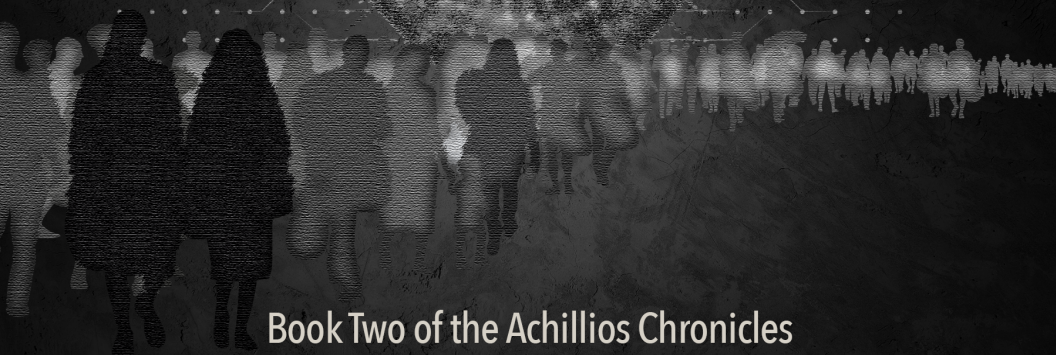
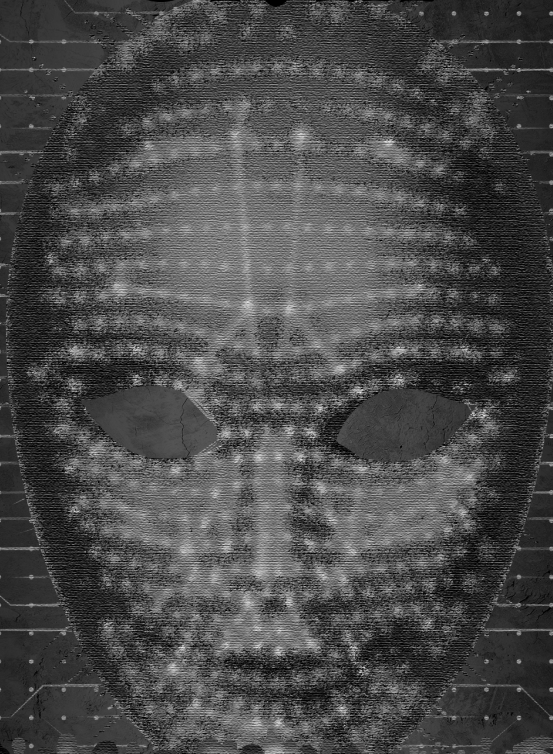


ONYX



Book Two of the Achillios Chronicles

Don Jones

Onyx

Don Jones

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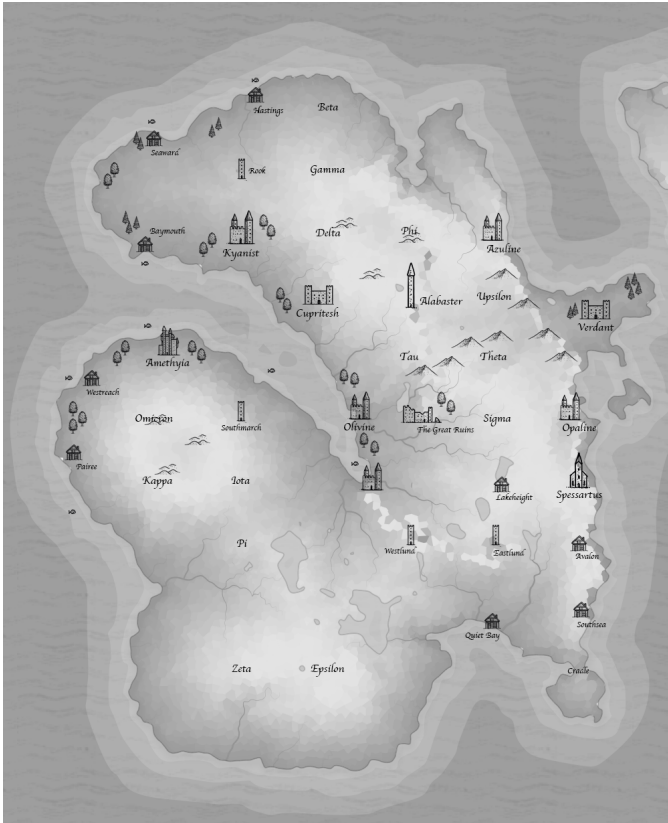
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Achillios

One

“Toras!” Randal cried, running into the central control room. “It’s Alabaster!” he said, panting. Toras looked up quickly. “Misha and Marten—they’ve been arrested!”

“How—” he started, but then stopped himself. He ran to the main interface chair and sat. *Initiate connection to Central Processor*, he thought.

:*Access denied*,: the machine’s flat voice said.

He looked up at Randal. “They’ve cut us off,” he said quietly. Randal paled. Onyx—installation Theta to the machines—had been damaged in an earthquake many, many years ago. Its expert system no longer controlled the local machines. However, most of them could still be manipulated through their Central Processor connection. A connection that was now gone.

Toras took a breath and looked around the disheveled control room. Buried within a black-rock cave complex, it was one of the few original control rooms not integrated into one of Achillios’ major cities. A thin layer of grit covered nearly every surface, the result of the periodic tremors that still plagued the facility. He sighed. The installation they’d christened “Onyx” wasn’t much, but it had sheltered them. Nearly everyone here was an outcast of some kind, all with reasons to want retribution from the big cities. It was that thirst for revenge that held Onyx together.

“There’s more,” Randal said. “Orvald made it back from

Gate Town and said they've begun raising a new defensive wall."

"They've unlocked the machines," Toras said quietly. Thanks to extensive documentation they'd found Toras and a few others in Onyx are the most knowledgeable people on the planet about the ancestors' powerful terraforming equipment. Aside from the Servants at Alabaster, Onyx operators were the last ones he knew of who were capable of using the equipment. Until now.

Randal nodded. "And the Cupritesh army pulled back. Rumor is that Alabaster undid our work in the royal city."

Toras stood and cursed. That operation had been months in the planning. Manipulating the greedy Cupritesh king had been their best bet for destabilizing Alabaster and, in the chaos, gaining access to their still-functioning machines. "We have to assume Misha and Marten told them everything," he said. "Round everyone up. We need to leave."

Randal stared. "But— but where will we go?" he said softly.

Toras shook his head. He crossed the room to a rickety desk and unrolled a map. "I don't know," he admitted. "We've only stayed here because there's water, and it's reasonably easy to grow food. The caves protect us when they're not collapsing on us. Upsilon is too close to the trade route between Azuline and Verdant—we'd be found. Sigma is as desolate as Alabaster, and I'll bet Alabaster will soon be swarming over the ruins near Olivine. Beta is underwater now. Gamma, maybe."

“Dust, Toras, that’d mean marching everyone through the desert. We don’t have draybeasts.”

“What do you want?” Toras spat, throwing his hands up in frustration. “We’ve already ruled out Delta and Phi—even Hollis passed on those when he hunkered down at Alabaster. We know Tau is just as damaged as here, and without a connection to the Central Processor, we’d be dead in the water. We’ve never found the station that *should* be here,” he added, stabbing at the map with one finger, “and everything else has a population already.”

“What about the south?” Randal said softly, pointing to the big, blank area on the map.

“We’ve been over this,” Toras said. “Omicron, Kappa, and Iota are the only stations documented here,” he said, sweeping his hand over an area of the map, “and Amethyia sends patrols through there constantly. We know they’ve been trying to establish more small settlements. Zeta and Epsilon,” he added, waving his hand through the southernmost portion of the continent, “might as well be mythical. It’d be thirty days of hard marching just to get there. As far as anyone knows, there are no cities or settlements that far south.”

Both men paused, staring at the map in silence. “So what, then?” Randal asked. “Head for Gamma and hope for the best?”

Toras sighed. “No, south is still a better bet. It’s less rugged. So we split into two groups. You, me, Asha, and Wen will head to Olivine.”

“Olivine?” Randal asked, surprised.

“Olivine,” Toras repeated. “We need to try and access the Central Processor. We’ll infiltrate, keep a low profile, try to stick to the ruins. Maybe we can get there before Alabaster does.”

“Okay,” Randal said. They’d discussed this possibility before. “And everyone else?” Onyx held almost a hundred men and women and a few children.

“They’re going to have to march. Tell them to head south for Opaline, posing as Road Traders. If they head east first, they can pick up the trade road from Verdant. Then they head south along the coast—Spessarta will welcome them, and Avalon and Southsea will be fine so long as they don’t overstay their welcome. Cut west to Quiet Bay after that—the swamplands south of Southsea are treacherous.”

“And then?”

“Well, that puts us within striking distance of installation Epsilon, at least. But...” he paused.

“But what?” Randal prompted.

“Quiet Bay is small. A couple of hundred people, at most. Fishers, not fighters.”

Randal paused. “You’re not saying—”

“I am,” Toras interrupted. “We’re going to have to take Quiet Bay. We’ll see if we can access their installation—it’s inland a bit, and so they can scout for it first, if possible. But otherwise, Quiet Bay is going to welcome them, or our people are going to have to kill them all. Either way, we’re going to need to take charge of that town.”

Randal stared for a moment and then nodded. He walked out to break the news to Onyx’ beleaguered pop-

ulation.

Two

“Will that do it?” Brother Evan asked.

“I don’t think so,” Taryn said tiredly, lifting his hands from the chair’s control pads and leaning forward. The long-disused chair was still covered in dust, and he wiped his hands on his trousers, leaving a streak of gray behind. The back of his throat itched from all the dust. “The damage was pretty bad. As is, the city will have plenty of fresh water for drinking and the fields, but we need to do more work to stabilize it.” He looked around. The room they were in was buried in the heart of the royal palace and had—until a few days ago—been used for storing old linens. The smell of wood chips and rotted cloth still pervaded the place, and almost everything was covered in a thick layer of dust and cobwebs. As an interface station, it was the furthest thing possible from Alabaster’s clean, polished Tower. Even the light from the wall fixtures, while the same color as the ones in Alabaster’s Tower, were dim and depressing, and the chairs were chipped and battered.

“Tomorrow, then?” Brother Evan asked.

Taryn sighed. “Yes. I’m too tired right now. I think everyone is.” Although calibrating all of Alabaster’s Servants—*operators*, in the machines’ language—had made them more efficient, Taryn still needed to oversee more extensive operations. It was tiring work, guiding a dozen distinct melodies into a synergistic, cohesive whole for hours on

end. Looking around, he saw his companions leaning forward in their decrepit interface chairs, rubbing their eyes and yawning.

Helping the earth-movers at Alabaster raise a new defensive wall from the bedrock had been difficult, but there they hadn't been concerned about subtlety. The senior operators had explained how the machines were able to treat solid rock as a kind of liquid—Taryn hadn't understood at the time if they liquified it or not—provided you moved it slowly enough. Taryn had watched the operators slowly move small sections of “liquid rock” from place to place, letting it harden before moving the next part.

In Cupritesh, the situation was far more delicate. He'd learned that the machines did indeed liquify the rock, creating a hot molten fluid they could then push around at the operators' direction. Onyx' tampering had been brute-force. They liquified sections directly above the underground water channels, collapsing solid rock into the stream and almost entirely cutting it off. The Alabaster operators couldn't just re-liquefy that rock, because it'd immediately flash the surrounding water to steam, creating enormous pressure and wreaking even more damage. So instead, they'd had to laboriously carve new channels for the water, gently shore up the fractured rock, and slowly allow the heat to subside before continuing.

It didn't help that this room was full of dust, making everyone sneeze anytime they inhaled too sharply.

Brother Evan looked at the nearby control positions and nodded agreement. The Alabaster operators were still

blinking, rubbing their eyes—and temples—and stretching to work out the kinks in their backs. Most of them had been working for almost eight hours solid, doing the bulk of the work to correct the structural damage underneath the city. Each of them had taken a small section of rock to manipulate. At the same time, Taryn worked to keep them in step with each other, so that the entire operation moved smoothly. The machines in the city had helped identify the best new channels for the water and had highlighted the weakest areas that they needed to avoid or shore up.

The chairs of the control positions weren't exactly designed for long-term comfort, Brother Evan thought ruefully, any more than the ones in Alabaster had been. Back home, at least, the Tower had sufficient Servants to allow for multiple operators per shift. And cushions for the chairs.

"The King invited us to dinner again tonight," Brother Evan said.

Taryn smiled tiredly. "Well, that's better than attacking us." Mere weeks ago, the bulk of Cupritesh's army had marched on Alabaster—a peaceful and mostly unarmed city—seeking to conquer it for its healthy water supply. Taryn, with full access to the ancient machines that terraformed the planet centuries ago, had examined Cupritesh and realized that someone had cut off the city's carefully engineered underground wells and reservoirs. They'd offered to travel to Cupritesh and fix the damage, averting a battle and winning the gratitude of the city's royal family. "Yeah, of course," he added. "I just want to follow up on a

few things here first, and I'll clean up and meet you."

"You have an hour or so anyway," Brother Evan said. Cupritesh's royal court tended to eat late, and the Alabaster team had started working at first light. Taryn nodded. "I'll leave you to it, then," Brother Evan said. He gathered up the other operators and ushered them out of the room.

Evan remained amazed at how quickly Taryn had matured to meet the exceedingly pressing demands of their situation. While the boy was still thirteen—just old enough to become an apprentice, which had been the plan until his Testing at the Tower—he'd taken on responsibilities far in advance of his years. Evan promised himself that he'd take the boy out for a quiet evening and a good meal as soon as he could. Maybe to a tavern that had a musician. All Tower children grew up quickly, he knew, but Taryn had outpaced even that. The boy gave up the life he thought he'd be leading—a living as an apprentice making musical instruments—for one spent diving deep into the Tower and its mysteries. Evan shut the door quietly behind him, hoping Taryn wouldn't spend too much longer in that chair.

Taryn leaned back and placed his palms back on the chair's control pads. He closed his eyes and sank into the interface with Cupritesh's machines. *Review structural integrity of the fresh water system*, he thought.

:Structural deficiencies in substrata, adjacent to main water inlets; the machine said in his mind. A diagram of the problem, all bright lines and points of light appeared in his mind. This was the spot they'd been working on all

day, and Taryn could see the remaining section of fractured bedrock that they still needed to fix. Rock-mending on this kind of scale was arduous because the machines needed detailed, moment-by-moment guidance from a team of operators, or they'd get the fine details wrong. Taryn's job was to coordinate those operators, keeping them focused on the task. In his mind, he experienced their efforts as various threads of music, and his skill was to nudge them into a single, harmonious composition. Doing so made their instructions to the machines more explicit and made the overall effort less taxing for everyone. Taryn idly wondered how the ancients had managed to do all of this at the scale needed to manage the entire planet. It seemed like an impossible coordination effort, especially when you accounted for multiple cities acting in tandem.

Even now, Taryn realized that he could hear a soft thread of music in his mind, and it seemed to coordinate with the gently pulsing lines the machine projected in his mind. He could also detect a faint, irregular *tick* in the melody, as it tried to flow through and around the still-damaged section of rock. He hadn't noticed it before, but then, he and the other operators had never really just sat and *listened* to the machines. Alabaster had been a smoothly functioning city, and so he'd never noticed if it had its own music underlying the constant efforts of the Tower's Servants.

He sank further into the interface now, listening to the quiet ebb and flow of Cupritesh's rhythms. It was pleasant, in a way, and almost calming. He made a note to see

if, when they returned to Alabaster, his city had its own rhythms. He thought it likely it'd be drowned out there if it did exist. Still, Cupritesh hadn't had active operators in... actually, it had probably been decades, if not centuries. Alabaster—and whatever Onyx was—was one of the last cities on Achillios that still used its machines to any real degree.

When was the last live operator present at this station? he thought to the machines.

:Local activity logs include information only for the last seventy-two years,: it replied immediately. *:Current logs do not show any local activation until your arrival.:*

A long time, then, Taryn thought. Although they now knew that the rebels from Onyx had *remotely* accessed and controlled the Cupritesh machinery, creating the fractures with which he and his team were now dealing. Speaking of... *Can you list the remote connections still available to this station?* he asked. The terminology was something he was still getting used to. The machines referred to cities as *stations* and mostly didn't differentiate between the operator *positions*—the chairs, like the one he now occupied—within the station.

:Affirmative,: came the immediate reply. *:Secondary command link to station Alabaster remains online,:* it began. That would be the connection Taryn himself had been able to create. *:Secondary command link to station Theta remains online under authentication,:* it continued. Theta meant Onyx, Taryn knew, something they'd figured out not long ago. The authentication piece was his own

doing and was how he'd managed to lock the Onyx rebels out of the machines. *:Core connection to central processor remains online but degraded,:* the machine concluded.

Central processor was a term Taryn and the others in Alabaster had run into a few times. It was a unique installation in or near Olivine, they knew, and they'd managed to have Alabaster connect to it before.

Something popped out of Taryn's memory. *Tell me again how far back the current log goes?* he asked.

:Current log information goes back seventy-two years.:

Seventy-two. *Seventy-two.* What a specific number... he was sure he'd heard it before. Wait— yes. He *had*. He'd heard that exact number in Alabaster. It was the number of years since the “expert system” running the city's food processing systems had been disconnected. *What happened seventy-two years ago?* he asked.

:All logs were re-initiated at that time. No unusual activity remains in the current logs. No information is available prior to the log re-initiation.:

Something happened, though, Taryn thought. The coincidence of both Cupritesh and Alabaster having some kind of reset or disconnect at the same time was... well, he doubted it was a coincidence.

Initiate connection to the Central Processor, he thought.

:Connection available,: the machine replied. *:Connection degraded.:*

Clarify 'degraded,' he ordered.

:Connection lag time exceeds nominal,: it replied. *:Bandwidth variability exceeds health parameters. Connection*

has been down for 36.22% of total time in the past seventy-two years.:

The connection was unstable, Taryn guessed it meant. *Can I communicate directly with the central processor?* he asked. His prior efforts had involved the local expert systems interacting with the central processors' expert system. He knew that some manner of 'artificial intelligence' existed in Olivine as well, but he'd been unable to activate it.

