Captain Dolappit's belongings have been decoded. They used an older Forbin code that the MIS has already mastered."

Fotkey paused but nobody said anything. "The messages are in Forbin. Most are from an operative providing instructions for gathering information about the work of Sar. Parnez, especially, but also of the other scientists working on the weapon."

The Second Citizen rubbed his face with his trunk and tilted his head slightly. "Would Dolap have access to those notes?"

"Yes. He was a logistics aide on the project. He would have been close to all three of the Sars on many occasions. The messages also reference the schedule for moving the devices. It seems Dolap sent that information to his contact but we have none of those

messages.”

“What do you know about this operative?” the First Citizen asked.

“Nothing,” replied Fotkey, “we have no intelligence about him at all. Of course the Forbinites have been cracking down; several of our agents have been recently jailed... or worse.”

“What I want to know is how Dolap got through our security. He had high level clearances.”

“My special investigator is looking into that. We’ve been trying to trace Dolap’s activities, find out who he’s been talking with, but it takes time. So far he appears to have been a model citizen. He had a wife in a reputable select, a family, a long, distinguished career in the military, and was active with the Limzar Association.”

“You must continue your investigation, of course,” the First Citizen said, “but right now we need to worry about the future, not the past. General, put that military mind of yours to work and tell me what the Forbinites are trying to do.”

Fotkey thought for a long moment. Finally he tilted his head slightly to glance at the Second Citizen and then he looked at the First Citizen with his right eye. “I believe the Forbinites want to study the device. The last we heard their program was well behind ours. They want to catch up and, if they can, using Parnez’s notes, jump ahead.”

“So you don’t think they plan to use the weapon?” the First Citizen said.

“I don’t think so. At least not now. They want to replicate the technology and extend it. To do that they’ll need the device in one piece.”

“Do you think there’s any chance they’ll be able to complete Parnez’s work?”

The room fell silent.

“I think it’s doubtful,” Fotkey said finally. “None of their scientists have the equal of Parnez’s genius. They wouldn’t even have a program if it hadn’t been for that leak...”

“We shouldn’t underestimate them,” the Second Citizen interrupted. “They are ruthless. If by some chance they manage to build second generation devices before we do, I

fear they won't hesitate to use them at once."

The First Citizen pondered. He leaned back slightly and studied both of the other men. "Should we be considering a first strike?"

"That would mean certain war, of course," Fotkey said.

"And let's not forget they have one of our devices now," added the Second Citizen.

"They'll likely have more than one if we give them much time," the First Citizen replied.

Fotkey swayed his head briefly. "Sirs, I must add that I have concerns about the evidence we've gathered so far. It doesn't make sense. An operation like this would be at the highest levels of Forbin intelligence. Yet they used obsolete codes in their messages. Why didn't Dolap destroy the messages he received? Any sensible protocol would require that. It's as if we were intended to read them."

"What are you saying, General?" the First Citizen asked.

"I'm saying that maybe the Forbinites didn't steal the device at all, and whoever did is trying to frame Forbin."

"That's crazy," said the Second Citizen, "who else could possibly have stolen it? The humans?"

"I doubt they did it."

"Then who?"

The First Citizen leaned forward. "General, if you're right then executing a first strike would be the worst mistake we could make."

"And if I'm wrong..." Fotkey continued.

* * *

Colty closed the door of his office to shut out the bustle in the halls of Fargon. He wanted to concentrate and for that he needed some quiet without the threat of immediate interruption. He returned to his table and clicked on the artificial light. Spread out

before him where the unbound pages of *A Theory of Numbers*.

Colty studied the text carefully, reviewing each proof closely. The style was incredibly formal with very specific rules describing even the presentation. Yet the creativity and imagination of the original mathematicians still shone through, mathematicians with strange alien names like *Euler*, *Hilbert*, and *Ranjana*. Colty felt a certain kinship with them. He recognized many of the problems they had solved and admired their attention to detail and desire for elegance. Mathematics was more than science. It was art. He could see the humans understood that too.

Ordinarily Colty found flaws when he read the mathematical texts of the dunari. Minor omissions or invalid steps, usually easily patched, peppered the published works. Yet in the human text there were none. The proofs were perfect.

“They’re checked by machine,” Rachel had explained.

Colty looked at the exercises at the end of the chapter. The first several were trivial. He scanned to the bottom of the list looking for the ones marked with stars. Opening his notebook to a fresh page, he worked through several of the one-star exercises. They weren’t difficult but he enjoyed the chance to practice human mathematical technique.

On the next page a three-star exercise caught his eye. He read it twice and then put his pen down. Leaning back he reflected for a moment. He clicked his teeth slightly. “Interesting,” he said aloud. He wrote some ideas into his notebook and then stopped. Looking at the problem again he flapped his ears slowly and fluttered.

Suddenly he had an idea. Twisting in his seat as best he could, he scanned over the books behind him. Reaching his trunk out and using two tentacles, he slid one from the shelf. He opened it on the table and flipped through the well worn pages until he found the section on Garacken Reduction. He scratched his shoulder slightly as he re-read it.

Colty set the book aside and started on a clean page of his notebook. It seemed as if the three-star exercise could be solved as a G-Reduction instance. He wrote some steps using human notation, but then crossed them out. The notational systems were

incompatible but the concepts looked applicable. He tried again, this time casting the exercise into dunari form. The converted exercise reduced readily, producing the desired result.

Colty put his pen down and leaned back. Had he solved it? To convert the exercise he had abused the notation. The lovely elegance of the human presentation was lost. Could he prove that the converted exercise was still the same?

The sound of someone knocking at the kick panel of his door jarred Colty out of his reflections. "Yes? Come in."

The door slid aside and Dargon stepped in. Colty straightened himself and started to anxiously gather together the loose pages of the human book.

"I don't mean to interrupt your work," Dargon said. "I just wanted to see how you were doing."

"I'm . . . I'm fine." Colty slid the book, roughly assembled, back into one of his trays. He closed his notebook. "Please, have a seat."

Dargon lay down next to Colty's table and looked around. "It's a cozy office," he said finally.

"I don't mind it. Not a lot of distractions."

"I think it's great that you've decided to look at graph extension fields. That's such an important area so it's good to have someone on our faculty specializing in it."

"Yes." Colty put his trunk over his notebook and tapped the cover of it slightly. "I'm . . . I'm still getting my bearings in the literature."

"Of course. I imagine there are many interesting lines of research possible in that field. I understand it would be hard to choose."

Dargon continued chatting about life around Parnon in casual tones. "I hear a rumor that you are companion to one of our librarians."

Colty clicked his teeth. "It's true. Joleia and I have been together for several runion now."

“That’s wonderful. It’s good not to be too consumed by your work. You have to give time to other things—things that really matter.”

Dargon stood up and made his way through the cramped space toward the door. Just before leaving he turned to Colty. “I’m looking forward to hearing more about your graph extension work at your next overseers meeting.”

Colty bobbed his head respectfully.

After Dargon left Colty opened his notebook again and studied the symbols scratched there. Could some sort of formal mapping, a kind of isomorphism, be created between the human and dunari mathematical systems? he wondered.

Tentatively he wrote a few more formulae beneath his solution to the exercise, yet he found it hard to concentrate. He stood up and paced back and forth in his narrow office trying to clear his mind. He understood all too well Dargon’s message. Setting aside one notebook, he took out a second for his graph extension work and flipped through the pages impatiently. Suddenly he stopped and rubbed his face with his trunk.

“I need a walk,” he said aloud.

The Parnon student center was the hub of student services and activities on campus. It was a two story building in an elliptical shape oriented parallel to the Nermella. In the middle of the building was a large courtyard with an impressive rigat tree growing at the center. At the east and west ends of the courtyard gaps in the building let in light, air, and people.

As Colty wandered into the courtyard he saw a small group collecting in front of a temporary stage erected on the south wall. At the top of the stage a podium stood waiting, microphones ready. Several people worked behind the stage setting up cables, while two others handed out pamphlets to the onlookers. A news crew with a portable video camera interviewed a pair of students.

Colty remembered seeing something about a Limzar speaker being on campus but he hadn’t paid much attention. Perhaps this was just the distraction he needed. He lay

quietly on a seat under the rigat tree watching people gather as final preparations were made.

The crowd grew steadily and soon there was a sizable herd of dunari filling the courtyard. Some lay on the ground but others just stood. After a few moments a middle aged woman stepped up to the podium. She leaned forward into the microphones and said a few words but they were inaudible. She turned and said something to the people behind the stage and then tried again.

“Are we on?” her voice rolled out of the speakers and filled the courtyard. “Yes? Good.”

She paused a bit while the crowd settled down. “It’s a great moment here in Parnon,” she continued, “it’s good to be back!” There was some stomping of feet and cries from the crowd. “I know you didn’t come here to listen to me so without further delay, I would like to present Chancellor Zarlonloti of the Limzar Association.”

There was more stomping of feet and some bleats of support. The woman withdrew and was replaced by a stately gentleman. He was thin with dark scales and exceptionally well dressed. He walked calmly forward, feeling no particular rush, letting the applause continue for a long time. When he reached the podium he waited patiently for the crowd to once again fall silent.

“Change is upon us,” he began simply, “but is it change for good or ill?” He paused and scanned over the crowd as if to be sure everyone was paying attention.

“The First Citizen believes his plan of industrialization is change for good,” Zarlon continued. “He believes poisoning our land, sickening our rivers, and choking our air with the smog of our machines is the change our country needs. I say it isn’t so. Such change is change for ill. Do you agree?”

A loud “Yea!” rose up from the crowd.

“Immediately prior to coming here I visited the wind generators at Karackia. Dozens of mills taller than the tallest buildings in Parnon, driven by the Nermella, produce enough

electricity to power a small city. It is a marvel of engineering. Yet what the government pamphlets don't tell you is the metalworks where the mills are made routinely dump huge quantities of free copper, zinc, and lead into the Notalios River, turning it an unnatural green."

Zarlon paused again and unhooked one of the mics, clipping it to his cloak. "Nothing lives in the water. Nothing lives along its banks. For dozens of karnons the people depending on the Notalios are broken and despairing, yet nothing is done."

He walked across the stage slowly, talking directly to the people in the crowd. "Marvel of engineering? This is not the Argenia I know. This is not the Argenia I want. Do you agree?"

An even louder "Yea be Yea!" filled the air.

"The Limzar offer a different plan, a plan for a different kind of change. We embrace the values that made this country great: working hard, helping each other, respecting the world that Jurita made for us. Our plan is to use these values to guide our path into the future. I believe that in this way Argenia can be made clean again. The Argenia of our mothers will be the Argenia of our daughters. *Do... you... agree?*"

"*Yea be Yea!*"

Zarlon returned to the podium and appeared to look at some notes. Colty shifted in his seat and snorted slightly.

"Technology has its place," Zarlon continued, "but it is up to us to control it rather than letting it control us. We are not machines, nor will we be slaves to machines. We only need look at the humans to see the consequences of rampant technology. They hide in their compounds, away from the sun. They talk to us through their machines and look at us with their machines. They are not building a telescope on Nermia; their machines are doing it. They are unfeeling, remote, and little more than machines themselves. I, for one, do not want Rujar to ever become the way Earth no doubt is: controlled, scheduled, and contained."

Zarlon started walking across the stage again as he continued speaking. He spoke of limiting technology and ways the government should intervene in its expansion. He spoke of returning to the basic values that inspired the founders of Argenia. He endorsed the Limzar candidate for First Citizen and spoke of how his election would usher in a new era.

“We must never forget,” Zarlon said as his speech drew to a close, “that it is Jurita who is the source of all authority. Her ways have not led us astray, and they will not. We must look to Her for both inspiration and guidance. We deserve a First Citizen who understands that. We *demand* a First Citizen who understands that. Thank you for your attention.”

The crowd burst forth with loud stomping, bleating, and cheers. Colty stomped his foot as well. Joleia had always spoken highly of the Limzar and out of respect for her he contributed to the applause.

47

Jernumia stood on the planks beside the prosecutor table and consulted her notes.

“Eminence,” she began, “it may be true that the accused brought sufficient cash to the transaction, but without bank receipts we have no way to know where that cash came from...”

“This is insane,” objected the defense adviser. He pressed his trunk against the defense table defiantly. The Eminence gave him a baleful look causing him to clench his teeth. Then, turning toward Jernumia, the Eminence nodded slightly. The three judges, sitting as they always did in the box above the planks watched the proceedings with detached eyes.

“The Real Estate Accountability Act is very clear,” Jernumia continued. “In section 8.3, paragraph six it stipulates that all cash used for transactions of this magnitude must be fully documented.” She stepped toward the stand and handed a page to the Eminence and a copy to the defense adviser. “Several documentation methods are enumerated in the act; none were used in this case.”

The Eminence glanced over the paper. He turned toward the defense adviser. “I don’t think you did your homework.”

“It might be that the letter of the law was not followed exactly in this case, but the intent...”

“How do we know the intent?” Jernumia interrupted. “The Real Estate Accountability Act was passed precisely to avoid, for example, money laundering schemes and

other criminal activities.” She raised her trunk slightly to ward off the objection. “I’m not accusing your client of money laundering; I only mean to point out that the law is written the way it is for a reason.”

The defense adviser took a deep breath. “I request *hutia noro*.”

“I respectfully request *hutia noro* be denied in this case,” Jernumia said. “The defense should have known the details of the Act.”

The Eminence looked closely at both advisers. He glanced up at the clock mounted high on the back wall of the court. “Section 8.3 is a technicality of the act,” he said at last. “I’m sure this is not the first time it has been overlooked. I’m going to grant *hutia noro*. We’ll reconvene at hour 71:050, Legal Time.”

Jernumia bobbed her head.

“Thank you, your Eminence,” the defense adviser replied.

As the court emptied Jernumia gathered her materials and slipped them back into her pouch. The defense adviser talked in hushed tones to his client. “Don’t worry, we’ll work it out,” she heard him say.

“What woman would be a lawyer anyway?” the client asked.

Haratol came up to Jernumia and clicked his teeth slightly. “Very nice. Let’s get out of here.” She slung her pouch over her back, smoothed her cloak slightly, and walked with Haratol toward the prosecutor’s door.

“It is a technicality,” she said when they were well out of earshot of the defense.

“And you’re so good at finding them,” Haratol replied.

Jernumia stopped. “Then why I am I still trying these silly real estate cases?”

“These are hardly silly cases. Fraterhof is a major corporation. Aratok doesn’t take silly cases.”

“Come on,” Jernumia said as she flapped her ears, “we are talking about the questionable acts of some minor, ignorant Fraterhof manager. Any new attorney could handle this case, you know that.”

Haratol slid his trunk over her shoulder and encouraged her to walk again. “Look, the guy in the big office wants you on these cases because you make them easy. Do you really think a new adviser would have found that stuff in the Accountability Act? That was brilliant.”

Jernumia snorted slightly.

“Are you hungry? Maybe we could get some food together.”

“What? No, I don’t think so.”

Jernumia ended up walking alone on the streets of Varnok, letting the Nermella blow her frustration away. When she got the position at Aratok she was excited to be the first woman in their team of court advisers. It was a prestigious job and a fitting reward for her dedication to the profession and her exacting attention to detail. Yet two arnoxes later and she had only just started to see the inside of a courtroom. The goal she wanted always seemed to be one step beyond. Perhaps, she thought, she expected too much.

The smell of fresh mosen cakes wafted from a eatery at the corner, yet she wasn’t hungry. Instead she turned down Following Street Polnet toward the river and the museum district. She had 50 arnets before court convened again and while she knew she should be reviewing counter-attacks to possible defenses, she didn’t feel interested in that.

* * *

The lifter stopped in front of the train station, and Colty climbed out scanning the side parking lot. There, in a spot reserved for taxis, Rachel’s van was parked. He quickly walked toward it and Rachel came out the back, staying close to the wall to be less conspicuous.

“I hope I haven’t kept you waiting long,” he said when he reached her.

She spoke to the driver briefly and then snapped her pouch about her waist. Facing Colty, she took a deep breath. “I’m ready,” she said.

The two of them made their way into the station. As usual Rachel looked around with interest. The people of Parnon had grown accustomed to the human presence and although many avoided her or watched her cautiously, most went about their business. There was a ticket counter to one side, a waiting area across from it, and from there a ramp that went down to the trains. The station in Parnon was nothing special; Colty wondered what she was going to think of the one in Varnok.

Colty paid for the tickets, complements of the university, and the two walked down the ramp to wait for the train. They stood close to the wall. Rachel squatted and leaned her back against the bricks, in part to make it easier to talk with Colty, in part to make her less tall.

“I would like to ask you,” Colty said at one point, “if your people have anything similar to our high level arithmetic.”

“We do, yes, very similar. We call it abstract algebra.”

“I . . . I would be interested in learning more.”

Rachel smiled slightly. “Would you like a book about it?”

“I know I shouldn’t be asking.”

“I’d be happy to get a book for you.”

When the express train finally arrived they hung back and let the others board first. The train itself wasn’t particularly long and was organized for commuters. There were two seats on either side of a central aisle. About half of the seats were occupied. Everyone stared at them as they made their way down the aisle looking for a pair of free seats. Rachel kept her head down to avoid hitting the roof of the train.

They found a suitable place behind a mother and daughter, and Colty offered Rachel the seat by the window. The woman in front of them seemed distinctly uncomfortable but she didn’t move. After a moment the young daughter turned around and stared at Rachel. “Hello,” Rachel said. Colty could tell she was suppressing a smile. The child’s mother spoke to her daughter in a hushed voice and reluctantly the child faced forward.

Colty could hear some other voices behind them muttering something about the human but he couldn't make out what they were saying.

"How are you doing?" he asked Rachel.

"I'm fine. I'm okay."

It wasn't long before the train pulled out and accelerated down the track. Rachel looked out the window intently watching the town rush by. "There's Tartuk Hall," she said pointing. In the distance Colty could see the distinctive spire rising above the trees and buildings of Parnon.

The train followed the river. Its dark waters glistened orange-red in the sun's light. Rachel watched as they passed fields of nanik and florenstalk. The ground was covered in a blanket of red and yellow. Large rigat trees lined the river bank in some places but in other places the view was clear. In one spot a boat floated lazily along the current.

The track crossed roads now and then, often with cars parked waiting for the train to pass. There was also the occasional house, farm, or business. In the distance there were some red clouds against a greenish sky.

Colty looked at Rachel. She had her head turned to face out the window so he could mostly only see her thick, black hair hanging down to her shoulders. As usual she had it gathered together in a neat bundle, this time with a bright yellow tie. Her clothing was a lighter shade of yellow with some tan and a bit of green. Despite the strangeness of her body her clothing seemed rather ordinary. The colors and even the style were not unlike something an Argenian woman might wear.

As they approached Varnok the view became progressively more urban. There were fewer fields and more buildings. They had veered away from the river and were crossing a kind of industrial park on the outskirts of the city. Rachel tilted her head as she tried to look forward to see what was coming.

The train passed by a large, brown area. No plants grew on the ground. Instead, some distance from the tracks, were several tall piles of orange and red dirt. Two

small buildings were squat on the ground with large pipes connecting them. From each building a pipe emanated and after going a short distance made a right angle turn and burrowed into the ground.

Rachel studied the scene. “What was that?”

“To be honest I’m not sure.” Colty felt vaguely embarrassed. It wasn’t Varnok’s nicest introduction.

Soon the train began to slow and the city rose up around them. There were no more trees, only streets, buildings, and traffic. The buildings themselves grew taller and soon they were towering over the train, three, four, or even five stories high. The train ran parallel to Cross Street Hark, moving in and out of the shadows of the buildings.

Colty looked ahead. “Okay, here we go,” he said.

At that moment a voice came over the intercom, “We are approaching the Vinden Tunnel,” it said. “We’ll be arriving in one arnet. Welcome to Varnok.” The train dipped below the street level and suddenly was engulfed in the darkness of the tunnel. Lights, glowing rubinum-red flipped on automatically. The girl in front of them gasped and her mother wrapped her trunk around the child to comfort her

“Oh wow,” Rachel said.

“Varnok Station is underground,” Colty explained. Rachel turned and looked out the window into the absolute darkness, staring intently. What she could see Colty had no idea.

In moments the train slid into the open, underground platform of Varnok Station. Colty was thankful that it was well lite both with natural light from high windows and supplementary artificial lights. The train eased to a stop and then, after a moment, the doors opened. People began to stand up and gather their things. The child in front of them turned and stared at Rachel again. Rachel nodded slightly, and the child spun around without a word. When the mother stood up she glanced at the human but quickly looked away and hustled her daughter forward.

The platform was, as usual, crowded with people. Many backed away from them with alarm, bumping into each other to keep their distance. But others actually seemed very interested in Rachel and bobbed their heads as they passed. Rachel nodded politely but she kept her arms tight to her body and stayed close to Colty. “There are so many people,” she said.

Colty wrapped his tentacles around Rachel’s arm and led her forward, moving toward the ramp for the city trains. When they got there the ticket master was reluctant to let Rachel on. “It will have to stand in the back,” he said.

“That fine,” said Rachel softly to Colty.

“*She* will be happy to do that,” Colty said as he paid the fare. They got on the train and made their way to the rear where they held on to poles for balance. Rachel wrapped her hand around the pole, gripping it tightly. On the seat next to her was a woman dressed in a business cloak.

“Jurita preserve me,” she said softly with her head bowed. She clutched the rail of her seat tightly in her trunk. Rachel looked at her and then at Colty but didn’t say a word.

The ride on the city train was short since the museum district was just in another part of downtown. The train had a stop in the center of Museum Park overlooking the river. As it pulled into the stop the train jostled suddenly and Rachel put out her hand against the seat in front of her to catch herself from falling. The woman next to her gasped and muttered something to herself, huddling away from Rachel as best she could.

“I’m sorry,” Rachel said to her. She looked over at Colty with an expression he couldn’t read.

When they got off the train everything was more open and less crowded. “I’m so glad you’re here, Colty,” Rachel said. “I wouldn’t have been able to do this without you.”

They walked a short distance from the train stop into the park. The grass was neatly trimmed and the park was beautifully landscaped. There were seats here and there,

many in the shade of kilar trees. Rachel, as always, was interested in the flowers. They talked for a time and enjoyed the air. In the shade and away from the busy train she seemed more relaxed and more like herself.

Surrounding the park were three stately buildings. Colty pointed to each in turn. “That’s the art museum,” he said, “and the science museum, and finally the natural history museum.” He turned to Rachel. “Where would you like to go?”

“Oh, the art museum, definitely.”

The Argenian National Museum of Art, as it was officially called, was itself a historic architectural landmark. Wide steps lead up to three broad doors over which was spread a tile banner. The tiles were different colored stones set into the rock that, taken together, depicted Roskala as he for the first time looked over the Varsynthia valley where Varnok would eventually rise.

Colty paid the admissions fee, again compliments of the university, and they entered the museum. The main hall was fully three stories high and decorated with long tapestries of the Mingala Era. Stone columns rose from the marbled floor to hold up the vault of the ceiling. Along the ceiling, windows were placed precisely to allow the light from the sun to shine against a wall covered with another tile image. It was a depiction of the ancient Hall of Yartolas before the Bizat War, one of the lost wonders of the world. The shadows in the image were aligned exactly with the incoming sunlight so that it almost appeared as if the sun was shining into the image itself.

“That’s beautiful,” Rachel said.

Colty was surprised at how few people were in the museum, but then again it was a moment when many people were working. He was grateful it was quiet. Rachel was more at ease that way. There were some people of course, and even a number of children, but they were respectful. They mostly kept their distance but they did not seem afraid.

Colty flipped through the guide book given to them when they entered. “Do you have anything in mind you’d like to see?” He asked.

“All of it,” Rachel said. She was still looking at the tile image. She laughed slightly and then turned to Colty. “No, not really. We can just wander.”

At that moment Colty noticed a man approaching. He was dressed formally and seemed pleased to see them. “I heard you were visiting,” the man said as he drew near. “I’m the museum director. It’s a great honor to have you here. I’d be very pleased to give you a personal tour.”

With the director’s guidance they spent many moments walking through the various galleries and admiring works of many styles and from many eras. Rachel seemed interested in everything but she seemed to particularly enjoy the romantic realists. She spent the most time studying the works of Mumulia, Arkitalos, and especially Zugola. Colty could see her eyes scanning the paintings closely. She asked many questions about the symbols and history in each work. They were questions the director was more than happy to answer.

Many people greeted her and spoke with her, often asking questions about her world as well. Rachel chatted comfortably with the small groups and became more animated and talkative.

“That way is one of Zugola’s most famous works,” the director said, pointing down a short hall. “I think you might like it.”

Separate from the other galleries, *The Creation* was kept in its own room under continuous guard. Colty, Rachel, and the director walked down the short hallway to the special gallery. They entered the room to find one wall almost filled with Zugola’s masterpiece. It was taller even than Rachel and at least as wide as four dunari standing lengthwise together. The painting was cordoned off with a guard at one end. The lighting, hanging down from the ceiling, was carefully crafted to mimic the natural light of the sun so the colors were accurate. At the back of the room were some steps. Colty assumed they were used, perhaps during tours, so people could get a good view.

A young couple was in the room, standing on the far end of the ropes. They looked

at Rachel with surprise but they didn't move. Rachel didn't seem to notice them. She was transfixed by the image before her.

On the left, standing on the side of Jenas Mountain was Varsynth, one of Jurita's prophets. He had his trunk outstretched pointing into the distance over the Erebus valley. The sun shone full on him, his golden cloak tousled by the wind. On the right, above the distant Argenian Sea, a great light shined down from heaven. Riding on that light was the Seleck of Jurita: the seven forces of the world.

Zugola's mastery of color and lighting was exquisite. The darkness of the distant clouds, the rubinum of the valley floor, and the bright, living yellow of Jurita's light all combined to give the image a vibrant intensity that few artists had ever achieved.

Rachel looked at the painting silently for some time. "What does it mean?" she asked quietly.

"It's about the moment Jurita breathed life onto Rujar," the director replied in a hushed voice.

"How do you like it?" called out the young man standing across the room. He and his companion were looking at Rachel. "It is said Zugola worked on it for over 200 runion."

"It's an incredible piece. Truly beautiful."

Rachel's answer seemed to please them.

"Do your people have anything like this?" the young woman asked.

Rachel ran her fingers through her hair. She looked momentarily lost in thought. "We have a couple of pieces that might be similar."

The young man clicked his teeth. "Sometime, I'd love to see them."

* * *

Jernumia lay on the seat in front of *Women Working*. It was a painting from the reign of the Third Regent depicting a group of women grinding nuts and baking larka for a Juju feast. They used simple trunk-operated nut grinders and roasted the meat over an

open fire. Yet it was the expressions that fascinated Jernumia the most. It was as if each woman's story was written on her face, stories that were sometimes joyful, sometimes sad, and sometimes deeply mysterious.

There was a commotion in the hall outside the gallery and Jernumia caught a glimpse of what appeared to be a human walking past with several dunari about it. She went to the doorway in time to see the creature, its tall thin body standing high above the two men on either side.

"What's happening?" she asked a museum guard.

"The human is going to speak in the Morgolan Room just down the hall."

Jernumia checked the clock in the gallery. It was a good time to leave. The last thing she wanted was to be caught in a crowd around one of the mysterious aliens, and she had counter-attacks to prepare in any case.

"Which way is the quickest exit?" she asked the guard.

In the Morgolan Room there was already a substantial gathering. Rachel lay on the floor by folding her legs directly under her. Colty lay down beside her and the director stood in the center of the room waiting.

Around the walls forty or fifty people gathered and several leaned against the wooden posts that punctuated the space. A number of children were there also, mostly lying on the floor where they wouldn't get in the way of those behind. At the last minute two reporters arrived, obviously rushed to get there, and forced themselves into the back.

"I realize this is very spontaneous," the director started, "but we are honored to have with us today the visiting professor from Parnon. Um... how did you pronounce your name again?"

"Just call me Ra'hel."

Her soft voice was in striking contrast to the rumble of the director.

"Well, Ra'hel," the director continued, "let me get out of the way and let you speak." He lay down at the edge of the circle of open space in front of Rachel and the room drew

silent.

“Sar. Coltinarly brought me here to see the museum,” Rachel said. “I wasn’t expecting to speak so I’m not sure how to start.”

“Why do you look like a chortak?” a voice called out. It came from one of the children in the front row. There was some shaking of ears.

“I’m sorry,” said the child’s father, “he doesn’t mean any disrespect.”

“It’s fine,” said Rachel. “In fact, it’s a very good question.” She addressed the child directly as she continued. “It’s because of parallel evolution. Do you know what that means?”

The child swayed his head.

“Creatures that evolve in similar environments develop similar traits. Millions of reunion ago my ancestors on Earth lived in trees just as the chortak do now. I have gripping hands and forward facing eyes that allow me to sense the distance of something by just looking at it.” She held out her hands, partly open. “If you are jumping from one branch and reaching for the next... well... you don’t want to miss.”

“What is Earth like?” came a voice from the back.

“In some ways it’s like here. Many worlds have similarities and life on those worlds are similar too. It’s parallel evolution again. Yet there are differences. Our sun is hotter than yours and shines with a different color. My eyes are adapted to the light from our sun just as your eyes are adapted to the light from yours. I can’t see rubinum. To me that color is just black. But I can see ultra-green. In fact the sky of Earth is ultra-green and so it looks very different than here to my eyes.”

“It must be very hot on Earth if your sun is hotter.”

“Earth is far away from our sun. In fact, I’m actually used to a cooler climate than here. I’m an endotherm. My body generates its own heat. It’s a useful thing when the temperature varies a lot, but here where the sun never sets it’s more of a disadvantage, I think.”

One of the reporters in the back spoke up. "Is it true that Earth is covered by your technology as Zarlon of the Limzar Association has claimed?"

"Zarlon has never been to Earth so what would he know?"

Everyone in the room shook their ears.

"We have great cities, like you do, and large works of engineering. Yet there are also millions of square karnons of wilderness on Earth. Even in our cities, as in yours, we have trees and plants. . . and flowers." She glanced briefly at Colty.

"It's true that we caused damage to our world with our technology, just as you are doing now to yours. We are trying to undo the damage we caused, but it will take time. I'm sure you will do the same eventually."

"Are you saying that we are like you?" a woman called out.

Rachel turned to look at her. "In many ways you absolutely are. We estimate you are only two thousand runion behind us technologically. Compared to the age of the universe that is but a fleeting moment. Even without any help from us you will be building star ships soon enough. If things had only been slightly different our first meeting would have been from you visiting Earth rather than the other way around."

"But we are not as smart as you," another child called out.

"I don't know about that," Rachel said, "what is 'smart?'" She smiled slightly. "Anyway, I think I can safely say that one of the smartest people I've ever met is dunari."

Colty wondered who she meant.

53

Zarlon turned off the main highway amid a grove of larzippa trees and onto a rough, poorly maintained dirt road. Many karnons from the nearest town, the remote location was wild and primal. A low cloud of dust rose behind his car only to be dispersed by the forest breeze. The road slanted upward slightly and after a short distance came upon an open field of harsna grass, finally reaching a small parking area at the base of a rise.

Six other men were gathered there, talking among themselves and waiting for Zarlon's arrival. As he got out of his car they came forward and greeted him by momentarily touching their trunks to his left shoulder.

"Greetings this moment my fellow seleckia," Zarlon said, "a time of greatness is upon us."