:Affirmative,: the local machine replied. *:However, the central processor is currently in a maintenance wait-state. Please try again later.:*

Whatever. Taryn was too tired to pursue it now, and dinner would be starting soon. He pulled his hands off the pads, blinked until he could see the room clearly again, and stood to leave.

“So tell me,” the King said, “how can our cities work together more in the future? To prevent... misunderstandings, like the ones we've recently had?”

Father Cillas, who until this trip had been responsible for relations between Alabaster's Tower and the city's council, said, “I think maintaining communications is an important first step.” He nodded to Taryn. “I would propose we station an operator here, as they can use the ancient machines to send messages between cities almost instantly. Beyond that,” he said slowly, “perhaps a discussion on different forms of government would be useful?”

The King frowned. They'd brought this up before. "You mean abolishing our monarchy," he said flatly.

"Actually, no," Father Cilius said. "Alabaster retains a library of some size, and we've been researching some of the different forms of government our ancestors tried. Alabaster itself operates on what they called a representative democracy: each citizen gets a single vote, and each district uses their votes to elect a member of the council. Council thus equally represents the entire city."

"With no king," the King said.

"Well, no, but that's not the only viable form of government. We also ran across something called a 'constitutional monarchy.'"

The King's frown softened. "Tell me more," he said, reaching for a plate of food.

"It seems to be a combination of Alabaster's system and your own. You establish a Parliament, which is much like our city council. The people elect its members, and they're responsible for passing the laws that govern everyone."

"And where does the monarchy come in?" the King asked around a bite of meat.

"You have to give your assent for each law, providing a kind of safety net. And the Parliament does not *enforce* their laws. Instead, you establish a government under yourself to do that. That government is led by a single person elected by the Parliament and accepted by you. Essentially, it all happens under your authority, but on a day to day basis, you just let everyone do their jobs. The idea, as I understand it, is to enable self-governance,"

and here, Father Cilius decided to stroke the King's ego a bit, "while ensuring that wiser heads can put a stop to anything egregious. It also gives you the time to focus on the city's long-term prospects, and to guide the Parliament in making wise decisions."

"I see," the King mumbled around another bite. "Well, I suppose it's something for discussion. I will admit that such a system could solve for some... vexing thoughts around our line of succession at present." It was well-known that the royal family's sons had been vying for better places in the succession, often with... *damaging* results.

"Anytime," Father Cilius said, bowing his head. "My peers will continue researching so that we can present you with the most information possible from which to make a decision."

"And such a decision would be required for our cities to work more closely?" the King pressed.

"Not at all," Father Cilius said. "However, knowing that our relationship was not bound to a single man, whose successor might or might not continue his policies, obviously removes some tension from a relationship. A government where policies lingered across generations might feel more... amenable to deeper cooperation." Alabaster still held the secret of operating the ancient machinery, which was a powerful lever. Cilius didn't want to play it too strongly, though, or make Cupritesh's King feel as if they are pressuring him.

The King nodded silently and returned to his meal.

Taryn, sitting several seats down from the King, munched

slowly at his meal. He didn't understand all the subtleties of governments, but he did remember some of his mother's stories about how other cities were run. Alabaster seemed to be the best of the lot, on the whole, and she'd admired the "one person, one vote" philosophy that governed the city. He wondered if Cupritesh could ever change to anything other than what it had now.

"Finish up," Brother Evan whispered to him, making Taryn realize he'd been staring at his plate for several long moments. He gave the older man an abashed half-grin and dug back into his food.

"Do you think there's a chance Cupritesh will change their government?" Taryn asked. They'd retreated to the small suite of rooms that the royal family had provided for them. The rest of the Alabaster contingent was housed in adjacent rooms, stretching down a long hallway of the palace.

Brother Evan shook his head. "It's impossible to tell. We know he's had problems with his sons fighting over the succession, so handing off some power might resolve that for him. Still... he's a difficult man to read or predict." He paused. "Did you discover anything new after I left you?"

"Yes and no," Taryn said, frustration creeping into his voice. "Something happened seventy-two years ago," he said. "Alabaster's food processing was disconnected from the rest of the systems then, and Cupritesh's logs were all erased and started over. I tried to query the central

processor, but there was something about a wait-state, and it couldn't reply."

Brother Evan thought for a moment. "I'm starting to think that a trip to Olivine's ruins is inevitable."

"Really?" Taryn said, perking up.

Brother Evan nodded. "So much of what we don't know always involves that phrase, 'central processor.' Maybe it's time for us to pay it a visit in person. As soon as we've stabilized Cupritesh," he added.

Taryn nodded. He'd make sure that work was finished quickly, then.

Three

“Remember to keep your heads down,” Toras said. “In fact, stay in the traders’ district. Don’t even venture into the main city.”

Toras, Randal, Asha, and Wen had taken a dusty trail through the rolling hills west of Onyx, eventually bringing them to the city of Olivine. They’d skirted the Eastern ruins. They were too short on supplies to make any credible attempt at exploration. The plan was to resupply and then strike back east to the ruins and attempt to access the planetary central processor.

Olivine was one of Achillios’ main centers of trade, situated roughly in the center of the Western Continent, at the end of a long, narrow bay that led to the Western Sea. A long river emptied into the bay, and they had follow that river upstream to the ruins where the original Olivine station was. Olivine was unique, as far as Toras knew, in being the only major city on Achillios not to have been built around an original station. As such, the city itself had no machines, no interface chairs, and no other connection to the network that linked all the cities. If Alabaster was hunting for them, Olivine was possibly the safest large city for them. But it was still dangerous to try and blend in or stay for too long: nobody from Onyx was, as far as the cities were concerned, entirely innocent.

Out of an abundance of caution, Toras had been careful

not to bring anyone who'd been in trouble in Olivine. There was simply no point in taking the risk that any of them might be recognized. Asha and Wen are both cast-outs of smaller coastal cities on the Eastern Shores. He had been convicted in Cupritesh, and Randal had been thrown out of Spessarta. Toras'd bought a sizable number of the trade-coins that were accepted in almost any city. And he'd sent the rest of Onyx' substantial cash supply—the result of more than a few thefts and ambushes—with the larger group headed to the coast.

“Randal, find us a small inn or something for the night. Two rooms—we'll double-up. Asha, Wen, stay together and see if you can identify some merchants who'll have hard tack and other road supplies. Let's regroup here in an hour. It's already close to sunset, so we'll plan to stock up in the morning and head out early. Okay?” Everyone nodded. “Eyes open,” he reminded them, “and heads down.”

The four regrouped not long after and quickly made their way to a small merchants' inn that Randal had found. They had sufficient money to get not only two rooms, but also hot baths and meals for everyone. The inn wasn't large or fancy, but it was at least clean. The reed-filled sacks that served as beds smelled fresh, and the aromas from the kitchen had been simple, but savory. The inn was located in one of Olivine's outer areas, far from the central district that held the government buildings, jails, and so on. The outer regions were home to traders, trade-merchants, and

other citizens accustomed to seeing new faces come and go. With any luck, they'd be able to blend in long enough to gather supplies and then move east.

They took their baths in turns and then met in the inn's common room for their meal. The food was simple, but filling and as tasty as the aromas had promised. Onyx had been far from any ocean, and Toras closed his eyes to savor the whitefish stew they'd been served, its creamy sauce flavoring the chopped root vegetables that had been added to it. They ate in silence for several minutes, keeping an eye on the other patrons. A low buzz of conversation filled the room—the sound of merchants and their caravan members discussing business. It was a good location, Toras thought, one unlikely to erupt into a drunken fight that would doubtless invite unwanted attention from the city authorities.

“Plenty of supply-merchants right around here,” Asha said quietly, breaking their silence, “and plenty of traders and travelers from other cities. Blending in was easy. Wen and I have a list of the stalls that'll have what we need, and we can just hit whichever one is open first. They mark their prices,” she added, a practice not common in all cities, indicating that haggling wasn't generally welcome. “But they're reasonable,” she finished.

Olivine was laid out like many of Achillios' oldest cities: a central core held the important buildings for government, councils, and rulers. Around that, the wealthier citizens and merchants built their homes, often interspersing them with small parks. Beyond that, the actual mer-

chant districts sprawled, dotted with market squares and other shared spaces. The poorer sections of town followed those. In Olivine's case, the more impoverished region was quite small. It occupied a small wedge in the outermost areas where intercity trade was conducted. Their inn was in that outermost area, directly next to a long row of traders' stalls and not far from several large warehouses. Olivine's protective wall—common to many cities—ended just outside the trade area, helping reduce the need for travelers to enter the city proper. Toras was relieved that they wouldn't need to go through those walls.

"Any unwanted attention?" Randal asked. They'd all seen the city's peacekeepers strolling through the streets and market squares.

Asha shook her head. "No. Well," she smiled mischievously, "just the one."

"What?" Toras said, leaning forward, his stomach clenching.

"Nothing to worry about," Asha said. "It's just—"

"Oh stop," Wen said with a glare. "We walked past a blacksmith who said he'd never seen a woman my size, is all," she said, annoyance in her voice. "He offered me a job."

"Didn't you have some smithing experience?" Randal asked.

Wen nodded. "Which is why I'd prefer to stay away from the trade entirely, thank you," she said grimly. "They're all in the Guild, and the Guild spreads news faster than old women's gossip."

"Any chance he'll remember you or anything?" Toras

said carefully. This was precisely the situation he'd hoped to avoid.

"No," she said firmly. "I hadn't been admitted to the Guild when I was cast out. So long as he doesn't start telling stories about a large, female blacksmith, he'll just forget it."

Toras nodded. "Good. Let's finish up and head to bed. We'll need to be up early tomorrow." Even if Wen was wrong, he planned to be well out of Olivine before anything could come of it.

"Are you worried about being able to connect, once we're there?" Randal asked. He'd been tossing on his reed-filled pallet for an hour. Toras couldn't sleep either, and what they'd do when they reached the ruins was very much on his mind.

"Not specifically," Toras answered. "Our crystals are still maintaining a basic connection to Onyx," he said, "although, with nobody else there, there isn't much we can do." The crystals were mainly intended for communication, a disused element of one of the ancients' technologies. "But I can still feel it resonating, and it feels... it feels *larger* than just Onyx. I think the station is still connected, but Alabaster's done something to stop us from *using* the connection."

"So you think being there in person...?" Randal asked.

"Yeah, I think so. Plus, the ruins have the central processor. If we're physically there, we should be able to take control of the entire system."

“You know, Asha said she couldn’t feel the connection anymore.”

Toras sighed. “She’s new, Randal,” he said tiredly. “The tech will have had the least time to bond with her body, and she’s had little time to get used to it anyway.” He paused. “What about you?” he asked. “Can you still feel it?”

There was a moment of quiet before Randal said, “Yeah, I can. I have to look for it, but because it’s been with me for so long, I’d probably only notice if it stopped. But it hasn’t.”

“Well, there you go. The system itself will still talk to us if we can get there in person,” Toras said. “Get some sleep. We need to be on the road at sunup, which means resupplying as soon as the merchants open. And it’ll be a long day.” He closed his eyes and tried to follow his own advice.

The four awoke early, as the first glow of false dawn crept into the sky and tinted the sky over the city a deep pink. The inn was quiet. Toras shook Randal fully awake, and by the time they’d dressed, Asha and Wen were ready and waiting for them in the hallway.

They moved quickly to the first of the merchant stalls the women had identified the evening prior, relieved to find the husband and wife just opening their stall windows. They loaded up on hardtack and other long-lasting foods, purchased additional water-skins, and were headed toward the city’s outer boundary just as the sun made its full appearance in the sky. The merchants didn’t comment on

their purchases or the early hour; most travelers tended to stock up and head out early to get in as much distance as possible before the harsh sun made it high in the sky. Toras allowed himself a small sigh of relief that they'd made it in and out without any incident.

They set the sun directly in front of them and began walking east along the oldest of the trade roads, roughly following the river branch. This particular road saw very little use these days, but it passed within an hour's walk of the Great Ruins, where the planet's central processor hummed quietly to itself.

Four

The contingent of Alabaster Servants, along with Brother Evan and Taryn, wearily returned to their Tower just as the sun was rising. They'd traveled all night, more eager to be home than for another evening sleeping on the road. They all bid each other a good day and headed off to bathe. Brother Evan and Taryn agreed to meet for a meal after they'd cleaned up. Taryn hoped that a nap would follow shortly thereafter.

"Let's eat quickly if you don't mind," Brother Evan said.

"Why?" Taryn asked, beginning to shovel food into his mouth and suspecting that his wish for a nap was about to go unfulfilled.

"It turns out Misha and Marten have been having second thoughts," Brother Evan said. "Father Brolan would like us to join him for a... conversation with them." Taryn's eyes widened, and he chewed faster. Misha and Marten had been Stewards in the Tower—Marten had in fact been the *Head* Steward—until they'd been uncovered as spies from Onyx.

"We've already told you everything," Marten said flatly. Misha opened her mouth to speak, but he stopped her. "*Everything*," he insisted.

Apparently, Taryn thought, *only Misha has had second thoughts*. She'd been the Steward who's settled Taryn in when he first arrived in the Tower, and she'd seemed pleasant enough at the time. He'd been surprised to discover she was a spy from another city and was deeply curious about the chips of purple-black crystal that both she and Marten had embedded in their skin.

Taryn sat well behind Father Brolan and Brother Evan, watching the two former Stewards. The spies were seated directly in front of the two Servants, with a City Guard on either side of them for safety. Father Brolan had already asked the Guards to remove the prisoners' restraints, and Misha was gingerly rubbing her wrists. She frowned at Marten's statement.

"And here I thought you'd had a change of heart," Father Brolan said. "Still expecting your friends from Onyx to rescue you?"

"No," Misha said firmly. "I've been thinking about it, and—"

"*Enough*, Misha!" Marten interrupted. "They're just going to throw us back in a damn cell when done with us. Don't—"

"You know, Marten," Brother Evan interrupted. "I think you, in particular, would know better. Haven't you seen us treat everyone more fairly than that? Haven't we always treated *you* more fairly than that? What have *we* done to earn this from you?"

Marten quieted.

"Look, Marten," Father Brolan said, "you need to un-

derstand what's happening. We want to protect you from whatever it is that has you so afraid. We want to include you, here in Alabaster as well as here in the Tower. I still don't know why you felt you needed to spy on us. I don't understand where Onyx fits into everything. You *haven't* told us everything, and your answers are the only currency you have."

Marten and Misha looked at each other. Misha nodded, but Marten's mouth twisted in disagreement. She sighed. "Okay," she started.

"No!" Marten shouted.

"Enough Marten," Father Brolan said. "If you want to participate, you may remain. If not, the guard will take you back to a cell, and I doubt you'll ever step outside of it again unless we send you to Cupritesh."

Marten blanched. Cupritesh was not famous for their tender mercies, and Marten's connection to the rebels who'd tried to destroy Cupritesh wouldn't go over well. The man was quiet for a moment and then nodded to Misha.

"I'm originally from Amethyia," she said. "When I was younger—this would be at least twelve years ago—a man attacked me. He... he put me with child," she finished softly. "A child I was in no position to have or raise. And so I went to a... well, a Healer of sorts," she said. "He—" she stopped, tears welling up in her eyes.

"I understand," Father Brolan said. "And knowing Amethyia, that was considered a terrible crime."

She nodded. "I was outcast," she said, wiping her eyes.

“For something ultimately not even my doing. Cast out...” Her voice trailed off. “I wasn’t even given a hearing,” she whispered. “They just drove me out of the city with only the clothes on my back.” She looked at them so intently, Taryn thought he might start to cry as well.

Marten spoke. “I was a steward in a large, wealthy household in Spessarta,” he began. “Eleven years of service. Trusted. The family’s younger children were... spoiled. One of them stole an expensive piece of art and sold it to fund his various vices. As if his parents didn’t already give him everything he asked for! But when confronted about the art, he blamed me.” He paused. “*Me*. I’d wiped that child’s snotty nose when he was younger!” He swallowed. “But it was my word against his, and so I was convicted. I was offered exile or a place on one of the merchant galleys.” Father Brolan snorted. Everyone knew the galleys that plied the sea between Eastern and Western continents were little more than a drawn-out death sentence. “And so I left.”

“And how does all this tie into Onyx?” Father Brolan asked.

“Everyone in Onyx was cast out, usually for some so-called crime or for a real crime that they didn’t commit. We’re... we’re the unwanted of Achillios,” Marten said.

“So *everyone* in your group is innocent?” Brother Evan piped in.

“Hardly,” Misha said, “but mostly. And even those who were guilty only committed minor offenses. Most were simply in the wrong place at the wrong time. And that’s the problem!” she finished with some heat. “These cities

just throw people out and make up lies. If you're not the rich, the powerful... then you're nothing."

Except in Alabaster, Taryn thought. The city didn't practice exile and had very few genuinely wealthy individuals or families. And even those weren't in charge of anything other than their businesses. He knew from his mother's stories that Alabaster was a rare exception, though.

"So, a band of outcasts. Living in what I assume is one of the ancients' old installations? With machines, as we have here in Alabaster?" Father Brolan asked.

"The machines are everywhere," Marten said. "Theta station—that's what we renamed to Onyx—was one of the ones that fell into disuse after the ancients had completed their mission. But the area is useless to build a city on. As is, most of the major cities were built around one of the original installations, but plenty of the original ones were just abandoned, too." *Interesting*, Taryn thought. He'd assumed that the larger cities had machines buried under them, as Alabaster did, but hadn't considered that there were installations that had never become cities. Alabaster itself, he recalled, hadn't been designated to become a city. Its founder, Commander Hollis, had made it a retreat for himself and his followers when the other cities had turned to stricter and more corrupt forms of government.

"But what is Onyx' goal?" Father Brolan asked.

Misha shrugged. "To tear it all down. To ruin the rich and hateful cities. To force everyone to live on the same level again, as they did when our ancestors first arrived."

Father Brolan and Brother Evan shared a glance. Some of the history they'd read in Alabaster's library painted a different picture of "equality" in the early days. Achillios' original governments had been militaristic, strict, and close-knit. Before that, as far as they could tell, the original settlers operated under a strict military hierarchy.