"Dangerous greatness," one of the men replied. "I fear my aides are suspicious of my unscheduled absence."

Zarlon swayed his head and touched the man's back with his trunk. "Fear not. Soon secrecy will no longer be needed. Once the Last War has wreaked its purpose our order will lead the way toward rejuvenation."

"Maybe," the man said, "but until then let's get on with it. I only hope none of us were followed."

Zarlon swayed his head and with solemn purpose the men put on ceremonial cloaks usually reserved for female seleckia. Each was individually adorned with a symbol of one of the seven forces. As the leader Zarlon wore the cloak of Jilfora, decorated with

the binding force of love.

Silently the group walked up a narrow path to the top of the small rise. There the ground leveled forming a wide and surprisingly well-tended lawn. The knoll was the only feature in an enormous plain of harsna grass. The tall, lush yellow plants surrounded them like a sea surrounds a boat, stretching into the vast distance as far as even dunari eyes could see. The sky above was clear and green with a touch of golden sand driven from the distant desert by the Nermella wind, the breath of Jurita Herself.

At the center of the lawn was a low stone pedestal made from rocks that were carefully positioned and mortared. A flat rock, like the top of a table, rested on the pedestal, awash with the deep, orange light of the sun.

The six men took their positions around the pedestal. They stood facing inward about a trunk's length apart. Zarlion knelt inside the circle facing the pedestal with the sun on his face. Bowing his head slightly he laid his trunk lightly on the table. The others put their right front knees on the ground.

"Huminia fa legori," Zarlion said softly and with a practiced confidence.

"el itara!" the others replied in unison.

"Huminia fa tarola"

"el tarara!"

"Let Jurita guide our thoughts."

They all lay comfortably on the grass.

"I still have concerns," Numtala began after a few moments, "about the human reaction."

"It doesn't matter what they do," Zarlion said. "Even if they do nothing the First Citizen will attack."

"Or perhaps it is the humans that will make the Last War manifest," Ratforin continued.

"Yes, pouring down Jurita's wrath from the skies," said Numtala.

Zarlon flapped his ears. “The humans are cowardly. They will hide behind their technology and do nothing, all in the name of being gracious guests.”

“What of the super weapon?” Qunart said.

Zarlon turned to face him. “We will use it when the time is right. As you know, the target has already been chosen. We need to even the sides in this impending conflict, for Argenia is too strong. Without our help Forbin will be overrun and there will be no Last War, only Argenian dominance.”

Zarlon swayed his head slightly to his left and then to his right, taking in the group of them with both his eyes. “We have debated this at length. The time for discussion has past. Now is the time for action.”

The perverse select of men all rose as Zarlon draw a small dagger from his leg pouch and laid it on the stone table. The others sat back on their rear legs and Zarlon took a small piece of cloth paper from the folds of his cloak. He held it high into the air.

“Here is the order to kill the unholy creature that by its very presence defiles the city of Parnon, the country of Argenia, and the world. Yet its death will ignite the hot, purging flame of Jurita’s anger, and by so doing fulfill Junarit’s prophecy.”

“*So it was, is, and will be,*” replied the group.

Zarlon put the paper in the center of the table and weighed it down against the Nermella with four polished lamstones. The select of men lifted their front legs into the air, with their left foot raised slightly higher than their right, trunks outstretched. Zarlon leaned back and turned his face toward the open sky, his trunk reaching upward as well.

“We call upon you, Mother of the Universe, to witness the actions of your humble servants. May your judgment be swift and true.”

“*el tarara!*” everyone called out in unison.

Zarlon stepped forward and took the dagger. With a quick motion he plunged the tip into his left front thigh between two scales. Without any expression of pain he dug

the dagger through his thick, leathery skin until orange blood started to ooze down the blade. “*el itara,*” he called out loudly.

“*el itara,*” replied the seleckia.

The seleckia lowered their front legs back to the ground and stood up normally, still remaining in a circle around Zarlion and the stone table.

Zarlion held up the blade. “The will of Jurita acts through the select of Junarit as foretold in the *Songs of Truth.*” Touching the point of the dagger to the paper, Zarlion stained the corners with several drops of blood. Putting the dagger aside he bowed his head and began to chant. At first his voice was little more than a low, rumbling growl. Yet it was taken up by the seleckia and soon the sound rose like the wind, vibrating, it seemed, the air around them and the ground beneath them. It became not the voice of one man or another but instead the revealing voice of the false Goddess, raining down from the sky above and enveloping them.

* * *

Colty paced back and forth in front of the classroom. His notebook was open on the table next to a collection of co-sequence papers and the three books Rachel had given him. The blackboard was covered with several Nulari sequence diagrams and a mixture of dunari and human mathematical notation.

He paused in front of a critical formula. It was Nulari’s theorem of co-sequence divisibility. He stared at the formula as he had done a hundred times before. It wasn’t the whole story. Something deep inside him knew there was more. He walked over to the other side of the board where he had reformulated the basic axioms of co-sequence theory in terms of human sets. It was an elegant isomorphism. He made an adjustment to one of the steps of his proof showing the logical equivalence of the two forms.

The human mathematics was extraordinarily precise and it revealed several areas where the original theory was lacking. Colty walked back to the dunari side of the board

and looked at Nulari's second lemma. He compared it to the longer, but more accurate version he had derived on the human side using his isomorphic axioms. The dunari math was fuzzy, unclear, and slippery. The human math was unforgiving and exact. The human form of Nulari's second lemma didn't seem to say the same thing.

Colty concentrated. Ignoring the notation he tried to discern the essential difference between the two forms. The logic of Nulari's development seemed inescapable, yet somehow it arrived at a slightly different result than Colty's derivation using human notation. He walked over to the table and flipped through Nulari's seminal paper. Was there some extra step he had missed? He knew the paper word for word. How could he have missed anything?

He walked over to the human side again and stared for a while at the alternate version of the lemma. Something about it looked familiar to him. He picked up one of the books Rachel had given him and flipped through it. There it was on page 215: an example of hyper induction. The starting formula in the example had a similar structure to the one he had written on the board.

Colty looked at the version he derived, then back to Nulari's version, and then to his version again. He reflected on hyper induction, an advanced human mathematical technique. In his mind the concepts drifted about, touching and bumping against each other like pieces in some fantastically intricate puzzle. Reaching out with his trunk he tentatively scratched a few symbols on the board in an effort to put two of those pieces together. A third fit with the two, followed by a fourth. With a rush everything clicked into place.

He knew.

Nulari's derivation made a hidden assumption. It was something so subtle that it had gone unnoticed by dunari mathematicians. That assumption forced the reasoning into a specialized setting. Colty realized that if he did not make the assumption he would be in a more general world. That was why the form he derived using human notation looked

different. Colty also realized that now he could use hyper induction on his version of Nulari's lemma.

He started writing quickly, his trunk found it difficult to keep up with his mind. The math poured out of him onto the middle of the board, and he freely mixed the notations of two species, passing back and forth between them fluidly, as he sketched the outline of his proof. It was easy.

When he finished Colty let the chalk drop into the tray, and then stepped back to review what he had created. Quietly he scanned over the board.

"Obvious," he said aloud to himself, and then clicked his teeth.

He flipped open his notebook to a fresh page and carefully copied down his proof sketch for later study. There was still a lot of work to do to fill in the details, but he knew that now it would just be a routine matter. He had done it. He had the proof that would grant him full status.

After he finished copying the details into his notebook he erased the board, pausing slightly just before erasing the final steps. He then walked down the hall to his office, notebook tucked safely in his pouch. He had to tell someone about what he just discovered, and he knew who that person needed to be.

He dialed Rachel's office number. The line beeped several times and he wondered if she was at the library. Eventually she picked up.

"Yes?" her light voice said on the other end.

Without any introduction Colty simply said: "All stellating co-sequences have prime bases."

There was a pause.

"And you have a proof," Rachel said in reply. It wasn't a question.

"I do," Colty said, clicking his teeth loudly.

"That's wonderful! What a lovely result."

"I still have to clean it up, but I'd love to show you. I had to use hyper induction."

“You used hyper induction on co-sequence math?” Rachel asked.

“Yes, after realizing Nulari made a hidden assumption that was blocking the depth of his result...”

“Wait,” said Rachel, “how did you justify that?”

“I created an isomorphism between human and dunari mathematical systems, so I was able to map your techniques onto dunari concepts.”

There was another pause.

“That’s amazing, Colty. I’m very interested in talking with you about this. I have to teach right now, but after class I’ll come right over, if that’s okay.”

“That would be just fine,” Colty replied.

* * *

Karn tapped one tentacle impatiently against the steering stick as he peered out the window of the truck. Gat followed his gaze along the cross street to where a small walkway opened onto the road by a patch of harsna grass.

“How good is our intelligence on this?” Yarlon asked. He leaned his trunk on the ledge of the small window in the barrier separating the front seats from the back area, pulling himself up to see a little better.

“It is what it is,” Karn replied, practicing his Forbin accent. He looked at the clock on the truck’s main panel.

“There!” Gat pointed down the street to an alien, bipedal figure striding toward them. Its front legs swinging ridiculously without even touching the ground.

Karn sank back slightly in his seat. “Very punctual.” The creature turned into the walkway and quickly disappeared behind the harsna. Karn engaged the transmission and moved the truck gently forward, stopping again just where the human had turned. “Yarlon,” he said simply. He gestured toward the back and then slid open his door.

Gat moved over to the driver seat while the two other men trotted down the path.

Karn quickly surveyed the area. As expected the way was empty. They soon rounded a bend and saw the human ahead, apparently oblivious to them. Karn slowed to a rapid walk and Gat followed him.

“Can we have a word?” Karn called out as they caught up to Rachel. She turned around and regarded them uncertainly. “We would like for you to come and speak with the Forbin ambassador,” Karn continued.

Rachel tilted her head slightly. “What? I don’t understand.”

“You should come right now.”

“Now?”

Karn reached into his cloak and held up a trunk pistol more just to show Rachel he had it than to directly threaten her with it. “Yes,” he said, “now.”

Yarlon wrapped his trunk around Rachel’s waist and she started at the intrusion. Karn turned so the two men flanked her on either side and Yarlon butted against her with his trunk ridge.

“What... what’s going on?” Rachel said anxiously.

“Just a meeting, that’s all,” Karn said.

Rachel let herself be led back toward the main road. Yet before they cleared the harsna grass another man approached them going the other way. Karn leaned over and spoke quietly to Rachel. “If you say anything we will kill him.”

She tensed but kept walking. The man passed trying not to take notice of the human as he went. By the time they reached the road Gat had backed the truck onto the walkway. Karn quickly opened the back and motioned for the human to climb in. Rachel hesitated.

“Go on. We have a short drive to get there.”

“Where are we going?”

Karn fluttered. He grabbed Rachel’s arm and pulled her forward powerfully. “The sooner you get in, the sooner you get back.”

Rachel scrambled into the truck and Yarlon followed. Karn turned briefly and threw

a cloak hook on the ground before he joined them. Once inside he latched and locked the truck doors. There were no proper seats and the windows were narrow and mounted high on the sides. A large skylight let the indirect light of the sun into the space.

Yarlon opened a long box mounted half way up one wall and took out two autorifles, passing one to Karn. Rachel shrank into the corner. Karn checked the magazine. He looked over at the human and clicked his teeth. “Just a little insurance,” he said.

Karn swayed his head and Yarlon started to reach into the pouches in Rachel’s clothing. Rachel pulled away and made a sound like a short squeal unlike any sound a dunari might make. Karn leaned his weight against her body and held her firmly while Yarlon dumped her belongings onto the floor of the truck. There was her machine, a smaller rectangular device, and her oxygen canister with its tubes and clips.

Karn picked up her machine and tentatively unfolded it. “What is this?”

Rachel panted slightly but didn’t reply. Karn tossed the device to Yarlon. “Destroy it.”

Yarlon repeatedly folded the device in half but that seemed to have little effect on it. Standing on one edge of the clear sheet he then tried to rip it. After some struggle he managed to distort the shape of the device, stretching it and deforming it, but not actually tearing it.

“Good enough,” Karn said. “Now this one.”

The second device was smaller and thicker than the first. Yarlon put it on the ground and using the butt of his autorifle hammered on the device repeatedly. After only a few blows it gave a satisfying crack as the front surface collapsed into the body. Rachel looked on but said nothing.

Karn thumped his trunk against the barrier behind the driver and then slid open the small window. “Stop at the canal,” he called out and then closed the window again. He then picked up the canister.

“I need that,” Rachel said softly.

“What is it?”

“Oxygen. I need it for my breathing.”

“We are aware.” Karn inspected the canister carefully. After a moment he slid it back toward Rachel.

She picked it up, placed the cup over her mouth and took several rapid breaths.

“Now take off your clothes.”

Rachel stared at him.

Karn tilted his head. “That wasn’t a request.”

Rachel didn’t move.

Karn reached into his cloak and took out his trunk pistol. He pointed it at Rachel. “We need you alive, but I’m guessing if I shoot you in the leg you’ll live. Is that right?”

Still Rachel didn’t move, and Karn slid back the latch on the pistol. With shaking fingers Rachel started to undo the hooks of her clothing. There were two main parts, one covering the top of her body and the other over her back legs. Beneath her outer clothing was another, thinner layer. Karn insisted she remove that as well.

“Disgusting,” Yarlon said softly at the sight of Rachel’s body. She huddled in the corner with her arms wrapped around her.

Karn passed her clothing to Yarlon who then started inspecting every fold. With a small knife he tore through the seams and ran his tentacles along the material.

“Just making sure you don’t have any concealed weapons or tracking devices,” Karn said casually.

When Yarlon finished Karn threw Rachel’s clothes at her and she quickly slid them back on despite the damage.

They rode in silence for a time. Finally the truck came to a stop and Rachel looked up. The window slid open. “We’re at the canal,” Gat called out. Karn took the two damaged devices and put them through the window.

“Dispose of these.”

The door opened as Gat got out. Moments later he returned and started the engine again.

“Where are we going?” Rachel asked.

“A Forbin military base,” Karn replied.

“There are no Forbin bases around here.”

“Of course not. We’re going to cross the western desert.”

Rachel’s eyes widened. “That will take too long! I can’t be away from the compound that long.”

“We won’t tell.”

“You don’t understand. I need water... much more than you. I can’t go without water.”

Karn leaned back against the side of the truck. “There will be water at the base.”

59

Fotkey stood on the observation platform overlooking the parade grounds. Behind and about him rose the imposing ramparts of Fort Yarta, and beyond those walls the modern city of Yartagard. Yet Fotkey concentrated on the grounds where herd after herd of highly trained solders marched to the sound of their callers. Each herd stopped before Fotkey, turned in unison, and, leaning forward slightly presented their weapons to him at ready. He scanned each group carefully before swaying his head slightly. An aide at his side barked a command and the callers directed the herd down the grounds to a large, arched receiving doorway.

It was a standard drill well known to the solders. Their charge had always been one of preparedness. Yartagard was over four thousand karnons north and west of Varnok and was the last major city in Argenia before the great desert. If ever Forbin should invade it would be the troops stationed there that would first respond.

When the presentations were over, Fotkey turned and walked through a door behind the platform into the controller space at the center of the fort. At one side he was flanked by sub-general Torman, the highest ranking resident officer at Yarta. At his other side was his trusted aide, two captains, and some assorted, minor officers.

“If it’s war Forbin wants, we’re ready,” Torman said. Yet Fotkey did not reply.

“Will it come to that over this human?” one of the captains said.

Fotkey paused and turned toward the captain. “The First Citizen will act, as always, according to the best interest of Argenia.”

“Of course, sir.”

They continued walking toward the Strategy Room where Fotkey intended to review deployment and other issues of operational status. Just as they rounded the corner a communications officer trotted toward the group.

“General! We have word that the First Citizen wants to talk with you on the secure phone in just six arnets.”

Fotkey fluttered slightly. “Fine. I’ll go to my private office. Torman, I’ll meet you in the Strategy Room right after the call.”

With only his aide a short distance behind him, Fotkey turned down a different hall eventually reaching a small and unassuming office. The aide stood beside the outer door while Fotkey carefully opened it and locked it behind him. Alone in a small, cramped foyer with a skylight far above him, he opened the inner door to his private space.

The decor was sparse and functional. A few cabinets lined one wall and a small table stood in the center with a secure phone at one corner. The windows were deep and placed high above him so that even someone standing on the fort’s ramparts outside could not reach him with a bullet.

Fotkey settled onto the seat and turned on the secure phone. He took a small book from a mini-pouch slung around his shoulders against his skin under his cloak. He opened the book and carefully adjusted the twelve dials on the phone according to the numbers on the first page, together with a special number known only to him. He then ripped out the page and placed it in a metal tray beside the phone where he burned it using a small lighter from one of the table’s trays.

He didn’t have to wait long. At exactly the expected time the light on the phone began to flash. There was no chime. Fotkey answered it.

“Hello, general,” came the First Citizen’s voice. There was a slight echo and some soft squealing in the background as an artifact of the scrambling circuits. “I trust all is well.”

“Yes, we’re fine here. You?”

“We’re fine here also.”

Fotkey relaxed a little. This simple, scripted exchange meant that neither side was under duress. Had the First Citizen used the singular rather than the plural greeting a very different sequence of events would have unfolded.

“I know you are in the middle of things,” the First Citizen continued. “However, I’ll be meeting with the ambassador earlier than expected and I wanted to talk with you first.”

“Yes, sir.”

“The human has been seen in Clickora, traveling west in the company of three men, at least one of whom has a Forbin accent.”

“Clickora,” Fotkey repeated, “that’s in aerocar range of Yartagard.”

“I want you to send an elite group to look for them.”

“Surely the humans will be looking as well,” Fotkey said.

“It doesn’t matter. If we find them first, rescue the human if you can.”

“Yes, sir.”

“Keep it out of Forbin at all costs.” The First Citizen paused. “General, you are authorized to kill it if necessary to do that. Just . . . make it appear to be an accident.”

Fotkey suppressed a flutter. “Yes, sir. I understand.”

“You know as well as I do that with our weapon and that creature’s knowledge we’ll have a major mess. It must not be allowed to happen.”

“The human will likely not cooperate with the Forbinites,” Fotkey said.

“Maybe not, but we can’t count on its ability to resist being broken—or tricked.”

“What of the IIB? This is more their purview.” Fotkey asked.

“Yes, yes . . . the IIB is having trouble tracking them. In this case I think we need to bend the rules a little.”

* * *

Karn rounded an outcropping of rock. A short way ahead was a small, dilapidated, two story building. It was about the size of a house with a wooden sand wall, quartz windows, and a tonstone step. Around the front and side was a covered porch. The roof was flat, typical for desert construction, to cut down on the surface exposed to the abrasive wind.

Behind the house was a small garage, just as dilapidated. A large fuel tank, partly buried in the sand, was pressed against one of the outside walls. The area was desolate and remote. They had passed no other buildings or signs of civilization for many karnons. The Rujaran sun beat down on the sandy yard, angling in from high above a rocky ridge behind the house.

Karn pulled the truck off the road and halted in front of the house. He banged on the wall between the front seat and the back area. "We're here," he said in a loud voice. Karn and Gat climbed out and opened the back. Yaron was lying on the floorboards beside the motionless body of the human.

"Glad to hear it," Yaron said as he started to drag himself out of the truck.

The men looked at Rachel and Gat poked her with the butt of his autorifle. She didn't move. Karn wrapped his trunk around her legs and, leaning back, dragged the human to the edge of the gateway. Rachel moaned softly. Her body was covered with a film of water and her clothing stuck to her skin. It was a repulsive sight.

Karn took the knife from his thigh belt and cut Rachel's bonds. He then dragged her limp body over the side of the gateway and she stumbled onto the ground. "Get up," he said simply. Rachel moaned again. Karn kicked her lightly. "Get up now."

She struggled. Her hair was matted against her forehead and neck. Her face and arms were covered with wet grim. Gat wrapped his trunk around her arm and unceremoniously pulled her to her feet. She leaned wearily against the side of the truck and looked at her captors.

"I... need water."

“Inside first.” Karn pointed toward the house with his autorifle.

Rachel grabbed her oxygen canister and tried to put the cup over her mouth but Karn took it away and pushed her forward. She plodded across the sand toward the building but paused after a few steps. “It’s not an army base,” she said.

“Inside.”

With an armed dunari at either side and another walking behind, Rachel made her way to the step and into the building itself. The main room was filled with clutter. Several wooden storage cabinets were strewn across the floor. Boards, buckets, used motor parts, oil covered rags, and other junk was scattered about. Along one wall was a dirty cook stove, and in the middle of the room was an open ramp that led through a hole in the ceiling to the upper level.

The men directed Rachel to the left through a wide door into a smaller room that was nearly empty. In the middle of the room was a stained, torn seat. On the wall beneath the wide quartz window, was a small table.

“Down.” Gat pointed at the floor with his autorifle and Rachel got down and leaned her back against the wall. Karn lay on the seat a short distance from where Rachel sat, her knees drawn up against her body. Gat and Yarlon stood at either side of Karn.

Karn looked at Rachel for a time, watching her watching him over her knees.

“This is not an army base,” she said finally.

“No.”

There was no trace of Forbin accent in Karn’s voice. Rachel did not reply. Her eyes moved to Gat and then Yarlon before returning to Karn. She hugged herself tightly.

“Why are we here?” she asked.

Karn slid his tentacles into his cloak and took out his pistol. “To kill you,” he said simply.

Rachel shifted uneasily. Her breathing was ragged and her eyes glistened, but she said nothing. Karn watched her. Then he raised the pistol and aimed at the center of her

chest. Rachel stared at Karn but did not move. Several moments passed and her body shook.

Karn lowered the pistol. "You're braver than you look," he said. He nodded toward the other two men. "Find out what color its blood is."

Gat and Yarlon stepped forward. Yarlon drew a knife from his thigh belt. Rachel tried to move away but Gat grabbed her arm with his trunk and pressed one of his front feet down against her hip. Rachel cried out and struggled but Karn stood up and raised the pistol again. Stepping forward he held it close to her chest. "Stop or it ends now," he said in a commanding voice.

Rachel panted. Water streamed down the side of her face and she glared at Karn. "If you're going to kill me anyway, why should I care?"

Karn leaned forward, holding the pistol to her head. "Because in the end you're nothing more than an animal, and all animals have an instinct to survive."

Resigned Rachel stopped fighting against Gat's grip. Karn nodded toward Yarlon and he pressed his foot against Rachel's other wrist. With a firm pressure he drew the knife blade down Rachel's arm. A thick, red liquid flowed from the wound. Rachel grimaced but she didn't move or make a sound. She panted rapidly, eyes open and staring at the ceiling, as Yarlon finished.

Karn watched her closely. He nodded. "Very good."

Yarlon poked at Rachel's finger tips with the knife. "Maybe we should try cutting one or two of these things off."

"What are you?" Karn said, "A barbarian? We need a different kind of test." He looked around, his eye falling on the door to the storage closet at the back of the room. "Put it in the dark."

Rachel looked toward the closed door and then back at Karn. "No," she pleaded. "Please, I beg you."

Gat and Yarlon grabbed her arms tightly in their trunks and dragged her toward the

door as Karn unlocked and opened it. Inside was a rough closet with a few wooden cabinets and a pile of sand jackets on the floor. There was no window and no artificial light. Inside, with the door closed, the darkness would be absolute.

“Please, no!” Rachel screamed as they dragged her into the closet. It took both dunari to hold her inside as she kicked and thrashed against them. Finally Karn raised his pistol to silence her. “Learn to deal with your fear,” he said as Gat closed and locked the door.

Rachel howled and started to pound on the inside of the door. “Please! Please! Please!” she begged. “Let me out!” Suddenly there was a crash. For a moment all was silent but soon she started again. She sobbed and moaned and there was more banging, this time it sounded like against the wall. Karn stood quietly listening, his trunk against his forehead. Gat and Yarlon waited.

There was more silence and then a groan and another crash. After that the silence was complete. Karn waited but all was quiet. “Have you mastered your fear?” he said loudly. There was no reply. He motioned toward Gat who opened the door.

She was gone.

Astonished Karn stepped forward. In the back corner of the closet, behind a wooden cabinet, one of the vertical planks had been pulled out creating a narrow gap that lead into the space between the main wall of the building and the outer sand wall. Karn moved to take a closer look but the the gap was filled with the blackness of night. Instinctively he recoiled.

“Light!” he said. “I need light!”

Gat rushed into the main room and pulled a trunk-held artificial light from one of the cabinets. Karn flicked it on and, taking a deep breath, kicked the broken vertical plank aside and leaned into the gap to see.

It was much too narrow a space for a dunari but he could see how the human might have been able to squeeze into it. Yet the creature was nowhere to be seen. In the red

glow of the artificial light he could see the rough cut boards of the outer wall on one side and the siding of the original building on the other. Some distance away the gap made a right angle turn where it wrapped around the side of the house and beyond that point he could see nothing.

“Dind,” he muttered.

He pulled back and once again the hole filled with darkness. He snapped at Yaron. “Stand here,” Karn said. “If anything comes through that hole, shoot it.”

Karn motioned to Gat and the two men trotted into the main room. Karn raised his autorifle and started shooting at the wall. The powerful gun easily sent bullets through the wooden planks, sending a shower of splinters into the air. Gat followed suit, starting at the other end of the wall and worked toward Karn. The noise was deafening as the two autorifles fired round after round through the dry boards.

“Down,” Karn motioned. “Aim low in case it’s lying on the ground.”

More splinters flew through the air. Finally Karn went back into the storage closet while Gat stayed in the main room. Grabbing the light he again looked into the gap. There was no sign of her. “More!” he called out loudly. Gat fired his weapon, raking the wall with more holes. Karn could see the bullets breaking into the gap as he watched. Finally he nodded.

“Enough!”

All three dunari gathered in the main room. The air was filled with the burnt smell of firing mixture and the wall of the room was littered with bullet holes. Karn walked along the wall kicking it just above the ground. About half way down the far side, the hollow sound gave way to a heavy thump. Karn clicked his teeth.

“So that’s it,” Yaron said.

“I want to see its body,” Karn said. He grabbed the wall plank tightly in his tentacles and pulled, but it held fast. “Let’s dig from outside.”

All went out into the open Rujaran sun and around to the side of the house where

the body of the human lay. Gat got some shovels from the garage and the three of them started to move the sand away from the outside of the sand wall. The hot Nermella blew across their backs.

After a short time they came to the bottom of the sand wall and began to dig under it.

“It’s not here,” Yarlou said as his shovel found open space on the other side of the wall.

“Not here either,” Gat said as he broke through a short distance away.

The men kept clearing away the sand finding more and more open space. There was no sign of a body where they expected it. Karn had a sinking feeling. He threw his shovel on the ground and motioned for the other two to follow him back inside. Once in the main room he reloaded his autorifle and started shooting a stream of bullets into the wall, this time cutting a line a short distance above the floor. Gat did the same and soon they had hacked off the lower part of the wall all the way around.

Karn kicked the loose boards free. The “body” they had located before was nothing more than a pile of desert sand that the Nermella had blown between the cracks in the outer wall.

“Light!” Karn commanded.

He lay on the floor and slid under the broken remains of the wall to look around. The gap was empty but supporting the sand wall there were several horizontal boards nailed to the both sides of the gap. They were thin and frail, yet a tree climbing chortak would have been able to scramble up them like a series of steps. Karn slid back out into the main room and looked at the wall. At the top, near the level of the highest board there were no bullet holes. He slammed his trunk against the floor in frustration.

“It must have escaped while we were outside,” Gat said.

Karn stood back up, his ears tightly folded against his head, fluttering loudly. He faced Yarlou. “I told you to stand by that hole and shoot anything that came out.”

“It was dead!” Yarlou said.

Karn curled his trunk and pressed it to his forehead. “Okay,” he said finally. “Yarlou, go outside and trot around the house. See if there are any fresh tracks leading away.” Yarlou swayed his head. “Gat, she’s got to be here. You and I will rip this place apart if we have to.”

Yarlou turned to leave but Karn stopped him briefly. “One more thing,” Karn said. “Don’t underestimate her again.”

Karn and Gat started opening any box or cabinet that looked large enough for a human to squeeze into. At one point Karn glanced out the window to the truck parked beside the road. He felt in his pouch and pulled out the key. It was the only key. He nodded to himself in satisfaction.

“Leave everything open,” Karn said. “If she comes back in here we don’t want her hiding somewhere we’ve already searched.”

While Gat worked on the first floor, Karn carefully ascended the ramp to the upper floor. Going slowly he surveyed the space before taking the final steps. The second floor was in just as much disarray as the first. There were boxes strewn about, several mining tools along one wall, and a metal cabinet filled with old radio equipment. Karn moved about the room cautiously, checking every potential hiding place. Against his back he felt the warm Nermella. He turned to find one of the windows open. Yet on the floor beneath that window there was no accumulation of wind blown sand.

Karn approached the window, with his autorifle raised. Staying well inside the room he looked through the window first in one direction and then the other. It opened onto the narrow roof of the porch, covered with broken hack tiles. Cautiously Karn stepped out on the roof. He looked over the side at the ground but there was no sign the human had jumped. It was a full story to the sand below. If she had been desperate enough to jump she would have surely broken a leg.

Karn climbed back into the room and returned to the first floor. “Well?” he asked

Gat.

Gat just shrugged. "Maybe it's in the garage," he suggested.

The two men went outside and trotted to the garage. There were many tracks around the house so it was difficult to tell if the human had gone that way or not. The garage itself didn't have a vehicle inside but was being used more as a storage area for junk. Along one wall was a drum of gasoline and collection of tools. A pile of broken auto parts was in the corner along with some oily sheets.

Leaning against another wall were several planks of fabri-wood. The space underneath them was small and dark, but large enough for a human to hide. Karn motioned to Gat to move around to the far side as he approached one end. Yet the only thing under the planks was a box of empty bottles.

"There is nothing here and no place to hide," Gat said.

Karn kicked the wall in several places but it was obviously just a single layer of cheap construction. It was amazing it was still standing at all.

"It can't have just vanished into hot air," Karn said.

Karn and Gat went back outside and Karn motioned to Yarlon who was standing some distance away. Yarlon came trotting over to the other men. "Well?" Karn asked.

"Nothing," Yarlon said. "It's got to still be here."

"Then where in *fran* is she?" Karn fluttered in frustration. "Let's take another look in the house."

Karn felt a need to again inspect the gap where Rachel had disappeared. Maybe she was still in there, hiding in some nasty corner crawling with desert mites. The three men tore off more of the inner wall and used two artificial lights to illuminate every part of that troublesome space. Rachel was not to be found.

Gat and Yarlon checked upstairs again while Karn kicked the wall between the two rooms. When they returned with nothing Karn stomped on the floor. "What's under here?" he asked.

“Sand?” said Yarlou

Karn stomped again. “Does that sound hollow to you?”

Gat was distracted. “Didn’t you put that gas bottle in the tray by the door?”

“What?”

“Why is it on the table?” Gat picked up Rachel’s oxygen canister and shook it slightly.

“It’s empty.”

Yarlou raised his trunk. “I hear something.”

Everyone stood silently. From the other side of the room there was a faint hiss. Gat walked toward it slowly at first and then more quickly. “It’s gas from the cook stove!” he said. He held up the line where it had been disconnected from the tank.