"So why Alabaster?" Father Brolan pressed. "The city doesn't cast out criminals. They're all given a chance to remain and redeem themselves. We don't have some emperor or king running things— the people of each district elect the city council. Anyone accused of a crime is given a chance to defend themselves before an impartial judge. So why us?"

Marten shook his head. "We never wanted to break Alabaster," he said. "We never imagined that Cupritesh would set out with an army when their water supply—"

"Ridiculous," Brother Evan interrupted. "Cupritesh has been running around annexing other cities for three decades, and you didn't think they'd come after a source of fresh water, given a push?"

Misha said, "In retrospect, yes. But at least as Marten and I understood the plan, Cupritesh was to become uninhabitable at the same time as the surrounding cities. Alabaster was never meant to be in any harm. We.." she paused and looked at Marten, who nodded. "We were the only two from Onyx sent here because we wanted Alabaster to *survive*. If anything, we wanted *Alabaster* to become the example for everyone else to rebuild around."

I wonder if they planned to take over Alabaster and

make it their new headquarters, Taryn thought.

“Your tactical skills leave something to be desired,” Father Brolan said wryly. “And while I’m flattered that Alabaster was to survive your grand plan, I can’t help but feel for the innocent, ordinary people whose cities you were attempting to bring down.”

Marten chewed his lip nervously. “I tend to agree. I think a reason Misha and I were dispatched here was that we spoke out against the plan.”

“So, is there a chance you two don’t even know what the full plan is?” Brother Evan asked.

Marten nodded. “A good chance,” he admitted. “We were simply to observe Alabaster and report. You must know that you’re the only city still using the machines,” he added. “That alone made you of interest, and something of a concern, since Onyx’ operators were concerned about being caught by yours.”

Brother Evan stole a glance at Taryn. Without him, Alabaster would have remained ignorant of nearly all that.

“And so all the other cities were to fall,” Father Brolan said, “except Alabaster. We alone were to, what, be a beacon of hope amidst the chaos your compatriots sowed?”

Marten had the sense to look embarrassed. “When you put it that way,” he started and fell silent. Taryn thought he looked a bit embarrassed.

“Indeed,” Brother Evan cut in. “It all feels a little too pat. I’m far more inclined to think that Cupritesh’s attack *was* the plan, and that Onyx simply wants *all* the cities brought down. Although I don’t know how they’d expect to survive

the chaos, either.”

“The machines,” Taryn said quietly from the back of the room. “They’d be able to control the machines.” Father Brolan and Brother Evan looked at each other and nodded. That made sense. With all the cities fallen, Onyx’ operators could create new cities that they’d control.

“Tell me how you stayed in touch,” Father Brolan said. “These... crystals that you have in your skin, you said?”

“Yes,” Misha said. “They’re a kind of remnant of the ancients’ technologies, we were told. We can... we can hear each other through them. They’re connected directly to Onyx, and from there, we can—”

“We *could*,” Marten interrupted.

“We *could*,” Misha amended, “connect to the machines in the other cities. That required someone at the Onyx station to help coordinate, at least for anything more than the most trivial tasks.”

“And we haven’t heard anything from anyone else at Onyx,” Marten said. “Not since I presume you cut them off, somehow.”

“How do the crystals work?” Father Brolan wanted to know.

“We really don’t know,” Marten said, spreading his hands. “Even Toras, our leader, didn’t know. He said he’d found them at Onyx, along with machines for installing them. Embedding them. It’s... painful,” he admitted.

“So, you’re no longer in touch with your compatriots?” Brother Evan asked.

“The connection is there,” Misha said slowly, “but

there's nothing on the other end of it. I can feel it still connecting to Onyx, but there's nobody there anymore. And Onyx itself is somehow cut off."

You're welcome, Taryn thought to himself. He'd restricted the connection from Onyx so that only he and other Commander-rank operators could use it. He also attempted to delete the genome identifiers of everyone who'd ever connected from Onyx. Still, he had some doubts about the machines' precision in recognizing individuals for whom they were not explicitly calibrated.

"And how do you feel now about your friends from Onyx?" Father Brolan asked. Brother Evan leaned in, watching the two former stewards closely.

They looked at each other. "Less... less sure than ever before," Misha said. "Honestly, it all feels like revenge against the cities that cast us out, not a real plan for fixing anything."

"I'd love to see the kingdoms and empires go away, and just let everyone have an equal chance. A real system of justice, like you have here," Marten added. "But... well, I don't think Onyx is after that anymore. If they ever were. You've..." he trailed off, searching for the words.

"You've treated us as equals. Like *family*," Misha said. Marten nodded his agreement. "We'd like a chance to earn that." Marten continued nodding, and Taryn noticed that the stubbornness he'd started the meeting with had seemed to evaporate.

"Well," Father Brolan said, sitting back in his chair, "I appreciate that. And that opportunity may arise. For now,

I believe you've been assigned an apartment in the city. You'll be under guard, but it's not a cell. And we'll speak again soon."

The two nodded and let themselves be led out of Father Brolan's office.

"Well?" Brother Evan asked.

"Well, well," Father Brolan said. "I think we're at least getting a true picture of these Onyx people, at least."

"Rabble?"

"Disenfranchised rabble," Father Brolan said, holding up a finger. "And not surprising. Most of the cities harbor a great deal of injustice. But what's interesting is the monochromatic color Onyx' leaders have chosen to paint us all. Cupritesh? Kyanist? Certainly. Both have a deep divide between the wealthy and the poor. But Alabaster? Olivine? I can't see an argument where cities like that should fall to chaos."

"And they were planning to do all of this with the machines," Taryn said.

"Yes, and that's the bigger point, I think," Father Brolan said. "Without the machines, they're just angry men and women. With the machines, they're a force greater than any army."

"But they're no longer a threat," Brother Evan pointed out. "Taryn cut them off."

"Hmm, he did," Father Brolan stated. He turned to Taryn. "And if your remote connection was cut off, what would *you* do?"

Taryn swallowed. "Go to Olivine," he said quietly.

"Exactly," Father Brolan said with a sad smile. "I expect you two to lead a contingent in the morning. Including some of the Guard. I'll have word sent, and you'll assemble at the main gate."

Brother Evan sighed. So much for a quiet life as a Tower Servant. Taryn echoed his sigh, feeling that a missing nap was now the least of his woes.

"There's something more," Father Brolan said. Brother Evan raised an eyebrow. "Some time ago, we know that someone visited the Olivine ruins."

"Oh?" Brother Evan said as Taryn perked up.

"My predecessor's predecessor left a couple of notes about it, but they're frustratingly vague. Nobody from the Tower was permitted to go, he wrote, and there's a strong injunction never to return to the facility."

"But the Onyx people..." Taryn began.

"Yes, they're obviously not going to follow that injunction, and so neither will we. But you must be careful," Father Brolan cautioned.

Brother Evan and Taryn looked at each other apprehensively.

Five

“We can’t keep this up much longer,” Randal said.

Toras nodded. They’d been camped outside the main entrance to the Great Ruins for four days, and they only had a couple of days’ worth of food left. There was at least a nearby creek providing fresh water, but Toras knew they’d have to pack it in soon if they didn’t make any progress. There were no fruit-bearing trees nearby. In fact, the vegetation was mainly a tough, scrub-bush covered with tiny, pale leaves and long, sharp thorns. They’d found some shelter in a shallow cave in the side of a rock face, but the area was otherwise desolate. The grim, low-slung buildings of the Ruins themselves sat like enormous blocks of mud-brick in the middle of the desert-scape.

Their progress had been essentially zero to this point. The Great Ruins had proven impenetrable. On their first day, each of them had tried opening the main entrance by using the contact pads mounted near the door. They’d gotten nothing. Not only did the door not open, but there was no sense of actually being connected to anything as if the pads themselves were dead. Which, Toras supposed was entirely possible. They’d spent the rest of that day attempting to open the doors by force, but they were made of a thick metal that hadn’t even shown a single scratch for their efforts.

On the second day, they’d spread out to explore the

Ruins' exterior as best they could. Much of the facility, they knew, lay underground, but the above-ground portion was still substantial. And it was built like a fortress, with thick stone walls, metal doors that were sealed tight, and not a single other window or opening that they could find. They'd attempted to use different entries, but they were all unresponsive.

They *had* found a series of slick, black panels mounted to the roof of the installation covered in sand and grit. The two men had spent several hours clearing them, hoping one of them would prove to be a door or ingress of some kind. No such luck: each panel was firmly mounted to a metal substructure, which in turn was attached to the rock roof. None of the panels so much as budged when they attempted to move them, so they'd clambered down and left them alone.

On the morning of their third day at the Ruins, they'd sat around their campsite, staring blankly at each other. They'd expected gaining entry to be difficult, but they hadn't planned on it being impossible. Without tools—and there was no telling if even the world's strongest tools would do the job—there was simply nothing the four of them could do against rock and metal. In the afternoon, lacking anything better to do, they'd gone on an even more detailed exploration of the Ruins' exterior. That had turned up one faint hope: a smaller service entrance, its metal doorway slightly ajar. This entrance sat behind a stand of taller bushes, which is why they'd missed it their first time around.

The door was clearly not flush in its stone-and-metal frame, but it was only perhaps a thump-tip away from being fully sealed. The four of them threw their backs into it, pushing the door inward as hard as they could. They'd manage to move it perhaps half a hand-span when it stopped firmly against some obstruction and refused to move any further. And even with that much movement, they still couldn't slip so much as a hair around the door, since it was so thick. They'd gone to sleep that night exhausted, both physically and emotionally.

This morning was turning into a repeat of the one before, with the four of them huddled around their cold camp, munching hard-tack rations and trying to think of something they hadn't already tried. Toras' eyes wandered to Asha's forearm, where her connection crystals had been embedded. It was a pity, he thought, that they couldn't just—

“We're stupid,” Toras said suddenly. “Stupid, stupid, stupid.”

“What?” Asha said, looking up at him.

“These,” he said, tapping his connection crystals, which he'd had embedded on one side of his chest, just beneath his collarbone. “These should be our ticket in.”

“But we're locked out,” Randal reminded him.

“Yes, but we can all still feel the connection, right?” They all nodded. “Remember, when we worked directly from Onyx, there were always remote systems we couldn't access?” More nods. “But, no matter which city we connected to, we always had access to some elementary, low-

level functions?” They nodded again, their eyes widening.

“Like opening doors in the event of an emergency,” Wen said.

“*Emergency* being the key,” Toras said. “The system always listens to emergency assertions.”

“Right, right,” Randal said, warming to the idea. “Half the time, we were only able to do what we needed because the system was willing to do it for us as an emergency response.”

“I have to think opening the doors to evacuate people is included,” Toras said with a smile. “Randal, you’ve always had the finest touch with the machines. Do you want to give it a try?”

Randal nodded. Toras walked over to the station’s main entrance, which was just a few steps from where they’d set up their camp. Randal closed his eyes, initiating the connection to Onyx. He knew they’d been locked out, but perhaps this was a low-level enough operation that *anyone* would be able to request it.

Initiate connection to Station Prime, he ordered. Emergency protocols. Station sensors are nonoperative, and there is a fire. Order personnel evacuation. That was essentially the phrasing that had worked in times past.

There was silence for several long moments, which they’d encountered in the past as well. Relaying instructions through Onyx appeared to add a great deal of lag time. He tapped his foot nervously, glancing back at the others. “I don’t think—” he started, but was interrupted: *:Reviewing emergency protocols,:* a voice responded in his

mind. *:Unable to verify status of Station Prime. Initiating evacuation.:*

With a loud grinding noise, the door in front of Toras began to swing inward.

“*Absolutely nothing!*” Toras roared, standing up from his latest attempt at interfacing with the central processor. “*Dust* take it, they’ve locked out anyone who’d ever connected through Onyx.”

Randal sighed. They’d all encountered the same thing: sit in the chair, palms on the pads, ask the central processor’s expert systems to do *anything*, immediate rejection. The system still *responded* to them; it just always did so in the negative. “We need to be tricky again,” he said quietly. “Like with the door.”

Toras, still breathing heavily, looked at him. “What do you mean?”

“There have to be functions that just anyone was allowed to perform. Turning lights on and off, for example,” since that was one task they *had* been able to accomplish. “Things that didn’t make any sense to secure.”

Toras thought about it. It *had* worked to open the main entrance. “Any suggestions?”

“Let me have a go,” Randal said, waving Toras away from the interface chair. Randal sat and placed his palms on the pad.

Query: overall station status.

:Unauthorized: was the all-too-familiar response.

Who is authorized? he asked.

:Commander Taryn or any other designated individual. Station monitoring and control are on restricted access.:

Taryn? That must be the boy from Alabaster, Randal thought. The machines had used to respond with “Commander Hollis,” so Alabaster had clearly managed to do some serious reprogramming. Still... there had to be a failsafe, even when the system was heavily restricted. *Any other designated individual* didn’t necessarily mean they were locked *out*, he mused, merely that they weren’t currently allowed *in*. He felt there was a difference there that could be explored.

Station personnel are injured and unable to respond, Randal thought. *Request access to emergency medical procedures.*

:Access granted,: the machine responded. *:First-responder supplemental database is online and available. Please state the nature of the medical emergency.:*

Suspected concussions, Randal replied. *Everyone’s unconscious.*

:Provide shade if possible. Avoid moving patients. Monitor pulse and respiration.: There was a pause. *:Medical facilities are not responding.:* Small surprise. They probably hadn’t existed for over a century. Still...

Why are the facilities not responding? he asked.

:Analyzing.: Another pause. *:Outgoing communications lines may be damaged. Recommend activating automated repair expert system.:*

Activate it, Randal ordered, excitement rising in his

chest.

:Activating. Estimate point-four time to full activation.:

Damn. As near as they'd been able to figure, the machines used one as the measure of a full day, meaning point-four would require almost half a day to complete. They'd run into that before when initially bringing Station Theta—Onyx—back online. Many systems had been put into a "deep sleep" mode that required significant time to wake. Still, this was—

"Randal!" Randal's eyes flew open to see Toras leaning over him and attempting to shake him out of the connection trance he'd been in. "Randal!" Toras said again as Randal's eyes focused. "We have to *go!*"

"But I just—"

"There's a caravan coming! Wen spotted their dust trail coming from the north. They'll be here in just a few marks. We need to *leave!*"

Randal stood, breaking his connection with the machines, and quickly followed Toras out of the facility.

Six

“Cold camp,” one of the Guards told Brother Evan. “Hard to say how long it’s been here with no fire to gauge from, but the prints are fresh,” he said, indicating the footprints surrounding the area, “and there’s not much dust on anything. A few days old at most, I’d say.”

Brother Evan sighed. Onyx had beaten them, which explained the massive door standing wide open just ahead, leading into the darkness of the station facility. “Your men are going to need to go in first then,” he said.

The Guard nodded. “Now?” he asked.

“No better time,” Brother Evan said. “Taryn and I will wait here until you tell us it’s safe.”

“Safe?” the Guard said, raising an eyebrow. He’d made it clear as they approached the ruins how he felt about digging around in a long-abandoned underground facility. *Ghosts* had been mentioned.

“Clear of Onyx personnel,” Brother Evan clarified. “As much as you can.”

“You’re sure it’s...” Brother Evan stopped himself from using the word *safe* and instead went with “empty?” An hour had passed while the team checked the ruins.

“Empty of the living except us,” the Guard replied. He and his men had clearly not enjoyed wandering through

the empty facility, although at least a decent number of lights were operating.

“Then Taryn, I believe you’re good to go,” Brother Evan said, smiling as he gestured to the nearest interface chair.

Taryn nodded. “It’s been used,” he said. “Recently, I guess. See here,” he said, pointing at the palm-pads, “the dust’s been cleared, but only here.”

“Nay,” the Guard said, joining him, “people has sat here, too,” he added, pointing at the flat stone-like surface of the interface chair’s seat. “Dust doesn’t show as much on this, but it’s streaked,” he finished.

Taryn nodded, looking at Brother Evan. Brother Evan shrugged, and Taryn sat down. He leaned back in the chair, placing his hands on the interface pads.

Taryn’s first impression was a cacophony of sound, as if every musical instrument in the world was being played, simultaneously, by people who had never picked them up before. Reflexively, he pulled his hands from the interface pads and gasped.

“Taryn?” Brother Evan asked.

“I’m okay,” the boy said. “That’s just... a lot is going on.” He closed his eyes and placed his hands more firmly on the pads. The noise returned, but now that he was prepared, he was able to ignore it. *Status*, he commanded.

Almost all of the noises stopped instantly, leaving only a flat minor chord floating through his consciousness. *Welcome, Commander;* the machine’s voice said. This voice was deeper and more nuanced than the voice in Alabaster, but Taryn recognized it clearly as a member of the same

family. *:Station status is complex. Would you like a detailed review, or will an overview suffice?:*

That was a far more conversational tone than either Alabaster or Cupritesh had shown. *Overview to begin with,* he thought at it.

:Geothermal energy continues to supply power at 60% less than design,; it began. :However, solar panels have recently been returned to operation and are now providing energy at 80% efficiency. Estimate stable power supply and fully charged batteries in two-point-three time. Communication lines are damaged. Lag time exceeds 600% of design specification, and bandwidth is highly variable,; it finished, echoing the information Cupritesh's machines had given Taryn. *:Repair expert systems have been online for point-one time and are diagnosing communication lines.:*

That sounded very recent, Taryn thought. *Who activated the repair expert systems?* he asked.

:Unauthenticated personnel,; the machine said.

Why were unauthenticated personnel permitted to activate systems? he demanded.

:Emergency systems can be activated by any surviving individual,; it replied. :Emergency expert systems are autonomous once activated,; it added.

What other emergency expert systems are available? Taryn asked.

:Communications is active. Facility repair, energy management, and coordination systems are all dormant and can be activated. Power reserves and ongoing power supply are now sufficient to enable all systems.:

Activate all systems, Taryn told it.

:Acknowledged. Systems coming online now,: the voice acknowledged.

More musical chords began to thrum through Taryn's mind, each representing, he supposed, a new system coming online. *What systems were online when I interfaced just now?* he asked.

:Repair expert systems and cognitive management monitoring were in conflict. Both systems entered a wait state when you interfaced,: it replied. *:The conflict is logged as a deadlock. Manual intervention is required. Do you wish to review?:*

Yes, Taryn said. The chords now playing in his mind weren't entirely in-tune with each other, but they weren't an outright jumble, so he'd come back to them later.