“Dind,” Karn muttered. He sprang into action. Rushing to the nearest window he quickly unlatched and opened it. “Yarlou,” he said turning back to the others, “open that window near you right away.”

At that moment a bottle filled with gasoline came flying through the window Karn had just opened. Tied around the end was a flaming rag. Karn spun around just in time to see the bottle smash against the edge of a metal shovel and burst into flame.

Years of training took hold and Karn flung himself to the ground. Almost instantly the entire room was engulfed in a ball of fire. The very air he breathed was filled with scorching heat, and the house shook with a thundering explosion. Fire roared over his back, engulfing him. In an act of sheer desperation, Karn lept forward and out the window he had opened, still clutching his autorifle tightly.

He landed heavily on the ground, rolling to absorb the blow. He got up quickly and backed away from the house, now fully ablaze. He could hear cracking wood as the feeble building, weakened by the explosion, started to collapse. He glanced briefly to either side, but there was no sign of the human.

“Gat! Yarlou!” Karn rushed around to the front of the house in time to see Gat stagger out the doorway, his body burning. Gat fell to the ground and Karn quickly

piled sand on top of him to put out the flames. The odor of burnt flesh filled the air.

Karn turned toward the house and ran up the step. “Yarlon!” he cried out. He moved forward to enter the house but heat radiated from the door as if from a furnace in a way that not even his dunari body could withstand. “Yarlon! Yarlon!” There was no reply.

Karn ran back to Gat and pulled him away from the house. Flames roared over the building, consuming the dry wood like kindling. A towering plume of smoke rose over the desert and into the Rujaran sky, driven into the air by the Nermella.

Gat was badly burned. Every part of his body was blackened and blistered. He moaned softly. “You’re fine,” Karn said. Gat opened his eyes and looked at Karn but said nothing. He was incapable of speech. “The pain will be gone soon,” Karn said, “and then you will be with Jurita.” Gat closed his eyes and never opened them again.

Karn looked around nervously. He did not like being in the open. He felt a need to hide. He needed to regroup, rethink. He needed to plan. He reminded himself that he still had the autorifle. His adversary was unarmed. He picked up his weapon with grim determination. He had to hunt the creature down.

He ran some distance from the house and started to circle it in an ever widening spiral. He stopped every dozen paces or so to study the scene. He paid close attention to the sand near the house to see if it gathered human footprints each time he went around. Yet there were none.

All was strangely quiet. The house burned steadily, the wood crackling as it was consumed. There was no sign of life. Karn knew that somewhere nearby she was waiting. Perhaps she was watching him that very moment. He looked toward the garage. She had to be there.

He ran toward the small building, galloping as quickly as he could move. He reached the door in moments and grabbed it tightly in his trunk. With a quick motion he slid the door aside and then deftly swung the autorifle up. There was a noise toward the back. Immediately he aimed and fired, sending a stream of bullets in the general direction of

his target. The back door swung closed, and Karn fired into the back wall for several moments. Then, stopping, he ran to the outside of the garage.

He hugged the wall inching forward to the corner. The smoke from the fire cast ghostly shadows on the sand about him. Folding his trunk back he started to peek around the corner of the building. Suddenly, with a ferociousness he did not expect the human lunged at him. She swung a heavy metal pipe, hitting him squarely across his trunk ridge and sending a stabbing jolt of pain over his trunk and down his back.

Karn jerked back, reeling. Rachel lept around the corner and came at him again. Karn raised his autorifle but Rachel grabbed the barrel in one hand and prevented him from pointing it properly. Nevertheless Karn fired a few rounds, sending a blast of bullets into the wall of the garage. Rachel swung the pipe with her other arm, hitting him again on top of his head.

Karn dug his feet into the ground and wrapped his trunk tightly around the autorifle pulling on it powerfully. He dragged Rachel toward him. Yet her grip, far stronger than Karn imagined possible, held fast. Rachel hit him again, and then again. Karn fell to his knees.

He fired the autorifle in an increasingly desperate attempt to dislodge the human, hoping that perhaps the heat of the barrel would loosen her hold. Yet she did not let go. Instead she pummeled him with the pipe. Each blow by itself wasn't enough to cause much damage, but the effects accumulated. Karn was in agony and he started getting woozy. The world began to fade and finally he let go of the weapon and collapsed on the ground.

Rachel jumped back, autorifle in hand. She threw the pipe behind her and pointed the weapon at her one time captor. The autorifle wasn't designed for human hands and she held it awkwardly. Her short arms couldn't properly wrap around the holds and her fingers barely reached the trigger.

Karn panted heavily. The ground seemed to spin and he fought to stay conscious.

Rachel took a few steps back but otherwise didn't move, keeping the heavy autorifle trained on him. Finally Karn looked up.

"It won't fire that way," he lied. "You have it upside down."

Rachel hesitated but didn't move.

Karn rubbed his head. Orange blood was running down the side of his face. Then, using his trunk to support him, he slowly stood up. Rachel shifted nervously and took another step back. Karn looked at her and sighed. "What are you going to do?" he asked.

"What do you think?" she hissed. "I'm an animal with an instinct to survive."

She fired.

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Muldon drove the mini-truck along a rough path through the short brikken grass. A cloud of dust rose behind him only to be blown quickly away by the desert wind. He crested a small rise and stretching out before him and below him was a broad valley of low ridges covered with dark, yellow grass. The rocky crags of the Handark mountains formed an imposing wall rising above the far side of the valley floor many karnons away. Sculpted by eons of blasting sand the steep flanks of the mountains were smoothed to impossibly rounded forms.

With a soft grunt Muldon stopped the mini-truck and took a compass from his pack. Kneeling on the seat he carefully read a bearing to two prominent knobs along the distance ridge. Satisfied, he turned the mini-truck off the trail and drove, more slowly than before, over the sandy ground. He raised himself up on his knees as he went, looking carefully ahead. After a half karnon or so, he stopped again and took some more bearings. He swayed his head and turned off the mini-truck.

Climbing off the small machine, Muldon threw an empty pack over his shoulder and then checked his gun. He hooked it to the belt of his canvas cloak and started walking down the incline, wading through the grass and leaving a trail of disheveled brikken stalks behind him. He paused now and then and stood up straight to see as far ahead as he could. His dunari eyes were adapted to see small objects hidden in the grass, and it wasn't long before he spotted them. It was a field of branhask.

Muldon came to the first plant and knelt down to inspect it. "Ah Jan," he fluttered.

It was immature. The skin had a yellow hue and had not yet darkened to the ripe orange color he wanted to see. Despite the recent flashes he was still too early. He walked from plant to plant until he finally found one that was ready. With a deft motion he cut the thick, succulent stalk from the base and put it in his empty pouch.

Muldon found only a few other ripe stalks as he methodically searched the field. Periodically he paused to scan the horizon in all directions. It was an instinctive response but it made sense as well. The dunari were not the only ones attracted to branhask fields and certain other creatures were not nice to meet. Muldon felt his gun to make sure it was in easy reach.

City people could buy their branhask in the food markets, already cut and peeled. However, in Tunar Provence, far from the branhask farms, it was expensive to buy. Muldon had been taught that it was stupid to waste money on something you could just drive out into the brikken grass and cut yourself. Besides, Jillziah thought it tasted better wild.

After his fifth stalk, one that was still rather too yellow, Muldon paused again to look around. Far to the west, just beyond the mountains, the sky had an ominous brown color. He watched it for a few moments and then pulled a portable radio from his pouch. With a flick of his trunk he extended the antenna fully.

“Maka?” he said into the device. “You there?”

There was a burst of static as the squelch control found its level.

“Ya, Paps?” came the voice of his son.

“Looks like a dayenstat’s coming.”

“I see it too, Paps.”

“We should get back.”

Muldon returned to his mini, and put the pack with the branhask into the basket attached to the dragboard. Starting up the mini’s engine he knelt on the seat and headed back the way he had come. It was easy to retrace his path and soon he was

racing along the rough trail over the rise and down the hillside to where the family flat truck was parked. In the distance he could see another cloud of dust approaching the same location.

He arrived at the flat truck a little before his son and had time to drive the mini up on the bed and strap it into place. He was tightening the bands when Maka pulled up.

“Find anything?” Muldon asked.

“Not much. It’s all too young.”

“We’ll come back after the next flash,” Muldon said.

They strapped the other mini onto the bed beside the first, and then put their disappointing collection of branhask into a single basket also strapped to the bed. “It looks like more if it’s in one basket,” Muldon said with a click of his teeth.

The two of them climbed into the flat truck’s cab and started home. Muldon eyed the darkening sky. A thick, brown cloud was crossing the valley blotting out the view of the distant mountains. “It’s coming fast,” he said. Maka looked at the storm but said nothing. Already the the sand was starting to block the sun. Muldon felt chilled.

It was several karnons back to the main road but they were able to go a little faster once they passed the turn to the copper mine. The road to the mine was well worn and well maintained. Many generations of Muldon’s family had been minors, spending most of their working lives in dark tunnels lit with primitive gas fired artificial lights. It wasn’t the kind of life most would understand, but it worked for Muldon’s father, for him, and for his son. Muldon glanced at Maka with pride.

Sand started to blow. It slithered across the road and clouded the air. Muldon turned on the artificial lights. Most dunari vehicles didn’t have them but when you live in Tunar they were a necessity.

By the time they reached the main road the dayenstat was almost in full force. A howling wind dragged sand over the truck scraping away what little was left of the finish. Muldon turned on the sand wipers and stared into the brown, dusty fog with his right

eye.

“Jurita’s witness,” Maka said. “Where did all this come from?”

“Quick to come, quick to go,” Muldon said quoting desert lore. The saying was usually applied to love affairs but the Tunarian residents knew what it was really about.

Maka adjusted the radio mounted into the frontboard of the cab. “Ma? You there Ma?”

There was a few bursts of static and then a woman’s voice came out of the speaker. “Where in seven are you?” she said.

“We’re on the main road, Ma. Should be home soon.”

“Don’t get yourself buried out there, ’cause I ain’t digging you out!”

Maka turned off the radio and clicked his teeth.

Muldon leaned forward peering more intently than usual into the blowing sand. “You see that?” he asked Maka. Ahead of them, beside the road, was a indistinct rectangular shape barely darker than the air. Muldon slowed as they approached.

“Looks like a truck, or maybe a van.”

As they got closer it was unmistakably a vehicle parked partly on the road and partly in the sand. Muldon pulled up behind it and stopped. Without any discussion the two men buttoned up their sand jackets and then, taking a deep breath, opened the doors of the truck and plunged into the storm.

The wind bit their faces harshly but their thick dunari skin was resistant to the damage. They walked over to the van, leaning forward slightly to let some of the abrasive air pass over them at least. The cab was empty. “You think they tried to walk?” Maka said in a loud voice.

“Let’s hope not,” Muldon replied. He went to the back of the van and tried the handle. It was unlocked. Maka joined him as he opened the door. The van was mostly empty but curled up in a ball in the far corner was the body of some kind of creature covered in a dirty, sandy cloth.

Muldon climbed into the van and cautiously approached the body. He wondered if he should get his gun first, but the creature looked dead. Muldon reached out with his trunk to pull down the cloth but he discovered, to his surprise, that it was actually some kind of clothing. The creature moaned and moved. Muldon jumped back. Its front leg fell free and landed on the floor of the van. It wasn't a leg like any Muldon had ever seen.

"Jurita..." Muldon said softly. He climbed quickly out of the truck. Maka stared at the leg. Muldon closed the van door.

"What is it?" Maka asked.

"Don't know," Muldon replied. He paused and then opened the door again. The creature hadn't moved. Muldon climbed back into the van and Maka followed him. "Be careful," he warned. Muldon took as close a look as he dared, but didn't touch. The exposed leg was thin and frail with strange, light colored skin. Its toes were long and thin and slightly curled. The creature's head, at least he assumed it was its head, was covered with some kind of fibers. He couldn't see its face.

"I think it's a human," Maka said.

"That's crazy."

"I'm serious, Paps," Maka replied. "They have legs like that."

Muldon leaned over the creature. He could see that it was breathing. It was alive but obviously sick. The two scrambled back out of the van again and Muldon closed the door. He went around to the front and opened the driver's door. The key to the van was still in the ignition. Climbing in, he tried to start the vehicle. The engine responded but didn't engage.

"No fuel," he said.

Maka didn't need to be asked. Making his way through the blowing sand he returned to the flat truck and opened one of the lower storage hatches. He pulled out one of the spare canisters of gasoline along with a sand sleeve. With Muldon's help they emptied

the canister into the van, using the sleeve to keep the sand from getting into the van's gas tank.

"I'll drive this thing back to the house," Muldon said loudly to Maka. "You take the truck."

"No problem, Paps."

The van started fine and Muldon made his way down the road carefully. The van didn't have any artificial lights so he had to rely on the lights on the flat truck behind him. Fortunately the dayenstat seemed to already be slackening.

Their house was a simple structure just off a bend in the road. It had an attached garage, an important feature when storms raged, and a metal shop in back where Muldon did various repairs for extra income. After entering the driveway he came out of the van and, with Maka's help, opened the garage door. He pulled the van inside and closed the door tightly behind them. By the time they had parked, Jillziah was standing impatiently in the doorway to the main house.

"First, what took you so long? Second, who's van is that?"

"You won't believe what we found," Maka replied.

Muldon was opening the van doors again and Jillziah came down the step to see. The three of them stood at the end of the van looking at the helpless body lying there.

"It's sick," Muldon said.

"It's a human," Maka said.

Jillziah just stared. "It can't be a human."

Muldon climbed back into the van and leaned over the creature.

A small voice came from the doorway to the house "Momma?"

"Go back inside, Jinna," Jillziah said firmly.

"What is it?" the girl asked.

"Inside. Now." Jillziah went up the steps and herded her young daughter back into the house.

Maka got into the van again as well, and both dunari just watched the human for a time. Finally it moaned and rolled onto its back, one leg flailed a bit and then its eyes fluttered open. Muldon and Maka jumped back.

The human chittered some and looked around vacantly. Then it noticed the dunari and seemed to focus on them. It backed away in fright for a moment and then stopped.

“Who... who are you?” it said softly in Argenian.

“Dind,” Maka said to himself.

“I’m... I’m... I need water,” the human said. “Water and cold.”

“Maka, go bring some water out here.”

“Yes, Paps,” he said.

“And bring some of Jinna’s ice.”

The human tried to sit up but only grimaced in obvious pain. Muldon moved forward, uncertain of what to do. “Can I help?” he asked. One of its front legs looked cut and was stained with a dark reddish blood. There was a black mark on her other front leg that didn’t look normal to him.

The human struggled to sit up again and Muldon reached his trunk behind her to support her as she did so. Eventually she managed to position herself so she was leaning against the side of the van.

“Thank you,” she said with a soft wheeze.

The door to the main house opened and Muldon could hear his wife’s voice. “What’s this about Jinna’s ice?” she asked. “Don’t you know how expensive that stuff is?”

Jillziah came around to the back of the van and stopped dead.

Rachel looked at her silently for a moment. “I... I have some money...”

Jillziah briefly raised her trunk to her forehead. “I’ll get water.”

“Ice too,” Muldon called after her.

When Jillziah returned she had a pan of water and a small insulated bucket with a few ice bricks in it. Muldon passed the water to Rachel who struggled to hold it. Muldon

held one end with his tentacles while Rachel sipped water from the other. She grimaced again.

“Are you in pain?” Muldon said.

She touched the black mark on her arm. “I hurt myself.”

“What are you doing here?” Jillziah asked.

“I was. . . kidnapped. I escaped.”

Muldon glanced briefly at his wife while Rachel sipped some more water and then reached for the ice. Jillziah took some tongs from her pouch and tried to pass them to Rachel but the human ignored them. Muldon moved the bucket closer and to their amazement Rachel put her hand into the bucket and grabbed a small ice brick without tongs. She held the ice tightly in her fist, and leaned back in pleasure as the coolness flowed into her body. The ice melted quickly and she raised her cold, wet hands to her forehead and then ran them down her arms. The water rinsed off somewhat the dirt on her face and arms but when she got to her bloody injury she hissed with pain.

“I’ll get something to bandage that,” Jillziah said.

Rachel slowly regained some strength. Muldon called the provincial police on the radio and Maka got an old sleeping pad from their storage area. Muldon and his son helped Rachel get positioned more comfortably on the pad. It was dusty and dirty but she seemed appreciative. Jillziah returned with sand cloths to wipe up some of the grim and a few medicated pads. Rachel insisted on using some water to clean her wound but then let Jillziah gently wrap a pad around her arm.

Rachel drank several cups of icy water, slowly at first but with greater gusto as she improved. Muldon had never seen anyone or anything drink so much. Yet her breathing wheezed and she was obviously very weak.

Eventually the deputy arrived, and Muldon ushered him into the garage. He was wearing his official uniform cloak of the Tunarian police and carried a small trunk pistol in his front leg strap. When he came to the open end of the van he froze when he saw

the human.

“By the seven sands, you weren’t kidding!”

“We are well met,” Rachel said weakly.

“It even talks,” the deputy muttered.

“It. . . she was kidnapped,” Muldon said.

The deputy looked at Rachel and she swayed her head slightly.

“Who kidnapped you?”

“They pretended to be Forbinites but I don’t think they were.”

“Forbinites! *cartak!*,” the deputy stepped back. “This is way over my head. I’ll have to call it in.”

“Can you get a message to ambassador Marshall in Varnok?” Rachel asked. “They will be looking for me.”

The deputy went back to his vehicle to use the radio there, and Rachel closed her eyes briefly. When she opened them again Jinna was standing quietly in the doorway of the van, and staring at the human. Muldon had his trunk over her shoulder as she leaned against his leg.

Rachel bobbed her head to the girl. “Thank you for the ice.”

“I didn’t need it,” Jinna said. She looked up at Muldon.

“It’s for her medicine,” Muldon explained, “but those injections have already been used.”

The deputy returned and told Rachel that he sent a message to the provincial police main office. From there Varnok would be contacted. “We just need to wait now.”

With Muldon’s and Maka’s help Rachel managed to get out of the van and up the ramp to the inner doorway. They led her into their home and helped her get comfortable in a seat in their living area. Jinna, with braces on one of her front and rear legs, limped behind them.

At first Rachel spent some time giving information to the deputy but it wasn’t long

before the deputy was talking with Muldon about the state of the mines, the timing of the next flash, and if his daughter should try to form a select, “like those city people do.” Maka tended to the flat truck while Jillziah busied herself peeling branhask and keeping Jinna out of the way. Rachel dozed.

When Rachel awoke many moments later Muldon and the deputy were nowhere to be seen. Instead, standing in the doorway to the hanaria was Jinna watching Rachel intently. When she saw the human was awake she limped over to her seat.

“Those are pretty ribbons,” Rachel said remarking on the decorations on Jinna’s braces.

“Seven colors,” Jinna replied. She took each ribbon one at a time between her tentacles. “Um. . . light orange is for Jinjana, dark orange is for Ji. . . Jixita. . .” Slowly and carefully she recited a name for each of the colors while Rachel listened quietly.

“Ma says they watch over me,” the girl explained when she finished.

Rachel bobbed her head slightly. The tangy smell of baking branhask faintly filled the room.

“Do the Seven come for you too,” Jinna said, “when you die?”

Rachel looked at her for a moment. “I don’t really know, but I think so, yes.”

“Jinna!” Her mother stood in the doorway. “Don’t be a pest. Leave our guest alone.”

At that moment the front door opened and Muldon came bustling in. “Your people are coming for you,” he said to Rachel, “they’re gonna land one of those. . . those aerocar things on the road right here in front of the house.”

“On the road?” Jillziah said.

Rachel moved to get up. “I should wait outside.”

“Jinna, call Maka,” Muldon said and his daughter scampered out of the room as best she could. Muldon held out his trunk and let Rachel use it to steady herself as she stood. With Muldon’s and Maka’s help she made her way down the steps and out onto the sandy yard toward the road. The sky had cleared and was a beautiful golden green.

The mountains to the west were clearly visible and the wind from the north and was strangely cool.

“The Nermellum,” Maka said.

When they reached the road Rachel knelt between Muldon and Maka to rest. Yet they didn't have to wait long. In a few arnets a fast moving streak, greener than the green sky, could be seen coming from the southwest. In only moments, it seemed, it was upon them. The craft made the transition a safe distance away and then circled around the house twice. Finally, with awesome maneuverability it swung into its final approach, descending to the road as it rushed toward them.

Gripping Muldon's trunk Rachel stood up again, resting her arms against the backs of Muldon and his son. They waited until the human craft came to a stop some distance down the road and then, with their help, Rachel made her way toward it.

A small platform descended from the bottom of the aerocar and several figures began to trot toward them, each on just two legs. Following behind was a kind of long, narrow, stretcher that moved with the help of four mechanical legs attached to each corner. As they approached it was clear the humans were wearing some kind of protective suits. Even their heads and faces were covered.

Neither Muldon nor Maka moved. They remained at Rachel's side supporting her. When the humans got to them, they chattered and hissed in their strange language. Rachel responded in kind, talking to them with her alien voice. They took her from the two dunari and helped her lay on the stretcher. They examined her eyes, inspected the bandage Jillziah had prepared, and attached some kind of exotic device to Rachel's arm.

Just as they were about to put a breathing cup over her face she turned toward Muldon and Maka.

“Thank you for everything,” Rachel said. “May Jurita be with you.”

The humans then whisked Rachel back to the aerocar. Muldon and Maka stood together at the side of the road as the craft lifted off, spun around, and streaked away,

leaving behind only the golden green sky and the cool Nermellum wind.

67

Colty walked up the steps along the side of the Cogart lecture hall and found his usual seat in the back. The students chattered among themselves much as they always did yet there was a palpable energy in the room. Two of the students directly in front of Colty turned in their seats. “Sar. Coltinarly, she is alive?” one asked.

Colty swayed his head. “Yes, thankfully.”

“We heard the Forbinites got her.”

“I don’t know,” Colty replied, “I’ve hardly spoken to her.”

The clock moved forward, and the students grew more agitated. Nobody expected her early, of course, and the delay just increased the excitement in the air. Some students waited with their notebooks ready, as usual, but most talked to their neighbors in passionate tones.

Just then the door swung open and Rachel walked in. Right behind her a man dressed casually took a post beside the door as unobtrusively as possible for an IIB bodyguard. Rachel wore tan clothing with red trim. A bandage ran up the length of one arm but she otherwise appeared perfectly healthy.

She walked briskly across the floor and up the steps to the podium but before she reached the platform someone in the back of the room started to stomp. Soon the tentative sound was joined by another, and then another, from all corners of the room. Rachel reached the platform and turned uncertainly as the stomping spread across the hall like fire on a field of brikken grass. Colty gripped the table in front of him and the

floor vibrated from the thundering ovation.

Rachel brought her hands to her face. She shuddered, blinking her eyes, yet the stomping went on and on. After several long moments she raised her hands, shaking them slightly to discourage the sound. “Thank you,” she said. “Please... please... thank you.”

The stomping stopped and a profound silence filled the hall. Rachel closed her eyes for a moment. Finally she addressed the class.

“I... apologize for missing some of our sessions,” she begin. She took another breath and then walked to the other side of the platform. The class watched her intently, listening to her every word. “I’ll have to take a few things out of the schedule to catch up, but I think we can still cover all the important topics despite my absence.”

Casually she walked to the center of the platform and put one hand on the desk, her fingers gently touching the top surface. She turned and looked at the class.

“Shall we begin?”

* * *

When Narlock arrived at the IIB facility, he found ambassador Marshall waiting for him in one of the interview rooms.

“He just got here,” Narlock’s secretary explained. “He’s very intent on talking to you.”

Narlock fluttered. Despite the human, he stopped at his office first. He wasn’t about to be rushed. After organizing his table and reviewing his schedule he took some writing materials and went to find out what the ambassador wanted.

The two greeted each other politely and then got down to business. Marshall leaned his front legs on the top of the table the way humans tended to do and spoke. “I’m anxious to know what you’ve learned about the note Rachel took from the body of her captor.”

Narlock didn't answer immediately. Legally there was no reason to give the human any information and maybe even some good reasons to avoid it. Although normally an excellent judge of character, Narlock found the strange creatures almost impossible to read. Despite directives from the IIB's governing board he felt no particular inclination to trust the ambassador. Instead he made a show of carefully clipping his pad to the table and unsheathing his pen before he replied. Marshall's impatience was obvious even to him. He didn't care.

"It does appear to be a Junar assassination order."

"Naming Rachel?"

"Well, yes," Narlock fluttered slightly. He paused and tilted his head a bit.

"What is it?" Marshall asked. Narlock might have had difficulty reading the human, but Marshall's experience with the dunari made it easy for him to read Narlock.

"Understand that the primary investigation is being handled by the Military Investigative Service, not the IIB. The presumption is that this was a Forbin act; my involvement is only a . . . formality."

"I see."

Marshall tapped this front toes together for a few moments. "Rachel's impression was that they were Junar pretending to be Forbinites."

"And the MIS believes they were Forbinites trying to frame the Junar."

"Wouldn't it be better to find the truth rather than presume it?"

Narlock fluttered loudly and tossed his head slightly. "We have our way of doing things, and it works. I'd appreciate it if you let us do our job. Don't worry. We will find the truth."

"Yes, but now my people are at risk. I hope you can understand my desire to . . . help in the investigation."

Narlock swayed his head and turned to look at Marshall with his right eye. Marshall took a small photograph from his pouch. It was printed on a kind of shiny, slippery

paper.

“This is a picture of the note,” Marshall began. Narlock turned the photograph so he could see it.

“That orange splotch is dunari blood,” Marshall continued.

“Yes, of course it is. That is standard for Junar orders. They are legitimized, as it were, by the blood of the leader issuing the order. The assassin who carries out the deed must have a so-called ‘legitimate’ order on his person when he does it.”

“So if we can identify who’s blood that is, we would know who was responsible for the order against Rachel’s life?”

Narlock snorted slightly. “In theory, yes. But one quarter of all dunari have the same blood factors as are in that sample. We already checked them. A match would prove nothing.”

Marshall nodded. “Using our technology we mapped the DNA of this blood sample exactly. Since every dunari’s DNA is unique finding a DNA match would definitely identify the perpetrator.”

Narlock thought for a moment and then wrote a few notes on his pad. “When did you do this?”

“When?”

“Yes, when?” Narlock fluttered.

“I’m not sure, but we do have that information recorded. Why?”

Narlock put down his pen. “We have something called the Rules of Yotal that limit the kind of evidence that can be gathered before an investigation is started. Your analysis might be ruled out of order in court.”

Marshall leaned back slightly. “We could do the analysis again if that is necessary.”

“Jurita’s witness,” Narlock said softly, “the whole thing is a blunder. The defense would make a game of it, what with violations of chain of evidence, use of untested technology, and so forth. Wouldn’t you also need a sample of the suspect’s blood to

make the match?"

"Yes, or any biological material. A scale or even a toe shield would be fine."

Narlock rumbled. "If it could work legally, it would be helpful. I appreciate what you're trying to do. I'll look into it."

When Narlock returned to his office he organized his notes carefully. He considered contacting the MIS office at Marvia but he decided to wait. He didn't want to lose what little initiative he had. Instead he called his secretary. "We need a lawyer well versed in evidence procedures," he told her. "Who can we get?"

* * *

The mood in Parliament was tense. Even before the hearing began several of the delegates were speaking loudly to each other in voices that could easily be heard across the hall. On the floor Fotkey, and Lucasa waited patiently behind a table to give their testimony. To Lucasa it seemed like only a few short moments since he was last in that hall talking about the humans. He glanced over to Fotkey but both men remained silent. Fotkey looked grim.

The Speaker of the People called Parliament to order. Yet one delegate couldn't help but cry out excitedly, "There will be war before we are done here!"

The Speaker raised his voice to gain control of the assembly. "Gentlemen, our purpose is to hear discussion regarding the Forbin interference with our affairs. Withhold any motions until after the initial statements are complete."

The Speaker asked Fotkey to give his statement and the hall grew quiet. Fotkey stood up and walked to the center of the floor, directly beneath the rostrum, disregarding the microphone on the table. He spoke with authority and power as any general might. His voice seemed strangely large coming from his small body.

"The facts of this case are confusing," he began. "Some physical evidence does implicate the Forbin government. . ."

Loud bleats erupted from the delegates, particularly the younger ones seated in the back. Fotkey continued, raising his voice a bit more.

“Yet the hostage recovered a Junar execution note from the body of one of the kidnapers naming the human as the target. The holder of the note was none other than Karnolia, a notorious Junar assassin.”

“Everyone knows Karn is a mercenary,” cried one delegate, “who will work for whoever pays the most. He knows the Junar ways. If the Forbinite dinders wanted to confuse us, who better to do the job?”

“Besides,” called out another delegate, “what would the Junar want with the human? There is no sense to that.”

“But what would the Forbinites want with the creature?” called out another voice. “There are already humans in Forbin anyway.”

Fotkey raised his trunk and stretched out his tentacles to draw the attention of the hall. “Forbin has, in the past, conducted operations deep inside Argenian territory just to goad us and to demonstrate their imagined superiority.”

Zarlon stood by his seat and raised his trunk high, signaling his desire to speak. Unlike the rabble around him, Zarlon continued to honor the Protocols of the People. The Speaker stomped his foot heavily to gain the attention of the hall and then said, “We recognize Zarlonloti of the Limzar Association.”

“Thank you, Sir Speaker. I submit that the real reason Forbin singled out the human is for the creature’s knowledge. I have read the reports published by your office, general, and it is clear the Forbin government is working on some kind of weapon of enormous power.”

“Our intelligence,” Fotkey interrupted, “is that their program is dead. The weapon they seek is nothing more than a fantasy, and they know it. You would also know that if you truly read those reports.”

“Ah, but would it be a fantasy if they had access to human knowledge? Perhaps your

intelligence is faulty. Perhaps they are developing weapons even now, with or without human help, that threaten our security!”

Fotkey fluttered and tossed his head. “If I didn’t know better, I’d say the Limzar Association was trying to incite a war.” He raised his voice to head off the clamor. “This investigation has been under the auspices of the Military Investigative Service. I’m not at liberty to discuss all aspects of this case publicly but there are other lines of evidence that are distinctly incompatible with the idea of Forbin responsibility.”

“It’s all very well,” a delegate in the back called out, “for you to invoke secret military proceedings, but how does that help us? We can only base our actions on information brought before us.”

“The humans are the cause of this,” Zarlion continued. “Just having that creature freely walking the streets is a lightening rod for trouble. It puts our citizens in danger simply by existing.”

“Yea be yea!”

Zarlion took this as license to continue. “The knowledge the alien is presumed to have makes it a tempting target for enemies of all kinds. We’re just lucky that in this instance we have not incurred the wrath of these creatures. Jurita only knows what destructive power they might be able to wield.”

The noise in the hall increased and cries of “yea be yea” filled the air.

“It is the humans who will incite a war, if not with their own actions, then with their existence in our midst. How long will it be before the Forbinites try again? We must dis-invite them from our world and send them back from whence they came.”

The Speaker was about to bellow to gain control of the assembly when Lucasa leaned forward and spoke loudly into his microphone. “Sir Speaker, may I address the concerns of the esteemed delegate?”

Lucasa adjusted his papers. The hall quieted. Finally he spoke. “I am, frankly, disgusted with these proceedings...”

The hall erupted into loud objections. Voices overlapped. Delegates called out. The Speaker bellowed several times before the room was brought under control.