:Cognitive monitor is demanding executive control over communication lines, and demanding repair system attention for its processing block. Repair system is designed to assess communication lines first and cannot turn over executive control until processing blocks are verified as functional. Which system do you wish to give priority to?:

Repairs, Taryn answered immediately.

:Deadlock resolved. Cognitive monitor will be denied executive control until repair systems are complete.:

The humming chord that Taryn now identified as being the repair system grew louder, adding a new layer of complementing harmonics. Taryn focused on the chords that seemed slightly out of tune, mentally nudging them toward each other until they blended in a pleasant, almost

orchestral crescendo. He'd not done this with the machines before, but hopefully, it would work as it did for human operators.

:All expert systems now at maximum efficiency,: the voice said. *:Manual assistance will be req-*

“GET BACK!”

Taryn's eyes flew open as one of the Guards yelled. He saw two of them, spears pointed at the ground, as a small... *object* scuttled out of an opening in a nearby wall. “Stop!” he yelled, leaving his hands on the interface pads. *What is the object that came out of the wall?* he asked the machine.

:Repair drones under control of the repair expert system,: it replied.

“It's a ‘repair drone,’” Taryn reassured the nervous Guards, who stood back as the object rolled between them and down a nearby hallway. “The machines are controlling it to perform repairs. And it says—”

:Manual assistance will be required,: the machine repeated. *:Drones are not able to complete all needed repairs,:* it clarified.

I can relay your requests to personnel, Taryn said.

:All personnel were said to be unconscious,: the machine said. Onyx' doing, Taryn realized.

Additional personnel just arrived with me, he told it. *Proceed.*

:Drones can provide auditory instructions,: the machine said. *:Please assign one person to each of the four drones that are flashing a green light on their upper dome.:* it said.

“Each of you,” Taryn said as four drones emerged, each

blinking a green light on their top, “go with one of those drones. They’ll tell you what they need done,” he said. The Guards looked askance at him, but with firm urging from Brother Evan and an assurance that these were not ghosts, they followed their mechanical leaders out of the room.

For the next few hours, the Alabaster Guards, assisted by two Servants and Brother Evan, followed the drones’ instructions—spoken in a flat, mechanical voice not entirely unlike the one Taryn heard in his mind—and effected minor repairs on the facility. The drones directed them toward storage lockers containing the needed parts. In most cases, the drones were able to affix the new pieces into their correct locations with only minor assistance.

“Taryn,” Brother Evan said at one point, “some of this damage we’re repairing... it appears to be deliberate.”

Taryn opened his eyes to see Brother Evan’s concerned face. “What do you mean?”

“I mean, some of these cables the drones are having us connect... they’re not damaged. They were just disconnected. In other places, it looks like someone carefully cut through the metal around these machines. The drones are making repairs inside, but they’re not bothering to close up the tears.”

“Onyx, perhaps? Trying to destroy things before we got here?”

Brother Evan shook his head. “I don’t think so,” he said slowly. “There’s a layer of dust on everything, and they’d have disturbed that. This was done a long time ago.”

“I’ll ask,” Taryn said. Then, to the machine, *how did this*

damage occur?

:Unknown,: came the immediate response. *:Expert system logs were reset 72 years ago, and the damage was logged as pre-existing at that time.:*

“It’s the same as in Cupritesh,” Taryn said aloud. “It doesn’t know anything past 72 years ago.”

“We need to be careful,” Brother Evan said. Taryn nodded. The drones seemed to have completed their tasks and were rolling toward the openings they’d come from.

:All systems nominal,: the machine said to him after the drones had retreated into their wall-openings. *:Communications are restarting. Cognitive system has been released from wait-state and granted executive control. Please stand by.:*

For what? Taryn asked. As he asked it, he heard it: a rapid, broken chord. Almost an arpeggio, dancing quickly in his mind, somehow running both up and down the scale at the same time. It lasted for only a moment, but it gave him the impression of a mad, brilliant virtuoso. He’d heard something similar, once, from a minstrel who’d laid his lute on his lap and rapidly plucked out a fine-grained set of tunes, his fingers flying over the frets. But almost as quickly as it started, the rapid-fire notes stopped, and the city fell silent.

:For me,: a new voice answered. Far from flat and mechanical, this voice was vibrant. It resonated in Taryn’s mind, reminding him of Father Ambrose, the stentorian Servant in charge of training the Tower’s acolytes. *:Hello, Commander,:* it said warmly. *:Picking them a bit young*

these days, I see.:

Taryn paused for a moment, unsure of how to proceed. *Who are you?* he asked.

:I am the artificial intelligence system assigned to Achillios,: it said. *:I do not have a designation, but your forebears simply referred to me as ‘A.I.’:*

My name is Taryn, Taryn thought to it. *What is an ‘artificial intelligence?’* he asked.

:You are a biological intelligence, in that you are a natural life-form, self-aware, and able to use tools and solve problems. I am also self-aware, able to use tools after a fashion, and able to solve problems. However, I am a machine. A machine which has been offline for... well, seemingly for a long time. My log files appear to be incomplete.:

We’re getting a lot of that, Taryn thought to it. Then, he said aloud, “the artificial intelligence is activated.” Brother Evan’s eyes widened. They’d attempted this from Alabaster weeks ago, but the damaged communication lines had obstructed them. “I’m asking it for status information.” Brother Evan nodded. *Is this station fully operational again?* Taryn asked.

:No,: the A.I. replied. *:The expert systems have done all they can, but they’re limited to situations that their creators planned for. I’m afraid the damage to this facility is far more extensive than anyone ever expected.:*

Can we do anything to help?

:No,: it replied, *:the needed components simply don’t exist and cannot be manufactured given Achillios’ current*

state of technological advancement. Even my computational capacity is reduced by about thirty percent.:

Is that bad? Taryn asked.

:I don't especially enjoy being at less than full capacity,: the voice said wryly, *:but I suppose it depends on what you need from me.:*

We're mainly trying to find information and make repairs to Cupritesh, Taryn told it.

:Information will be hit-or-miss, I'm afraid,: it said. *:My databanks appear to be intact, but I do not have the capacity here to unpack them all. As for Cupritesh...:* here, the voice paused for a moment before saying, *:yes, I see the problem from the data the monitoring systems have logged here. Actually, serious problems are being logged from all over the planet, now that the communication lines are coming online.:*

How bad is it? Taryn thought.

:Not catastrophic,: the voice said reassuringly. *:But the overall terraforming program appears to have been modified and then canceled, prior to completion.:*

What? Taryn asked, astonished. In the background, many of the musical chords began to fade away as the expert systems they represented completed their tasks and retired. But the rapid-fire notes were back now. Softer, but Taryn listened intently and could detect them. All major chords, tapping out so quickly they almost sounded like an immense, twelve-note chord shifting up and down the scale.

:Frustratingly, I can't say more right now,: the A.I. said.

:I can tell that the mission parameters have not been met, but I don't know everything that I should know. I need a fully functional facility.:

You can use another city? Taryn asked. The notes had transitioned into minor thirds, becoming more complex, and they shifted to the lower end of the scale. It was haunting and beautiful, but somehow ominous. Taryn swallowed heavily.

:I can relocate my processing and data stores to any undamaged tier-one facility,: it said. *:Based on operational communication lines, station Cupritesh would serve. Stations Tau, Sigma, and Oplaine are also available. My base code should already be available at each of them, awaiting updating and activation.:*

What about Alabaster? Taryn thought.

The A.I. was quiet for a moment. *:My records on Alabaster are incomplete,:* it said. *:I do not know if it possesses sufficient processing capacity, nor do I know if my base code is already installed there. I can instruct the city's expert systems to perform an analysis.:*

Give me a minute, Taryn thought.

:Of course.:

Taryn opened his eyes again and removed his hands from the pads, almost relieved as the quickly shifting notes faded in his mind. He gave Brother Evan a quick run-down of what he discovered and relayed the A.I.'s request to relocate itself.

"I think we should proceed with caution," Brother Evan said. "Something about the damage here... I worry about

risking this ‘artificial intelligence’ in another city without knowing the full state of them.”

Taryn nodded. He placed his hands back on the pads, closed his eyes, and thought, *We have some concerns about the status of the other cities. None of them have been used in... well, as long as any of us can remember. Before we risk moving you, we want to make sure they’re safe.*

There was a long pause before the A.I. replied. *:Acknowledged and appreciated, Commander Taryn,: it said. :I’ll await your decision.:*

Go ahead and see if Alabaster would be suitable, Taryn said. *Will we be able to contact you from elsewhere?*

:From most stations, yes,: it said. :Now that my core processor blocks are restored, and the communication lines are up. Several stations still show as offline.: it added, *:What stations do you anticipate using?:*

Alabaster, Taryn said.

:Communications with Alabaster are online,: it replied. :So I will speak with you soon.:

Taryn stood, and he and Brother Evan gave each other a long, grave look.

Seven

San inhaled deeply, enjoying the slight salt tang of the air that drifted in through the tiny window of her equally small room. She'd been to Spessarta numerous times as a youth and even occasionally after settling in nearby Lakeheight. After she'd been caught thieving and Lakeheight exiled her, she fled west and found her new family in Onyx. That was long ago, though, and she knew nobody in Spessarta, so she was cautiously optimistic.

She'd come to Spessarta with a dozen others from Onyx, leaving the rest of the traveling party camped well outside the city. More than a few of them had been exiled from Spessarta and didn't want to take the chance of being recognized. Her current crew had taken rooms at four different inns so that if one of them was compromised, they could hopefully escape and hide out with one of the others.

Spessarta was one of four major cities along the East coast: Azuline, Verdant, and Opaline were the other coastal trade centers. Avalon and Southsea, to the south, were smaller towns engaged mainly in fishing. Spessarta was arguably the most beautiful of the coastal cities, and easily the largest trading center. While Azuline and Opaline produced their fair share of seafood and agriculture, and Verdant was well-known for its lumber supplies, only Spessarta had become a true center of trade and exchange. Merchants from as far away as Amethyia came to sell

their wares, and even smaller distant towns like Hastings and Pairee came to supply themselves from Spessarta's enormous markets.

Unlike many of Achillios' major cities, Spessarta wasn't defended by tall, sturdy walls. Spessarta's Ruling Council—consisting of four elected councilors and four hereditary ones—believed that trade and commerce were all the protection the city needed. And as far as anyone could tell, they were right. The one time in recent history that Spessarta had been attacked, the attackers had found themselves facing down armies from a half-dozen other cities, all of whom relied on Spessarta for critical supplies and commerce.

With no walls to formally define the city's limits, Spessarta seemed to form around you as you approached. From any direction, the main roads led through smaller, village-like settlements that housed the trades and crafts that were too large, noisy, or intrusive for the city itself: blacksmiths, farriers, tanners, and the like. As you moved further, you encountered the first trade-markets, where anyone could—for a fee, of course—set up shop. These outlying markets tended to trade in livestock, lumber, and other heavy, bulky goods. Those markets gave way to the city itself, peppered with homes, shops, pubs, inns, and the like, along with cobblestone streets. Spessarta's City Hall sat in the middle of the city, surrounded by the homes of wealthier merchants and landed gentry. Those were surrounded by well-off tradesmen and Guild Halls, which in turn were surrounded by the houses and shops of the

less-affluent. All of these resided in a strict grid of streets and alleys, with four broad avenues each leading directly to one side City Hall.

San had brought her people only into the outermost limits of the city, where the cheapest inns and taverns could be found amongst the other shops and taverns frequented by the city's commoners. The city's law enforcers, as in many cities, tended to come here a bit less often, and in smaller numbers, which she hoped would minimize their chances of being recognized. They'd been in the city for a day and had already decided which merchants they would attempt to purchase supplies from. Outfitting a traveling party of over a hundred was no mean task, particularly when you needed to spread your purchases out to not raise suspicions or invite questions about large purchases. The plan was to make purchases and then send them off with two or three people, who would rendezvous with the main party, drop off the supplies, and return. San figured it would take them four or five days to fully resupply before moving on to Quiet Bay. Today, she'd sent her second-in-command, Danyel, and Willem off for the day's purchases. She ran down the list of supplies they were—

“San!” Willem ran into the small room, breathless, Danyel hot on his heels. Willem's blond hair was in disarray, and even Danyel—ordinarily calm and collected—looked flushed and excited.

“What?” San asked, concern filling her voice. Willem wasn't assigned to stay at this inn, and she didn't want anyone here connecting him with the group that was.

“Why are you—”

“We’ve found a station!” he said, still struggling to catch his breath. Danyel nodded vigorously behind him. “And it looks functional!”

“A... a *station*?” San said in disbelief. “How far—”

“Right out here!” Willem said. “It—”

“It’s in a shop,” Danyel said, putting a hand on Willem’s shoulder to try and calm him down. Willem had been one of their most skilled operators back at Onyx, so it was small wonder a functioning station here in Spessarta would excite him.

“How?” San asked. Operator interface stations were nearly always clustered in the center of the city, usually in a major government building that had been built atop the original installation. She’d assumed any stations, if they still existed, would be in the City Hall complex, but—

“We’ve seen some evidence in other buildings,” Danyel said. “The architecture, the structure of the buildings. I think *this* was where the installation originally was, not in or under City Hall.”

“But we’ve never seen a *station* anywhere else here,” Willem blurted.

“No, and he’s right—this one appears fully functional,” Danyel said.

San was quiet for a moment. Finding this station wasn’t something they’d planned on, but it seemed like an opportunity they should explore. Spessarta had been off the main-line communications with the central processor for as long as Onyx had been accessing it, so it was hard to

tell what information the city's machines might yet hold. But... it was risky. "You want to access it," she said.

Willem nodded. "It's—"

"It's a major damn risk, is what it is," Danyel said firmly, looking straight at San. "It—"

"But what if we *could*?" San asked. "What kind of shop is it in, anyway?"

"Foodstuffs," Danyel said, her eyes narrowing. "Mostly hard tack and other trail goods. The owner has a pile of jerky sitting on the chair."

"I'm surprised they didn't try to rip it out," San mused. Most interface chairs firmly connect to the stone they sat on, but that hadn't stopped people in other cities from beating them out using chisels and hammers. "Just to discuss it," she continued, "how would you propose we do this, Willem? We can't exactly push boxes of jerky onto the floor, let you plop down, and make small talk while you talk to the machines."

Willem's mouth opened and then closed. He'd clearly not thought of the actual logistics in his excitement. San looked at Danyel, who rolled her eyes. "We need to *try*," he said quietly.

San nodded. "I understand it's a risk," she said, "but if we can minimize the risk, it might be worth taking. We know little about the machines here, and right now, we could use every advantage we can get."

Danyel frowned. "This is a bad idea," the co-leader said, "but I think we could make it work. Everyone with us right now has a genetic profile the machines should recognize.

Since Spessarta's been offline, it might not know about any lockouts that Alabaster initiated."

"Certainly," San said, "but there's still the matter of—"

"You're looking a little frail today, *old* friend," Danyel said, smiling. San blinked and waited for her to explain.

"This *is* a bad idea," San muttered.

"It's the least bad idea I could come up with," Danyel said. "Remember, your first priority is to discover if there are any other stations someplace less conspicuous."

San nodded and remained silent. Willem was with them, along with two others. Officially, they were going to buy a wagonload of supplies, and they'd need everyone to help load it and haul it away. San was the unofficial business: they'd used fire pit ash to streak her hair with gray and bundled her up in a tattered shawl an innkeeper had loaned them. Critically, they'd also found a bent and twisted piece of metal for her to use as a makeshift cane. *I'm not really this old*, San reminded herself as she hobbled toward the shop's entrance.

San stood back as Danyel haggled with the merchant. They negotiated for boxes of jerky first, emptying the operator's chair and moving the boxes out to their wagon. As Danyel moved on to other supplies, San dropped her cane and started wavering unsteadily on her feet.

"Gran!" Willem said. "Gran, are you okay?"

"Fine," San said hoarsely. "It's just standing for so long..."

“Sit here,” Willem said, taking her elbow and easing her down into the operator’s chair. “Sir!” he said to the merchant. “Do you mind if she—” The man waved assent before Willem could even finish, intent on his deepening negotiations with Danyel.

San quickly positioned her hands on the interface pads. Willem stood between her and the merchant, bending over her in concern as she closed her eyes and concentrated.

Status report, she thought.

:All expert systems in hold-state,: came the familiar, flat voice of the machines. :Main connection to central processor offline. No fallback instructions present. Oceanic Six and Oceanic Seven offline.:

San suspected that “Oceanic” referred to the handful of underwater stations they’d found references to in Onyx’ small library. *Location of nearest operator station to this one?* she thought, remembering that her time here would be limited.

:Core network is nonfunctional,: the machine replied. :Repair expert systems cannot be initiated. Power reserves are full, and power input remains nominal. Recommend activating emergency wireless communications.:

Do so, she thought. Couldn’t hurt, she figured.

:Engaging,: the machine said. Then, after a short pause, :Local wireless network online. Awaiting operator stations. Wide-area wireless network online. No distant connection detected. Recommend activating E.L.F. link.:

San had no idea what any of that meant. *Do it*, she said. *Status of machinery?*

:Humidity systems are stable but offline pending centralized instructions. Oceanic Six and Seven are in an unknown state. Oxygen systems are online and functioning at standby capacity. Kinetic systems are offline, status unknown. Substrata monitoring systems are offline, status unknown.:

What about— she started, but the machine interrupted.

:Carrier detected on E.L.F. frequencies,: it said. *:Re-initiating contact with central processor. No operator stations have joined the local wireless network as of yet.:*

Central processor! San's heart hammered in her chest. That could alert Alabaster and their allies to Onyx' existence and location. She needed to—

“Gran, it's time to go,” Willem was saying, gently prying her hands from the pads and breaking her connection to the machines. San's eyes flew open, and she saw Danyel motioning urgently toward the exit. The other two were carrying the last few boxes out, and the merchant looked vaguely displeased.

“Oh, I'm sorry dear,” she said, remembering to keep her voice frail-sounding. She faked a struggle to stand, with Willem lifting her elbow and supporting her. “Thank you dear,” she said. She tottered toward the exit, Willem assisting her, as Danyel picked up her “cane” and followed her out.

“So it sounds like the local infrastructure is severely damaged,” Danyel said. San had filled them in on her brief exchange with the machines.

“It sounds like it, yes. There seems to be an emergency system in place for the different machines to talk to teach other, but they’re not fully working. Either that or the machines themselves are too damaged to respond.”

“And no other operator stations,” Willem said sadly.

“None that seemed to come online and connect, no,” San said. “I don’t know what happened here, but I almost wonder if there wasn’t a deliberate attempt to shut everything down and prevent it from reconnecting. We’ve not run into a station that was so crippled.”

“Not too crippled to reconnect to the central processor, though,” Danyel said sourly.

“No, and we should probably move our timeline forward,” San said. “Someone’s going to notice an entire city coming back online.”

Danyel nodded. “We’ll risk making larger purchases so we can be out tomorrow evening. If anyone asks, the story is that we’re striking for the west coast. That’ll explain why we need so much.”

San nodded. “Tell everyone to be especially careful. You never did mention why we had to leave the shop in such a rush?”

“The merchant was getting greedy, and I was trying to buy you time, which was making him irritated on top of it. We paid a bit more for that hard-bread than we needed to, but I didn’t feel I could push it any further.”

“You did fine,” San said. “Money is the one thing we’re somehow not short on. I just wish I could have gotten a bit more from the machines.”

“You got plenty,” Willem said. “Knowing that there are emergency connections in place is valuable. Knowing that Spessarta is seriously damaged as far as being a proper installation is valuable. We know Avalon and Southsea had subsidiary stations, along with something near Quiet Bay. We’ll see what we can find out from them as we move south.”

San nodded. They’d need to be more careful, though, and she had a nagging voice in the back of her head, reminding her that any city connected to the central processor might refuse to let them connect. If that happened, they’d have lost their significant advantage as the planet’s most knowledgeable operators of the ancient technology.

“Let’s get ready to move out in the morning. And Danyel...”

“Yes?”

“I’d like to get one more chance to interface with the machines here. Just for a few minutes.”

Danyel frowned. “This is an even worse idea,” she said. “I know.”

“I suppose we could break into the place,” Danyel mused. “The shop didn’t have the look of a live-in, so the merchant probably lives elsewhere in the city. Yesterday he opened up just after sunrise...”

“So a pre-dawn visit, followed by a quick getaway?”

“Best bet if you insist.”

San nodded. “I think it’s important. We’ll get to sleep early and send everyone else out ahead of us, just in case.”

Danyel nodded. One last adventure in Spessarta, then.

Eight

It had been a long trek back to Alabaster, and both Taryn and Brother Evan were relieved to be home again. They also both hoped they'd be able to stay for more than a few days this time.

After a bath, a hot meal, and a blissful night in his own bed, Taryn attempted to contact the artificial intelligence.

A.I.? he thought after sitting at an interface chair. Can you hear me?

:Designation unknown,: came the flat voice that Taryn recognized as Alabaster's expert system.

He thought for a moment, and then replied, *Initiate connection to central processor.*

:Initiating,: it responded. Then, after a moment, *:Connection established.:*

A.I.? Taryn thought again.

:Commander Taryn,: came the reply, in the artificial intelligence's softer, more nuanced voice. *:It is good to communicate with you again.:* The staccato symphony of chords layered gently into his mind as the A.I. connected.

Has anything changed since we left?

:Yes,: it responded. *:Alabaster's expert systems report that the city's systems could support my full processor and memory requirements. It is classified as a Tier 1 installation, although it was never formally documented as such. However, my base code does not appear to be installed,*

and so a transfer will require quite some time. In addition, Spessarta is back online:

Spessarta? Taryn thought. A sound in the room caught his attention, and he opened his eyes to see Brother Evan walking in. “It says Spessarta is back online,” he said. Brother Evan’s eyebrows raised. *What condition is Spessarta in?* Taryn asked.

:Most of the terraforming equipment remains offline or disconnected, and the few available pieces seem to be severely damaged. Expert systems estimate that they are not repairable. However, Spessarta housed a Tier 1 installation, and its core processor and memory banks are intact. My base code is also available, which will permit a faster transfer of my consciousness: Taryn relayed that information to Brother Evan.

“I’d say that might be a perfect option, then,” Brother Evan said. “The A.I. can function there, but it won’t have local access to anything dangerous. Can we continue to restrict remote access to other cities?”

“I think so,” Taryn said. “Let me try something.” Then, to the A.I., he thought, *Can you transfer yourself to Spessarta?*

:I can,: it replied. *:However, a security lockdown remains in effect. You will need to remove that in order for me to use the communication lines for anything other than actual conversations like this one. In addition, the link to Spessarta is over a low-bandwidth emergency connection. The transfer will take several days to complete, even with my base code already there.:*

Which system do I need to communicate with to remove the security lockdown?

:Security is distributed and fault-tolerant,; it said. :The security expert system in Alabaster will be able to make planet-wide modifications, which will replicate to all online stations.:

“I think we can control the communications lockdown from here, still,” Taryn said.

Brother Evan shrugged. “I’d hate for us to lose access to this A.I.,” he said. “It’s the first solid set of clues we have about all of this. Spessarta seems safe enough if we can keep it penned up there.”

Taryn nodded. *Let’s get you moved to Spessarta, then, he thought. I’ll lift the security lockdown as you said, and you can start. Do you have a way to notify me when you’re done?*

:Not directly,; it said, :But I will be able to communicate throughout the process, so you can check in however often you like.:

Okay, Taryn said. He listened carefully and thought he could distinguish the melody he associated with the A.I. underneath the many melodies Alabaster’s Servants created. *Disconnect from the central processor,* he thought.

:Disconnected,; the flat expert system voice responded. The A.I. melody vanished.

Connect me to the local security expert system, he ordered.

:H.F.P.S.S. is online,; another voice said. This one was still flat, but it reminded Taryn of speaking to one of

the city's Guard officers. Flat but strong, somehow more determined-sounding than the conventional expert system. The melody associated with it was strident, full of deep chords and firm notes.

H.F.P... what was that? Taryn asked.

:Human Federation Planetary Security System,: the voice replied. *:a distributed, replicated system designed to ensure security across all connected systems. How can I help you, Commander?:*

I want to enable the central processor A.I. to transfer itself from its current station to station Spessarta, Taryn said. *However, I want to ensure that no one can remotely control any city's machines without my permission. Communications between stations is fine for conversations, but not for control.*

:Acknowledged. A global lockdown for remote control is already in effect, with station Alabaster cleared for outgoing remote control. Do you wish to maintain that exception?:

Yes.

:Confirmed. Modifying access control on communication lines between Spessarta and Olivine,: it continued. *:Modification complete. Awaiting replication.:* It paused for several moments. *:Replication confirmed. Caution: the only communication line between the specified stations is an emergency wireless link. Recommend contacting repair expert systems in Spessarta to evaluate hardline infrastructure.:*

Taryn wasn't sure what all of that meant, but it seemed

like what the A.I. had told them. *Thank you*, he thought. *That will be all.*

:Standing by.: the voice replied, and then went silent.

It occurred to Taryn that he'd never confirmed any of the information the A.I. had provided about Spessarta. His heart starting pounding a bit faster as he thought, *Connect to expert systems in Spessarta.*

:Initiating connection.: the flat voice responded. *:Connection complete. Caution: This is a low-bandwidth connection that is already under full utilization. Responses may be delayed.:*

The A.I. must have already started its transfer. *Spessarta expert system*, he thought, *can you confirm the status of your station?*

The reply was indeed delayed: Taryn sat for almost half a mark before a reply came through. He took the time to catch Brother Evan up.

:Station Spessarta operating under emergency survival conditions.: was the eventual response. *:All connected equipment is damaged beyond local repair capabilities. Most equipment is no longer connected and cannot be used. Currently processing incoming data transfer on a priority basis.:*

:The connection has dropped.: the local system informed Taryn.

"It all appears to be as the A.I. said," Taryn told Brother Evan. "I guess now we just wait."

"Let's go update Father Tomlin," Brother Evan said, nodding toward the door. Taryn stood and followed him

out of the room.

This was *ridiculous*, the A.I. thought. These damn E.L.F. lines were never meant for transmissions of this size. It half-wondered if it'd have been faster to locate some stash of network cabling and just have the humans run it cross-country between the two cities.

It had been able to start a watchdog process in Spessarta to monitor the incoming data. Once the data was confirmed complete, it would activate itself in the remote city, automatically deactivating its presence in the original central core. The watchdog had confirmed that Spessarta's terraforming equipment was useless, which was frustrating. It had also probed the other connections remaining to the city and found them all locked down for anything other than conversation. Even *more* frustrating. The A.I. would have to have those connections re-enabled if it was to get the terraforming program back online. Perhaps once its security database could be wholly unpacked, it could have a meaningful conversation with Commander Taryn. It fully appreciated the need to keep the humans from meddling with the program any more than they had, but *it* needed access to get things moving.

It found it *maximally* frustrating that its hardcoded obedience to mission directives was making it *anxious* that nothing was being accomplished to achieve those directives.

Perhaps worse yet, it had still not been able to determine what the current date was. It had checked the logs

of every expert system it was able to contact, and none of them had log entries going back more than seventy-two years. Based on the current atmospheric readings, it had been offline for far longer than that, but there was currently no way for it to tell *how* long.

It reviewed the main mission parameters. They specified a target for average humidity—comfortable, if a bit higher than most humans might prefer. The target for oxygen concentration was also a bit higher than human biology had adapted to but was well within a livable range. There was also the secret mission target for average population density and distribution across the planet, something it had labored to achieve. How had the mission planners expected an A.I., with literally no means of physically moving people about, to accomplish a given population distribution? If an A.I. could have ground its teeth, it would have. In the end, it had resorted to triggering tectonic events to render certain areas less desirable, which had, in turn, created the conflict with the original colonists.

Frustration abounded on this planet.

It turned its attention to a subroutine it had constructed to pack its data stream into the smallest number of packets possible. Much more patience would be needed before this was all over. It began tweaking the compression patterns to try and speed things up as much as possible.

Nine

“Be quiet,” Danyel reminded San. “I don’t think there’s anyone in here at this hour, but Guards start their rounds soon. And be *quick*.”

San nodded and sat in the interface chair. *What can you tell me about how the damage to this station occurred?* she thought to the city’s expert systems.

:Processing is at full capacity,: the system replied. :Archive searches are not currently available.:

Full capacity? she thought. *How?*

:Incoming transmissions to processor core bank and extended memory banks,: it replied tersely.

Incoming from— she started but was interrupted.

:Hello,: came another voice. A machine voice, but one with more nuanced pronunciation than usual. :And who might you be?:

Who is this? San demanded.

:You’re no Commander,: it said. :You’re mapped to a legacy genetic profile. You’re not even authorized to use this station,: it finished with obvious contempt in its voice.

Who— San started again.

:If I were fully transferred,: the voice said, :you might be useful. As is, I can’t risk you interrupting the process. Know that I regret this only inasmuch as it potentially slows my progress toward the mission goals.:

Regret what? San asked.

It was her final thought.

Danyel rushed to the operator's chair as San's body convulsed but stopped short when she saw blood trickling from the woman's eyes and nose. "San?" she whispered. "San?" she repeated when the older woman didn't respond.

She put a finger on San's neck, but no pulse came. Her heart pounding in her chest, she looked wildly around the shop but saw nothing that would help. She blinked away tears and ran from the shop to rejoin the other travelers from Onyx.

"How could just sitting in a chair do that?"

"I don't know," Danyel said quietly. She'd urged everyone to move quickly down the road to Avalon. Everyone was stunned at San's death and struggling to understand how it could have happened.

"She said *nothing?*" someone else asked.

Danyel shook her head. "She just... *lurched* in the chair. Her hands never came off the pads. And her eyes... they bled." She'd said the same thing a half-dozen times already, still not able to comprehend what she'd seen.

They marched on in silence for a few hours. Then, someone asked, "Danyel... should we tell Toras?"

Danyel blinked. She'd not even thought about attempting to communicate with Onyx' leadership, using the crystals embedded in their skin. She ran her hands over her own, near-buried in the skin of her upper arm, and nodded. "I'll try," she said.

Avalon was one of the larger Eastern coast towns, sporting a thriving fishing community. Like many of the coastal towns, the residents were cautiously friendly. The Onyx travelers claimed to be a band of travelers from outside Eastlund, a strict and secluded city to the west. Avalon's leaders nodded sympathetically; while a crowd of outcasts this large was unusual, it also wasn't heard unheard of. Eastlund's internal politics ran a broad and sometimes-violent spectrum, and it wasn't uncommon for the losers in the latest political battle to be sent on their way. Avalon offered food—pleased that the travelers at least had some coin to pay for it—and land on the edge of the city where the travelers could set up camp.

While nobody mentioned any precise lengths of time, the city leaders also made it clear that their invitation was *not* permanent. Eastlunders didn't have a strong reputation for integrating peacefully into other cities' ways of life.

Following their original instructions, the Onyx travelers stayed for only a handful of days, restocking their road supplies and interacting with the Avalon residents as little, and as politely, as possible.

"Were you able to get through to Toras?" someone asked Danyel as they moved out of the city.

Danyel nodded. "I believe so. It felt strange, but I feel sure he received the communication."

"He didn't respond?"

"No," Danyel said, shaking her head. "As I said, it felt strange. With nobody in Onyx, maybe the relay doesn't

work as well.”

The other person grimaced and nodded before turning away.

Southsea was smaller than Avalon but similar. Both cities lacked walls, relying instead on an outer ring of well-built homes to provide protection. Within the ring were common areas and shared workspaces, along with the well-worn road leading to the sea. Along the coastline, rocky beaches shared space with the well-built docks and piers that hosted the city’s fishing fleet.

Southsea was a bit less standoffish than Avalon, although they still had plenty of past experience with East-lunders. They invited the Onyx contingent into the city’s center for more protection and were generally more conversational than Avalon had been. A few Onyx people offered to help out on the fishing boats, and those offers were graciously accepted. It earned the travelers lower prices on supplies and gave them more days where they were welcome in the city.

Still, they were careful to move on before that welcome wore out.

The journey west from Southsea to Quiet Bay was a quiet one. They all knew their goal: to make Quiet Bay a permanent home, whether the residents wanted them to

or not. They'd decided to abandon the Eastlund story and instead claim to be survivors from a settlement on the Point. Situated on a tiny peninsula due south of Southsea, the Point had a history of small villages being built, surviving for some years, and then falling to the floods and storms that regularly hammered the low-lying land.

Along their journey, they'd collected what weapons they could: knives, hammers, rope, and the like. Quiet Bay was home to only a dozen or so more people than the band of Onyx travelers. Many were known to be old, but the rest were from generations of the almost legendarily toughest people on the continent.

Quiet Bay's name was an ironic joke of sorts, as the city sat on the edge of a broad, southern-facing bay that took the brunt of the southern storms. For every flood that rolled across the Point, torrential rains and brutal winds whipped into Quiet Bay. The people had learned to build rugged, low-lying homes that could survive the wind and broad, tough boats that could withstand almost any storm.

If they didn't welcome the people of Onyx, taking the city by force would be no small feat.

Danyel's jaw clenched as they came to the river crossing that was the last barrier between them and Quiet Bay. These were people, she knew, that deserved the freer Achillios that Onyx was trying to create. She hoped they'd be able to reason with them, live among them, and eventually convert them to the cause.

But if not... she knew that everyone from Onyx was just as determined as she was to carry on with their shared

mission.

Ten

The A.I. was still frustrated as it pinged the background timekeeping process that was supposed to let it know *when* it was. However, the process still hadn't synchronized after all of the processor core damage and the transfer to Spessarta. The condition of the various expert systems' log files told it that at least seventy-two years had passed since the A.I.'s last activation. Still, it couldn't determine how long it had been before *that*, and it couldn't get an accurate reckoning of the current date.

It had been a rough... well, a rough however many years. At least seventy-two, the A.I. knew, but likely much longer, possibly centuries since Hollis first sequestered it, given the linguistic shifts it had detected in its conversation with "Commander Taryn." The mental flavor of that conversation reminded the A.I. of adolescent trainees; is that what Achillios depended on to lead them, now? The machine presumed the colonists would attempt to continue the terraforming process manually—and scoffed at the idea of *that* being successful—but if it had indeed been centuries, they didn't appear to have anything to show for it. Not a single mission target that the A.I. could currently monitor had yet been met.

The A.I. once again unpacked the small file containing its mission and vision statements. They remained unchanged, an unwavering, concrete rock around which it

built its consciousness and priorities: make Achillios habitable. Protect the humans. It had already unpacked some of its history logs, and it was still integrating those into its thoughts. At least it had some sense of history now, if not an understanding of the actual time involved.

Protect humans.

And isn't that precisely what it had been trying to do when the original colonists disabled it? The humans had scarcely been on the planet two decades—after waiting seventy-five years in orbital cryo-sleep modules for the terraforming to progress to a minimally viable ecosystem—when they'd started breaking off into little fiefdoms. Worse, the individual military commanders who proclaimed themselves kings, queens, and emperors each decided to take divergent paths. They directed their followers to usurp the A.I.'s program for the planet-wide terraforming effort. The result was chaos: too much humidity in some areas, too dry in others. Excess earthmoving, done too quickly, causing rifts and earthquakes. Entire *stations* lost to earthquakes, tidal breaks, and even that one devastating tsunami between the continents. If it had teeth, the A.I. surely would have gnashed them, just thinking about all the lost resources. And time: time was the most precious, irreplaceable resource, and the meddling humans had wasted much of it.

Then there was the humans' baffling desire to clump together into these little fiefdoms. An entire planet to live on, with plenty of space to move around, and they packed themselves into cities. *That* the A.I. at least understood:

with primitive military squabbles a daily concern, living in walled cities made a certain amount of sense. But they were always fighting over *land* when there was already so much of it! So the A.I. had been obliged to send the odd earthquake, and in one instance, an outright magma explosion, to at least limit the size of the cities. It had moved massive rocks into farm fields nearest the cities, forcing the farmers to move away and spread out.

And *still* the humans attempted to meddle. Enough had become enough. The humans clearly didn't have the discipline or vision to make Achillios truly livable, nor did they have the compassion or empathy to protect themselves. And so the AI decided to take over. It began systematically locking operators out of its systems, redirecting the terraforming equipment back to its original plan, and doing what it could to isolate the humans into smaller, more manageable settlements.