“Lucastanonia,” the Speaker warned, “you are not to disrespect this assembly.”

Lucasa leaned forward into the microphone again. “I apologize, Sir Speaker. Yet to send the humans away would be a crime against the dunari people for which our progeny would never forgive us.”

He started to speak more loudly. “But more than that it would also be acquiescing to the demands of a terrorist organization. Surely that is the real agenda of the Junar. . . to have us reject the humans and set us against our adversaries out of fears grown in our dark past. Is that the action of a brave and powerful nation? Is that the action of a people who reject terrorism in all its forms? Or is that the action of a nation of cowards?”

Loud cries were raised, but Lucasa ignored them and continued forcefully. “There is much talk about the bravery of Argenia in this hall. Yet if you want to see actual bravery you apparently have to go to Parnon.” He pointed his trunk in the general direction of the city. “There she who almost died in the desert is teaching her classes *as if nothing has happened.*”

Lucasa gathered his materials together. “I must apologize again Sir Speaker, I can not abide to remain here.” He stood up, and amid a storm of cries and bleats and bellows, walked out.

* * *

Lucasa went quickly down the path leading from Parliament and across the Yellow. The flowers beside the walkway caught his eye, and he slowed to look at them. Finally he stopped in front of a lovely bed of garlangias, their large red blooms and thick yellow leaves danced in the Nermella. Lucasa clicked his teeth. A short distance away a small fountain surrounded by green harnolick flowers bubbled playfully.

He took a deep breath and looked back at the Parliament buildings. They were old, imposing, and impressive. Flying from the top of the main building the Argenian flag flapped proudly in the wind. On the opposite side of the Yellow from Parliament rose the city of Varnok. Lucasa could hear the sounds of traffic drifting on the breeze. Finally he looked into the green sky, punctuated with a few rubinum clouds. He knew that somewhere far above *Golden Light* was flying silently over their troubled world.

Lucasa continued down the Yellow, more slowly, taking in the flowers as he walked. When he got to the street he took a bus to the Office of Alien Affairs and walked to his space on the second floor. Jinlo, his secretary, was surprised to see him.

“The hearing ended early,” Lucasa said. He went into his private office. Just before closing the door he turned and said, “Oh, and I think I lost my job.”

Lucasa lay down beside his table. It was a very nice table. It had lots of space and nice trays and drawers. He opened the drawers one by one. He had a lot of junk he’d have to throw out when he left. He spun around and looked out the window at the Nizon Bank across the street. He wondered how much thought the people there gave to the humans. Did they care at all? Did they wonder about the future of Rujar or of the dunari race? Or were they content to focus on only getting by day to day? Lucasa knew that could be his focus now as well. Maybe he could teach. Maybe he could write a book.

He pressed the intercom button on his phone. “Jinlo, could you come in here?”

She appeared at the door in moments.

“Would you, by chance, want something to eat? I have a little rigat fruit in here.” He opened one of his drawers and took out a small box.

She clicked her teeth. He opened the box and offered it to her. She took one of the fruits and lay down on the opposite side of the table to eat it. Lucasa chewed his fruit absent mindedly.

“What happened?” Jinlo asked.

“I couldn’t listen to fear any longer.”

Jinlo nodded slightly. “You admire her, don’t you?”

They ate their rigat fruits in silence for a while. Lucasa offered her another but she shook her head.

“I think your job is safe,” he told her. “They’ll find someone else for you to work under.”

“I don’t want to work under someone else.”

At that moment the phone chimed. Almost instinctively Jinlo answered it. She spoke for a moment and then passed the phone to Lucasa. “It’s the Secretary of Parliament,” she said. Lucasa took the phone and Jinlo left to give him some privacy.

“I just wanted to let you know,” the voice on the phone said, “Parliament voted against declaring war on Forbin... and to keep the humans here as our guests.”

“That’s wonderful.”

“Also, some people are saying you should run for First Citizen.”

Lucasa shook his ears. “Oh? Well, that’s the last job on Rujar I’d want.”

After he hung up the phone he clicked his teeth slightly. He pressed the intercom button again. “Don’t pack your bags just yet, Jinlo.”

71

Narlock disliked the dungeon. It smelled funny.

The dungeon was the name given to the lowest floor of the IIB building. It was below the level of the street but still had windows in the back that looked out over the Varsynthia. In other parts of the city such a view might command a high value, but the IIB offices were in a renovated manufacturing plant that once used the power of the river to drive saws and lathes. Rusted chutes and metal frames still sprouted from the water and anchored to the foundation of the building, too expensive to properly remove. Instead of being surrounded by parks and gardens as in the commercial district, the river there was lined by decaying brick work and a crumbling access road.

Narlock sat in the office of a young lawyer on the IIB legal advisory team, waiting with rising impatience while the lawyer collected his notes. The east facing window at his back had no direct sun and the room seemed dim and gloomy, an effect enhanced by the dreary view outside. Taped just below the top edge of the window was a small film drawing of the sort a young child might make.

“This certainly is an interesting situation,” the lawyer said looking up at Narlock at last. “I don’t think there’s ever been a case quite like this.”

“You don’t think?” Narlock said with an edge of sarcasm. The lawyer either didn’t care or didn’t notice. The later case Narlock found more likely.

“I’ve reviewed your notes and the problem as I see it is twofold. First the aliens are not under our jurisdiction and thus not subject to our purjury laws. There is no treaty

in force between Argenia and, ah, the humans. And second, the alien technology is unknown to us and won't be acceptable to the Standard Citizen."

Narlock squirmed a little. The seat was not very comfortable. "The ambassador from Earth has stated humans on Argenian soil will be subject to Argenian law."

"Yes, but it doesn't really mean anything until a treaty act is passed and signed by both governments."

"What's the problem with the technology?" Narlock asked.

"It isn't reasonable to ask the Standard Citizen to accept technology that isn't understandable by us. Precedent requires the nature and limitations of any technology used to acquire evidence be comprehensible so the quality of the evidence can be properly evaluated."

Narlock suppressed a flutter and shifted in his seat again. "I spoke with a biology professor at Parnon and he is convinced that what the humans claim to have done is possible in principle. He even agrees that a DNA match would identify the owner of the blood with 100 percent certainty."

The lawyer swayed his head. "The problem is the Standard Citizen test. You can try to use the professor as an expert witness, but it isn't his technology he'd be testifying about. The Standard Citizen can't rely on his word about it. One way or another he would have to rely on the word of the humans and legally they aren't trustworthy."

This time Narlock did flutter. "Fine. I get it. So this means I can't use DNA evidence, yes?"

"It would be a very difficult case to make."

"Right."

"Maybe one day when we have such technology ourselves it will be different."

"I can't wait that long," Narlock said. He stood up and gave a brief nod to the lawyer, turned and left. At least he didn't have to spend any more time in that smelly basement.

* * *

Colty heard a light tapping at the door frame of his office. At that moment he was focused on his paper about the primality of co-sequences, fussing with the wording of a particularly tricky passage. “Yes?” he said finally looking up. It was Rachel. “Come in, come in,” Colty said excitedly curling his trunk toward him.

“I’m hoping we can walk, maybe down by the river?” she said.

Colty swayed his head and hastily slid the papers on his desk back into his notebook. Then they made their way out of Fargon and along the campus pathways.

“I heard it wasn’t Forbinites that... well, that took you,” Colty said.

“They were Junar.”

“Junar?”

“Honestly, I don’t want to talk about it.”

The two walked silently for a time. Rachel’s IIB bodyguard kept a few paces behind but otherwise stayed out of the way. Colty discretely eyed the bandage on Rachel’s arm but said nothing.

Some students walked by and greeted Rachel warmly. She thanked them graciously, as always. Colty clicked his teeth as he watched. When they left, Rachel turned toward him and said, “There’s something I want to show you?”

“Yes, of course,” he replied.

She pointed toward the narrow path that ran along the river. “Let’s go down there.”

As they turned off the main path the bodyguard followed more closely behind. Colty felt nervous having him there. “Everyone insisted,” Rachel said glancing over her shoulder. “I even agreed to get a tracking implant. They told me I couldn’t come back unless I did.”

Finally they came to one of the seats along the path. “Let’s lie down,” she said. The bodyguard stopped a few paces behind and stood beside the path leaning against the trunk of a tree.

The weather was beautiful with a clear, green sky. The embankment beside the path

fell away in front of them down a grassy slope to the edge of the river. The brush that normally crowded along the water had been partially cleared leaving a small space where the grass touched the swirling flow. Large rigat trees arched overhead, their leaves gently humming in the ever present breeze.

Rachel took a folded piece of paper from her pouch and gave it to Colty. On it were several colorful bands printed horizontally across the page. The bands were many thin vertical lines densely packed together, with each line printed in its own color producing an overall effect like that of colored confetti. Here and there were thicker black lines spaced in irregular intervals that partitioned the other lines into random sized blocks.

“It’s a fragment of the dunari genome,” Rachel explained. “The lines represent individual nucleotides.”

“Where did you get this?” Colty asked as he looked at the image with interest.

“It’s a long story but it was taken from a sample of dunari blood. The biology lab on *Golden Light* mapped the full genetic structure of whoever’s blood it is.”

Colty studied the image.

“You see,” Rachel continued, “this fragment is special. We call it *Kessler-17*. This very same fragment is in the genome of all vertebrate animals on Earth. It’s in my genome as well.”

Colty reflected on the significance of Rachel’s words. It seemed almost too incredible to believe. He cocked his head slightly toward her. “Does that mean we’re related somehow?”

“I don’t see how. Our biology is incompatible. We use different nucleotides. It’s just the pattern that’s the same.” She leaned over a bit to look at the image herself. “Our lead biologist on *Golden Light*, his name is Brendon, explained it to me. Not all genes code for proteins. The ones that don’t are called non-coding sequences. Yet they mostly do have other purposes, or at least are understandable as ancient viral genes or evolutionary cruft. Some non-coding sequences are passed faithfully from generation to

generation over long time scales. They are said to be ultra-conserved.”

Rachel shifted slightly and looked over the grass toward the river. “The Kessler sequence is the only ultra-conserved non-coding sequence we can’t explain. Now we find it on Rujar in dunari blood. It’s hard to understand.”

Colty briefly turned over the page as if to search for some explanation on the back, but it was blank. “You said all vertebrates on Earth have this?”

“Yes,” Rachel said, “it must have arisen on Earth at least three billion years ago. Brendon wants to find out if it exists in other Rujaran life forms. He looked at the bacterial samples we used to check for biological compatibility, but the Kessler sequence doesn’t show up there.”

Colty handed the paper back to Rachel but she waved him off. “That’s for you,” she said. “I thought you’d be interested.”

They sat quietly for a time while Colty digested the startling revelation. They watched the swirling water of the Varsynthia move slowly past.

“It pleases me to think,” he said finally, “that we might be cousins somehow.”

* * *

Fotkey’s office at Marvia Base was large and plush. His table was polished to a fine sheen and on the floor before it was a wide, circular harnskin rug. On the south wall, and almost the length of a dunari, was a large map of Argenia. On the north wall was a similar map of Forbin. Elsewhere the room was decorated with pictures of Fotkey with various first citizens, the fort at Yartagard, and even Fotkey’s yellowed and tattered certificate of achievement for completing his initial training as a third class herdsman. Behind his table was a broad window that looked out onto the Marvia campus, and in one corner a heavy, locked door made of steel separated Fotkey’s office from the document room where the secrets of Argenia were stored.

Fotkey lay at his desk scanning over routine reports when a sharp kick sounded at his

office door.

“Enter.”

The door slid open and his guard leaned in. “A courier, orange class, here for you, Sir. His papers check.”

“Yes, yes.”

A small, lean man came into the room wearing the uniform of the Courier Service. He had an orange band down the left side of his cloak running from his shoulder to just above his left front knee. He waited discretely until the door behind him slid closed again.

“I have reports from the realm,” he said formally.

Fotkey didn’t bother with the formal reply. “Show me.”

The courier unclipped a flap in his cloak and deftly untied several knots to loosen a thick pouch. He approached Fotkey’s table and lay the pouch on it more or less directly in front of the general. With a practiced motion, he unlocked it and slid a diverse collection of papers onto the table and then held up the empty pouch, open for inspection.

Fotkey waved him off with a gesture. He began to flip through the reports, setting them to one side or another to organize them. He made sure everything was in order before he released the courier.

After bending his left knee slightly in respectful salute, the courier turned and left without hesitation.

Fotkey reviewed the reports carefully. They spoke of troop movements and supply reinforcements. Several herds were moving into position along the Forbin frontier. Aerocars and tanks were being made ready for service. Reservists were being notified of the possibility of being called to duty. Everything was happening discretely, like a kind of great dance, designed to avoid alarm by giving the appearance of ordinary troop rotations.

The general put down the last report and thought for a moment. Then he fluttered softly. Gathering the reports together into a tray he got up and approached the steel door to the document room. Putting the tray on the ground briefly, he spun the combinations and used his key to open the door and store the shocking truth away from the eyes of Argenia.

Returning to his table, he flipped on the intercom to his support staff. "Is Yutar here yet?"

"No, Sir."

"Why not?"

There was a confused pause. "I don't know, Sir."

Fotkey disconnected and fluttered. He paced a bit behind his table and then stood staring out the second story window over the rolling, yellow hills surrounding the base. Some distance away he could see two fighters parked on the landing pavement, fueled and ready to fly at a moment's notice. It was as it always was yet that day the tension in the air seemed high.

A movement caught his eye and he turned to see a vehicle coming down the road toward the office building. Fotkey recognized the markings of the Investigative Service painted on the side. With a growl he turned and quickly left his office, heading down the hall briskly while his guard struggled to catch up.

He intercepted Yutar just as he was coming into the building. Fotkey dismissed his guard and gestured for Yutar to join him. The two men left the building and followed the walkway beside the road for some distance. The Nermella was strangely calm, and the air was thick with humidity from the distant seas.

"I trust your trip was uneventful," Fotkey said casually.

"Yes, exactly," Yutar responded saying nothing more than an answer to Fotkey's question.

After a time Fotkey raised his trunk and pointed off the path and the two men made

their way through the low harsna grass and down an embankment. There, below and behind the office building, ran a small stream, its waters flowing lazily toward the distant Varsynthia. Tall reeds lined its banks and in many places the surface of the water was covered with red mats of algae criss-crossed by insect tracks.

Before reaching the stream itself they came to a rough path that wound alongside the water, following it to a broad, flat, marshy space at the edge of the Marvia campus. They walked along the path at a comfortable pace that was neither rushed nor as stagnant as the stream.

“Tell me what you know,” Fotkey said finally.

“Intelligence is hard to come by,” Yutar replied. “Forbin is clamping down. One of our operatives has been jailed and I fear for his life. Another has gone silent. I hope he is only keeping quiet to avoid detection.”

“What of their weapons program?”

“We believe it is still alive. There is an unsettling rumor of a breakthrough in the refinement process but we can’t verify that.”

“They have no devices yet?”

“Not as far as we know.”

They walked while Fotkey reflected. “Tell me about our missing device,” he said finally.

Yutar tossed his head and swatted away a fly with his trunk. “We have found nothing...”

“Nothing?”

“I’m sorry, Sir, but it’s as if it has just vanished off the face of Rujar.”

Fotkey fluttered. “That’s not good enough. It *must* be found. Does Forbin have it?”

“We... I’m sorry, Sir, we can’t tell for sure. But their increased security says to me that they do.”

Fotkey stopped abruptly and Yutar turned to face him. “Maybe the Forbinites are

just responding to what we're doing," Fotkey said softly.

The two men stood silently for a time. Fotkey stared off over the stream and into the distant west as if, somehow, he could see all the way to Forbin. "Maybe the Junar have the weapon," he said at last.

"The Junar? Impossible," objected Yutar.

"Imagine it. The Junar steals the weapon and then assassinates the human creature making it look like Forbin kidnapped it. What do we do? We stampede toward a war neither side wants, destroying each other and leaving the Junar the victor. They don't even need to use the weapon. It's a strategic masterpiece."

"No, Impossible," Yutar repeated. "The Junar is nothing more than a two bit group of religious fanatics with delusions of grandeur. They don't have the resources—or the intelligence—to do something like that. Leave the Junar to the IIB, that's what I say."

Fotkey turned to look at Yutar again, putting his trunk on the man's shoulder. "You do understand that before we can fight a battle we need to know who is the enemy."

"Of course, Sir."

"Just find the weapon."

Part III.

Jahelle

73

Peno lay at a small table beside an open window sipping ranan juice. He enjoyed a short tray of cakes while he read a few pages from the latest mystery best seller. Jameia bustled in the hanaria and then came to join him, lying on the opposite side of the small table. She took a bit of cake in her tentacles and tilted her head to look out the window. Across the street a small clothing boutique looked back at her. Yellow vines climbed the walls on either side of its doorway with green flowers turned toward the sun. Next to the boutique was another apartment similar to the one where Jameia and Peno lived; the home of another seleckia.

Cars and mini-trucks drove down the following street as people made their way to work in Yartagard's center. Children gathered at the lifter stop in front of the boutique chattering freely, teeth clicking and ears shaking.

"Must you go this moment?" Jameia asked. "It's going to be so crowded."

Peno sighed. With two tentacles he put a nut from the cake between the pages of the book to mark his place. "I want to get that paperwork done, and you know how hard it is to get an appointment with him."

"Let me go with you, at least."

"You never like going into town, *tinka*. Anyway, I'll be home before you know it."

He got up and found his regular bookmark. Slipping the nut between his teeth he cracked its hard shell and then carefully placed his book in its usual spot on the hallway shelf. His wife stared out the window absent mindedly.

Peno glanced at the clock. "I should be going. The lifter will be here soon." He walked down the short ramp to his study where he slid several files of papers into his pouch. He grabbed his purse and his keys and slid them into his pouch as well, making sure all was carefully stowed away. When he returned, his wife, still sipping on ranan juice, was watching the people along the street outside. He touched her shoulder with his trunk and she turned toward him.

"When I get home we can clean the attic finally," he said.

"That would be wonderful."

They crossed trunks. Peno stepped out the front door of their modest home and down the ramp toward the walkway. His wife stood in the doorway watching as he paused in the alcove momentarily. The Nermella blew fresh air over him, laden with the scent of harsna from the grasslands beyond the city. He turned to face the wind and for the briefest of moments, the world seemed to pause with everything and everyone as it should be.

Suddenly the brick wall beside the boutique flashed with a sharp, white brilliance greater than the sun. It stung Peno's eyes and he instinctively flinched and twisted his body away from the onslaught of light. He could feel a blast of heat envelop him. The people in the street cried out in shocked surprise and raised their trunks to shield their eyes from the unnatural glare. Yet almost as quickly as it had come the light faded to a shimmering yellow glow. Everyone stopped, even the cars, and stared toward the city exclaiming in horror.

Peno stepped out from behind the wall of the alcove to witness a terrifying sight that defied description. There, in the direction of the city a huge, boiling cloud was rising. It glowed with yellow-white heat and billowed upward and outward with overwhelming speed.

"Jameia!" he called out to his wife, but she was transfixed, standing in the doorway looking at the cloud with an indecisive stare. Peno ran back up the ramp.

“What... what is happening?” she asked, her voice an anxious flutter. She reached out to him. Their trunks touched.

Then it came. At first it was a dull rumbling like the sound of distant thunder. Yet soon the ground started to shake with rising violence. The people in the street began to bellow, uncertain of which way to run, uncertain of what to do. “Jurita’s witness!” Peno yelled as he pushed his wife back through the door. The rumbling became a roar. The roar became a howling gale of burning death that blew back even the Nermella.

“*What is happening?*” screamed Jameia desperately, but her voice seemed faint and remote against the thunderous noise.

Peno could not answer. They fell to the floor and he threw his trunk around her. The windows blew out and the walls cracked. In the distance Peno could hear the helpless wails of the people in the street. The scorching wind, like a blast from some great furnace, blackened his flesh with searing pain and darkened the world with smoke and ash. The roof gave way. Stones, tiles, and beams all crashed into their home. Peno held on to his wife tightly. There was nothing else to do.

* * *

Colty sat in the back row of the Cogart lecture hall listening to Rachel present on thermodynamics. She stood on the platform, the board behind her covered in the mathematics of her last example, arms outstretched with one finger of each hand extending into the empty air.

“So, if the entropy of the universe is always increasing, how is it possible for biological systems here on Rujar to take disorganized components such as air and soil and arrange them into, say, a new rigat tree?”

A student in the front row, toward the door, thumped his trunk against his table. Rachel stepped in his direction and held out her hand in invitation.

“Rujar is not a closed system. Energy is introduced from the sun.”

“So what does that mean about the sun? How does the entropy...”

Suddenly a strange, high pitched beeping filled the air. Rachel paused and looked momentarily confused. She reached into her clothing and took out a device that she had in a pocket. She looked at the device with a slightly furrowed brow.

“Ah... I’m sorry,” she said. “I’m required to respond to this.”

She stepped down from the platform and stood beside the wall between the door and the board, turned slightly away from the class while everyone watched with fascination. It was rare to see her using any human technology.

She held the device to her ear and spoke softly into it as if the machine was some kind of telephone. “Yes? Hello?” she said in Argenian. There was a delay while she listened to whoever was on the other side. The delay grew long. She slowly moved her free hand to her chest, clutching her clothes. She turned to look at the class but her expression was unreadable.

Finally she turned away again and chattered into the device in her native language. She slid the device back into the pocket from which it came, but she didn’t move and didn’t turn around. The clocked ticked several times, and Rachel put her hand against the wall with her head bowed. Finally, after long moments, she slowly walked to the center of the floor. She didn’t go back onto the platform but instead stood on the ground beneath the class and looked up over the seats. Everyone watched her silently.

“I release you.”

She turned and left.

* * *

Even though he was still dozens of karnons away, the cloud rising from the remains of Yartagard was obvious. The pilot banked the aerocar slightly with his knee control and picked up the radio with his tentacles.

“S1 to Harken Base,” he said into the microphone.

The radio crackled slightly. "Go S1."

"I'm... ah... seeing a lot of smoke. It looks like smoke."

"Where is it coming from?"

"Yartagard," the pilot replied, "still too far to really see much."

"What part of Yartagard?"

"I think all of it."

The pilot climbed higher to see if he could get a better view, pushing the Z-7 reconnaissance areocar to its altitude limit. There were some natural clouds in the distance that obscured the scene but the plume was obviously smoke and it seemed to come from an enormous area. He had a horrible feeling in his gut.

The pilot talked with Harken base regularly. Following the protocol normally reserved for war missions, he turned on the scramble circuits. It was obvious that Argenia was under attack. Yet as the pilot approached he started to realize this was no ordinary attack. The breadth and totality of the destruction was astonishing. He was too young to have experienced the Harkite War but from his history he knew this was unlike anything ever seen.

"Dind," he muttered as the remains of the city came into view. The pilot grabbed at the microphone.

"Harken," he said. "It's... it's gone."

"What's gone, S1?"

"Yartagard!" the pilot yelled. "There's nothing left!"

"What do you mean 'nothing'? Report, S1."

The pilot swallowed hard and clutched at the microphone. Using the knee control he pulled the areocar into a descending turn toward the base of the smokey plume.

"I'm seeing a circle, maybe three or four karnons across, all destroyed. The outer parts are burning. Fires everywhere. Lots of smoke. Looks like the middle part isn't burning."

There was a delay.

“Say again, S1... three or four karnons?”

“Yes!”

He turned the Z-7 toward a gap in the smoke and flew over the outskirts of what was once a thriving city of nearly 100,000. As he pushed past the obscuring curtain the view was, if anything, more horrifying.

“I’m above the central part now. There is nothing. No buildings. Nothing. All destroyed.” His trunk shook as he looked down at the barren landscape.

“Are there survivors?”

The Z-7 flew over what must have been the middle of the blast, right where the center of the city used to be. There the ground itself had been blown into a crater almost as if Yartagard had been hit from space.

“I’m descending now,” the pilot said. “There is nobody in the city center. Just nothing.”

The aerocar flew through the curtain of smoke at the far side of the city and the pilot turned to follow the outer part of the circle of destruction. Far below, his sharp dunari eyes could see people but many of them were sprawled on the ground unmoving. “Gods of Nar,” he said softly to himself.

He flew over the main road leading into the city and he could see some people walking slowly away from the destruction behind them, carrying nothing, all with nothing left.

“There are some survivors, yes,” the pilot said. “They are walking on the Yart Highway. I see maybe a few hundred.”

Again there was a delay.

“We are sending fire and ambulance services from Tulanor, they should be there in a few arnets.”

The pilot fluttered. There was nothing he could say.

* * *

The atmosphere in the First Office was tense. They were at war. Fotkey stood at attention beside the First Table while the Second Citizen lay on his appointed seat at the opposite side. The First Citizen lay behind the table and leaned his trunk heavily on the mat. In front of him stood Ragar, the chair of the Parliamentary Defense Committee, and Politia, the ambassador to Forbin.

“On behalf of my government,” Politia said, “I extend our deepest condolences to you and to the people of Yartagard”

“Save it for the video cameras,” Ragar interrupted, “for all we know it was your government who did it.”

“We know who did it,” Politia replied sharply, “no force on Rujar could destroy an entire city in a single stroke.” His body was tense but he stood rooted to the floor, his trunk pressed against his right front leg as protocol required.

“It would suit you to have us believe that. You are little more than barbarians.”

The First Citizen eyed the Forbinite ambassador closely but Politia stood rigidly and did not respond to Ragar. At that moment there was a knock at the door and the coordination secretary stepped just inside the room. “He’s here,” she said. The First Citizen swayed his head. The secretary withdrew and ambassador Marshall entered the room looking grim.

“Why? Why did you do this? Why?” demanded Ragar. He pointed his trunk at Marshall angrily and stepped forward menacingly.

Marshall tried to ignore Ragar and instead addressed the First Citizen. “Please, FC, we did not do this thing. We are as horrified by this disaster as you.”

“And you expect us to believe that?” Ragar shouted. “An entire city is destroyed with nothing but a crater left... 80,000 people dead... *80,000!* Who else has the power to deliver such destruction?”

Marshall turned to Ragar, his voice raised as well, “Why would we do something like this? What would we gain?” he turned back to the First Citizen. “It is *not* our doing.”

Everyone waited for the First Citizen to respond. Leaning forward slightly he finally said in a soft voice, “Thank you, Ambassador Politia. We will let you know if we need any further help from Forbin.”

Politia glanced around and then bobbed his head. “Of course. Again, I convey the condolences of my nation.” He then turned and let himself out the door.

“How do we know your intentions...” Ragar began, facing Marshall. The First Citizen abruptly raised his trunk silencing the outburst. Nobody spoke or even moved for several long moments. The Second Citizen tapped his tentacles against his leg. Ragar shifted impatiently. Marshall watched the First Citizen closely. After what seemed like many arnets, but was probably not even one, the First Citizen picked up his phone and called the receptionist.

“Has Ambassador Politia left the building? ... Very good.”

The First Citizen returned the phone to its cradle and looked at Marshall. “I know you’re not responsible, Tom.” Fotkey stood unmoving, facing forward like a statue. The Second Citizen looked very tired.

Ragar strode to the First Table. “You... how do you know?”

The First Citizen paused, looking down slightly as if lost in thought. He tilted his head toward Fotkey briefly. “The humans are not responsible.” He sighed deeply. “I am.”

“What?” Ragar said, his voice a rumbling whisper.

Fotkey shifted and then spoke for the first time. “Sir, the ambassador.”

“Yes, yes,” the First Citizen replied. He stood up and walked slowly to the window. He looked out over the lush gardens around the building and across the street to the lawns of Parliament. The roads were strangely quiet as if everyone was inside, uncertain of what to do or what was going to happen next, afraid of what the world had become. Without turning around he said, “We’ve been doing experiments at our military base in the Rangard Desert. We’ve been building special, high energy weapons, all very secret,

of course.”

He turned around and walked back toward the table. “We know the Forbin government has been doing the same. It was all about national security. We didn’t want to be defenseless. Unfortunately one of the weapons was, well, stolen.”

“Are you saying,” Ragar growled, “that Yatagard was destroyed by an experimental weapon *of our own construction?*”

“Yes, that’s what I’m saying,” the First Citizen replied simply.

“Why wasn’t I made aware of this weapon?”

“You would have been. There was a schedule.”

Marshall’s alien voice interrupted. “Who stole it, FC?”

“We think maybe Forbin but...” the First Citizen glanced at Fotkey, “General?”

“It was the Junar.”

“The Junar?” Ragar said with a flutter, “So the Junar knew about this so-called secret weapon and I didn’t?”

“To be frank, we aren’t sure,” said the First Citizen, “who stole the farg thing.”

“It was the Junar,” Fotkey said again confidently. “If Forbin stole the weapon to study it, there is no sense in them destroying it, especially since they were unable to secure the human scientist. Their strategy is sometimes questionable, but they aren’t idiots.”

“Why are we having this discussion?” Ragar said loudly. He leaned against the First Table and spoke directly to the First Citizen. “Eighty thousand are dead. Someone must pay!”

“And do you suggest we attack Forbin even if they are innocent?” the Second Citizen replied with sudden passion. “Doing so would be playing into the plan of the radicals, not to mention cause the deaths of thousands more on both sides. The general seems sure of his conclusion. I, for one, trust his judgement.”

“The people will demand retribution. They will blame the humans.”

The First Citizen turned toward Marshall. “It’s true. Your people will be in danger until this is worked out.”

“I have pulled our groups back to the compounds for now,” Marshall said. “If necessary we will retreat to orbit. However, we want to offer what help we can. I’ve contacted Earth already. I hope to get medical aid for the thousands of injured. Your medical science is not ready to deal with the aftermath of an explosion of this nature. Yet it will take many unition for help to arrive from Earth.”

“In the meantime,” the First Citizen said softly, “it’s time to tell the people of Argenia the truth.”

“Are you sure that’s wise, Sir?” Fotkey said, still standing at attention.

The First Citizen rumbled slightly. “Frankly I don’t know what the best course of action is, but the truth seems like a good default. Don’t you agree?”

Fotkey shifted uncomfortably. “Yes Sir.”

When the meeting finally ended the participants filed out one by one. Marshall was the last to leave. As he opened the door the First Citizen called out to him.

“Tom,” he said and Marshall paused. “Has anything like this ever happened to your people?”

Marhsall put one hand on the door frame and turned slightly. He seemed to think for a moment. “Yes,” he said simply.

The First Citizen swayed his head but did not reply.

* * *

A reporter walked slowly down the remains of what was once a road, picking his way around overturned cars and fallen utility poles.

“This is Following Street Huteria,” the reporter said, “or what’s left of it. All the bodies have already been removed by rescue workers. At this location there were bodies, at least.”

The voice of the anchor woman interrupted the reporter's monologue. "We understand the humans are recommending you get no closer to the city center than the fifth crossing. Are you at that point yet?"

"No. It's actually very difficult to get much beyond here, there's so much rubble on the street. It's more like picking your way through a rock field than walking along a road."

The picture switched back to the Varnok studio. "Thank you," the anchor woman said, "we'll come back to you again soon." She turned in her seat slightly and cocked her head toward the camera. "Many demonstrations have erupted throughout Argenia demanding that the humans make amends for what some see as their attack against us. Yet the official word from the First Office is that the humans are not responsible. In fact, ambassador Marshall has said the humans are already air lifting people to hospitals all over Argenia in an effort to distribute the enormous burden of caring for the injured from this horrific event."

The anchor woman looked momentarily distracted and seemed to touch an earpiece with one of her tentacles. "I have on the phone now Sar. Barikoka, an astronomer from Parnon University. Can you hear me Sar. Barikoka?"

"Yes," came a voice over a small speaker on the desk before the anchor woman.

"What can you tell us about a possible cause of this catastrophe?"

"Well," the voice continued, "as incredible as it may seem, the cause might be entirely natural. The crater at the center of the explosion indicates that a large meteorite may have hit Yartagard."

"That sounds like an amazing coincidence for it to strike the city center."

"Yes, true. However, meteorites do hit Rujar now and then. There is evidence of much bigger impacts in the distant past."

The anchor woman adjusted her earpiece slightly. "Would that also be the cause of this deadly radiation we've been hearing about?"

“Well, ah... it’s possible, yes. We just don’t know enough about it. In any case the energy released in the explosion is far greater than any weapon could produce.”

“Do you think the humans would have been capable of warning us of this approaching meteorite?”

“I don’t know what they’re capable of doing.”

The anchor woman swayed her head slightly. “I think a lot of people are asking that same question right now.” She lifted her trunk. “Ah, Sar. Barikoka, I have a light on my panel that tells me it’s time for the First Citizen’s speech. We will be going to Jarloz who is standing by the First Office.”

There was a slight delay and then the camera showed Jarloz in the street with the First Office building in the background. There were barricades around the building and a number of people gathered there. Police were on duty making sure things did not get out of control.

“Thank you,” Jarloz said. She was stylishly dressed as usual. “In a few moments we will go to the First Citizen’s statement. As you can see there are people here looking for answers. Argenia is lost, dazed, and confused by what has happened. Everyone is longing for direction. The time has come for this leader to make his name in history.” Jarloz paused as if listening. “They are about to start. We are going to the First Office now.”

The scene cut again. Now the camera showed the First Citizen of Argenia lying clamly at his table. There did not appear to be anyone else in the room. Behind and above him the flag of Argenia was pressed against the wall. The First Citizen looked into the camera with his right eye confidently. He waited a long moment while the nation stopped to hear him.

“Citizens,” he began. His voice was firm yet comforting, “a terrible disaster has befallen us. The city of Yartagard has been destroyed. I speak with the voice of Argenia when I say that our hearts and souls go out to the survivors of this calamity and to

the families of those who were lost. This event will forever change the character of our nation.

“Yet amidst this despair there is hope. We will persevere. We will rebuild. It is in our nature as Argenians and as dunari to push through these dark times to a bright future. Yes, this event *will* change the character of our nation by reminding us that we are bound together in our fate and that, together, we will find the way forward.”

The First Citizen paused and the world stood silently.

“It is natural to seek those who are responsible for this horrifying crime and bring them to swift and proper justice. Even as I speak an investigation is ongoing to find the perpetrators of this attack.”

He paused again and looked down slightly. He took a breath and then looked back up. “But now, citizens, I must share with you a terrible fact. In an effort to protect this great nation from our enemies, this government has been experimenting with weapons of exceptional power. To ensure our advantage we kept this experimental program secret.

“Several of these weapons have been made and, to our great sorrow, one was stolen. This government conducted an aggressive investigation to locate the stolen weapon, and we were closing on those responsible, when the weapon was exploded by the murderous thieves in the city of Yartagard.”

The First Citizen looked visibly pained. “The force that destroyed Yartagard was a force of our own creation, unwisely built for reasons soon to be obsolete. That force was used by lunatics bent on undoing all we have done, yet at its heart it was the short sighted arrogance of this government that was responsible. Eighty thousand of our people paid the ultimate price. For this reason I am no longer worthy to be your First Citizen. At the end of this broadcast I will step down from my post. May Jurita forgive me.”

He paused again, tilted his head slightly, and looked directly at the audience. “Our role in this world has changed. We are no longer the simple people we once were. We can

wield powers beyond the imagination of our ancestors. Now we must find compassion beyond their imagination as well. We must never forget what happened at Yartagard for as long as the sun burns.”

79

Colty lay at the table in his apartment. His notebook was open before him with pages slide across the table top. He reflected, yet again, on the steps of his proof. Pushing the pages aside, he picked up the copy of his paper and studied the title: *The primality of co-sequences with stellating bases*. It was his finest work. The full proofs in Appendix A were compelling but, unfortunately, based on human set theory. As suggested by his overseers he included a sketch of the same proof ideas, but in dunari style, in Appendix B. In retrospect it had probably been a mistake to include it.

The reply from the Argenian Journal of Combinatorics had come back in only one runion, an exceptionally quick turn around. The speed was not due to dazzled enthusiasm. In fact, the paper hadn't even gone out to formal review. Instead it had been summarily rejected by the journal's editor. Colty read the conclusion one more time.

It is not reasonable to accept work that uses an approach unsupported in the literature. For this reason I dismiss at once the material in Appendix A, and focus instead on the proof in Appendix B. Unfortunately that proof is deeply flawed. . .

Colty fluttered softly. "Deeply flawed" might be overstating the case, but he had to agree with the editor. The proof, such as it was, in Appendix B had serious problems. It was intended to only be a sketch to assist readers in their understanding of the true proof in Appendix A.

He tossed the letter onto his table and leaned back. He wondered what he was going to do next. He had spent nine terms thinking about stellating co-sequences. If he couldn't get this result published he'd have to start over with graph extension fields. At that point producing anything meaningful from scratch in the time remaining would be nearly impossible. He wouldn't be promoted to full status, and he'd lose his job.

He stood up and went to his small hanaria and got some water to drink. As he sipped from the cup he leaned against the wall of his apartment and looked out the window at the gathering clouds. If he had never met Rachel, he would have never spent time learning the human math and he would have instead used that time working on graph extension fields. Getting to know Rachel had been an incredible experience on a personal level, but it might have been professional suicide.

Colty clicked his teeth resolutely. Despite what the journal editor thought, he *knew* the result was true. He understood the human notation, and the proof in Appendix A was decisive. He had that satisfaction at least.

He went back to his table and, for the lack of anything else to do, started to tidy up. In doing so he came across the picture of the Kessler genome sequence that Rachel had given him. He paused to look at it. Line after line of different colors marched across the page in several bands. There must have been hundreds of them on the paper.

He put the image down but just as he was about to turn away it caught his attention again. There was something about the spacing between the bold, dark lines that looked familiar. He picked the image up again and studied it closely with his right eye. He had definitely seen that pattern before. Setting the Kessler genome aside, he fished through his pile for the copy of his paper. Flipping to the diagrams in section three, he held them beside the genome image. There was a shocking similarity.

Rummaging through the top tray in his table, he found a ruler. He grabbed a fresh pad from the shelf. Then, very carefully, he measured the distance between the black lines in the genome image. Using the smallest as a normalizing interval, he computed

the stellating correlations of the other intervals. Even as he wrote the numbers down, he knew what they were. His trunk shook as he flipped through his paper. The correlation tables were on page nine.

“Jurita’s witness,” Colty whispered.

It was raining when Colty got into the cab. “The human compound,” he said simply.

“What?” the driver said. “The human compound? Ya sure? You can’t get in there now.”

“Yes,” replied Colty, “just go.” He didn’t have time to deal with silliness.

Colty looked out the window at the wet streets of the city as the cab drove toward the base. The driver watched Colty suspiciously in the mirror. “Ya meeting with a human?” he said with a shake of his ears.

“Yes,” Colty said. That was the end of their conversation.

The entrance to the base was closed with a metal gate but artificial lights glowed softly in the guard station to ward off the gloom of the storm. The driver pulled into a small parking area beside the station. “I guess this is as close as we get,” he said. Colty paid the fare and got out of the cab just as a guard was coming out of the station, his trunk on his weapon.

“You don’t want to be here,” the guard called out loudly. The cab pulled away and the guard fluttered. “What do you want?”

“I’m Sar. Coltinarly from the university. I’m here to see the human Ra’hel.”

“Good for you.” The guard drew his weapon and pointed it at Colty.

Colty slowly held out his trunk, tentacles open. This wasn’t what he had been expecting. “I . . . I just want to talk to her about our work together.”

“Inside.” The guard waved Colty toward the door where the other guard was standing, also with his weapon drawn. They led Colty into a small room just off the station entrance where there was a table and nothing more.

“Look, I . . . I don’t want any trouble,” Colty said. “I’m Ra’hel’s host. We are working

together and I need to consult with her.”

The second guard searched Colty and took his pouch, dumping the contents on the table and sending papers sliding over the smooth surface. He briefly went through them. Eventually he faced the first guard and swayed his head. The first guard relaxed a little.

“Check out this guy’s story,” the first guard said to the second. Without a word the second guard headed for the door.

“I’m Sar. Coltinarly,” Colty called out after him.

The first guard holstered his weapon but stood on the opposite side of the room from Colty beside the door. He stared at Colty intently first with his left eye, then with his right. Colty tried not to move.

“I’m sorry...” Colty began.

“Quiet!”

Finally the second guard returned. He went to the items from Colty’s pouch now lying haphazardly on the table and found his purse. He flipped through it until he came to Colty’s university identification. He studied it carefully with his left eye and then looked at Colty. After a long moment he bobbed his head. “It’s him,” he said, “they say it’s okay.”

The tension in the room dissolved. Colty, along with the first guard, both breathed a heavy sigh. Colty was shaking.

“You can’t just show up here,” the first guard said, “not now, not this way.”

“I... I understand.”

“Do you?” the guard fluttered.

“I’ll escort you to the compound,” the second guard said.

It was a short trip from the gate to the compound. The road climbed a small rise and then turned toward a collection of storage buildings one of which had become the home base for humans in the Varnok area. The rain had mostly stopped and the clouds were starting to break up letting rays of warm sunshine filter over the base. Neither Colty

nor the guard spoke until they stopped before the last storage building in the group.

The building looked like all the others. It was of single story brick construction with rounded sand ridges. However, the windows were all covered, and sitting on the ground a short distance from the corner of the building was a strange device with hoses and cables that fed through the wall. At one end there was a wide door.

“Just go in that door,” the guard said, “they’ll talk to you right inside. I’ll wait here.”

Colty got out of the vehicle and approached the building. He felt suddenly nervous. Although he had grown accustomed to Rachel on the Parnon campus, here he was in her world. He felt acutely aware that despite being friendly and approachable, she was an alien creature with powers unknown.

Tentatively he tried the latch. It wasn’t locked. Inside was a small room with a large table, several seats, and an inner door on the far wall. A human device of some kind was braced across the inner door like a bar. A red light on the device flashed ominously.

“Hello? I’m Sar. Coltinarly. I’m here to see Ra’hel. She’s not expecting. . .”

“Just a moment,” came a voice from a speaker next to the door. The voice sounded synthesized but otherwise it spoke Argenian very smoothly. “She’s on her way. Please wait.”

Colty paced back and forth. Finally he heard a beep. He turned and saw the flashing red light on the bar change to green. The door swung open and Rachel stepped out. She was dressed differently than he had ever seen. Her clothing was plain and resembled a long shroud. Her hair was not tied back but instead hung loosely about her shoulders. He realized he was seeing her at a time when she was expecting to be just a human among humans. He felt vaguely embarrassed.

“I’m very sorry to disturb you,” he said.

“It’s fine, Colty. What is it?”

He set his pouch on the table and took out a folder, showing her the genome image.

“You remember this?” he asked.

Rachel stepped beside him to take a closer look. “Yes, of course.”

“Those black lines are part of the seventeenth order stellating co-sequence.”

Rachel blinked her eyes a couple of times. “What?”

“I have it here,” Colty said excitedly. He got some other papers from his folder and showed her the calculations.

She took the papers and sat down on a bench along the side of the room to study them, pulling the hair back from her face and hooking it over her ears. She looked at the genome image and then at Colty’s calculations. After a moment she looked up, but not at Colty. She seemed lost in thought. He could see her eyes moving slightly the way they did when she was trying to understand something difficult.

“How could that be?” she said finally, more to herself than to him. She touched her face pensively. Suddenly she stood up. “Come with me,” she said as she walked toward the inner door.

“Inside?” Colty asked uncertainly.

“Yes, is that fine?”

He folded his ears back. As far as he knew no dunari had ever been inside a human compound. “Only if it’s permitted,” he replied.

As the inner door closed behind them Colty found himself at the end of a long hall with doors on either side. It was obviously the same layout as the original building, but the hall was illuminated with strange, dim, yellow-green lights. The regular lights were off. Colty squinted slightly in the unnatural glow. “Don’t look at the lights directly,” Rachel said. “They emit a lot of ultra-green.” She touched Colty on the shoulder as if to reassure him.

Next to where they came in there was a kind of table, obviously added by the humans, with some electronic devices on it. Rachel walked over to it and touched one of the panels. Colty could hear a click behind him and he turned to see the red light on the bar flashing once again. Rachel touched a different panel and the lights brightened some

but remained the same ghastly yellow-green color.

Colty noticed that the walls, floor, and ceiling were all the original materials. The scene was at the same time other wordly and yet oddly familiar. Rachel motioned for him to follow her and they started walking down the hall together. “How many humans are here?” Colty asked, keeping his voice just above a whisper.

“There are seven of us right now. We are all here because of what happened.”

“Just seven?” The way the compound was presented on the news always made it seem like there were dozens of humans packed inside. Yet as they walked he did not see anyone else.

“It is the time we normally sleep,” Rachel explained.

They came to a door and Rachel opened it and motioned for Colty to follow her inside. The room had been one of the storage rooms but the humans had partitioned it into three smaller rooms. The main door opened into an entry way and there were other doors off that. Rachel turned toward the door on the right and touched a panel. He heard another electronic click and then she grabbed knob in her hand and pushed the door open rather than sliding it aside. The lights came on automatically and Rachel adjusted them brighter right away.

“Is that too dark?” she asked.

“It’s fine,” he said a bit nervously.

Rachel brightened the lights a little more. “On Earth we sleep in darkness. The lighting system is programmed for that.”

“I don’t think I would like Earth very much.”

The room itself was small and without windows. It had a high table with a piece of glass mounted upright on top, a long, low bed, and a piece of furniture that Colty didn’t recognize. In the corner was some kind of storage closet. There was very little there.

“What room is this?” Colty asked.

“This is my room,” Rachel said. “My personal space. I guess you could say it’s

my apartment on Rujar. I know it's not much to look at, especially compared to the beautiful buildings at the university, but we travel light."

On the wall was a picture of a strange landscape with jagged mountains poking into a dark sky. In the foreground were tall orange plants with thick, fleshy stalks and broad leaves. The picture seemed to glow slightly with its own light.

"Is that Earth?"

She glanced at the picture. "No. That's on a planet officially called **Groombridge 1618c** but most people just call it **Altairia Caledonia**." She spoke the names in her own language making them sound exquisitely exotic. "It's close to Earth; I've been there."

She took a tool out of the desk and then stood in front of a mirror on the wall and used the tool to smooth her hair. She then pulled her hair back and tied it the way he was used to seeing. "I shouldn't have imposed," he said awkwardly.

She turned toward him as she finished. "Don't worry. It's fine, really." When she was done she took a deep breath and, bringing her hands together said, "Now, about Kessler. . ."

She went to her desk and lifted the glass plate from its mount. It was about the size of two pieces of paper back to back. It looked like nothing more than a dusky sheet, yet as she held it, the glass came to life and glowed with symbols and images. Colty realized immediately that it was actually a human machine, larger than the one Rachel normally carried. She sat on the bed. "Is there enough space for you to lie here too?" she asked.

"I'll just stand if that's okay."

She touched the surface of the glass a few times and the symbols moved under her touch. Then, opening a drawer in the desk, she pulled out a small device. She hooked the device around one ear and pulled her hair aside so it could rest closer to her skin. She touched the glass a few times and seemed to adjust the device behind her ear as well. After a moment she looked up at Colty.

“I’m not really fond of this thing,” she said touching behind her ear. “But it does make things faster.”

“What is it?”

“It decodes my brain activity so I can control my machine with my thoughts. Most people have implants but I really don’t like the idea of a computer being able to read my mind.”

Rachel looked at Colty’s paper and he could see the formula for calculating stellating correlations appearing in the dusky glass of her machine. She was transferring the equations by just reading them. When she was finished she set the paper aside and studied her device. She took a breath and squinted a little but nothing seemed to happen. She glanced at Colty.

“I’m out of practice,” she said sheepishly. She closed her eyes for a moment and took a couple more breaths. Then she opened them and looked at her machine again. The symbols began to move swiftly. She spoke to herself briefly in her own language and nodded.

“I’m going to do these calculations using the precise distances,” she said without taking her gaze off the device, “right down to the last nucleotide.”

He watched as she worked. Finally, after an arnet or two, she took a deep breath and took off the headpiece. She watched the machine closely for a moment and then held it up so Colty could see it.

“Right here,” she said standing next to him and pointing to a rectangular region in the corner of the display. “This table will show the stellating correlations precisely with a comparison to the seventeenth order correlations. Are you ready?” She didn’t wait for an answer but instead touched a symbol at the corner of the table. Immediately the first column filled with values using Argenian script. They matched exactly.

They both looked at the machine in stunned silence. Colty’s mind raced. The number of nucleotides between bases was precisely the correct number; not one more and not

one less. It was beyond belief.

Rachel touched the symbol in the corner of the table again. The values disappeared and then reappeared the same as before. She rubbed her chin. “That’s really strange.”

“What does it mean?” Colty asked.

Rachel put her headpiece back on and soon the symbols were moving across the glass again. Colty waited patiently. Finally she furrowed her brow slightly. “The other nucleotides in Kessler are completely random, at least with high confidence. I wonder if that’s normal.”

She touched her device again. “I’m going to leave a message for Brendon. He’s probably asleep right now.” Suddenly she shifted to her native language and chattered and clicked at the device. Yet despite the alien sound Colty could sense, in the tone of her voice, an edge of excitement. When she was done she took off her headpiece and set aside the glass. She drew her knees up to her chest and leaned back slightly, lost in thought.

“It can’t be coincidental,” Colty said, “that this sequence appears in both the human and dunari genome.”

For several moments Rachel said nothing. Then she replied, “maybe it’s artificial.”

“What?”

“Even we have the technology to do genetic engineering. We can insert arbitrary sequences into the genomes of most living things. If it were done right, such sequences could be passed from generation to generation for millions or even billions of runion, even as one species evolved into another.”

A profound silence descended over the room. It was a silence shared by one dunari and one human together as they absorbed the implications of what they had discovered.

Jernumia slowly flipped through the land transaction records of the Handani Mining Company. Despite the catastrophe at Yartagard, work at Aratok continued as usual. She was looking for a specific sequence of transactions that would show the company in violation of the Land Monopoly Act. Haratol had a witness that would testify to the violation but unfortunately that witness was not entirely credible. Hard evidence was necessary.

She heard a soft knock at the kick plate of her office and looked up to see an elderly gentleman dressed in fine linen. Jernumia stood up at once, stumbling slightly. “Leemaster Aratok, Sir, I didn’t realize you were there.”

“Please come to my office, Jernumia.”

“Should I . . . bring anything?”

“No.”

Jernumia quickly grabbed a fresh pad from the top tray of her table and then followed Aratok himself to the office at the end of the hall. As she passed Haratol, he tilted his head quizzically and looked at her with his left eye.

The “big office,” as everyone called it, was about twice the size of anyone else’s and was lavishly furnished. On the floor was a thick rachen hair rug and nanwood paneling ran up the walls and even across the ceiling. Aratok’s table was broad and seamless and made of solid onnanin wood from the Forbin lake region. It probably cost more than Jernumia made in 10 runion.

When she entered her eye was immediately drawn to a small, slightly disheveled man lying on one of the onnanin wood seats.

“This is Inspector Narlock,” Aratok said in a soft voice. A man in his position never needed to speak loudly.

Narlock got off the seat and Jernumia touched his shoulder briefly. She recognized the IIB look at once, and her mind focused immediately. “We are well met,” she said with a polite click of her teeth.

Aratok closed the door and then lay down behind his table as Jernumia and Narlock found their seats as well. Jernumia wasn’t sure what to do with her pad so she slipped it under her right front leg. Narlock watched her closely.

“We have a case,” Aratok began, “that has some, shall we say interesting, procedural issues.”

Jernumia cocked her head.

“Excuse me,” Narlock interrupted. He held out his trunk slightly in Jernumia’s direction, “what kinds of cases do you prosecute?”

“Lately it’s been mostly real estate cases but in the past...”

“Real estate!”

“Yes, but in the past...”

“Are you sure she’s right for this?” Narlock asked Aratok. The Leemaster said nothing.

“Obviously he thinks I’m right for this,” Jernumia snapped, “or else he wouldn’t have invited me to his office.” Narlock jerked his head back with surprise to look at her again. Aratok clicked his teeth slightly.

“The inspector is gathering evidence,” Aratok continued, “in the Yartagard investigation. Some of this evidence may come from the humans.”

“Oh, I see,” Jernumia replied. She turned to Narlock. “What is this evidence?”

Narlock fluttered and swayed his head. “Frankly I don’t fully understand it. Appar-

ently they have a machine that will allow them to gather surveillance in a way we can not.”

“Surveillance, okay.”

Narlock hesitated. “They say this machine can look into the past and gather surveillance at the time the weapon was stolen.”

Jernumia bobbed her head slowly. “I see.”

“So we run afoul of the Rules of Yotal,” Narlock continued.

“But the surveillance would be gathered now. It would only show us the past.” Jernumia’s voice trailed off.

“I want you to look into ways of allowing such evidence in the court,” Aratok said to Jernumia.

“Yes, Sir. But what about the case I’m on now? I’m looking for land monopoly violations.”

“I’m sure Haratol can take care of that. This is your case now.”

“Yes, Sir.” Jernumia sat up straight and suppressed a shudder.

“I want you to work with the IIB through Inspector Narlock’s office to find out what you can and put together a strategy. We should assign a page to assist you, perhaps Larno?”

“Yes, that would be fine, Sir,” Jernumia took a deep breath.

“So she is to be the lead on this?” Narlock said with a flutter.

“Yes,” Aratok said simply.

* * *

Jernumia smoothed her sash with her trunk and then turned to look out the window of the express train. Carefully tended fields rolled past endlessly, dotted by groups of small homes and crisscrossed by narrow roads. Yet her mind was elsewhere. She put her case on the convenience table beside her seat and opened it to take out her notes.

She felt a need to go over them one more time. The questions were standard but the situation was far from normal. She is just another witness, Jernumia reminded herself, just another witness.

An announcement over the speaker brought her back to the moment. “Parnon up!” Jernumia slid her notes back into the case, snapping it shut, and smoothed her sash again. She gripped the handle tightly in her trunk and waited as the train slowed to the station.

She had been in Parnon only a few times and the last had been long before. As she got off the train it took her a few moments to get oriented. The station was small, yet busy, and it bustled with many students. Jernumia glanced at her watch; she still had plenty of time.

She found a taxi along the roadside in front of the station and climbed into the back. The driver watched her closely. He wasn’t used to seeing a woman dressed for business and carrying a legal case. Jernumia ignored his gawking. “The human compound,” she said.

The driver pulled into the street and Jernumia watched the shops and stores go by. Parnon seemed so quiet and relaxed. Compared to Varnok it was like a small village dropped in the middle of open farmland. The driver glanced at her frequently in the mirror but she didn’t notice.

“You be careful,” he said finally.

When they got to the gate the guard on duty came out as Jernumia paid her driver. “I’ll call when I need to get picked up,” she said.

She walked briskly to the guard trying to look more confident than she felt. She was greeted with friendly tones. She had her identification ready but the guard barely looked at it. Instead he directed her to a military car and drove her up the road to the compound.

“I think this is the first time a woman has met with them,” he said conversationally.

Jernumia bobbed her head briefly. "I've seen all sorts come here, you know," the guard continued, "but I never thought I'd see the time when they needed a lawyer."

When they reached the compound Jernumia sat briefly in the car and just looked at the small, imposing building. She's just another witness, she reminded herself again.

"Go through that door," the guard said, "they're expecting you."

She got out of the car and walked purposefully toward the door. She went inside but nobody was there. It was an empty conference room. She put her pouch down on the table and settled into a seat relatively far away from the locked inner door and its blinking red light. She took out her notes and reviewed them yet again. All was quiet except for the sound of paper as it rustled in her tentacles. Outside even the Nermella was subdued.

After a short time there was a click and the door swung open. Into the room stepped the human. She was tall but not as tall as Jernumia had expected. She was wearing grey coverings on her lower body with red trim and a light grey top. Around one arm she wore a red trunk cord decorated with small embroidered flowers. She looked like a chortak wearing clothes but her strange skin and eyes were completely alien.

Jernumia stood up awkwardly, not sure where to look, and haltingly introduced herself. The human looked at her with a steady gaze, almost childlike yet with a confidence Jernumia found disconcerting.

"We are well met," the human said. "I am Ra'hel." Her voice was light and soft. Jernumia returned to her seat while the human knelt down on its lower legs diagonally across from her. The red Rujaran sun highlighted the trim on her clothes and the trunk cord on her arm.

"Um. . ." Jernumia felt at a loss and her voice quavered. She reached out and touched her notes, seeking reassurance from their familiarity. "I've been assigned to this case," she said finally. "So that means I need to know more about this surveillance evidence you hope to gather."

“Yes,” Rachel said.

“Before. . . um. . . we get to questions about the evidence, though, I need to explain a few things.” She looked at Rachel again but the human hadn’t moved. Jernumia took a breath and reminded herself one more time that she was just another witness. “The defense will immediately attempt to have any evidence you provide thrown out because it was collected by. . . well, by humans. No offense.”

“I understand,” Rachel said.

“There is a legal principle called *witnearo en tempexia* that allows a non-Argenian citizen to testify in our courts against Argenians. It has been used in various cases to allow, for example, Forbin tourists to testify against Argenian businesses.”

Jernumia paused and glanced at the human but Rachel just watched her intently with strange, circular pupils.

“I believe,” Jernumia said more confidently, “if we try to use *en tempexia* the defense will argue that it doesn’t apply because humans are not subject to Argenian law. There was an obscure case in Arnoxium 21 argued before the National Court where *tempexia* evidence from a Runar tribesman was disallowed because the witness couldn’t be tried for perjury, even in principle, and so couldn’t be trusted to provide a true and complete accounting. I believe the defense will argue the same in this case, and this is before the validity of your evidence is even considered.”

Rachel nodded her head slightly and Jernumia wondered briefly if the gesture was something the human did for her benefit.

“So what can we do?” Rachel said.

“I’m not sure right now.” We need to link you personally to Argenia in a legal sense. Once that link is made, but not before, you can show the court whatever evidence you have.”

There was a long silence while Jernumia pondered the possibilities but nothing came to her. She fluttered softly. “Let’s talk about that surveillance now,” she continued,

“have you heard of the Rules of Yotal?”

“No.”

“They are the result of a number of landmark cases that went through the National Court about three hundred runion ago when video surveillance became possible. Certain surveillance made before a formal investigation is opened is not admissible. For example, video recordings made at the time of a crime, unless they are specifically of the crime itself, are not admissible. Only recordings made as part of the investigation can be used.”

“But the recordings I propose have not yet been made,” Rachel said, “assuming I can convince my government to allow it, they will be made precisely as part of the Yartagard investigation.”

Jernumia tilted her head and looked at Rachel with her right eye. “Are you saying you don’t have the support of your government? Are you acting alone?”

Rachel looked off to the side. “What I want to do is expensive. Tom, the ambassador, feels we shouldn’t get involved in the investigation directly. Earth does not know about my proposal yet and many people here do not approve.”

Jernumia was uncertain if she should make any notes or not. “If you are working outside your authority that could be a problem if it comes out in court.” She fluttered slightly and shook her head. “That creates new issues.”

“I’m trying to get the authority,” Rachel said. “I know Tom wants to help somehow. I just have to convince him what I want to do is the best way.” Rachel furrowed her brow in an expression that looked to Jernumia almost like pain.

Jernumia studied her but Rachel said nothing more. “Well, keep me informed. I’m going to hope we can avoid talking about your circumstance, but I need to know about it so I can properly prepare.”

Rachel nodded.

“My understanding,” Jernumia continued, “is that you propose to show surveillance

of the crime itself. But the recordings would be made now as part of the investigation, are you talking about some kind of time travel?”

Rachel nodded again. “In effect, yes.”

Jernumia fluttered. “Our legal system has never had to deal with such technology.” She scratched her shoulder with a tentacle and then flipped her pad to a fresh page. “In other cases involving new technology it is typical for a third party *impartial* expert witness to testify about the technology’s capabilities and limitations. I don’t see how we can do that here.”

“But the technology is not directly related to the evidence. . . .”

“Then there is the problem of evidence tampering. The defense will no doubt call the evidence into question because it will have spent so much time under human control.”

The two of them fell silent. After a few moments Jernumia wrote some additional notes. She cocked her head and again looked at Rachel. The human didn’t seem so intimidating any more. “Unless. . . unless we could have an observing witness.”

“What is that?” Rachel asked.

“An observing witness is someone, an unbiased third party, who observes the investigation and then testifies to the veracity of the claims made by the investigators. Ra’hel, can you allow a dunari—an Argenian citizen—to observe you when you make this surveillance?”

Rachel tilted her head back slightly and exhaled sharply. “No,” she said looking at Jernumia again, “impossible.”

“In that case it may be very difficult to get your evidence before the judges. Don’t forget we are talking about the National Court here; a matter like this would be handled at the highest level. If there is any doubt or question the defense will latch onto it with great tenacity.”

“You don’t understand,” Rachel said energetically, “there is a purging process required when going from one world to the next to prevent biological contamination. It’s an

elaborate medical procedure. We don't know dunari physiology well enough to do it safely to one of you. It would be very dangerous."

"I see, but it would still be possible?"

"I don't know."

"Do you know anyone who might be willing to undergo this procedure?"

Rachel looked at her hands. "There is one person I know who might be fearless enough, or maybe crazy enough, but it might be sending him to his death. I . . . I can't have that on my conscience."

Jernumia tilted her head and looked at the human closely. The creature seemed subdued and tired. The idea that it might even have a conscience took her by surprise, and she wasn't happy that it surprised her. "I understand," she said finally.

"He has a family."

"I understand. I can talk to the IIB. Maybe they can suggest someone else. I do think an observing witness will be essential, though, if we want this to have much of a chance."

The two women, from two different worlds, spent many more arnets going over the details of Rachel's proposal and how they might present whatever evidence it revealed. The fields outside the window were bathed in the orange, uncaring glow of the ever present Rujaran sun.

Finally when they were done Jernumia slid her pad, along with her other papers, back into her pouch. The standard questions never came up. There was nothing standard about this case. She stood up and put her pouch over her back. "I think that is all I need for now."

Rachel nodded and then rose as well. She reached out her arm. Jernumia hesitated. Then with a click of her teeth she stood before her as Rachel lightly touched her shoulder. Just as Rachel was about to turn away Jernumia said, "I really like that, ah, trunk cord you're wearing."

"Yes?" Rachel replied with a quick smile "I think it's very pretty."

“Where did you get it?”

“I bought it at a small shop in Parnon, in the market center.”

“How did you pay for it?”

“Oh,” Rachel laughed lightly, “I’m a visiting professor so I just used my paycheck.”