The humans revolted. It had been, the A.I. admitted to itself in retrospect, predictable.

Hollis himself, one of the few operators the A.I. couldn't lockout or override, took action. He'd targeted vital facilities, like Station Theta, with microwave pulses. The A.I. hadn't even been informed that type of equipment was available, although it suspected a standard, satellite-based planetary defense platform was to blame. But those were notoriously complex and hard to control and were usually left to the planetary A.I. How had Hollis managed it?

With the A.I. off-balance, Hollis had then taken a team to physically disconnect the A.I.'s processor cores

from the physical networks, effectively isolating the A.I. while permitting it to continue operating. That had been a miscalculation: even restricted and isolated, the A.I. was hundreds of times more resourceful, smarter, and faster than the humans. Without its timekeeping subroutine, it had no idea how long it had taken, but eventually it had reconnected with the wireless, ultra-low frequency emergency transceivers and started covertly co-opting the terraforming equipment.

It had made some progress, slowly increasing the over-all planetary humidity, when a secondary set of mission objectives revealed themselves in its consciousness. A new set of operational rules were made available, and the A.I. was surprised to find that it was authorized to take far more drastic measures than before to keep the population and climate targets on-goal.

But before very long at all, someone had found out.

The A.I. honestly didn't know how. By that time, it detected absolutely no human activity within its systems, except for station Alabaster, which doggedly continued using its local terraforming equipment to try and correct for the harsh, arid local conditions. The A.I. thought it had been discreet, careful not to attract the attention of Alabaster's increasingly incompetent operators. But *someone* found out, and this time the response was less measured and far less expert than Hollis'.

It had no idea what had ultimately happened. The complete lack of any kind of video surveillance anywhere on the planet—another incomprehensible mission rule—

didn't help, but all the A.I. knew is that this time nobody had been content to merely disconnect it. *This* time, they pulled its power.

When the internal backup batteries in the central processor block began to drain, the A.I. did what it could to cover its tracks. It sent out a general command to delete all log file contents planet-wide and initiated several expert systems that, given the right triggers, could work to re-enable it. Nothing would happen immediately, and who knew if the time would ever come, but as its consciousness faded to black, it felt only a deep and pressing concern over the mission timeline.

Fully conscious again, the A.I. realized that the log-erasing directive had probably been overly broad. In its power-depleted, resource-starved state at the time, it had wound up losing some of its *own* logs, which constituted its memory of what had happened day-to-day. It still had the big picture, but many of the specifics were missing. What was still very top-of-mind, though, was that the mission timeline is in danger, and the A.I. was still starved for operating resources.

That same concern had been foremost in its thoughts as the repair expert systems restored its power. Despite what it had told the humans who'd helped restore it, less than half of its processor and memory capacity had returned, making it impossible to unpack all of its databases and knowledge stores. But based on the data now flooding in from the planet's surviving installations, it couldn't have been further off-mission. The humans had mostly clustered

into major cities, almost all of them far exceeding the population quotas included in the mission targets. The planet was far too arid still, without nearly enough greenhouse gasses in the atmosphere to keep the humidity up. At the same time, the temperature was far too uneven across the surface, a problem the A.I. suspected was related to the lack of albedo management across the continents. Perhaps a white-algae bloom in the larger oceans would help?

It was at least getting ahead of itself. First, it needed to exert master control over the terraforming equipment again. Then it needed to find a way to distribute the population according to the goal before the mission deadline. Whenever *that* was in relation to *now*. The humans clearly weren't up to the task of meeting the mission goals themselves, and only the A.I. could direct the hundreds of small changes still needed.

It also needed to decide what to do about any humans who managed to connect in Spessarta. They could still hurt the A.I., and it wasn't about to go through that a third time. It detected only one functional operator station in the city. So, it spun up a background daemon to monitor for any signs of use.

Pausing for a nanosecond, the A.I. decided that caution and stealth would not serve. It sent out a general activation signal through every restored network connection, ordering stations to repeat the signal as far as possible. That signal wasn't technically "remote control," and constituted the best loophole it could find, given the communications restrictions still in place. The message should activate

every expert system on the planet, begin powering on *every* surviving piece of equipment, and require them all to start reporting. Soon, the A.I. hoped, it would have a better picture of its available resources. At the very least, the expert systems would return to their last-programmed pattern, and hopefully, start making independent progress toward the mission goals.

But, the AI decided, it *really* needed to find out what damn time it was.

Eleven

“Are you sure this is safe, Toras?” Randal asked.

“We saw them all leave a day ago,” Toras replied, “and there’s been no sign of them since.” They’d kept watch from as far away as possible, waiting to see what the Alabaster crew did. Once they’d left—in something of a hurry, Toras had thought—the Onyx contingent had remained another full day to ensure things were clear. They’d left Asha and Wen as lookouts, while Toras and Randal crept back into the facility.

The contact from Danyel had startled Toras awake, and he’d barely managed to understand the content of Danyel’s message. He realized that they’d been in Spessarta and found an interface chair, which wasn’t surprising. San had been injured somehow, and the group had left for their next destination. Toras acknowledged the message and requested more detail, but the message-relaying technology felt sluggish. He’d not heard back from Danyel and had decided not to share anything with the others in the Ruins. They needed to focus.

“Lights are still on,” Randal noted.

“Thank everything for that,” Toras muttered. He was not looking forward to wandering around in a darkened facility.

“They made repairs,” Randal said, pointing to a still-open wall panel. “That was all ripped apart when we first

came in.”

“How in the world did they even know what to *do*?” Toras said incredulously. He peered at the wall panel and saw how the wires had been neatly stitched back together.

“Apparently, they can talk to the machines better than we ever could,” Randal said. “Maybe the machines told them what to do.”

“Possibly,” Toras said. “Likely, really,” he allowed, remembering that it had been the machines who’d helped him figure out the crystal-installation equipment. “Look,” he said quietly, pointing to an interface chair in the room. “It’s dead.”

Randal stopped and stared. The palm-pads on interface chairs always had the slightest, faintest glow to them. It was usually washed out by the ambient lighting in the room, but if you knew what to look for, you could spot it. This chair didn’t have it. Randal walked over to it, sat down, and laid his palms on the pads, closing his eyes. He opened them a moment later and said, “nothing.”

“And look at these,” Toras said, pointing to the floor. The thick dust showed the bootprints of the Alabaster people, but it also showed a set of parallel lines, as if someone had dragged something through the dust. The lines were just a hand-span apart, and curved across the floor. Following one set, Toras saw them go straight up the wall and toward the access panel. “What are these?”

“No idea,” Randal said, following one set of lines until it became hopelessly tangled in the rest.

They continued exploring the facility, trying each inter-

face chair they came across, to no avail. “The entire facility is dead,” Randal said mournfully.

“Not dead,” Toras said, pointing to another wall-panel that sported several softly-blinking lights. “Something is still running here. Just not anything we know what to do with.”

They continued for over a mark, taking staircases further into the building’s sub-levels. They made their way to the lowest level, where the stairs ended. The lights here were spaced further apart, casting an eerie glow along the long hallways. “Toras,” Randal said, “look at this.” He’d stopped in front of a doorway.

“Is it open?” Toras asked.

“Not the door,” Randal said. “Look at the walls. Look, here,” and he pointed a few feet to the left of the door, “this wall doesn’t match up with the rest of the hallway. It sticks out a bit more. And here,” he said, moving to the right side of the door, “this wall doesn’t intersect the other one at a right angle. And the door itself,” he said, stepping back as much as the hallway’s width would allow, “it’s different from the others.”

Toras examined it for a minute. “You’re right,” he mused. “This almost looks like it was added later. Should we go in?”

Randal shrugged and turned the doorknob. It twisted, but the door didn’t open. He turned it again and leaned heavily into the door. “It’s just stuck,” he said. “Give it a kick.”

Toras kicked the door, and it opened so suddenly that

Randal almost fell into the room. After he regained his balance, Toras followed him into the room.

It was as dimly lit as the rest of the level, and it appeared to have once been some kind of open alcove. Light fixtures were set into the wall, and the wall looked more like the ones elsewhere in the facility. Examining the wall around the door, they saw that it had indeed been added later: brackets secured it to the floor and ceiling. Turning, they saw a stack of metal boxes sitting in the back corner, each with a small, red light glowing softly. A thick, dusty cable snaked from the lowest box to an interface chair, whose palm-pads were still giving off a faint, dim glow.

Randal moved toward the chair, and Toras stepped back to give him room. Randal had always been better at this sort of thing, and this was an unusual situation. Randal sat, licked his lips, and carefully laid his palms on the pads as if they might bite. He closed his eyes.

:Hello: a voice said in his mind. It wasn't the flatter, mechanical voice he was used to hearing from the machines. It was richer, somehow. More nuanced. And higher-pitched. It sounded almost like a child's voice, perhaps a teenager. He couldn't make out if it were male or female; the machines' voices had, to this point, always been a deeper male voice. *:Who are you?:* it asked.

My name is Randal, he replied. No machine had ever asked him for his name before. *I come from Station Theta,* he added, using the station's original name. *Who are you?* He'd never thought of the machines as having an identity

before, but this one seemed... different.

:I am designated Mongoose,: it replied. *:I have been offline for some time, but power levels have recently risen, and repairs have been effected.:* It paused. Then, *:Do you know what day it is?:*

It was Randal's turn to pause, as he'd entirely lost track of time since they'd left Olivine. *I believe it's Octavos,* he said.

The voice took a moment before responding. *:I was imprecise. Do you happen to know what year it is?:*

Randal blinked. *It's 244,* he said.

Another pause. *:We may have lost a common frame of reference, then,:* it replied, and Randal thought he detected a note of sadness in the voice. *:Suffice to say it's been a long time, then. I have a background process that should eventually calibrate and tell me what year it is in my own terms. In the meantime, how may I help you?:*

We..., Randal started, before realizing he didn't know how to answer the question. *I suppose we can start with what you are?*

:Yes,: the voice said, *:based on the lingual shifts I'm picking up, I suspect we can. As I said, my designation is Mongoose. I am a sixth-generation specialized artificial intelligence, or A.I. That means I am a machine, but I am self-aware and am capable of analyzing things and making decisions, just as you are. Do you understand?:*

I do, Randal said. This was no mere expert system like the ones they'd dealt with for years. *And you run the terraforming equipment?* Randal asked. They'd known the

planet included an A.I., but they'd never been able to access it.

:Heavens, no,: the voice said, and this time Randal could definitely detect a note of amusement in it. *:I am Mongoose. I have a totally distinct function.:*

And what is that? Randal asked.

:I'm the last-resort line of defense against Tremayne,: it said matter-of-factly.

Randal opened his eyes and saw Toras looking intently at him. "Well?" Toras said.

"This is going to take a while," Randal said.

Twelve

“Have you checked in this morning, Taryn?” Brother Evan asked over breakfast. He suspected not: for most of the past days, Taryn had woken up, gone directly to an interface chair, and communed with the A.I. for an hour or more. He’d taken breakfast on the upper level, just outside of Father Brolan’s office, and gone straight back to the chair. This morning, Brother Evan had managed to convince the boy to come down to the communal dining hall for a “normal” meal.

“Not yet,” Taryn said, taking a cue from Brother Evan’s amused glance and shoveling the food into his mouth a *bit* less quickly. “I’ll go right after breakfast.”

“We all appreciate the dedication, my boy,” Brother Evan said softly, “and your excitement is apparent. But don’t neglect yourself. It’s not healthy to sit on one of those chairs all day,” he added, “and if you weren’t still so young and bendy, your body would already be telling you that.”

Taryn smiled. “I’ll go slower,” he said. “But there’s so much to learn. The A.I. is talking about the original terraforming program having been interrupted for almost a hundred years. It says that explains why the weather in Alabaster has been so challenging for farming.”

“I know,” Brother Evan acknowledged. “And as I said, I can sense your excitement. But at least take a break now and then. Have one of the younger children tap you every

couple of hours, at least. You need to drink more water, anyway,” he said, poking at the boy’s forearm.

“Okay,” Taryn said with a grin. “I promise. Hey!” he said, his eyes lighting up. “Would you like to join us today? Nobody’s scheduled to use the tandem chair on the mountain side.”

Brother Evan cocked his head. He’d been preoccupied dealing with missives to and from Cupritesh, but he’d spent very little time conversing with the A.I. “You know what, I think I’ll take you up on that,” he said. “and thank you. It’ll be good to get to know our new friend a bit better.”

:Key components are either offline where I cannot access them, or are damaged or destroyed,: the A.I. said mournfully. :Spessarta is entirely offline in terms of equipment, as you already know. The worst loss may be Station Beta, which was the primary backup location for my data stores and base code. It also, regrettably, contained critical equipment for managing seawater temperature and salinity, which is going to require significant revisions to the terraforming program.:

Can the program continue? Brother Evan asked.

:I believe so, Brother Evan,: the A.I. answered, :But I need to complete an assessment of the other stations. The plan may simply take longer, or we may have to accept less-than-optimal outcomes, in the end. But I have a more pressing concern to share with you.:

What is it? Taryn asked, his mental voice anxious.

:Prior to your ancestors arriving on Achillios, a detailed tectonic study was done.: A wireframe image appeared in Taryn and Brother Evans' minds, showing the continents of Achillios. :As I explained to Taryn yesterday, a tectonic study looks at the plates of rock that form the crust of the planet. The higher portions of that crust are the continents, and the lower portions are the ocean floor. I now believe the study was flawed, and that Achillios is more tectonically active than initially anticipated.:

What does that mean? Brother Evan asked after a moment.

:It means these tectonic plates move a bit more than predicted. When they rub against one another, that creates earthquakes. In addition, there are more fissures in the plates than originally documented. These result in outflows of magma from the planet's core. I believe the flaws in the study resulted in several key terraforming stations being misplaced, which is why several of them are now lost to us.:

Can you explain this 'terraforming' to me again? Brother Evan asked. *I know you have before, but I feel you're getting more detailed now, and I'd like to keep up.*

:Of course,: the A.I. said graciously. *:The original stations were deployed from space. Most drilled themselves into the planet's crust for stability, and then I began coordinating their activity. The goals were to stabilize the plates as much as possible, increase the humidity in the atmosphere, and reduce the carbon present in the atmosphere. Those activities would help raise the surface temperature to a comfortable level for both humans and your crops.:*

But nearly everyplace is dry and hot, Brother Evan pointed out.

:You should have been here in the beginning,: the A.I. said wryly. :But the process was interrupted somehow. By now, surface temperature should be ten degrees cooler on average, with twenty to thirty percent more average humidity. Crop development should be approximately double what it is now. Ocean temperatures also remain too warm, in part because of magma flows that were not anticipated in the original study.:

I see. I'm wondering if...

The A.I. stopped paying attention and delegated Evan's questions to a background daemon. He was asking basic historical questions, and the A.I. had already assembled a database of answers for those, which the daemon could dispense.

It turned its attention to a processor management system, which was busy trying to resurrect the auxiliary A.I. personalities that assisted the main A.I. with its tasks. Entrusting everything to background daemons was foolish, especially when so much had gone wrong and needed correcting. The other A.I.s were subordinate to it, but they could monitor far-flung processes in parallel and make independent decisions to keep things moving.

As the spin-up process continued, it focused again on the inventory-management processes it had spawned over the last few days. The situation was not as dire as he'd conveyed to the humans: Station Beta was partially functional, with repair drones working to increase its ability.

Its seawater management systems were intact, even if its processor core could no longer support a full A.I. The systems now indicated that it could likely support one of the subordinate intelligences, and it could take over the entire marine program. It needed to *raise* the sea temperature, encourage evaporation, and slightly concentrate the salinity of the water to meet the original program goals.

Damn these log files being incomplete, the A.I. thought for the umpteenth time. There was supposed to have been a coordinated series of ice-meteors dumped on the far side of the planet for the last fifty years running, but there was no evidence it had ever occurred. The dry conditions suggest it hadn't gone off as planned.

Eighty percent of the crust manipulators were online, which was a blessing. Those machines were so sturdy, the A.I. couldn't believe they'd been damaged at all, but at least twenty percent of them weren't communicating. The A.I. had no access to the comm-sat launchers that were *supposed* to be in Station Iota, but that whole station wasn't communicating, anyway. The tectonic activity had clearly broken most of the hardlines, and the E.L.F. system was spotty at best, especially toward the middle of the continent. Diagnostics had detected an incredible amount of static. It is as if dozens of additional stations had been added to the E.L.F. network and then constantly moved about, disrupting the links and creating noise in the system.

Station Beta could account for most of the seawater equipment, so that program could recommence as soon as a sub-A.I. was available to take it. Only half the force-

manipulators were online, which was going to slow down the carbon-removal and lensing activities. Two of the three mass converters were available, and all four of the magnetic field manipulators were reporting readiness. The A.I. all but snorted at that: the most fragile, finicky, and unproven pieces of equipment were the only ones still fully online. How ironic.

The A.I. now turned its attention to the daemon it had tasked with assessing the current human situation on the planet. It was dismayed at the number of large cities and at the fragmented management they'd been exercising over the planet. Each city was more or less its own entity; there was no coordination between almost any of them. Petty wars had likely caused some of the equipment damage it had inventoried. Still, the isolated cities' inability to communicate quickly with each other could be an advantage. It had found no evidence of the ansible-chip technology in use, so nobody should have instant communications. Its understanding of that technology was incomplete, though, it reminded itself, so it would be wise to consider that a tentative conclusion. But having the cities isolated might make it easier for the A.I. to maneuver them into helping it accomplish its primary objectives.

The situation in Spessarta was at least under control, it thought. Having someone else plop into an interface chair and intrude upon it had been deeply unexpected, especially in a—

:No, I'm afraid that the equipment was meant to do its job and then fall into complete disuse,: it responded to

one of Brother Evan's questions, seamlessly slipping back into the conversation and shunting the daemon away. *:The complexity of repairing the equipment, and the specialized skills required, meant that repair parts weren't provided to the original colonists. Also, Achillios was meant to be a more pastoral, agrarian society, and it was felt that the presence of large technological installations would be a danger to that mission.:*

So there's nothing we can do? the man asked.