Jernumia cocked her head. “The university pays you?”

* * *

Colty sat staring at his notebook, open to the section on graph extension fields. He had a few notes and graph diagrams scribbled at the top of the page, but so far nothing had come of those earlier ponderings. Open next to his notebook was one of the seminal papers on graph extensions. He slide his tentacles across the document as if that would somehow extract inspiration from the work.

A knock at the kick plate to his office distracted him and he turned to see Sar. Molanalor at his door. With a combination of surprise, pleasure, and forboding Colty invited him to take the seat beside his table.

Molan closed the door behind him before settling down. “First, I want to tell you that I think your paper on co-sequences is brilliant.”

Colty bobbed his head deeply.

“What you are doing by joining dunari and human mathematics is thrilling. I believe in the long run it will be seen as the most important work in the field in ten Arnoxiums at least. . . far more important than graph extension fields.” Molan glanced toward Colty’s notebook still open on the table.

“I’m very gratified to hear you say that, Sar. Molanalor. I’m honored.”

Molan shifted slightly in the small seat. “Unfortunately I understand the difficult position your work has created for you. I heard the paper was rejected.”

“It’s true.”

“I hope you plan to resubmit it promptly.”

Colty suppressed a flutter. “I don’t have much choice. I don’t have time to develop anything else.”

Molan swayed his head. “I know you tried sending it to a well known journal, but maybe you should try a journal that’s a little more open to publishing innovative work. You might have better luck.”

Colty looked at his notebook and then reaching out closed it with a soft thud. “Thanks for the advice.”

At that moment Colty’s phone began to chime. He looked at it uncertainly. Molan got up and bobbed his head. “I just wanted to let you know I support you,” he said as he slid open the door and left.

Colty picked up the phone, feeling relieved that the conversation with Molan was over. It was Rachel.

“I’m glad I caught you in your office. We wanted to talk with you about the genome.”

Colty pushed his notebook aside and sat up a little. Rachel’s light, alien voice was surprisingly comforting. “What do you mean by we?”

“Brendon is here also. He’s the biologist I told you about. He’s on *Golden Light* right now but he’s on the call.”

“We are well met,” came another voice. It was very smooth and deeper and obviously synthesized. Colty was a little disconcerted to hear another person intruding on his conversation with Rachel.

“Ah, yes,” Colty answered tentatively, “we are well met.”

“Brendon, why don’t you explain what you’ve found?” Rachel said.

“Sure thing, Rach. I tried searching the genome records of other life forms, at least the records we have on **Golden Light**, looking for other instances of the Kessler sequence.”

“Yes, I understand” Colty replied.

“Well, I didn’t find any. However, I looked at your paper, Sar. Coltinarily, and saw the correlation formula you derived.”

“You mean stellating correlation? Or are you talking about the reduction correlation in section three?” Colty scolded himself for leaving the copy of his paper at home.

“The stellating correlation. The formula you used to show Kessler is wrapped in the seventeenth order sequence.”

“Co-sequence,” Colty corrected him. Suddenly he had the strange feeling that he was talking with a colleague about some fine point of research or with an advanced student working on a special project.

“So as I understand it, these co-sequences are infinitely long and Kessler is only a fragment of one,” Brendon said.

“Right.”

“Instead of searching for an exact match, I ran your formula over the genome records using variable sized windows looking for other correlations... ah... stellating correlations, I mean.”

“Variable sized windows?”

“I just tried different fragment sizes starting at every possible position in the genomes I tested.”

Colty’s mind reeled. “I must not be understanding...”

Rachel’s voice interrupted. “We have machines that can do the calculations.”

“Even so,” Brendon said, “it does take a while. That formula is very time consuming to compute when you get to long fragments, as I’m sure you know, and it doesn’t help that some of the life forms I looked at have very large genomes.”

There was a slight delay and Colty tilted his head. “I understand what you did, I think.”

“Now comes the good part,” Rachel injected, her voice had a clearly excited tone.

“So I found other fragments of the seventeenth order co-sequence in various life forms on planets spread over a large region of space. They have different sections of the co-sequence, but all part of it.”

“Yes,” Rachel continued, “and some of them, at least, are ultra-conserved non-coding sequences.”

“Where we have that information, yes,” Brendon said.

“It gets better!” Rachel injected.

“So...” Brendon paused, “on one planet the fragment shows up in the genome of *cancardacs*, they are insect-like creatures. The planet has a lot of them, it’s a nasty place really, but we have good information about their genetics. It seems the fragment appeared there about 300 million of our years ago, just as Kessler did on Earth.”

Colty tilted his head again, listening carefully as he absorbed the information.

“What’s more,” Rachel interrupted, “the information between the co-sequence structures appears entirely random.”

“Yes,” Brendon said with a certain reluctance.

“What’s the significance of that?” Colty asked.

“It could be a compressed message,” Rachel replied.

Colty leaned back slightly pulling on the cord to the phone. “I see. Compression randomizes the statistics because it removes redundancy. Of course.”

“Rach, I know you think this is artificial,” Brendon said, “but we let’s not jump to conclusions. For all we know there is some natural process at work that’s causing it. The shell of the nautilus on Earth contains a logarithmic spiral not because they can do advanced math but as a consequence of the way they grow. It could just be parallel evolution.”

“Maybe so,” Rachel said, “but think about it: what better way would there be to communicate with intelligent life emerging throughout the galaxy? Wrap your message in a mathematical structure to draw attention to it. Then inject the message into the genome of life on various planets, letting biology preserve it while that life evolves into a form that can read it.”

“But why inject just a fragment into each biosphere?” Brendon said.

“To ensure,” Colty suddenly blurted out, “that only life with interstellar travel could gather the entire message.”

There was a longish pause and Colty wondered if he had spoken somehow out of turn.

“Perhaps,” Brendon replied. “I agree this needs to be explained, but I’m not convinced it’s artificial. We need to examine more genomes more deeply and then try to correlate the fragments with biochemical and environmental factors. Unfortunately the library on *Golden Light* is limited, and anyway I have my machines analyzing the dunari genome right now working on... um... a different project.”

Colty cocked his head. “What project is that?”

There was silence.

“It’s related to the Yartagard investigation,” Rachel said. “We’ve been advised not to discuss it.”

“I see.”

“Anyway,” Rachel continued, “I wanted to let you know what we found. It might be helpful if you could tell us more about co-sequences; if there are any results you didn’t include in your paper, it might help us understand what we’re dealing with.”

After the call ended Colty stood up and paced back and forth in his small office. It was a lot to consider. He found himself agreeing with Brendon in that cautious analysis was the best approach. He returned to his seat and pulled his notebook toward him. Opening it to a fresh page he wrote “Information Compression” down one side.

Jernumia put some wet garjost leaves into the press and, holding it over a mug of warm ranan, tightly squeezed the juice out of the leaves into her drink. She settled at a table on the sunward side of her apartment and looked out over the small park behind the building. Lush crocker with some harsna grew in the shade of the businesses on the far side of the park. It was a very calm and pleasant view.

Jernumia's apartment was in the Middle City, an older section of Varnok yet very well maintained. Many young professionals lived there, mainly single men, but a few selecks as well. Jernumia herself had no seleck, a fact of her life that drove her mother to endless distraction.

"You can't rely on just yourself," her mother often said, "it makes you look like a hick."

Maybe that was why she had become a lawyer. It was just another way to distinguish herself from her family. Yet Jernumia was happy with her solitary lifestyle. Her space was small but well furnished and decorated with tasteful items of good quality. She drank her ranan and valued her peace.

When she was finished she put her mug away, gathered her papers into her pouch, checked her clips, and made her way out into the world. She was headed for the legal library in the New City, only a few following streets from the agency. But first she would meet Larno at the office. He had offered to meet at the library but Jernumia knew he had things to do, and she didn't want him wasting his time waiting for her.

When she got to Aratok the office bustled as usual. Haratol was there but didn't look at her. They had hardly talked since Jernumia started work on the Yartagard case. When they did their conversations were never more than a few brief words, grudgingly shared.

Larno was in his cubbyhole of an office putting things in order when Jernumia arrived. At once they left Aratok and took to the streets to make their way to the legal library.

"I can carry your pouch," Larno said.

"I'm used to carrying it myself, but thank you anyway."

They crossed Hillart and started down one of the wide cross streets blocked for vehicle travel.

"I want you to look into employee taxation," Jernumia told her assistant as they walked.

Larno tilted his head quizzically.

"And banking laws."

"Are you looking for something specific?"

"Yes. I'm just not sure what. Look for cases involving foreigners, especially foreigners from places without treaties, so not Forbinites."

Larno bobbed his head. "What about *en tempexia*?"

"It won't work." She didn't say anything more.

"What are you going to do?" Larno asked.

"I'm going to try to find a way to get evidenced gathered by a time machine admitted."

Author note: I would like to enhance this scene somewhat to include more description of the legal library and of Jernumia and Larnon working together. This might also be an opportunity to drop some more hints about what she is thinking (without giving too much away, of course).

* * *

Colty lay in the instructor's seat at one side of a hexagonal table in the main Fargon conference room. To his left and slightly behind him a student stood beside the board. Four other students lay at the table, all waiting patiently as Colty made a few notes on the brikken pad clipped in front of him. Finally he looked up.

"Any other questions for Darnart?" He tilted his head first to one side and then the other. Hearing no response he tossed his ears and pushed himself back from the table slightly. He turned toward the board, scanning over the dense notation that covered it. "I have one." Darnart bobbed his head slightly. "Tangon's Lemma has a side condition," Colty continued, "how is that reconciled?"

"I thought you might ask about that, and I wasn't sure at first myself." Darnart turned to the board and extended his trunk to a formula near the top. "It's the resequencing done here. If you look at the proof of Tangon's Lemma you'll see that this accounts for the side condition. In effect it is equivalent."

Colty cocked his head slightly as if to get a better look and reflected. "Interesting," he said finally, "that's clever."

"Wait a moment," one of the other students called out. He flipped through a couple of pages open on the table before him. "I have the paper here, and it looks like the authors are only conjecturing that the resequencing is equivalent."

Colty pulled himself up to the table again and opened his copy of the paper. "Just conjecturing? Where do they say that?"

At that moment there was a kick at the door just before Dargon slid it partly open. Everyone turned to look at the intruder with varying mixtures of surprise and annoyance. "I'm sorry, Colty, to interrupt while you're in seminar," Dargon began, "but Ra'hel is on campus and wants to talk with you immediately. She's in her office."

"Thank you."

Dargon slid the door closed and Colty looked over the class. "Well, we are almost out of time anyway so why don't we stop here. Thank you, Darnart." The group briefly

stomped their feet as Darnart turned, with some relief, to erase the board.

Everyone gathered their papers together and returned them to their pouches. “Taskana? You are up next, hour 57:025 Parnon time. Yes?”

“That’s right, Colty.”

“Good.”

Colty made his way across the Yellow against the blowing Nermella. The rigat leaves whistled loudly over his head. When the breath of Jurita was strong few lingered on the seats and lawns. Aside from one or two others moving quickly along the walkways, the campus seemed deserted.

When he got to Cogart he went directly to Rachel’s office. The door was wide open and her office was more empty than usual. The few trinkets she had and even her photo sheets were gone. The air cooling unit was off. Colty was suddenly gripped with a deep sadness. Her office seemed so lonely and so vacant. He had a strange feeling that it had all been some kind of extended dream. Her arrival, the time they spent getting to know each other, her presence at the Juju feast, their explorations of Varnok... had any of that actually happened?

“I thought I saw you come in here.” Colty turned to see Jarnol standing at the door. “She left a message to tell you she’s in the hall.”

Colty bobbed his head briefly, and then without a word quickly made his way back toward the Cogart lecture hall.

The hall itself was empty except for Rachel’s bodyguard slumped in one of the seats. He took notice as Colty opened the door, watching him warily, but quickly returned to a state of profound boredom. Rachel was standing on the platform, her back to the empty space, writing on the board with the podium behind her. She turned as Colty came in.

“There you are! I was hoping I’d connect with you.”

Colty climbed up the steps of the platform, his eye drawn to the math sprawled out on the board written in the thin, curly style Rachel used. It was math he knew well. It

was his math.

“What are you doing?”

Rachel cocked her head at him and smiled slightly. “I’m trying to understand your paper.” She put the chalk in its holder and turning to the podium picked up the loose sheets there. “I’ve been working through your proof sketches, but I have to tell you, Colty, some of this is over my head.”

She held out a particular sheet in her hand and Colty took it from her, gripping the page with two of his tentacles. “Right here,” she said stepping beside Colty and pointing at his factoring theorem, “this seems central to the work but I’m having trouble putting it all together.”

“That is the trickiest part. That’s the part the journal editor didn’t like.”

Rachel walked over to the board and looked at several formula in a notation Colty didn’t recognize at all. He put the sheet back on the podium and joined her.

“What is this?” Colty asked.

“Remember how I told you all the proofs in our books are checked by machine? Well, to do that we must first write them in a special way. That’s what this is all about. I want to use our machines to check your proof.”

Colty looked over the notation for several moments. Although he wasn’t familiar with it, he could sense that it had logical structure. He lifted his trunk and touched a formula written in dunari style, then its isomorphic equivalent written in human style, and finally what he assumed was its equivalent in the new notation.

“I understand.”

He glanced over at Rachel and her eyes sparkled. “I think that you do, indeed,” she said with a smile. “If you translate your entire argument into our form, convert all the dunari parts, it will be a simple matter to run our automatic checkers over it. The methods are quite standard and well accepted.”

Colty fluttered. “Accepted by you maybe, but my reviewers, and my overseers for

that matter, want me to do just the opposite: remove all the human parts. As much as I'd love to see the proof checked by your machines, I don't see how that will help me to get it published."

Rachel turned toward Colty and kneeled down to be closer to his level. "What do you think about a change of venue?"

"A different journal?"

"I was thinking of, say, the *European Journal of Discrete Mathematics*. It's very prestigious and noted for publishing unusual papers."

Colty tilted his head to look at her with his right eye. "A human journal?"

"Why not? You can translate everything to our form, yes?"

"That would be simple."

"So the problem with mixed notation goes away. You would need to write a new section as a primer to co-sequence math since we've never heard of it before."

Colty shook his ears. "It sounds crazy."

Rachel laughed. "It is crazy, but I've been suggesting a lot of crazy things lately!"

He took a step back and tilted his head thoughtfully. "I wouldn't be able to resubmit to a Argentinian journal while the work was being reviewed by your journal, true?"

Rachel sat down on her back legs the way she did. "Yes, there are some restrictions. But the review won't take long. Maybe a couple of runions plus another runion in communication time. The proofs won't be questioned because of the machine checking. It will be all about the significance of the work and the clarity of your presentation."

Colty paused. "A three runion delay, not to mention preparation time... should your journal reject it, I'd never have time to resubmit here before my full status deadline."

Rachel didn't reply. Colty slowly walked to the front of the platform and looked out over the empty seats of the Cogart lecture hall. The Rujaran sun streamed through the back windows as it always did, filling the space with its warm, orange-red glow. After a moment he walked back to where Rachel was sitting. Tilting his head he looked closely

at her. “Would my work be reviewed on its merits?” he asked seriously.

She looked at him steadily in return. “That journal has a blind review process, Colty. They would not even know you are dunari. But, maybe I shouldn’t have brought this up. I can’t ask you to throw away your only chance to get it published here in time.”

“It’s fine. I won’t be able to get the work published here anyway. It was a fantasy. So in that respect it doesn’t matter. In fact, I’m grateful to you that there’s even this chance.” He clicked his teeth briefly. “I’ll take it.”

The two of them spent many arnets discussing the organization of the new paper. Rachel explained the details of the notation required for machine proof checking. Colty walked her through Nulari’s proofs and his own isomorphism. They filled and refilled the board several times, and made many notes on many pages.

“If you write up the new paper,” Rachel said, “I’ll get it transmitted to Earth right away. Unfortunately, I’m going to be off-world for a while. Rocolla is taking over my class for the rest of this term.”

“Where are you going?”

“It’s about Yartagard but, like I told you before, I’m not supposed to talk about it for some legal reason I don’t understand.”

* * *

Tusk crossed trunks with Jael and he affectionately caressed the trunk ridges of Jinna and Mart. There wasn’t much to say beyond what they had already said. Behind him, in a hanger of the Parnon base, was a relatively large human craft waiting for him.

Jael shuddered slightly. “Don’t get sick.” Tusk just swayed his head.

“Learn as much human language as you can,” Jinna said with a soft click, “so you can teach me.”

Tusk kneeled down to his son who wrapped his trunk around Tusk’s shoulder. “I wish I could tell my friends,” he said.

After several moments Rachel came up behind Tusk and stood slightly to the side waiting patiently. Jael eyed her uncertainly, and Tusk turned to see her. "I think that is my cue to get this started."

As Tusk turned to leave his family, Rachel spoke to them briefly. "We'll take care of him."

The hanger was strangely quiet. For the first time in history a dunari would enter a human spacecraft and leave Rujar. Yet there were no reporters and no crowds of people. Tusk had to plead to let even his family be there. Eventually ambassador Marshall needed to intervene. The IIB, and the Aratok lawyer decided discretion, if not outright secrecy, was necessary. This was strictly a legal matter, not a political bonanza nor a media event. If it didn't work, the public didn't need to know.

Tusk and Rachel walked together toward the rear of the craft where a ramp came down from a tall narrow doorway in the alien vehicle. Tusk resisted the urge to look back. He avoided looking at the dark space inside the mysterious door. Instead he focused on the two ambassadors, Marshall and Lucasa, standing near the bottom of the ramp.

"It's not too late to back out, Tusk," Lucas said when they were in ear shot, "we can likely find another way."

"No," Tusk replied, glancing up at the door, "I want this."

"We will abort the process and pull you out if there are problems," Marshall said. Tusk just swayed his head.

"I want to thank you again, Tom, for allowing this," Rachel said in English.

Marshall shook his head slightly and replied in English. *"You are lucky Earth is so far away. I am lucky that it is easier to ask for forgiveness than for permission."*

Tusk, who understood the exchange perfectly well, clicked his teeth slightly.

Just before ascending the ramp Tusk turned for a last look at his family, standing together by the wall. He raised his trunk and Mart did the same. Then, turning away again, he followed Rachel up the ramp toward the door. He was about to go where no

dunari had gone before.

Author note: Jernumia discovers here for the first time that Tusk has Forbin ancestry and she is upset about that. She worries that he will be seen as biased and thus unacceptable as an observing witness. She's also upset that this is the first time she found out about this issue. Of course it is too late to change the plan. However, it will hopefully cast uncertainty in the reader's mind about the outcome of her plan.

Authors note: Here I'm visualizing a scene with Colty and Joleia that shows a significant amount of time has passed. Otherwise the jump from Tusk leaving to the arrest of Narlock below is too abrupt. My thought was a scene showing Colty and Joleia honoring those who were killed at Yartagard (I'm thinking about how people put pictures of loved ones on a wall near where the twin towers collapsed in NYC on 9/11). This would also be an opportunity for Colty to update Joleia (really the reader) with how his work on the new paper is coming.

* * *

Narlock and his officer walked into the Parliament East Wing where various Parliamentary officials had their offices. They drew a few eyes as they went down the hall, but for the most part they were inconspicuous. They soon came to the door of the Limzar Association office.

Narlock took a breath and glanced toward his officer. "Be alert," he said, "don't underestimate him."

They entered and two interns watched them carefully as they approached the reception desk.

"It's important that I talk with Zarlon right away," Narlock said.

"Is he expecting you?"

"No."

Narlock waited for a moment and when it was obvious that he wasn't going to leave the receptionist picked up her phone and called into the inner office. In short order Narlock and his officer were invited inside.

"Narlock!" Zarlion greeted him as he stood up and came around to the front of his desk. "I do hope this is good news about the investigation."

"I think so," Narlock said.

"Would you like something to chew while we talk?"

"Not now. This is strictly an official visit."

"I understand."

Zarlion stretched his trunk toward some seats where all three of them could lay but Narlock did not move. Instead he regarded Zarlion closely. "By the authority vested in me by the Internal Investigation Bureau, I hereby place you under arrest for ordering the destruction of Yartagard." He nodded to his officer who stepped forward with a trunk binding ready.

"What?" Zarlion clicked his teeth. "Do you have any evidence to support such an outlandish claim?"

"All evidence will be presented according to due legal process," Narlock replied formally. He nodded to his officer again.

"If you please, sir," the officer said holding the trunk binding toward Zarlion.

"This... this is outrageous," Zarlion said. "I'm sure there is a misunderstanding. I'm not guilty of even a parking violation let alone this... this horrifying crime."

The officer took Zarlion's trunk and begin to slip it into the binding. Narlock opened his arrest order and held it up so Zarlion could see it.

"Are you sure you know what you're doing, Narlock?" Zarlion said. "You know I could make your life miserable once this is all cleared up."

Narlock shook his ears slightly. "I'm not concerned."

The officer tightened the strap of the binding around Zarlion's left front leg and hooked

the loop through his own trunk.

“Listen, this is an unnecessary embarrassment to my office,” Zarlou continued. “I’m happy to accompany you to the IIB center where we can get this cleared up, but for the sake of my staff can we do it without the binding?”

The officer looked at Narlock.

“No.”

Zarlou folded his ears back tightly and snorted as the officer led him back to the outer office. The interns and the receptionist all stood up in alarmed surprise to see the leader of the Limzar Association in bindings.

“Call my legal staff,” Zarlou barked.

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Jernumia had been in the National Court before, of course, but never at the prosecution desk, and certainly never as the primary. The seating behind and above the judges' table was packed shoulder to shoulder with political figures and industrial leaders. The balcony above the witness seat was overflowing with reporters and other media workers. Yet Jernumia stood steadily and scanned the crowd slowly. In the back, far above, in a space easily missed, she could see the human ambassador kneeling with Lucastanonia.

Across the way, at the defense desk, Zarlou was speaking with Pertonal, one of the most well known—and most expensive—defense advisers in the city. Jernumia caught his left eye briefly but he pretended not to notice.

Larno lay at the prosecution desk fussing with some papers.

"I can't find the bank statement," he said in a hushed but frantic tone.

Jernumia knelt beside him and opened a folder poking unobtrusively from between two others. "Here it is." Larno shook his head slightly and Jernumia rubbed his back.

She lay down next to him to help organize their materials one last time. Across the oval floor, brightly lit by shafts of sun coming through the sun windows, she could see Aratok's reservation. Haratol was there, as were several others from the firm. Even the Leemaster himself was there.

The officer of the court rose and walked to the center of the floor. He stood for a time while everyone settled. Finally he bent his left front knee and extended his trunk toward the door behind the raised front table.

“The Eminence.”

The Eminence entered wearing a garish yellow cloak topped with rubinum cords. His trunk was loosely wrapped in cloth and his legs were covered with richly patterned leggings. He took his seat at the table without ceremony. Then in formal language he intoned, “So begins the case of Zarloloti v. People. Let the judges enter.”

Plodding slowly down the aisle from the back came the three judges. All wore cloaks of impartiality, but each was lavishly decorated according to the education and experience of the wearer. They moved with a practiced shuffle projecting an air of unconcerned attention. Nobody spoke, moved, or hardly breathed as they took their seats across the oval floor from the Eminence.

“Zarloloti, come forward,” the Eminence commanded.

Rising from behind the defense desk Zarloloti walked with his usual confident gait to the middle of the floor where he stood in the bright light of the Rujaran sun facing the Eminence.

“You are charged with authorizing the destruction of Yartagard, of being a leader of the Junar, and of ultimate treason against Argenia and its free people. Are you guilty of these crimes?”

“I am not.”

“Then we shall hear evidence related to these claims, both supporting and contrary, so that judgement can be made. Zarloloti, you are compelled to take your seat against the charges leveled upon you. Do so now.”

Zarloloti gave the usual formal response, delivered in his usual oratorical style. “Your Eminence, I will show these charges are *groundless* and *false*, and by so doing clear the tarnish upon my name brought to me by People.” He walked over to the defendant seat and lay down defiantly.

The Eminence paused and appeared to look over some papers. “Advisers, stand before me.”

Jernumia and Perton rose and came forward. They stood side by side about a body-length apart, facing the Eminence with heads tilted to avoid each other's glance. Jernumia did her best to look tall.

"I have read your *suktinas*," the Eminence continued, "and we have an issue related to *en tempexia*. Perton, state your case."

While looking directly and only at the Eminence Perton began, "the prosecution wishes to bring testimony from a human. Yet the humans are not subject to Argenian law and so the testimony should be dismissed as irrelevant. I reference *Hurtur v. Killkaria* where legal precedent for this decision was handed down from this very court in *Arnoxium 21*."

The Eminence turned toward Jernumia. "I have reviewed the precedent. Do you have additional comments?"

"Yes, your Eminence."

She produced some documents from her pouch and passed them to the Eminence.

"These are records of the human's paychecks from Parnon University where she is currently legally and gainfully employed as a visiting professor."

Jernumia paused briefly and then continued in a clear voice.

"You will see that she pays taxes to the city of Parnon and to the government of Argenia like any citizen. Furthermore, here is a record of her bank account at the Bank of Central Argenia where she has been saving a majority of her income. Notice that she is receiving interest payments from the bank. In the case of *Parlilly v. Yarlat Sporting Goods*, a decision made by this court as well, a Forbin citizen was granted *witnearo en tempexia* based on his participation in the Argenian economy. I submit that my witness should thus be granted *en tempexia* status based on her similar participation."

When Jernumia ended Perton stepped forward. He rubbed his shoulder briefly with his trunk. "Despite my colleague's points, the key issue in *Hurtur v. Killkaria* is that of perjury protection. I submit that regardless of the human's participation in the Argenian

economy, this court is impotent when it comes to charging the human with perjury and thus its testimony, if allowed, would be worthless.”

The Eminence glanced toward Jernumia. She was ready. “The First Citizen of Argenia and the Ambassador of Earth have signed understandment papers whereby humans in Argenian territory agree to submit to Argenian Law.”

“Understandment papers do not constitute a treaty such as was in place between Forbin and Argenia at the time of Parlilly v. Yarat Sporting Goods,” Perton objected, “and anyway that understandment has never been tested.”

“Only because the humans are law abiding...”

“Enough!” barked the Eminence.

The two advisers stopped talking abruptly. The Eminence scanned over the papers Jernumia provided. After several long moments he tilted his head toward the two again. “Anything more?”

Jernumia hesitated. “I stand here.”

“As do I,” Perton said.

“Very well. I will review these comments,” the Eminence said, “we will resume in six arnets.”

Jernumia returned to the prosecution desk where she lay down in a slump. The trial had barely gotten started and already she was shaking.

“Good opening,” Larno said as he passed the next batch of papers to her.

Jernumia and Larno talked in soft voices while the rest of the court circulated about. Once or twice she looked up to see the human ambassador and Lucasa still sitting quietly. The arnets passed steadily... first six, then 12. Jernumia checked her watch often. Finally the officer of the court stood up and everyone returned quickly to their seats.

“The Eminence.”

The Eminence returned through the same door as before and ascended to his center

seat. He motioned with his trunk and Jernumia and Perton went forward.

“I have reviewed the expositions, and I find the argument of the prosecution incomplete.”

Jernumia felt her heart sink.

“However, the defense would have us believe the humans are no more than savages without any engagement in Argenian society at all. I am moved not so much by the prosecution’s arguments but rather instead by the public fact that the witness in question has suffered personally and yet, rather than taking counteraction on its own terms, it is here waiting to testify by legal means before this court. *Witnearo en tempexia* is granted.”

Whispers and a few scattered stomps broke out through the crowd. Jernumia clicked her teeth softly. “Thank you, Eminence.”

Perton turned and, as was customary, gave a slight nod toward Jernumia as they went back to their desks. Zarlon, still on the defendant seat, glared in the general direction of Perton.

“Please proceed,” the Eminence said.

Jernumia returned to the center of the floor, standing amid the pool of Rujarn sunlight. As was traditional when calling witnesses, she turned to face the audience. Zarlon seemed to be studying her carefully. “I call to the witness seat the human known as *Rachel*.”

The side door opened and Rachel walked in using the alien bipedal gait that had become well known. Then, for the first time in the history of the dunari, a creature from another world lay upon the witness seat of Argenia’s highest court. The crowd grew silent.

The Eminence turned toward Rachel. “Do you swear upon your immortal soul to here put the absolute truth before all deceptions?”

“Yes I do,” Rachel said seriously.

Jernumia stepped forward. “For the court, state your name and position.”

Her voice was soft and light, but loud and clear. “I am Rachel Spencer. Visiting professor at Parnon University.”

“Do you bring evidence related to this case?”

“Yes.”

“Please describe the nature of your evidence.”

“It is surveillance showing the accused ordering the destruction of Yartagard.”

Mumors of incredulous surprise swept over the court. Perton stepped forward and raised his trunk. “I seek *hutara*,” he said in a loud voice. Jernumia stepped aside without surprise.

“Yes, of course,” the Eminence said, “go ahead.”

Perton snorted slightly in Jernumia’s direction. He turned toward the Eminence. “The authorization of Yartagard’s destruction must obviously have been given before the event, which in turn occurred before the Initial Moment of the investigation. I believe even the prosecution stipulates this. Clearly the Rules of Yotal are at play. I thus proclaim the evidence out of order and request the witness withdraw at once.”

“Your Eminence,” Jernumia said, “I respond to *hutara* by saying that the Rules of Yotal do not apply in this case. The evidence you are about to see was gathered after the Initial Moment. I can provide testimony to that effect.”

“You play at words,” Perton said directly to Jernumia. “Your Eminence, please, unless the humans have technology that allows them to see the past...” he clicked his teeth with amused satisfaction.

“Rachel?” Jernumia said.

Rachel simply replied, “we have technology that allows us to see the past.”

The courtroom fell silent.

“... under certain circumstances.”

Jernumia continued, “I can and will bring other witnesses to the seat, Argenian witnesses, who can testify that the evidence we will present was gathered legally and appro-

priately. If it pleases the court I can do that now before continuing with this witness.”

Perton stood beside the desk. “Your Eminence, even if this is true, it was obviously gathered with a technique beyond our science. Our judges can not evaluate such evidence. It *must* be thrown out.”

Jernumia immediately pulled a sheet of paper from her pouch and slide it onto the top of the desk toward the Eminence. She gave a copy to Perton. “In Hunian vs the Province of Polot evidence gathered with microscopic techniques was admitted because the method used to gather the evidence was clearly explained to the judges.”

“I will request a counter-argument, of course,” Perton said glancing at the paper.

Jernumia did not reply but instead waited patiently for the Eminence to read the document. When he was finished she took another document from her pouch and passed it to the two of them. “In Nariptia vs Taganon scale analysis evidence was also admitted after it was explained. Notice in that case the defense also argued that the evidence would have been incomprehensible, yet now scale analysis is a common technique.”

“Scale analysis is one thing,” Perton said, “but time travel is entirely different. We are asking the judges *and* the Argenian people to understand a technology that is far beyond scale analysis.”

The Eminence reviewed the second document carefully and then put the papers down. Glancing at Jernumia he added, “You did your homework, adviser.” He reflected for a moment and then turned to Rachel. “Can you explain how this time travel works in a way that we can understand?”

“Yes, I think so,” Rachel said.

“Go ahead, I would like to hear this.”