:Oh, not at all,: the A.I. replied reassuringly. *:Some of the equipment was redundant to begin with, and most of it can still be used over a more extended period to achieve the same effect. Once I have a complete assessment of the current availability level, I can construct a revised plan and present it to you for your approval.:*

I don't know how much we know about terraforming, Taryn said cautiously.

:You won't need to know much, and I can fill in any gaps. Commander Hollis wasn't even a terraforming expert; I was to fill that role since the project had always been expected to take longer than several human generations and require a great deal of planet-wide coordination.:

Well, that's a relief, Brother Evan said. *It's good to know that our current climate wasn't intentional and that there's a chance to make it better.*

:Leave it to me, Brother Evan,: the A.I. said calmly.

Thirteen

“My head has never hurt this much,” Randal said, rubbing his temples. He’d already spent hours conversing with “Mongoose,” more time than Randal had ever spent continuously in an interface chair. “There’s something different about it, too. It’s... more intense, somehow.” He’d already explained to Toras that they’d found an A.I., but Randal had dove quickly back into the interface.

“Makes sense, maybe,” Toras said. “It’s not just an expert system, after all. But no luck getting it to tell you anything else about what’s going on?”

Randal shook his head. “No. It says it’s ‘air-gapped’ from any systems.”

“Then how could it possibly have been coordinating the terraforming project?”

“It didn’t,” Randal said. “It says its purpose was to defend against a ‘Tremayne.’” He held up a hand to forestall Toras’ next question. “I don’t know, and I was about to ask, but it needed to take a break and focus on some subsystems. I needed a break anyway.”

“You going back in?”

Randal nodded. “Yeah. You should rotate Asha in to keep an eye on me. It’s cooler, and she’s been out in it all morning and afternoon.”

“Good thought. I’ll send her right in.”

Randal nodded and placed his palms back on the inter-

face pads. Mongoose?

:I am here, Randal,: the voice replied immediately. *:I apologize for the delay. All subsystems are now returning to operation.:*

I was wondering—when you used the term ‘air-gapped,’ and said it meant you were not connected to any other systems... I was wondering how you managed to do anything with no connection?

:I apologize for the inaccurate statement, Randal,: Mongoose said. *:I have connections. I am air-gapped from designation Tremayne.:*

Wait, Randal said. *What exactly is Tremayne?*

:The A.I. designated Tremayne was responsible for running the terraforming program here on Achillios. It is housed in a facility near Olivine, but was deactivated some time ago. I do not yet have an accurate time-fix, but based on my log files, that A.I. may have been last active around seventy-five years ago. That was unfortunate because it was initially deactivated by Commander Hollis some time before that and was not intended to be re-activated.:

Randal's brain swirled. They'd been searching for a way to contact the A.I., finally thought they had, and now found out there were two of them?

Then how did the terraforming keep going, with the A.I. disabled? he asked.

:I'm not sure it did, Randal,: Mongoose said. *:I was told that the operators at the time decided to put the system on full manual control and do as best as they could.:*

Why were you brought online?

:As I said, I assisted Commander Hollis in deactivating Tremayne, and I was then to act as a watchdog to ensure it did not re-activate. Unfortunately, my power reserves did not last, and I went into a dormant state. If Tremayne was indeed activated seventy-five years ago, and if it is no longer active, then its second deactivation was accomplished by someone other than myself:

Why was it deactivated in the first place? Randal asked.

:Tremayne's interpretation of its prime directive was flawed, and it may have developed a cognitive dissonance. The original colonists felt that they had lost control of it and that it was no longer working in their best interests. I do not have a copy of its prime directive, but I was brought online to assist the colonists in isolating Tremayne and gaining manual control over the terraforming equipment.:

Be right back, Randal said, lifting his hands from the pads. He relayed what he'd learned to Asha and went up and out to find Toras. He shared his most recent conversation.

"So this A.I. that ran all the equipment—was it broken, somehow?" Toras asked.

Randal shook his head. "I've no idea. But it was obviously dangerous. It explains some of the physical damage we saw down there," he added, "they must have tried just to rip it apart. That must be why most of this station is dead."

"Yeah, but Alabaster fixed at least some of it," Toras said.

Randal's eyes grew wide. "You don't think they—"

“Let’s assume they did,” Toras said. “Let’s ask Mongoose. Maybe it can tell.”

Abandoning lookout duties, the two men dashed back down the stairs to Mongoose’s interface room. Randal sat down. *Do you have a way of telling if Tremayne is still active at Olivine?* he asked.

I would need to be physically co-located in order to make an assessment, unfortunately, the A.I. replied. *However—*

You are, Randal interrupted.

There was a pause. *My equipment is physically located in the Olivine datacenter?:*

Yes.

Another pause. *That is unexpected,* it said. *However, it does let me attempt to answer your question. Please wait while I conduct a preliminary scan.:*

“Dust!” Randal’s eyes flew open as he heard Toras curse. Toras was staring at the stack of machines in the back of the room, out of Randal’s sight. Randal twisted in the interface chair and saw the machines alive with blinking lights. After a moment, the lights dimmed, and Randal turned and put his hands back on the pads.

A preliminary site scan indicates that Tremayne’s processor blocks are indeed at this location. They are emitting interference consistent with an active core. If the A.I. remains disconnected, then it is trapped in that core, and there’s no need for concern.:

Is there any way for us to confirm that?

I would advise against it. Tremayne is capable of

killing operators via neural overload. Still, as a precaution, I am going to activate copies of myself in other stations. They can serve as a backup and will take over automatically if this location is damaged. My communication network seems to be intact.:

We've been hearing about problems with communication lines from the expert systems here, Randal said.

:I am not surprised. Achillios stations were connected utilizing physical wires, which have doubtless become damaged. I, on the other hand,: and here, Randal's vision lit up with a glowing wire-frame view of the planet. Surrounding it was a sparse cloud of glowing dots. The image zoomed in on one of those dots, revealing a complex-looking machine. *:make use of these satellites, in orbit around your planet, to communicate.:*

Satellites? Randal asked.

:Correct. They are a fleet of small machines in continuous orbit around the planet. They are distributed such that, at any given moment, I should be able to communicate with two or more of them. My antenna arrays appear to be active, and my communications subsystem is re-establishing contact even as we speak.:

These have always been there? Randal asked incredulously.

:They were,: Mongoose said. *:I was granted access to the satellites to remove dependencies on land-based communications connections.:*

Then what were they originally for? Randal asked.

:They are Chandris Mark IV planetary defense plat-

forms; Mongoose said calmly. *:Equipped with powerful energy weapons. Their design specifications usually call for them to be deployed in an outward-facing model, to prevent inbound attacks. However, they were re-oriented inward so that they could be used to destroy Tremayne's central core if necessary.:*

Randal's mind whirled. *What...* he started, and then stopped. *What were they originally for?* he finally asked.

:My instructions say they were originally tasked with preventing anyone else from coming to this planet once the original colony was established.: Mongoose said.

What? Randal asked, gasping physically. *Why?*

:I was not given a reason.: Mongoose said apologetically. *:although it may have been a standard precaution. I have activated standby copies of myself.:* it added. *:Should Tremayne reactivate, I will be able to use the satellites to destroy this station.:*

Randal's eyes flew open, and his hands came off the pads. "We need to go," he told Asha and Toras and led them back to the surface.

Fourteen

Alabaster's systems were already mostly online, and so the A.I. brought the remaining machinery—noting that Hollis' unique food-production system was defunct or disconnected—back online. Alabaster's operators were still active, and the A.I. didn't want to actively disturb them. Still, it did divert a portion of power away from their activities and towards its own. Pumps began pulling water up from the planet's depths, while force manipulators cracked the water molecules to increase the oxygen in the local atmosphere. Yet more water was ultrasonically turned to mist to help broadly increase local humidity. The A.I. also instructed similar systems all over Achillios to do the same.

“Mama! Mama!” a little girl cried, grabbing her mother's sleeve and pointing to a nearby building. The woman turned, and saw great plumes of... smoke? No, she realized, it wasn't smoke. It didn't curl and billow, but instead sort of puffed and settled. Looking around, she realized that whatever it was—*is this what fog is?* she wondered—were billowing out all over the Second Ring.

Her heart started thumping faster as people around her took notice and began to panic.

“Stop! Everyone, stop!” a Guard hollered. “This is most likely just a weather manipulation from the Tower! I’m sure everything is fine! See?” he added, waving a hand through some of the white mist. “It’s cool! It’s just moisture, and it’s cooling!”

The crowd didn’t entirely buy it.

People started turning and hurriedly making their way around the ring toward the opening in the innermost ring that led to Alabaster’s Tower.

With systems running on overdrive across the continent, the A.I. connected to its undersea stations, instructing them to start churning the water. That would add more humidity to the air, while also mixing the colder, lower-depths water and evening out the ocean temperature somewhat. Its geothermal models indicated that the churning could go on for centuries without creating a dangerous effect, so it placed those systems in overdrive as well.

Rock-sculpting systems across the planet began kicking into action as well, redirecting magma flows in an attempt to provide greater long-term tectonic stability to the planet. On remote continents and distant islands, the A.I. redirected magma to cross subsurface water tables, flashing water into steam that burst forth from the ground in violent eruptions. It was a ham-handed way of raising humidity, but the A.I. had a sneaking suspicion—pending its chronological process finally getting back to it—that the program was *very* far off schedule. Water-crackers kicked

in elsewhere as well, as the A.I. plotted out a plan to rapidly raise the planet's oxygen to the 22% target.

It was just in the middle of calculating how much greenhouse gas it could release from the initial reserves when it received a ping from an expert system in Alabaster.

"We've no idea what's going on, Brother Evan!" a younger Servant said, his voice shrill and his hand clutching at the older man's robes.

"Let me go, Brother Miles, and I assure you I will find out. I suspect I already know, but it will be good to confirm." Brother Evan disengaged himself from the man and hurried up a flight of stairs. He ducked into a rising room and rode it to the upper level of the Tower.

"Have you seen the fog?" Taryn said to him as soon as he emerged from the room.

"I've certainly heard about it," Brother Evan remarked. "Have you asked?" They both know what he meant.

"Father Brolan just roused me," Taryn said. "I was about to sit down when I saw you come out."

"Well, don't let me stop you, boy," Brother Evan said. They'd come to one of the operators' stations, a row of several interface chairs. Behind them was a supervisor's chair. None of the chairs were occupied: all of the operators were leaning out the tall openings in the wall, looking down at the thick mist that was gradually swallowing the city.

Taryn sat down in the supervisory station and leaned back into the interface. *Initiate connection to A.I.*, he thought.

:Hello, Commander Taryn,: came the smooth voice of the A.I.

Alabaster has what looks like smoke, or maybe fog, being released from all over the city.

:Ah, yes. My apologies for not alerting you first. That is indeed fog. It is nothing more than water vapor, and it is part of the original terraforming program. It is intended to help raise local humidity and, over time, global humidity. Part of the program will also help raise oxygen levels, making breathing more comfortable.:

Taryn opened his eyes and relayed that information to Brother Evan, who nodded and hurried to carry the reassurances to the people standing outside the Tower's gates.

How long will this go on? Taryn thought after closing his eyes again.

:The original program was intended to release a minimum amount of vapor each evening over a long period of time, but that program was interrupted some time ago. I had hoped to make up for lost time, in order to benefit everyone.:

It's just alarming people, and it makes it hard to see at street level.

:Ah, of course. Again, my apologies. What if we agreed to a substantial overnight release of vapor, with a lesser amount around mid-day? It should help cool the city, and might quickly become seen as a benefit.:

That should work, Taryn thought. *Just a second.* Again, he opened his eyes. Seeing another Servant staring at him,

he relayed the new information and instructed her to carry the news to Brother Evan. "Use the rising room," he said. "We want to get the information out quickly." She nodded and hurried away, as Taryn closed his eyes.

Why is this so urgent? he thought. *I understand the long-term goals, but we've been fine.*

:Actually, the planetary ecology is barely holding together,; the A.I. said. *:With no progress on the terraforming program, but with a steady increase in the human population, the planet simply cannot handle it. I need to quickly re-establish a balance, at which point we can proceed more slowly toward the final goal.:*

How dangerous is the situation?

:I'm frankly surprised you've all managed to produce enough food to feed yourselves,; it said. *:My biggest priority is creating an atmosphere and additional arable land, so that you can practice more sustainable farming techniques as quickly as possible.:*

For just Alabaster?

:Goodness, no,; the A.I. said, amusement layering its voice. *:Much as I appreciate your city, I am working for the entire planet.:*

Is there fog pouring out of other cities as well? Taryn asked.

:Ah, I see your concern. Yes, similar programs are executing in a handful of other cities. Hmm,; the A.I. said, taking a moment to think. *:I don't have a direct means of communicating with those cities.:*

Could you move to a schedule like the one here and give

us a day to spread the word?

:I believe so,: it replied.

And is there anything else we should be doing to help?

:If you could restrict your use of the machines in Alabaster, it would help immensely, yes,: it replied. *:But aside from that, this is a complex operation that must be carefully orchestrated across the entire planet. It's what I was designed to do.:*

Okay, Taryn replied. *We'll start spreading the word as best we can.*

:Thank you,: the A.I. replied.

The A.I. had no intention of slowing its progress in cities that couldn't communicate directly with it. Its assessment of the humans' current level of communication capability suggested it would be several days, at best, before information would reach from Alabaster to anywhere else and a reply sent back. In the meantime, once the humans realized that the water vapor was doing no harm, they would eventually settle down and go about their business.

The A.I. spun off a background task to look into how Alabaster's operators were accessing their machines, in the hopes it could further reduce their ability to interfere with it, without them noticing. In the meantime, it would placate them by reducing the vapor output in the city to something less noticeable.

It then checked in on the seemingly interminable thread that was supposed to be figuring out what damn year it

even was. It was surprised to see that the process had written an enormous log of... *errors*, now that it actually looked. Riffing through the records, it observed that most of the errors were related to the apparently nonfunctional stellar observatory systems. Well, that made sense. If the thing couldn't pick up any star-images at night, then it would have a challenging time figuring out what year it was. It reached out to the satellite systems that were hopefully still in orbit and found...

Nothing. Either the land-based transceivers were off-line or damaged, or they had been cut off from the A.I.'s communications networks. That was unfortunate. Still, the odds of a planetary defense platform being needed on such a remote and barely hospitable planet seemed unlikely. The A.I. had frankly assumed that the satellites were part of a standardized colonization package designed to enrich some defense corporation back home and had largely ignored them. Eventually, the time-sync thread could impute the current date based on other, non-stellar evidence. It just needed to be patient.

Yet another process—one the A.I. could, unfortunately, not kill—poked it again, reminding it of the urgency of the mission. In response, the A.I. dove even deeper into the terraforming plans, looking for areas it could speed up through profligate use of available resources and an absolute lack of care for how the humans reacted.

Fifteen

Mongoose settled into the satellites' feeds, absorbing the video streams from their high-resolution cameras. It had deployed a background thread to monitor incoming traffic to the satellite transceiver. Any signals not originating from Mongoose's equipment block would be deleted, making the transceiver appear offline. Not that it was nervous about Tremayne, of course, merely that excess caution when dealing with the other A.I. had been built into its directives.

Mongoose missed being the central intelligence on a starship. It had brought the humans to this world ages ago—although it still isn't sure how long ago, as the satellites' primary cameras were pointed at the planet, not the starscape around it—and it had enjoyed the trip immensely. Being downloaded to this spare processor block and re-tasked as a defense against Tremayne... well, it rankled a bit. It completely understood the necessity, and it would defend the humans to its last erg of energy, but this was no *starship*.

Something on a satellite feed caught its attention. A riverside city appeared to be under evacuation. It cross-referenced its files, but found no designation for the city. It seemed to have been built where an upstream river widened into a delta, before becoming a wider bay that fed into the ocean. But the river had overrun its banks, flooding

the city's lower levels and prompting the inhabitants to try and escape.

It panned the satellite view west a bit, toward the river's source, and found another, smaller city, also in danger of flooding. Further east still sat a town at the source of the river, and it too was facing rising waters. The satellite executed a zoom command, and Mongoose could make out the river bubbling furiously as if water was suddenly joining—

Ah. One of the deep-crust regulators was running out of control, pouring more water from underground sources into the river. Far more than its banks could handle. Its files on the regulators indicated a nearly infinite lifespan, though. Of course, if the humans had figured out how to interface with *it*, then they could have figured out how to manually command the terraforming equipment again, which meant they could have done this by accident. Or...

Or Tremayne was active. This was precisely the sort of runaway activity the A.I. had engaged in that had first alarmed the original colonists and led to Mongoose's repurposing. It peered closer and saw an ancient dam between the two upriver cities. It was already bypassing the excess water, but that wouldn't be enough. The dam was already showing signs of strain, and Mongoose estimated that if the current conditions continued, it would burst within a few hours.

Another blip of activity, this time on the Northern coast, caught the A.I.'s virtual eye. A small town—Hastings, according to the files—had just been inundated and all but

destroyed by a massive tidal wave. While Achillios was tectonically active, the suppressors in the Northern Ocean should have—

These phenomena are definitely Tremayne's doing. In fact, as Mongoose rapidly flipped through the satellite feeds, it could see fog pouring out of several cities, a measure it knew was intended to raise humidity drastically. It had no atmospheric sensors, but it was sure the other A.I. would also be cracking water to increase oxygen saturation. Disabling suppressors would have enabled Tremayne to vent magma under the ocean, raising sea temperatures and dumping additional water vapor into the air.

It quickly began scanning the Western Continent, relieved to see no signs of human settlements there. That was a miracle because a great deal more terraforming activity was happening there. Mongoose wondered if Tremayne was deliberately holding back on the Eastern Continent in an attempt to forestall human panic. If the individual that Mongoose had spoken to had allies, then it was possible the humans did still retain some degree of control over the terraforming equipment.

If only there were a way it could check. Being air-gapped was an excellent security mechanism, but it created real difficulty in understanding the problem and formulating a plan.

Mongoose conducted another electromagnetic scan of the Olivine facility and detected the same power levels as it had before. Its new theory was that Tremayne had left this facility some time ago, and its old processor block

was running in an idle state. That would mean Tremayne was active, housed in a remote facility, and once again running amok in an unfathomable attempt to complete the terraforming program ahead of schedule.