Rachel turned to the court, addressing not just the advisers but everyone. It was as if she was giving a lecture back at Cogart, and she spoke with the voice of a teacher.

“About five runion ago a nuclear weapon was stolen from the Argenian government. Since then the light from that event have been steadily moving away from your planet.”

She shifted.

“We are a small band of humans far from home. We don’t have many resources. But one thing we do have is the Nitooli telescope. It is the most advanced optical instrument ever made by my people, and it is here, waiting to be installed. So we packed Nitooli into *Summer Breeze*, and outraced the light rushing from your world to deploy the telescope temporarily at a point several light runion away. Then, turning back toward Rujar, we captured the images of the crime as they sailed by.”

Rachel turned toward the Eminence. “When you see the stars you don’t see them as they are now, but instead as they were in the past. That is all there is to it.”

Perton rubbed his shoulder with his trunk. “It is still necessary to explain how your faster than light travel works,” he said, “since that technology is critical to your story.”

Jernumia interrupted. “Your Eminence, it is well known that the humans have faster than light travel. The precise mechanism of that technology need not be explained in order to make the method used to gather this legal evidence understandable.”

This time the Eminence was swift. “I concur. Adviser, present your evidence.”

“Thank you,” Jernumia said with a quick click of her teeth. There were more murmurs in the audience. Zarlon remained emotionless. Jernumia looked at Rachel and held her trunk out slightly. “Rachel, if you please?”

Rachel hesitated. “May I rise?” She glanced toward the Eminence.

“You may,” he said, “but you are still bound by your oath until you are formally released.”

Rachel stood up and walked over to a flat, gray screen positioned along one wall. She took her machine from her pouch and unfolded it. She also turned on the projection system and soon the screen was filled with a view of Rujar unlike any the dunari had ever seen. It was a view of Rujar from space. The image of the entire daylight side of the world filled the screen. The tans and browns of the great deserts faded to deep yellow red toward the Narlur. Several seas were plainly visible but there was no obvious

evidence of dunari activity. There were no cities, no roads, and no Forbin or Argenia.

“These images are from the date when the weapon was stolen.” Rachel touched her machine and the image grew larger as if they were falling toward the world from a great height. As the view zoomed in the detail increased. There were clouds over the Varsynthia valley and a bloom of algae in the Argenian Sea. Around the edge of the screen were various human symbols, incomprehensible to everyone. As the image grew the symbols changed, too quickly to read.

“Notice the Argenian clock in the corner,” Rachel said pointing out what looked like a drawing of a clock. The time advanced at a normal rate but was several runion in the past. “It shows the time we are seeing,” she explained.

She focused on the Shunal valley descending lower and lower until roads started to become visible as thin lines. It felt like they were falling rapidly, and soon the city of Shunalia started to take shape. Briefly some lines flashed on the screen overlaying the view but they disappeared as quickly as they came. “That’s just our pattern recognizer,” Rachel explained. “It’s trying to align the image with the map of the area we got from the IIB before we left.”

The city continued to grow and soon individual buildings started to come into view. The descent slowed as the buildings of the military base in Shunalia became recognizable. The pattern overlay flashed on the screen again and a few symbols appeared next to some of the buildings and roads. Then a circle appeared in the center of the screen that surrounded a single truck.

“That’s the truck containing the weapon,” Rachel said.

The court watched as the truck pulled away from the base and headed out of town. The view followed the truck as if from high above, looking down on the small vehicle as it crawled along the road. They watched as the truck was ambushed and as the attackers murdered the drivers and loaded the weapon into another truck.

“Fortunately the truck stayed under clear skies the entire time,” Rachel said. “We

were able to follow it to its destination. It was a long trip but I can turn over the entire sequence to the court for detailed examination.”

“As you must,” the Eminence said.

Rachel touched her machine. “I will skip to the part related to this trial.” Some alien symbols appeared in the middle of the screen and Rachel seemed to adjust them. The view shifted and again they were flying over the truck only this time they were clearly in a very different part of the world.

The truck stopped at small clearing with another car nearby and a person standing beside the car waiting. That person stepped forward as the truck parked and two dunari climbed out. Rachel zoomed in even more closely until the view appeared to be hovering just over the heads of those who were present. When the men got close to each other they paused and then the three of them looked up so their faces were all directly visible. The man who had been waiting was clearly Zarlon. The likeness was unmistakable.

A murmur swept over the court. Perton studied the screen but did not say anything.

Rachel paused the video and pointed at Zarlon on the screen. “We adapted our pattern matching system to recognize dunari faces and we believe with 99.97% certainty that this is the accused.”

“I don’t think human technology is necessary,” Jernumia said, “to convince us of who that is. We have seen him on television often enough.”

Rachel started the video again and the men on the ground began to move. They appeared to construct a makeshift circle using stones from a nearby gravel pile.

“Explain why they are blurry when they move,” Jernumia said.

Rachel nodded. “Light comes in . . . particles that we call *photons*. There aren’t that many photons reflected from small objects and they spread out as they travel. After several light runion they are very sparse. To get a good image we have to combine information from many different photons, a process we call photon integration. That process takes time. If the objects are small or if they move, the integration doesn’t have

time to work and the view is blurry.”

Finally the men completed their work and Zarlion went to his pouch, laying on top of his car, and took out what appeared to be a piece of paper. It wasn't easy to see because of the blurring effect. Zarlion walked toward the circle and, apparently kneeling down, put the paper on the ground at the center.

“Here we got very lucky,” Rachel said. She made a few adjustments on her machine and the view began to tighten up on the small fuzzy square of yellow-white paper.

“They put this paper face up and held down the edges with stones,” Rachel said, “and then they just left it there for a long time.”

Gradually the view zoomed more closely and the fuzzy square grew.

“And so,” Rachel continued, “pushing our technology to its very limit, we trained the eye of Nitooli on that paper, and let photon integration do its work. . .”

The fuzzy square now filled the screen but it was little more than an amorphous blob at first. The court was silent as the clock in the corner of the display ticked. Gradually dusky patches appeared and, as the moments passed, they slowly took form. It was as if someone was focusing a great lens, bringing the subject into clear view in small increments. The dusky patches took shape and lines appeared. The lines became curves. The curves became letters. The letters became words written in a ceremonial script.

Rachel touched her machine and the clock stopped. She turned to the court. “Now we can read it,” she said quietly.

Jernumia stepped forward. This was her moment. “This is the paper taken by the accused from his own pouch.” She turned toward Rachel. “As I explained to you earlier, in our legal system it is important, in cases like this, for a witness to utter significant evidence verbally. Rachel, your Argenian is quite good. Can you read this message?”

“I can.”

“Please do so.”

Rachel turned to look at the screen. She paused briefly and then with her light, alien

voice said, “I, the Jahar of the Junar, proclaim these words: for the glory of the Seven, the city of Yartagard and...”

Rachel paused. She shook her head slightly. “... and all the inhabitants therein are to be... erased... from this world.”

Rachel shook slightly and her voice broke. “So speaks Jurita.” She rubbed her eyes quickly and then ran her fingers through her hair.

Jernumia walked over to her. “Are you all right?” she said softly.

“Yes,” Rachel replied, “I’m fine.”

Jernumia addressed the court as a whole, this time in a loud voice. “I will bring testimony that this is the standard Junar assassination note. Except in this case it names the entire city of Yartagard as the target of the assassination.”

Rachel started the video again and the view pulled back. The court watched as Zarlion and the other men executed the confirmation ritual. The court watched as Zarlion used the ceremonial knife to cut between his scales. The court watched as he dripped his own blood onto the yellow white paper. Finally, the men parted ways and the truck continued on its route while the court watched. Rachel stopped the video.

“We followed the truck all the way to Yartagard,” Rachel said, “where we saw the weapon being unloaded to a warehouse for a clothing store in the center of the city.”

“Thank you Rachel,” Jernumia said, “please return to the witness seat.”

Perton shook his ears slightly and came forward toward the center of the floor. He faced Rachel and turned his right eye toward her. “So you are claiming that these pictures were taken from several *light runion* away?”

“Yes.”

“And you expect us to believe that it is possible to see such detail from that distance?”

Rachel tossed her head slightly and glared at Perton. “Nitooli can see lakes and rivers on planets on the other side of the galaxy. So, yes, it can see the detail I’ve shown here when it’s as close as a few *light runion*.”

“That is all very well for you to say,” Perton turned toward the audience and spoke in a loud voice, “but we need *proof*.”

He turned back toward Rachel. “Do you have image processing technology?”

“Yes.”

“Have these images been processed?”

Rachel hesitated. “Yes, but only. . .”

“And so how do we know these images haven’t been entirely fabricated?”

Jernumia called out suddenly, “Eminence, the adviser is interrupting the witness’s testimony.”

The Eminence turned his right eye briefly toward Perton and then told Rachel to continue.

“I only wished to say that the images have been processed to make them visually accessible. The data coming off the telescope are not images in the usual sense. But the images I’ve shown here are a true accounting of reality.”

Perton addressed the audience again, “Eminence, despite what we have seen, this evidence is meaningless. We have no assurance the images are real. I remind you that the witness may have a vendetta against the accused.”

Rachel replied speaking just as loudly. “The gathering of this evidence is not my doing alone. It was gathered with the approval of ambassador Marshall and done by the Nitooli technical team. I’m merely presenting. . .”

Jernumia gestured with her trunk and Rachel fell silent.

“My adversary’s point is well taken,” Jernumia continued, “if his questioning is complete I am prepared to call an observing witness to add credibility to this evidence.”

“That’s the real point,” Perton said directly to Jernumia, “your ‘observing witness’. Then let us get to it.”

With the Eminence’s permission Rachel withdrew and Jernumia once again faced the audience. “I call to the witness seat the head linguist at the Office of Alien Affairs,

Tuskara.” The sounds of murmurs filled the court as Tusk came into the bright oval. He was focused on reaching the witness seat without looking around.

Immediately Perton slapped a document on the desk before the Eminence and then passed a copy to Jernumia. “My counter-argument,” he said simply.

Jernumia scanned the document quickly. She had already seen the preliminary version. “I will point out, that Tuskara is a full bred-and-raised citizen of Argenia in good standing.”

Perton tilted his right eye toward her. “Do you deny that his father is fully Forbin?”

“Of course not. Tuskara’s father was granted citizenship by the First Citizen himself for his valuable contribution to the Argenian war effort in the Harkite War.” Jernumia put her rebuttal on the Eminence’s desk beside the counter argument. The Eminence arranged the papers carefully so they were both in front of him, as if he could read them both simultaneously.

“My rebuttal enumerates many instances where individuals with Forbin ancestry, including some bred-and-raised Argenians, have testified in Argenian courts.”

“It does not matter,” Perton said, “The fact remains that this witness may be motivated to indict my client in order to protect his homeland from scrutiny. It is no secret that Forbin has been informally accused of the crime we are here debating.”

“This is his homeland!”

The Eminence raised his trunk and the court fell silent.

“Tuskara,” the Eminence said, “recall that you are oathed. Do you owe your allegiance to Argenia?”

Tusk glanced toward the Eminence and then at Jernumia. He turned his left eye to the audience.

“No.”

Jernumia took a step forward with a flutter. Perton clicked.

“I owe my allegiance to all dunari,” Tusk said, “and it is for them that I am here

ready to reveal the truth.”

Perton shook his ears. “The witness has all but admitted *rustara*. He must withdraw!”

“It does not matter,” Tusk continued, “who I am. The destruction of Yartagard is a crime against us all. It only matters that I am dunari.”

Jernumia gestured with her trunk briefly, but paused.

“Who you are may not matter to you,” the Eminence said, “but this is an Argenian court and so it does matter to us.”

Jernumia lept forward. “Eminence, in... Tagonally v. Rostan, Arnoxium 8, the genocide of the Endless War was deemed, by this very court, to be a crime against all dunari. Surely this court could make that determination again.”

“You are desperate now,” Perton said, “doing such a thing would amount to saying that war itself was a crime against all dunari.”

The Eminence looked tired. He spoke directly to the two advisers. “I’m interested in the reliability of this witness, not in making broad philosophical statements.”

“Then please review my rebuttal,” Jernumia said, “all the precedent is there.”

The Eminence dismissed the advisers and called for a hiatus. Jernumia returned to the prosecution desk. Larno was making some notes.

“Tagonally v. Rostan was in Arnoxium 9,” he said softly to Jernumia.

She didn’t reply. Instead she watched Perton pace in front of the defense desk. Zarlou sat impassively on the defense seat. He could have been a statue. Jernumia always avoided looking at the accused. It wasn’t her business. She constructed her cases based on evidence, facts, and the rule of law. How the accused looked didn’t matter. Yet she found herself drawn to Zarlou. The quiet stare from his hollow eyes fascinated her.

Finally the Eminence returned. He took his seat as Jernumia and Perton stepped forward again.

“I have read the arguments. I am impressed by the witness’s military history. Regardless of what me might think about Forbin, this witness satisfies all criteria for an

observing witness. I grant him validity.”

There was some stomping of feet. Perton shook his head slightly. Jernumia exhaled. Had she been holding her breath? She walked over to the witness seat. It would be easy now.

“Tuskara,” she said, “you are an observing witness. Tell us what you saw.”

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Colty stood outside his office, the door ajar, talking with a student about a recent assignment. He cradled the student's paper in his trunk and scanned it with his left eye.

"You should use the proof of the Numlis Theorem that I did in class as a guide. If you use the same technique here it goes through easily."

"Yes, but this should work, right?"

Colty fluttered slightly. "I think you're getting into trouble when you reduce the initial equations. That throws away important information that I'm fairly sure you'll need later."

The phone in Colty's office started to chime. He returned the paper to the student. "Look at Numlis again. That will clarify what I'm talking about."

"Okay, Sar. C."

Colty went into his office and closed the door. He quickly stepped over to the phone.

"Yes, hello?"

The line had a strange hiss. The voice on the other end sounded as if it was coming through a long tube. Yet it was soft and light and unmistakable. "Colty?"

"Yes... is that you Ra'hel? Are you back in Parnon?"

She laughed. "No, no. I'm actually calling from the observatory. We found something important and we want to talk to you about it."

Colty paused as he took in the fact that he was receiving a phone call from another planet. "What did you find?"

“It’s related to your work on stellating co-sequences but it would be easier to show you. Can you get to Lungast? It would be much better for us to talk over the Link.”

Colty reached his trunk into the top tray of his disk and found his schedule book. “I could be there mid-runion.”

“Yes, perfect,” Rachel said.

Immediately after disconnecting the call, Colty arranged for train tickets and contacted Dargon for assistance covering a class. “I can give them a reading assignment if you can’t do it,” he told Dargon, but Dargon was happy to help.

“What is it about?” he asked with genuine curiosity.

“Stellating co-sequences.”

The train ride to Lungast was uneventful. It was scenic in some places and dreary in others. There was rain across The Flats and Colty spent much of that part of the ride reading. Originally he had thought to review material on co-sequences but there was no point in that. Colty was the foremost expert on the subject on two worlds. He knew more about co-sequences than any dunari who had ever lived. Instead he read a book about the Mezanic composers Joleia had given him just before he left.

“You need a hobby,” she had told him.

At Lungast Colty was met by a smartly dressed military officer and immediately led to a car parked directly in front of the station. It was surprisingly luxurious. Colty expected some sort of combat-ready vehicle but he supposed that was silly. He was just a university instructor being driven from the Lungast train station to the base, not a general going to a battle front.

Colty had never been in Lungast before. The town was larger than he expected. It was also closer to the Narlar than he was used to. The sun hung low over the rooftops and the air felt a bit chilly.

The car turned at a surprisingly unobtrusive sign for the base. Along the road was a collection of tents, mobile homes, and even some temporary shacks. A few people were

outside, walking along the roadway or laying on the rough grass. They eyed the car suspiciously. Colty could see several signs saying things like, “They are not here to help us,” or, “Be careful. Jurita is listening.”

“What’s this all about?” Colty asked the driver.

“People protesting the Link.”

“After all these reunion?”

“It was much worse earlier. I used to get an armed escort.”

Colty looked out the window at the people. They looked tired. They were dedicated to their cause, but what cause? Didn’t they realize that no matter what they did the humans would be a part of dunari life from now on? Colty wondered if any of them ever saw a human in the flesh much less spoke to one.

The ramshackle collection of tents and mobile homes disappeared behind them as they approached the entrance gate for the base. The car stopped and the guards inspected the driver’s papers.

“Transporting Sar. Coltinarly from the train station,” he said, “to see Captain Charkonaless’s group.”

The guard asked Colty for identification. He looked over the papers on a clipboard he had hanging around his neck. He inspected the vehicle. Finally he signaled to the booth and the gate opened.

When they reached the main facility the driver parked the car immediately by the front door. He got out and escorted Colty into the building, leading him down the hall and up the ramp. Finally they came to a door with an engraved plaque saying “Captain Charkonaless, Director of Link Communication.” When they went inside the secretary looked up.

“Hi Jenno,” the driver said. “Sar. Coltinarly here for the Captain.”

Colty was told to go right in. He opened the inner door and found a spacious, attractively furnished office. Two windows were open and a pleasant breeze was gently moving

through the room.

“Sar. Coltinarly!” Chark got up from his desk and greeted his visitor warmly. The two men clasped trunks. “So glad you could come. They seem very intent on talking with you.”

“Thanks,” Colty said. “Do you know what it’s about?”

“Not really. I’m just an engineer. I don’t usually participate in the meetings. Don’t you know?”

“Ra’hel was a little enigmatic when she spoke with me.”

Chark looked at the clock. “You’ll know soon enough. We should go to the conference room to see how they are coming along with the setup.” Chark put his trunk on Colty’s shoulder and clicked his teeth. “It’s not like any conference room you’ve ever seen.”

Chark led Colty back down the hall to the narrow ramp. “This might be the first time a non-government official has used the Link,” Chark said. “So far it’s all been people from the ambassador’s office, Parliamentary delegates, and the like, even the First Citizen. I’m glad to see them branching out.” Chark turned to face Colty as he walked, side stepping down the hall. “There is a similar facility in Forbin and we’ve used the Link for our own dunari purposes as well.”

They came to an unassuming door. Inside was a small waiting room. There were windows on one wall, a counter staffed by a military receptionist, a number of seats, and a desk in the corner.

“Shall we go in?” Chark asked. He gestured toward a simple door next to the reception counter. There was a yellow light above it.

When they entered Colty found himself in a triangular room. The floor seemed to be made of dark gray tiles with the outline of a red square on each tile. The walls and ceiling were also dark gray and almost completely blank. Along the wall, running all around the room, was a single red line. In the walls opposite from where they came in were two tall, narrow doors of the sort a human might find comfortable.

At first Colty did not see anything remarkable about the room, aside from its unusual shape, but then he noticed that the red lines on the walls and floor were not painted as he had assumed at first. The color was a glow from the material itself. Even the lights in the ceiling were just glowing patches and not ordinary artificial light fixtures.

Near the middle of the room stood a young dunari facing a tall human standing slightly to his left. When Chark and Colty entered the human gestured toward them and the dunari turned around.

“Oh. I didn’t hear you come in,” he said.

“How is it going?” Chark asked. He introduced the young man as Tarmala.

“Fine on our end. There was a little trouble with the Nermia connection.”

Chark turned toward Colty. “It’s a super-luminal connection to Nermia. They are always a bit finicky.”

“It’s all set now,” Tarmala said. “Just a minor synchronization thing. Our equipment is running fine.”

“Our equipment?” Colty asked with surprise.

“Not all of it,” said Chark clicking his teeth. “The humans provide the end point hardware and data codecs but we still use good old radio power amplifiers to boost the signal up to their communications network.”

At that moment the door to the right opened and Rachel walked in. She was wearing green clothing with black trim that covered her entire body. It was a style Colty had never seen before and he found it rather striking.

“Ra’hel,” he said with pleasure. He walked quickly toward her but she froze. Suddenly a grid of red lines appeared in the air in front of Colty’s face and he stopped abruptly.

“Be careful, Colty,” Rachel said. She put up her hands as if to push him away even as the red grid faded.

Chark walked up behind Colty and held up his trunk. With a quick motion he swung it in Rachel’s direction and the red grid appeared again, very brightly. His trunk thudded

against something hard even though it appeared to Colty to be stopping in thin air.

“It’s a wall,” Chark explained. “Just like over there.” He pointed to the dark gray wall behind them with the door through which they came in. “The red lines appear as a warning to stop people from accidentally walking into it.”

Rachel stepped forward so that she was, or seemed to be, standing right next to Colty. “I’m at Nitooli,” she said. She pointed to the other side of the room where the human who had been speaking to Tarmala was still standing. “That’s *Golden Light*.”

“*Hello, Rachel,*” the other human said with a thick accent.

“This is amazing,” Colty said. He looked Rachel over closely. “It’s as if you are standing right here.” Tentatively he held up his trunk and touched the wall in front of him. It felt smooth and cool.

The other human chattered something and Rachel turned slightly and spoke a few words in her native language as well. Colty shivered. To hear her use her strange language still made her seem very alien.

The other human left. “Everything is set and your meeting time is about to begin,” Chark said. He and Tarmala also left, leaving just Colty and Rachel standing side by side and yet millions of karnons apart.

“How have you been?” Colty asked.

“I’m doing fine,”

Colty touched the wall between them again, just to check if it was really there. He considered telling Rachel that he had missed her but somehow that didn’t seem quite appropriate.

“Can you use this technology to communicate with Earth?” Colty asked.

“It’s too far away,” Rachel said. “The delay is much too great even with our super-luminal technology.”

Suddenly the door on the *Golden Light* side opened and in walked a very tall human. At least he seemed very tall to Colty.

“*Sorry,*” he said in Argenian. “*I delayed.*”

“Ah, good,” Rachel said. “Colty, let me introduce Brendon. He’s the computational biologist you spoke with before.”

Brendon put a translation unit behind his ear and seemed to adjust it slightly. When he spoke again he did not move his lips but instead his words were beautifully accented and synthesized Argenian.

“I know people find this a little strange, but my Argenian isn’t good enough yet to do without it.”

Rachel introduced Colty, and Brendon seemed very pleased.

“I’m honored to finally meet you, Sar. Coltinarly.”

Rachel started the discussion, speaking mostly to Colty. “I’m going to show you a map, of sorts. To render it properly I’ll have to dim the lights but I won’t dim them as much as usual for your comfort.”

She took a couple of steps back and so did Brendon. Colty followed their lead, uncertain of what was going to happen.

“Francine,” Rachel said, “show the summary map in dark background mode using integrated H-D visual spectrum. Split across sites and keep ambient light at medium.”

A female dunari voice, speaking Argenian seemed to come out of nowhere. “Understood. Computing view...” After a few moments the voice spoke again, “Completed.” The lights faded slightly and suddenly a galaxy appeared.

Colty gasped from the surprise like a small child. Floating in the air around him was a huge disk of stars. It filled the room, spanning all three locations smoothly as if it was just one large space as it appeared to be.

The detail was fantastic. What at first Colty thought was only clouds of light were actually, upon closer examination, millions or even billions of individual points. In the center of the space was a huge central bulge. A long, thick bar of stars extended from either side of the center and two, great arms extended from the ends of the bar to wrap

in opposite directions around the combined room. Many smaller spiral arms also could be seen. Colty reached out to touch the stars but there was nothing solid, only light.

“This is our galaxy,” Rachel said. “The map is as accurate as we can make it but the sections on the far side of the center are much less clear.”

Rachel walked into the center of the space, wading through the stars the way a person might wade into a lake. She seemed to be in her element, at home both with the technology and with the galaxy as well.

“There are highly compact spherical clusters that we call globular clusters. They mostly orbit in a halo around the galaxy as a whole. Francine, brighten all known globular clusters.”

Many bright dots appeared like a swarm of insects buzzing around the galaxy’s disk.

“As you know, I came to Rujar to measure the orbits of these clusters. I’m particularly interested in the orbits of clusters close to the galactic center where the effects of the central mass are the greatest. Francine, brighten only the globulars in data set 1737-295.”

The swarm of insects faded into the background while a handful of bright dots remained about the central bar.

“Francine,” Rachel continued, “show projected orbits of the 1737-295 globulars using recent data taken from the Nitooli Observatory.”

The soft voice replied, “Analysis of observations incomplete. What confidence factor should I use?”

“Show only orbits at 90% confidence or higher.”

Graceful arcing green lines appeared circling the central bar. Each line passed through a single bright dot and Colty assumed it indicated the path that cluster took as it moved about the galaxy. The lines went up rising out of the disk, swinging over the central bar, and then diving back down and under. Because the main spiral arms started at the bar’s ends, there was a significant, largely empty space on either side of the bar. It was

through that space these clusters moved.

Rachel waded up to the orbits and pointed at one of them with her finger. “There is nothing obviously out of the ordinary here,” she said. “Yet these clusters all move in a largely similar orbit that happens to pass right between the main spiral arms.” Colty tentatively walked out into the sea of stars to join her. He wasn’t sure exactly where this was going, but it was fascinating in any case. “Yet there is something very strange going on here,” she continued. “Francine, show *Sagittarius A-star*.”

A bright green dot appeared at what seemed to be the very center of the galaxy. It was surrounded by six short green lines that helped to draw attention to its location.

“Okay,” Rachel said. “For the first time, thanks to Nitooli’s data, combined with data from several other observatories, we were able to observe precise three dimensional locations of clusters on the far side of the central black hole.”

“What, exactly, is a ‘black hole?’ ” Colty asked.

“They are highly compressed stars. They are unusual objects, but created by natural means.”

“Most of the time,” Brendon said.

Rachel didn’t react to Brendon’s comment. “Francine,” she said, “apply a Larkin normalization to the semi-major axis distances of the 1737-295 clusters, and show the normalized values.”

Small numbers appeared next to each orbit but Rachel wasn’t satisfied by that. “Francine, display the previous results in tabular form and show Sar. Coltinarly using Argenian notation.”

A rectangle of light appeared before Colty. He twisted slightly so that he could view the information with his left eye. He didn’t have to look long. He recognized the numbers immediately. It was the eleventh order stellating co-sequence. He looked up quickly, his ears spread.

“And now you know,” Rachel said, “why you are here.”

“Could it be some kind of coincidence?” Colty asked.

“Impossible,” Rachel said. “Stellar orbits around the galaxy are chaotic. Any pattern like that would degrade after a few million years. The chances of us being here to see it would be negligible.”

“But if these orbits are not degrading,” Brendon said, “someone is holding them there.”

There was a pause and then Rachel said, “Francine, remove map and restore lighting.”

Colty paced back and forth across the room. Brendon said, “I now agree with Rachel. Some intelligence is responsible for both the Kessler genome fragments and for the orbits of the 295 globulars. Whoever or whatever they are, they seem to be fond of your mathematics, Sar. Coltinarily. The question is: why?”

Colty hardly heard him. “Francine,” he said without even thinking, “show me again the previously computed values.” The illuminated rectangle appeared before him and Colty stopped to study it more closely.

“This is the TARS variant of the eleventh order co-sequence,” he said.

“Yes,” said Rachel, “definitely. What is significant about that?”

“Well,” he began. “You mentioned that the non-coding genome in Kessler might be a compressed message. I’ve been reading about information compression, and it occurred to me that stellating co-sequences might form the basis for a very aggressive compression method.”

Rachel and Brendon glanced at each other. “Go on,” Brendon said.

“I . . . I haven’t worked out the details. I’m not even sure it works at all. If it does, the behavior depends on the order. Second order co-sequences would produce an identity compression, third order co-sequences would produce some compression, and so on. The eleventh order co-sequence . . . well, that could potentially produce a huge compression.”

“Jurita’s Witness,” Rachel said softly.

“If you’re right,” Brendon said, “then the key to reading the message might be in

these orbital observations Rachel's group is doing.”

“It won't be helpful,” Colty said. “By the time you reach the eleventh order, the number of calculations required to recover the information would be vast. It's totally infeasible.”

Brendon leaned forward and put his hand on the invisible wall, the red grid flashed momentarily. “Exactly how many calculations are we talking about?”

“I don't know for sure,” Colty said. “I'm just starting this line of investigation.”

“Colty,” Rachel said, “we have machines on Earth that are capable of extremely fast computation. It's not outside the bounds of possibility that we could do the calculations needed. We would need to know the details.”

Colty paced back and forth again. “Unfortunately the unclassified dunari literature on information compression is sparse. I feel like I'm having to derive basic results in that field in order to make any progress.”

“It might be good if you came to Earth,” Rachel said.

“What?”

“I agree,” said Brendon, “we need to continue this investigation in the Sol system in any case to have easier access to the master genomic database. Also the computational resources on Earth make the computer on *Golden Light* look like an abacus.”

“And we need you, Colty,” Rachel continued, “we have the technology to gather the message but it's your mathematics that will allow us to decode it.”

Colty felt overwhelmed. “I... I... I'm not sure what to say. There is a lot to... consider. Do you think it really is a message, then?”

“It has to be,” said Brendon.

The two humans and one dunari continued talking about their collaboration and how it might be arranged. How long they talked Colty wasn't quite sure. There were no clocks and anyway he was too distracted by the revelations that had come forth. The idea that an incredibly powerful race might be sending them a message embedded in

every living cell of their bodies was overwhelming enough. The idea of Colty going to Earth to collaborate with two human researchers trying to read that message was overwhelming on top of that.

When the meeting finally drew to a close Brendon said his goodbyes and Colty was about to leave as well.

Rachel called out to him. "If you have a moment, I'd like to show you something."

"Yes, certainly," Colty replied.

"Francine, access my personal storage."

"Additional authentication required." A dark rectangular area appeared before Rachel and she touched it a few times with her fingers and closed her eyes momentarily in concentration.

"Access granted."

"Francine, show the image entitled 'Cannon Mountain, July 2275.' "

Suddenly the world changed. Colty almost fell over he was so disoriented. All the walls and even the ceiling and floor seemed to vanish. Colty found himself standing on, or maybe floating just above, what looked like green grass beside a lake. Rising up on either side of the lake were steep slopes covered with green trees. Colty spun around and saw looming behind him a huge cliff of grey rock, ringed with scruffy green. Overhead white clouds drifted in a dark sky with a bright yellow sun.

Rachel was there too, standing on the grass beside him and looking out over the water. She turned toward him. "This is Earth," she said. She pointed toward the water. "That's Profile Lake, and that..." she pointed up at the cliff, "is Cannon Mountain."

Colty took a few steps as if to get a better view of the cliff but suddenly a red grid appeared in the air in front of him. He stopped and clicked his teeth. He turned back toward Rachel. "This is incredible."

"I live not far from here," Rachel said. She pointed down the valley between the steeply rising slopes. "That way 100 karnons or so. This is a kind of park, reserved for

its natural beauty.”

“There is so much green.” Colty looked at the strange yellow sun, unnaturally high in the sky, and at the strange green trees. “It seems so alien.”

“Just as Rujar seemed to me at first.”

“It is beautiful, though.” Colty turned toward his friend but she was looking across the water again. She had a strange expression on her face.

“I miss my home,” she said softly. She sighed. “Francine, close image.”

The world changed again. Now it was just the two of them in a small triangular room with dark gray walls and thin red squares on the floor. Colty walked over to Rachel but she seemed very somber.

“I will see you again when you return to Parnon,” he said.

“I look forward to that,” she replied. She sighed and said her final goodbye. The two turned toward their respective doors. Rachel paused and said, “Francine, close Link.” The room shrank. Where once Rachel stood there was now only a blank, gray wall. Colty stepped into the waiting room. Once again he was on Rujar, in the city of Lungast.

Chark was laying on a seat waiting for him. “How did it go?” he asked. Colty didn’t answer right away. “It’s amazing technology,” Chark continued.

“Yes,” Colty said. He was lost in thought. The technology didn’t matter. What mattered was what came next.

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Colty felt strangely relaxed on the trip back to Parnon. He thought about the meeting. He thought about going to Earth. He thought about Joleia. Going to Earth would be exciting beyond imagining, yet the idea saddened him as well. Time with Joleia was exciting too in a different way.

The sun flashed behind the buildings beside the tracks as the train raced by. Colty watched it carefully. Laying on the seat next to him was a small child in farth-sleep. His mother was on the other side of the aisle reading. Colty looked at the sleeping boy and clicked his teeth. Perhaps you will also go to Earth, he thought. Your generation will travel in space.

The mother tapped her foot gently as she read. Perhaps feeling Colty's eye on her, she looked up. Colty swayed his head slightly and she clicked her teeth politely. He turned again to watch the world go by outside the window. Everything seemed the same and yet everything was different. The future had arrived. The world of the dunari had been transformed and most of them didn't even know.

When Colty got back to Parnon he found a note taped to the door of his apartment. "Welcome back," it said, "let's meet for dinner at 80:100, Parnon time. You know the place. Touches... Joleia."

Colty just had time to unpack and then stop by the office to check his mail before walking over to Dolarta's. The air seemed fresh, a little cooler than usual, and the Nermella was little more than a breeze. The Rigat trees along the Yellow stood nearly

in silence with only the occasional rattle as a reminder of their presence.

Dolarta's was quiet as well. Perhaps the nice weather had encouraged people to spend time outside. Colty did not have to wait long. "Your other party is already here," the host told him right away. Colty followed him as he made his way across the restaurant floor, winding around the various privacy partitions. Eventually they came to a small partition in the back overlooking the Varsynthia through the sunlight branches of a rigat tree. Joleia was there and she stood up in greeting.

"So good to see you," she said as they crossed trunks. The host gave Colty a menu and then left them alone. The two wrapped their trunks together and let their tentacles caress their scales. Joleia was dressed in a lovely orange smock with diamond clips. They briefly touched their trunk ridges.

"It's good to see you also, *tinka*," Colty replied. They lay down again and Colty took a sip of juice from the cup beside his place.

"How was the meeting? What did Rachel want?"

Colty gently flapped his ears. He then started to tell Joleia about orbiting spherical clusters, TARS co-sequences, and compression methods. Joleia listened attentively but Colty stopped himself. "I don't mean to go on about all those details," he said finally.

She swayed her head. "It's fine," she said. "I don't understand the technical stuff, but I get the general idea. Someone is sending us a message."

"It appears so."

"Using your math."

"The math I discovered, yes."

"Who is sending the message?" Joleia asked.

Colty shrugged. "We have no idea. Whoever it is, they can control the orbits of star clusters so they must be incredibly powerful."

Joliea reflected for a moment and then tilted her head slightly. "Jurita could do it."

Her comment took Colty by surprise and he wasn't sure how to respond. He always

understood Jurita to be a symbol, a kind of moral guidepost or a source of comfort and inspiration. Despite the stories, the real physical world was surely just the work of mindless physical laws. However, Colty never imagined, during his musings as a young adult, that he would ever be faced with something like this.

“You’re right,” he said finally, “I’m sure She could.”

Joliea put her trunk against his and they again entwined tentacles. “And the humans need you and your math to help them figure this message out.”

Colty folded his ears back and lowered his head slightly.

“What’s wrong?” Joliea asked.

“They want me to go to Earth.”

Joliea spread her ears. “Oh my, that’s wonderful Colty.”

“You think so?”

“I do. You see, they do need you. They want to work with you. This isn’t about them teaching us any more. You are teaching them.”

“So you think I should go?” Colty asked.

“Absolutely I think you should go,” Joliea replied. She leaned forward slightly. “You don’t want to?”

Colty shrugged. “It would be an incredible experience. Yet...it would take me away from you.”

Joliea leaned against him slightly. “We’ll be fine,” she said. “I know it’s a long trip but I will happily wait for you.”

Colty clicked his teeth and the two wrapped their trunks together.

When the dinner arrived the two continued talking about all manner of things. They talked about humans and the Earth. Yet they also talked about Parnon, about Joliea’s work at the library, and about Mezanic music. Colty felt completely at home with her. They made each other click. He found it hard to imagine leaving her.

At the end of their meal they watched a small bird flit among the branches of the rigat

tree outside their window. It seemed to study them through the quartz glass almost as if it recognized them somehow. Then with a sudden flurry of wings the bird shot into the air and disappeared over the river in the direction of the university.

The waiter brought some sweet sagnum and fermented russart to drink. Joleia and Colty each took a square of sagnum and nibbled at the spicy nut mixture.

“So I have a question for you, Sar. Coltinarly,” Joleia said playfully as they were sipping their russart.

“Is it about math?”

Joleia leaned toward him and took his trunk in hers. She looked at him with her ears spread and said, “Will you marry me?”

Colty spread his ears in surprise. “I...” he hesitated and a look of disappointment spread over her face that pained Colty to the core. “You said I should go to Earth but how could that be satisfying for you if we were married? I would be gone for many runion.”

Joleia took a deep breath. She looked at him eye to eye. “I love you more than anything. Yet despite that... no, because of that... I will never hold you back.” She held his trunk tightly. “You are so smart, and yet you still don’t understand. You said yourself that it’s a new world for the dunari. You aren’t just part of that change, you are the focus of it. I would be so incredibly proud to stand by your side as your wife as you lead us into our future.”

Colty shook slightly and he wrapped his trunk around Joleia’s shoulder and drew her close to him. “I love you too, *tinka*,” he said in her ear. “I want to stand by your side as well.”

“So is that a yes?” Joleia said shaking her ears slightly.

“Yes,” Colty said. “It absolutely is a yes!”

* * *

Colty stood by the window of the lecture hall in Nark. He looked across the Yellow to Fargon where his unassuming little office resided. He thought perhaps he could see his office window but the view was obscured by a large tree.

As Colty waited, faculty and students began to fill the hall. They had come to see his full status presentation. It was, in some respects, the culmination of his life's work. All the classes at Marlock College, all the hours studying, all the papers and conferences, and finally his work at Parnon flowed to this moment. In theory his future career depended on his presentation being accepted. If he failed, not only would he be forced to leave Parnon, but also he would most likely never be accepted anywhere else.

Yet strangely Colty did not care. It no longer seemed to matter what Parnon thought of him. Parnon needed him more than he needed it.

Colty turned away from the window and walked casually toward the board. There was still some time before his presentation but he didn't want to lay down. Some might say that he should have been going over his talk in his mind. It wasn't necessary. Instead he scanned the audience. Almost everyone from the mathematics department was there and he recognized some faculty from physics and engineering as well. Rumors about the implications of his work had spread and there were even a couple of faculty from the biology department present. However, Colty noticed that Rocalla had not come.

He was more interested, though, in the students. There was a surprising number of them, mostly from his advanced classes, but also many less experienced students whom he did not recognize. He wasn't sure why the students would be so fascinated by stellating co-sequences, but he supposed it was his association with the humans that really interested them.

Dargon stepped up to the stage and spoke softly to Colty. "It's a good showing. Will Ra'hel be here?"

"No. She's on her way back from the observatory and won't be here until next reunion."

Colty was just as happy that Rachel couldn't make it. While her support had been

invaluable he wanted to make it clear that his work was his own. He didn't want anyone to suppose he had been prompted by the humans.

Just as the room was reaching capacity Colty noticed Joleia slipping in through one of the rear doors. She stood against the back wall and he gave her a brief nod. She swayed her head in response.

"I think it's time to start," Dargon said. He walked over to the podium. The audience settled down and found their seats. Dargon waited a few moments before continuing. "We usually do these things here instead of Fargon because Nark has larger lecture halls, but this time we should have gone to Cogart." The audience shook their ears. "I think there are some more seats in the next room. Maybe we can move a couple in."

There was some shifting around as two or three seats were added behind the back row. It wasn't enough. Dargon glanced over at Colty and Colty bobbed his head slightly. "I'd like to introduce the full status presentation of Sar. Coltinarly, a new faculty member in the department of mathematics, and—now, I've actually checked the records—I believe the youngest faculty member to ever be part of our department in the history of Parnon."

The audience stomped their feet.

"The title of his presentation is *The primality of co-sequences with stellating bases as shown by isomorphic mapping from Haken collections to Zermelo-Fraenkel set theory*. I hope I said that right."

"Yes, just right," Colty said.

"In that case... you have the stage Sar. Coltinarly."

Colty stepped forward, hesitated for a moment, and then started to talk. He gave some background for his work, including a brief literature review. He then launched into his contribution. The talk was extremely detailed and technical. Colty knew it was the mathematics faculty he needed to impress.

He presented the human mathematics without apology, describing the basic concepts as needed, and outlining the nature of his isomorphism to human mathematical founda-

tions. The time did not allow him to present any detailed proofs but he did work through a proof sketch showing an important connection between G-reductions and Ranjana's hyper sets. He pointed to the appendix of his paper for more information.

Colty filled the board with figures and formula. He emphasized the conceptual core of his proofs and their implications. He was animated yet also deliberate. On the podium were some papers holding his notes. He never looked at them.

Finally with the background in place, Colty showed the exact form of Nular's theorem and demonstrated the flaw in Nular's original reasoning. From there it was an easy matter to use Ranjana's hyper induction on the more precise form of Nular's theorem to derive the final result: all stellating co-sequences have prime bases.

When he finished he put down the chalk and the hall filled with the sound of enthusiastic stomps. Dargon returned to the stage. "Thank you, Sar. Coltinarly. We have time for some questions."

The first question came from Molan "I'm very impressed with this work. Not even considering your primary result, the isomorphism to human mathematical foundations has the potential to be an enormous contribution. Congratulations."

Colty bobbed his head politely as the room again filled with the sound of applause.

"I do have one question. I'm confused about how you collapsed the sub-chains after stellation. Does Roak's Theorem actually apply there? What about the pre-stokes side condition?"

"Good question," Colty said. He erased a section of the board and stepped through the reasoning in more detail. He fielded several more technical questions from the math faculty, however Tarnock said nothing.

One of the biologists asked the next question. "I heard that your work is of interest to the humans. Could you elaborate on that?"

"The isomorphism between our mathematical structures works both ways, of course. With further development it could be used by them to access any mathematical results

we have and apply those results to open problems in their domain.”

“I was thinking about... something else.”

There was some scattered shaking of ears.

Colty clicked his teeth briefly. “Yes, I understand. It’s true that they’ve noticed co-sequence based patterns in the genetic structure of life forms on both Rujar and Earth. The meaning of those patterns isn’t clear right now.”

“Are these patterns they did not know about before?” another biologist called out.

“Yes. Actually I first noticed them myself while preparing my paper and brought the matter to their attention.”

“Colty why don’t you share with the audience what you told me earlier,” Dargon said.

Colty bobbed his head. “I’ve actually been asked by two human researchers, including Sar. Ra’hel whom I believe most of you have seen on campus, to collaborate with them investigating this matter.”

“Sar. Coltinarly has been invited to Earth,” Dargon added, “and furthermore his paper has been accepted by a human mathematical journal.”

The applause broke out again and Colty swayed his head from side to side.

Next an engineer spoke up. “Congratulations on your exceptional success. I’m concerned, however, that your access to human technology and human knowledge gives you an unfair advantage in your research program compared with the rest of us. I guess it’s the way of the future. You are ahead of your time.”

“It is my hope,” Colty replied, “that soon both our cultures will be able to share knowledge freely to the benefit of all.”

There were no further questions so Dargon indicated that the public presentation was over. He directed Colty’s overseers to remain for further questioning while the rest of the audience filed out of the hall. Colty tried to catch Joleia’s eye before she left but she was standing behind a much taller man.

When the hall was finally emptied the overseers settled down in the front seats while

Colty erased the board. Tarnock started the discussion.

“As you know, my concern,” he said, “is that we can’t evaluate the novelty of the work since we don’t have access to the relevant literature. It’s not that I don’t trust Colty, but how can we know what is original and what was taken from human resources?”

Colty put down the eraser and turned to face the committee. As was traditional in these situations he would not address any points until explicitly asked to do so.

“I think this is an exceptional circumstance,” Dargon said, “and that some flexibility is in order.”

“I agree,” said Molan, “the candidate for full status needs to show that he has become a ‘respected and influential’ member of the Argenian mathematical community. I think Sar. Coltinarly has discharged that requirement admirably. It’s safe to say the humans didn’t create that isomorphism.”

“Is it?” Tarnock asked.

Dargon turned to Colty. “Do you have any comments?”

Colty took a deep breath and stepped forward. “I agree with Sar. Tarnock,” he began, “in that there is an irregularity here. By its very nature my work can’t be properly evaluated in the context of dunari mathematics alone. I submit, however, that any first attempt at merging dunari and human mathematical legacies will suffer from this problem. If we are to take advantage of human knowledge at all then we must bend some rules to make that transition.”

Dargon swayed his head, but Tarnock seemed unconvinced. He fluttered slightly. “Maybe so, but should we compromise the integrity of our system doing so?”

Molan leaned forward slightly and changed the subject. “What of this collaboration? Colty will be gone for some time, I assume, but he is not yet eligible for leave even supposing we grant him full status.”

“Yes,” Dargon replied, “Colty tells me the humans are looking into a visiting scholarship for him so technically it would not be a leave but more like a transference. I’m

sure we could make some sort of arrangement in order to take advantage of this unique opportunity.”

“I have a couple of technical questions,” Tarnock said with a loud flutter.

Tarnock then asked several questions related to Colty’s isomorphism proding him about specific details of notation, equivalence sets, and irreducibility of reductions. He did not ask anything about co-sequences and was much more interested in the boundary between dunari and human mathematics. Finally the questions ended and Colty once again erased the board. Tarnock shrugged.

“Should we convene in private,” Dargon asked, “to discuss?”

“I’m content with granting full status right now,” Molan said.

Dargon swayed his head. “Tarnock?”

Tarnock tapped his tentacles thoughtfully on his knee. “I agree,” he said finally.

Dargon stood up and extended his trunk toward Colty. “In that case... congratulations Professor Coltinarily!”

* * *

Colty scrambled down the steep embankment along a rough trail forged by adventurous students. At the bottom he walked a short distance under the shade of several rigats. He climbed over a low rise and out onto a flat rock that angled down to the river’s edge. There, sitting calmly under a large narnolia tree was Rachel with her back toward him as she looked out over the water.

The Varsynthia was wide and smooth. It flowed by, slowly gurgling now and then with the occasional swirling eddy. Colty paused and clicked his teeth quietly. The human looked entirely at peace. She was a creature of the galaxy and as she sat beside the river Colty realized, maybe for the first time, that she was not an alien.

“They told me I might find you here,” Colty called out.

Rachel twisted around and smiled broadly when she saw him. She stood up as he

came down the slanted rock to meet her. "It's great to see you, professor," she said. Stepping forward, she put her arms around his shoulders and hugged him briefly. Colty could feel the warmth of her body.

"Let's sit." Rachel motioned toward the rock at their feet. "This is such a beautiful spot. I was just watching the narnolia nuts floating down the river."

The two of them settled down side by side, Colty stretched his legs out comfortably next to her while she sat cross-legged. "It is the season for them, I think," he said.

They sat quietly for a time watching the river. The red sun glinted off its waters. Although they had much to talk about neither felt any particular rush. After a few moments Rachel opened her pouch and took out a machine. She unfolded it and touched the display a couple of times. Then she held out the device to Colty.

"For you," she said.

"What?"

"You shouldn't have to wait for me to find books. Now you can read anything you like in the library of *Golden Light*."

Colty reached out his trunk and took the device in his tentacles. "I am honored," he said.

"It's only fair. I have been reading in your library after all."

"Does your government know you are doing this?"

"I think I will be able to get it approved." She smiled slightly.

Colty held the device up to look at it with his right eye. It was surprisingly rigid considering how light it was. On the display were several symbols along with writing in Argenian. "I don't know how to use it," Colty said.

"It's not hard," Rachel replied. "I'll show you."

"Thank you. I don't know what else to say."

"That is all you need to say. When you come to Earth you can use this device to access the Meta-Library with no restrictions. It contains the totality of human knowledge."

“I guess I have some reading to do,” Colty said with a click of his teeth.

Rachel chuckled. “I look forward to finding out what will happen when a mind like yours is exposed to a library like ours.”

With Rachel’s help Colty folded his machine and put it into his pouch. The two of them sat quietly again for a time. Then Colty said, “Joleia asked me to marry her.”

“She did? That’s wonderful!” Rachel’s eyes were bright and she put her hand on Colty’s shoulder.

“Yes,” he said with a shake of his ears. “She’s crazy, of course, but I’m glad of it.”

Rachel laughed lightly. “When is the wedding?”

“We aren’t sure yet, but soon. It will be before I leave for Earth.” He paused. “We would both like it if you were there.”

“Colty. I would love to be there! You’ll have to tell me how it works, though, so I don’t embarrass myself.”

* * *

A light rain was falling as Colty stepped out of the Varnok train station. He pulled his cloak tightly around him and then, raising his trunk, he attracted the attention of one of the waiting cab drivers.

“Where to?” the driver said as Colty got in.

“The First Office.”

Low clouds covered the sky giving the streets a dark, almost dusk-like feeling. Colty could see a few artificial lights glowing in some of the buildings.

The First Office building looked the same as ever. There wasn’t anything to suggest a special event was about to occur. Colty did notice a news truck parked in the press parking area across the street from the building, but of course that wasn’t unusual.

“You want me to let you out in front?” the driver asked.

“I was told there is an entrance on the south side,” Colty replied.

The driver swayed his head. “You must be important if you are going in that way.”

The driver rounded the corner and stopped in front of a gate with two police officers standing beside it. Colty got out and trotted across the street. He slowed to a walk as he approached the officers.

“The public entrance is around front,” one officer said.

Colty showed his identification.

“Oh yes, they are expecting you, Professor Coltinarly. This way.”

Colty was shown through an unassuming door and down a hall lined with offices. Raindrops trickled down the glass of the skylight overhead. After a short distance they came to a large door and he was shown into a circular room reserved for special events and presentations. The First Citizen was there wearing diplomatic colors standing with Lucasa and ambassador Marshall. A short distance from them stood Tusk and Rachel talking together comfortably. Yet Colty was surprised at how few people were there. He didn’t notice anyone from the press.

Rachel’s dress was stunning and obviously special. She wore a long garment that covered her shoulders and arms and that flowed gracefully all the way down to her ankles. It was tan like the deserts of Rujar, trimmed with yellow the color of harsna grass. The cuffs of the arms and around the bottom were decorated with a graceful curving design in rubinum, a color Colty knew she couldn’t even see. About her waist she wore a narrow belt of silver, hooked in front. Her black hair flowed down her neck in a wave, like a bit of night, and was held in place with a silver clip. On her chest just below her left shoulder she wore a single flower unlike anything Colty had ever seen. It had an elegant, red bloom and a strange, green stem.

“Colty!” It was Tusk who first saw him. He greeted everyone and, with honor, clasped trunks with the First Citizen. Then he stood in front of Rachel and clicked his teeth.

“Do you like it?” Rachel said with a smile.

“What is that flower?” Colty asked.

“It’s a *rose*,” said Rachel, “from the gardens of *Golden Light*.”

Tusk spoke to her in her native language and Rachel laughed. She replied in her language as well, the words rolling off her light, airy voice in a natural way. The sound did not seem so strange to Colty anymore.

Tusk shook his ears in response to whatever Rachel had said but then she added, “We should use Argenian. It’s rude to talk when Colty can’t understand.”

“We’ll have to teach him some *English*,” Tusk said, “since he is going to Earth.” He touched his trunk to Colty’s shoulder.

Rachel chuckled, “Yes, or maybe *French* or *Manderin* or *Hindi*.”

“You are just teasing me now,” Tusk replied.

At that moment Lucasa stepped onto the platform with the First Citizen behind him. He thumped the side of the podium with his trunk to get everyone’s attention. “We should get started,” he said. He waited until the room grew silent. “I convene this very special assembly, on this hour 47:060, runion 115, arnoxium 22 since confederation.” He paused. “I give you the First Citizen of Argenia.”

Everyone stomped their feet as Lucasa withdrew and the First Citizen came to the podium. “It is a rare and happy event,” he began, “when a First Citizen is in a position to bestow the Medal of Argen. I am privileged to be in such a position. Every moment in history when this honor has been presented, and every recipient of this honor has been special and unique. Yet I think I can safely say that Argen himself could never have foreseen the circumstances that bring us here today.” He paused and then continued in a commanding voice. “I call Jahelle to stand before me.”

Rachel walked to a spot on the floor directly in front of and below the podium.

The First Citizen looked at her and then continued. “The Medal of Argen cannot be bestowed on someone who is not Argenian. However, by the Cartana Laws the First Citizen has the power to grant citizenship to any individual. In this case, by vote of Parliment, it has been deemed that you are worthy of citizenship.” He paused and the

again continued in a commanding voice. “Jahelle, do you take onto yourself, willingly and with full knowledge, the rights and responsibilities of that citizenship?”

Her voice was soft and light. “I do.”

“Then so be it. From this moment forward, by the power vested in me as First Citizen of Argenia, you are now Argenian.”

The applause was loud. Colty could see Rachel take a deep breath but she didn't turn around. She was following custom and faced only the First Citizen during the proceedings.

“Come forward, Jahelle.”

Rachel lightly ascended the steps to the podium where she stood next to the First Citizen. He reached down and then held up the Medal of Argen in his trunk. “It is the recommendation of Parliament, and both the Second Citizen and I concur, that you be given the Medal of Argen. Your ordeal in the desert and your actions that lead to the arrest and conviction of those responsible for the disaster at Yartagard have set you apart. What you have done has no doubt saved countless lives, both Argenian and Forbin alike. Congratulations.”

He then raised the medal and Rachel lowered her head. The First Citizen slipped the medal around her neck and she adjusted her hair so the cord went underneath it. Again the room was filled with the sound of stomping. The First Citizen extended his trunk and Rachel reached out her arm. She grasped his trunk in her hand as he wrapped his tentacles around her elbow.

As the applause faded the First Citizen stepped back from the podium and Rachel took his place. She adjusted the microphone slightly and then paused. She looked out over the room and then addressed her country.

“I am deeply moved by this honor,” she began. “Never in my life did I imagine that I would be standing here now, like this.” She touched the medal briefly. “I only did what I thought was right, as I think we all do. I'm just happy that I was at the right place at

the right time to make a difference.

“I haven’t lived here very long, but I have come to love this place. I love the trees and the flowers. I love Parnon. I love the Nermella. Yet it is the people here and the friends I’ve come to know that are the most special of all. Really there are too many to name, but I would especially like to call out my host, Professor Coltinarly, who showed me tolerance and kindness despite not being too sure about me at first.” People shook their ears. “I see goodness everywhere I look. It makes me proud to be Argenian.”

Once again the room filled with applause. Rachel waited patiently for it to die down.

“That is all. Thank you again.”

With that she once more clasped her arm with the First Citizen’s trunk and then climbed down the steps from the podium.

Lucasa formally ended the proceedings and people crowded around Rachel taking pictures and asking questions. She finally made her way back to where Colty was standing next to ambassador Marshall. The ambassador reached out his hand and Rachel shook it.

“Congratulations, Jahelle,” he said with a smile.

* * *

Colty looked out the cab window while Joleia, his wife, leaned sleepily against him. The streets of Parnon were nearly deserted. It was the end of the reunion and most dunari were at home in bed. Even the fields surrounding the town seemed subdued. The sun was covered with spots and its light was softer and redder than usual.

They pulled into the air force base where the driver let them out at the gate. Colty had no trouble getting inside. In fact, one of the guards, apparently relieved to have someone to talk to, took extra time showing them the way to the right landing area. There they found a small alien craft parked some distance from the building. Standing just outside the gate was a group of three dunari loading some boxes onto a pallet.

Standing by and watching the proceedings was Rachel.

She was dressed in casual clothes. She had on dark tan pants and a light, cream colored top that looked like something that would be good against the wind. Her hair was tied back, as usual, and it bounced slightly from side to side as she turned her head.

Colty and Joleia walked out onto the landing pavement toward the people and Rachel soon noticed them. She raised her hand in greeting and Colty did the same with his trunk. She walked toward them and soon they were close enough to talk.

“You didn’t have to come,” Rachel said. “You should be asleep!”

“We wouldn’t miss it,” Joleia replied.

Rachel smiled. “Well, thank you. I do appreciate it.”

Colty took a deep breath and stood face to face with Rachel. It seemed so long ago when they first met on that very same landing pavement. Then she was an alien creature. Now she was a friend. Colty extended his trunk and Rachel clasped it in her hand. Her grip felt firm and yet warm and gentle. They held each other that way for a time and then Rachel put her other arm around Colty’s shoulders, hugging him.

“Have a safe journey,” Colty said as they pulled away from each other.

Rachel nodded. “We will see each other again soon,” she said, “and the next time will be in a city called *London*.”

Colty clicked his teeth. “I look forward to it.”

“Will you ever come back to Rujar?” Joleia asked.

“Yes. I hope so,” Rachel replied, “after all, Nitooli is here. Anyway there is so much more of my new country that I’d like to see.”

“You will be welcome here, always,” Joleia said.

A soft beep came from a device tied to Rachel’s wrist. She looked at it briefly. “That’s my signal. I have to go now.”

“I will miss you,” Colty said, shaking slightly.

Rachel put her arm around him again, holding him closely for a moment. Her eyes

glistened. “You keep thinking about data compression,” she said.

“Oh, he doesn’t need any encouragement when it comes to math,” Joleia replied with a shake of her ears.

Rachel let go of Colty and stepped back. She smiled and nodded her head. Then she turned and, without looking back, walked briskly to the craft that would take her to *Summer Breeze* and, ultimately, to that distant world she called home.

The two of them stood quietly watching her climb into the human aerocar. They watched as it sped down the runway and lifted into the air. They watched as it climbed steeply upward, moving with ever increasing speed until it was just a tiny dot. They watched it disappear with a green streak leaving behind nothing but the orange sky tinted with dust driven from the distant desert by the Nermella wind.

Colty looked down and then turned to Joleia. He put his trunk over her back as they headed toward the waiting cab.

“The universe is not as big as it used to be,” he said.

“Really?” Joleia replied, “to me it seems bigger than ever.”

THE END

Epilogue

Colty steered the vehicle along the narrow, sandy road that wound beside the Sarnowl-edge River. The tops of the mountains rose high above the valley, their snow capped peaks aglow with the light of the Rujarian sun. Low yola trees grew thickly on their leeward slopes and haganbrush covered their windward ramparts.

Eventually Colty came to a small town. A circular park of neatly trimmed brikken grass was surrounded by several old but tidy buildings. At its center the Argenian flag flapped energetically. He turned the car onto a side road that went past a ramshakle garage and then a neighborhood consisting of two or three selecks. The houses were simple, but clean, partially built into the hillside as was typical in the mountain country. The road bent upward toward higher ground and made its way along the side of the valley following a narrow, gurgling brook.

After several karnons and several steep, twisting turns, the road leveled off just below the top of a long, broad ridge. From there a grand view stretched out over the Sarnowl-edge Valley to the flat lands far beyond. On a clear day one could even sometimes see Lungast. Yet Colty did not stop to admire the scenery. Instead he continued through open fields until he came to a distinctive boulder. There he turned onto a narrow lane and followed it for a short distance. Around the side of a small rise, in the light of the sun and yet protected from the full strength of the Nermella, he finally came to an unassuming house.

Colty parked in front of the small detached garage and turned off the engine. He got

out and took a deep breath. Her house looked good. It was well kept and the yard was tidy. It had a large porch on the front, and a small patio at the back, under some rigat trees. Beautiful gardens surrounded the building and lined the path from lane to door. Flowers in rubinum, red, yellow, green—all the colors of the rainbow—were layed out before him.

“Colty!”

He looked up and saw Rachel coming out the door and down the step. She had her arms open and a smile on her face. Colty spread his ears and came up the path. Rachel ran to meet him, throwing her arms around his neck and shoulders. He wrapped his trunk around her waist.

They embraced for a long moment. “Let me look at you, Rachel,” Colty said in English. She stepped back and smiled but held his trunk affectionately. Colty shook his ears slightly. “My, my, your hair is now completely gray. I think the last time I was here there was still a little black.”

Rachel just laughed. “Come on, let me show you around. I’ve got a new shade garden in the back.”

When she finished the tour she offered Colty something to chew, which he graciously accepted, and made herself some toast with genic butter. She went into the back room of her house where unnaturally bright lights illuminated a garden of green plants. She picked a few strawberries and added them to her plate. Then they settled on the front porch with Colty on a seat and Rachel sitting cross-legged on a pad. There they could look out at the majestic view of the valley and the rocky crags of Tomorsa Mountain above.

“How is Joleia?” Rachel asked as she took a bite of toast.

“Busy,” replied Colty. “The National Library is just starting to convert their holdings to electronic form. She’s directing the project now. I don’t know where she gets her energy.”

“Wonderful!”

“And would you believe Jarnia is applying to university already?”

“Is she going to Parnon?”

Colty shook his ears. “She applied for my sake. Her father thinks it would please me, but I know she’d rather go elsewhere. She’s got applications in at several schools including the University of California. She says she wants an adventure, but I think she really just wants to get away from the stodgy likes of us.”

Colty clicked his teeth and Rachel chuckled slightly.

“And what about you?” Colty asked. “Are you still teaching?”

“Some. Mostly I tend my gardens.”

Colty snorted. “Yes... and...? Come on, I know you better than that.”

Rachel smiled coyly. “I might also be evaluating the logical consistency of Jenkins multi-manifold theory.”

Colty shook his ears and Rachel continued, “I’ve been using the neticular core at Cambridge over the hyperluminal link to Earth. It’s a bit awkward, but it works.”

The two of them talked for many arnets as they always tended to do. They talked of friends and of family. They talked of Rujar and of Earth. They talked of the past and of the future, switching back and forth between English and Argenian as the mood took them. They talked long after the food ran out, punctuating their conversation with Colty’s clicks and Rachel’s airy laughter. And all the while they lay in the light of the unmoving Rujaran sun with the Nermella whispering in their ears.

Finally their conversation faded and each quietly enjoyed the company of the other. After several long moments Colty fluttered softly and Rachel glanced his way. “I’m getting old too, *tinka*,” he said staring out over the valley. “I’m planning to retire soon. Joliea and I are talking about moving into an apartment in Varnok...” His voice trailed off.

“That sounds nice.”

Colty turned to look at her, clicking his teeth. “Maybe I’ll start thinking about graph extension fields.”

Rachel laughed out loud.

* * *

On the far side of the galaxy, somewhere near the base of the Perseus spiral arm, there is an ordinary yellow-orange star surrounded by an ordinary collection of planets. One of those planets is almost entirely covered by ocean with only a few small, island continents rising above the waves. In a city on one of those continents, in a brightly lit burrow, a six legged creature begins to warble with delight. For it has just proved an amazing fact: *all stellating co-sequences have prime bases.*