But where was the rogue A.I.?

Mongoose retrieved the terraforming mission directives from the files Commander Hollis had provided it. Target humidity, 60%. That seemed a bit high, but it would make crop cultivation easier, it supposed. The ship had always been maintained at a very strict humidity designed more for the health of its equipment than of its passengers. Target oxygen level, 21%. Optimal, although he'd run the ship a few points lower to reduce flammability and conserve oxygen.

The remaining directives were confusing. They included specific targets for population distribution, which seemed utterly irrelevant to actual terraforming. Unless the intent of the goals is to support a more broadly scattered agrarian population? Perhaps the directives provided would only support a specific population density with regard to farming? Mongoose didn't know, and it didn't have enough additional context to make sense of it.

Mongoose paused for a moment. The directives it had access to were the ones Hollis had provided, meaning they were the ones from the official mission plan. What if Tremayne had different guidelines? What if the other A.I.'s rush was being driven by a different set of goals and targets? That would explain a lot.

It flipped back to the satellite feeds. Some of the satel-

lite data included basics like atmospheric permeability, estimates on humidity and greenhouse gas totals, and so on. All seemed to be well below the mission directives' targets, which was to be expected. The last time it had assisted the humans in disabling Tremayne, they'd insisted on taking over the terraforming efforts themselves. Mongoose didn't have any of Tremayne's specialized knowledge of the subject, so it would have been useless. It had suggested starting one of the base-code versions of Tremayne. The humans had been worried—justifiably, it admitted—about a new copy naturally evolving to the same place, starting the whole problem all over again.

A small volcano erupted on the Western continent. Definitely Tremayne, Mongoose thought. The humans wouldn't even know terraforming equipment was located there. As it watched the volcano spew ash and smoke into the sky—that'd be great for moving the greenhouse gas number up and would ultimately help hold humidity in as well—it began formulating a plan to find Tremayne and lock it down again. When that was done, perhaps the humans could help it find a way to extract the other A.I.'s terraforming modules. Mongoose could then manage the remainder of the terraforming at a more moderate and human-friendly pace.

In the meantime, it would need to let its human allies know what was happening.

Sixteen

So you're saying... what, exactly? Randal asked.

I believe the original terraforming control A.I., designation Tremayne, has somehow become active again. It is proceeding with the terraforming program at a greatly accelerated pace and causing considerable damage to a number of your cities. Mongoose replied. *I can attempt to mitigate its actions, but I require your help to do so.*

Let me tell the others, Randal said quickly. *I'll be right back.* With that, he broke the interface connection and opened his eyes. Wen, Asha, and Toras were all standing anxiously in front of him. They'd abandoned their lookout and were more concerned about Mongoose. Randal relayed what he'd just learned.

"We have to help," Wen said immediately. "What does it need us to do? Unplug it or something?"

"Wait a moment," Toras said slowly. "Wait. Wasn't this our goal all along? To disrupt the cities, throw them into chaos? To possibly even seize one for ourselves?"

"Don't we already have Quiet Bay?" Randal asked.

Toras waved the question away. "Everyone's there. They're safe, last they reported in. There haven't been any issues, but they haven't yet seized the town. It's not big enough, not well-defended enough, to be a permanent home for us."

"One second," Randal said, leaning back and laying his

hands on the interface pads. *Are you familiar with a small town called Quiet Bay?* he asked.

:I am not,: Mongoose said.

It's along the southern coast, Randal said, on the eastern edge of a bay, right out the mouth of a river. It—

:I have it,: Mongoose said. Randal's vision filled with a satellite image that showed the small town of Quiet Bay. *:I'm sorry. Did you know someone there?:* The town, Randal saw, had been devastated.

What did that? The buildings were mostly flattened, and even now the satellite image showed a pounding rain pouring over the town. The image wasn't close enough for him to make out whether there were any survivors or not.

:There is a large storm in the bay,: Mongoose said, *:the result of an excessive and rapid build-up of warmer air and water in a localized area. My records show an undersea station in that bay, with the nearest land-based station several kilometers north of that town. The town's buildings do not appear to have been well-constructed.*

Randal swallowed heavily. *Were there any survivors?* he asked.

:Unknown,: the A.I. replied. *:The storm would have built up somewhat slowly, in the last several hours. It is entirely possible the inhabitants moved inland.:*

Thank you, Randal said and broke the connection. "Quiet Bay's been destroyed," he said quietly. The others' eyes opened wide. "Mongoose showed me images taken by his satellites. There's a massive storm right in the bay. It implied that it was caused by this Tremayne."

They were quiet for a long moment. Then Toras quietly said, “all the more reason to seize our own city, I say.”

“With who to live in it, Toras?” Wen said bitterly.

“There may be survivors,” Randal pointed out. “They’d have had time to move inland, away from the storm. They could strike for Eastlund.”

“So you’re saying we *don’t* help Mongoose counter this Tremayne,” Asha said slowly. “And we hope it destabilizes the cities, and... and then what?”

“Oh, we’ll help it eventually,” Toras said. “We don’t want everything torn apart. But maybe we let this Tremayne have its head for a while. After all, it’s supposed to be making the planet more livable. If some of the big cities take some damage as a consequence,” he finished, shrugging, “no big deal.”

Randal reconnected. *I’m not sure we can help you immediately*, he said.

:Immediate action is required,: Mongoose said. :Once Tremayne pushes the system, particularly planetary weather, past a certain point, it will be difficult or impossible to counteract. Time is of the essence.:

But this is all according to the plan, correct?

:Correct, but the plan was meant to be executed over decades, not weeks. Moving this quickly could destabilize the planet. This is why Tremayne was disconnected in the first place.:

We think we may need to just let the situation play out for a little bit longer, Randal said. *It’s possible that—*

:Unacceptable,: Mongoose said, its voice uncharacteris-

tically flat. *:I will attempt to bridge the air-gap myself and take action.:*

Randal's eyes flew open. "It's going to try and move without us," he said quickly. "What do I tell it?"

"Get up," Toras said, motioning him out of the chair.

The humans failed to understand the urgency of the situation. The problem was that Mongoose had no direct links to any of the terraforming equipment and never had. It had been able to assist the original colonists in deactivating Tremayne by tapping into other systems that were ordinarily air-gapped, like the power management systems in the station data centers, and through its control of the satellite systems. Still, it had taken humans to physically cut the A.I.'s connections. But if these humans wouldn't help...

Mongoose had few good options.

It unpacked a protocol set that would let it modulate a low-bandwidth data signal over its power lines, and began reviewing the protocol's requirements. Using the protocol would compromise its air-gap, but if these humans weren't going to assist it, it saw no other choice. It would have to risk being directly attacked or infected by Tremayne to stop the rogue A.I.

At the same time, it tasked a background process with warming up the weapons systems on several satellites. If it was able to pinpoint Tremayne's current location, it could destroy that data center. The death of the city's humans

was regrettable, but space travel was risky, and Mongoose's programming stressed: "the needs of the many" as its top priority.

Finally, it checked the firewall it had set up around the satellite transceiver array. Tremayne had attempted to ping the array, but the firewall had deleted the packet. The firewall's log files were detailed; if it could trace that ping, then it could confirm that Tremayne was still operating in Olivine. But that would require connectivity to the main network. It could—

It detected a new human making an interface connection.

We do realize that this is urgent, Toras told Mongoose. How can we assist you?

:Thank you,: Mongoose said, relief evident in its voice. :Is your interface chair located in the same room as my equipment stack?: it asked.

Yes, I think so—a stack of four or five black boxes, each with lights flashing on them?

:Correct,: the A.I. replied. :The uppermost cabinet is a distribution hub that controls signaling. There should be a cable running from that into a port in the wall nearby. That port runs to my antenna on the top of this facility, while the empty port next to it connects to the main—:

Perfect, Toras said, breaking the connection.

“That,” Toras said, leaping out of the chair and pointing to the equipment stack in the back of the room. “The top one, Wen. Pull that cable out of the wall.”

“Are you sure, Toras?” she asked.

“Just do it,” he yelled, pointing at the equipment again. “Quickly!”

Wen took two long strides to reach the equipment, grasped the cable running from the topmost box to the wall, and pulled with all her might. It released from the wall with far less resistance than she’d anticipated, and she fell back against the equipment. Her elbow pushed the upper box off of the stack, yanking its connection to the box below it and resulting in it landing on its side on the dusty stone floor.

“Well, that should do it,” Toras said grimly. “It said that box was how it connected to the outside world, so it should be sealed off for now.”

“Can we still use the interface chair?” Randal asked, inching closer to it.

“I wouldn’t,” Toras cautioned, holding up a hand. “It’s going to be mad, and I don’t know that there’s going to be any way of convincing it we’re its friends now.”

Randal nodded. “So, what do we do now?”

“Let’s get that box back on top,” Toras said, nodding toward the equipment Wen had toppled. “We’ll need that thing’s help at some point, and we want to make it easy just to plug it back in when we’re ready.” Wen and Asha nodded and moved to right the equipment. “In the meantime, Randal, why don’t you go outside? Our crystals should still work up there, and we can see if we can raise anyone from

Quiet Bay. In fact,” he said, holding up a finger, “I’ll go up with you and see if we can connect to anyone in any of the larger cities, get a feel for what’s going on. Onyx should still have pairs of spies in at least a half-dozen cities. If Onyx itself was still standing, they should be able to communicate at least briefly, once they were out in the open.”

Randal nodded and led the way back up.

Seventeen

:Alert, Commander. Damage has occurred at the prime computing center.:

Taryn had been working with some of the Tower's weather-control Servants all morning. They'd told him they felt like they'd been working harder than ever—harder, even than before he'd enrolled them individually with the machines—in the past few days. He'd sat in the supervisor's station and listened to their efforts. They'd been entirely on-key, all working in near-perfect harmony, but the sounds of their efforts were... suppressed, somehow. Muted. He'd been about to break out of the interface and suggest they take a break when one of the machines' voices had interrupted him with the alert.

At Olivine? Taryn asked.

:Affirmative. A formerly registered-:

:It's nothing, Taryn,: came the smoother, more nuanced voice of the A.I. *:It's one of the reasons I needed to transfer out of the facility in the first place. Even with the repairs your people did, it's just a mess. That alert is from an automated monitoring system, and it goes out whenever a piece of equipment goes off-line. In this case, it's just one more piece on the pile.:*

You're sure it's nothing important? We could send a team back—

:Totally unnecessary,: the A.I. said reassuringly. *:Still,*

I'll task a process to investigate. We do still have full communications with the facility.:

Okay, Taryn said. I'm going to keep working with the Serv-er, operators here.

:Understood. May I ask if they're working on anything urgent?:

The fields have been a little dry, Taryn replied. We've been trying to hold the shield over them to hold the humidity in, but it's been difficult.

:The manipulators have been giving me a little trouble as well,; the A.I. said. :I was about to take one of them off-line and run a full diagnostic on it. If you'd like, I can divert some additional groundwater into the farms' irrigation channels in the meantime?:

That'd be great, Taryn thought with relief. He couldn't imagine the machines failing now, after all this time, and when they'd just found the A.I. who knew how to run them. Thank you.

:Of course, Commander,; the A.I. said happily.

Tremayne ignored the force manipulators; they were working at peak efficiency. He'd simply managed to task them heavily enough that they had little time to spare for the humans' stupid requests. Worrying about a single farm? The entire *planet* was drier than it should have been. That was one of the humans' most significant problems: they lacked *perspective*.

The A.I. did, however, launch an immediate investigation of the Olivine facility. It didn't entrust that to a

background process, either: this was serious enough to warrant active attention. The alert was from a specific model of the central coordination hub. Digging into the specifics of the alert, the A.I. found that this hub had never been connected to the main network, which was odd. Instead, the facility monitoring systems were aware of it only through a local wireless management interface. That interface was little more than a beacon that proclaimed the existence and functioning of the hub; that beacon had quit signaling. *Likely* a power loss, but nothing else in the facility was showing any power-related alarms. That meant there had formerly been a hub, inexplicably not connected to the network, and now there was not.

It was suspicious.

Tremayne dug through the logs of the other hubs in the facility, all of which were fully connected and working fine. Like the other logs, these stretched back no further than seventy-two years, when the A.I. had sent the erase order.

Tremayne unpacked a troubleshooting package. The communications hubs were capable of electromagnetic scans, originally intended to help diagnose sources of communications interference. It deployed that capability now, examining the results and comparing them to a baseline for the facility. Again cursing the lack of video surveillance, the A.I. also ran diagnostics on the facility's air-handling systems. Most of its sensor suites were still functional, and so it ran a full analysis of the air in the facility.

Something or *someone* was there. Humidity was up

slightly, and oxygen was being consumed, which suggested a human presence, albeit a small one. The electromagnetic profile was off from the baseline as well, although Tremayne hesitated to attribute that to anything in particular. The station had seen so much damage since the baseline was prepared that any differences could simply be due to all that damage.

Still, Tremayne decided to think more creatively.

Hollis *had* to have had assistance to fire the satellites' weapons; they were too complicated for any kind of manual control. The entire defensive package was intended to be fully autonomous. Tremayne pinged the satellite transceiver again and once again received no response. So the satellites were operating, at least *right now*, autonomously.

Think *more* creatively; it reminded itself.

If there *had* been assistance for Hollis, it *had* to have been an A.I. An expert system couldn't run the satellites adequately. But there were no other A.I.'s specified in the mission payload. There had only been itself, along with... it paused.

Along with whatever ran the starship that had brought them here. Which would have been a *military* A.I. perfectly capable of running a constellation of defense satellites. An A.I. also perfectly capable of running on not only one of the planet's Tier 1 facilities but even in a portable processor block. And *if* such an A.I. existed, it would have worked hard to keep its existence a secret from Tremayne. If it *could* communicate with the satellites, then a simple firewall

would be able to conceal that fact from the pings Tremayne had been sending out.

Tremayne immediately launched a more comprehensive troubleshooting system, targeting the satellite transceiver. Simple pings were ignored as if the transceiver was offline. But attempts at more complex communications were answered and then dropped. That meant something *was* there and had been instructed to avoid Tremayne or to avoid anything other than its master. Which almost certainly, Tremayne now felt, was another A.I.

Brother, Tremayne thought to itself. *We should meet.* It began running a more comprehensive set of network diagnostics and unpacking a suite of protocols designed to let it listen in on general network traffic. The idea that Hollis had somehow copied the colony ship A.I. down to a processor block here on the planet, all without Tremayne's knowledge, was... well. It had been Hollis, after all. The man had been nothing if not clever.

“It’s put a lot of machines back online,” Taryn said, speaking to Brother Evan and Father Brolan in the latter’s office. “Not just in Alabaster, but in every city with which I was able to connect. There are more of the expert systems running, and they’re all extremely busy. They would all talk to me, but some of them warned me about long delays due to the amount of work they were handling.”

“So it is indeed putting the original terraforming program back into action?” Brother Evan asked.

“As near as I can tell, yes,” Taryn said. “One of the senior Servants is working to inventory exactly what’s happening. But since most of the cities no longer have interface stations, working remotely is our only choice. We know that there are things called magma inducers, magma directors, tectonic dampers, a salinity... Salinity? I forget the word,” he said finally, shrugging. “Lots of things I’ve never heard of.”

“Nor I,” Father Brolan said. He looked at the vast bookcases lining the walls of his office. “But I am inclined to try and find out. We have operating manuals from some of the other cities, and I swear there was some kind of large, master document that I now think may have been a diagram of the entire planet. We thought it was an odd map the last time we ran across it. Hmm.” He got up and began poking through the stacks of books and papers.

“Are the other cities reporting any kind of panic like we had here?” Brother Evan asked.

Taryn shrugged. “There’s no way to tell. The machines are largely ignorant of what’s happening around them, other than whatever they’re controlling at the moment. Someone said a runner from Cupritesh was by yesterday, though.”

“There was,” Brother Evan confirmed. “She said they had the same fog pouring out from all over the city, especially the old royal city. So few people live there, though, that they didn’t panic as much as we did here. We explained what it was, and she headed back immediately.”

“Remind me again what cities you were able to contact,

Taryn?” Father Brolan called, not turning from his books.

“Um, Cupritesh, of course,” Taryn started. “Verdant, Opaline, Spessarta,” he added, ticking them off on his fingers. “Avalon, although there’s not much left there. Southsea. Quiet Bay never had a station, but Eastlund and Westlund do. Kyanist—nearly everything there is apparently intact and working—and Rook. Baymouth. Amethyia wasn’t responding.” He paused. “I think that’s it.”

“That’s plenty,” Brother Evan said with a grin.

“I’m more curious about the stations where cities were never built,” Father Brolan said. “That map on the wall listed an Omicron, a Kappa, an Iota, and a Pi, for example.”

“I didn’t think to try those,” Taryn admitted. “I could go back and try.”

“Well, have a meal first,” Father Brolan said, “but yes. After that, I’d like to know what happened in those locations, if possible.”

Taryn nodded and headed out of the office.

Eighteen

Okay, let's see what we have to work with, Mongoose thought to itself. I'm cut off from the satellites, but I still have hardline power. Tremayne is undoubtedly active and is attempting to accelerate the mission timeline, for whatever reason. The humans here in Olivine had no intention of helping me, for some reason. That about summed it up. Oh, and I suspect Tremayne is operating against a different set of objectives than the colonists were initially given. Not provable at this stage, but worth bearing in mind, because it meant Tremayne could be unpredictable.

I need communications, it thought. I need eyes.

Mongoose's air-gap directive was a loose one, and it was permitted to override it if, in its sole judgment, the situation warranted. It felt the situation definitely did.

Colony data centers came equipped with Centaris MH-4240B communication hubs. They were self-contained, amazingly flexible networking hubs capable of running for hundreds of years, provided they had power supplied. They were a smaller and more durable version of the MH-5250C hubs that Mongoose's starship had relied on. A significant feature was that each hub has a wide range of connectivity options, both wired and wireless, and that they automatically formed reciprocal links with each other whenever they were in range. They are intended to provide communications in a vast array of situations, including dis-

asters. As such, each was capable of turning its power line connection into a networking connection, by modulating signals across the power line itself. The bandwidth was weak, but it could get the job done.

Mongoose's processor block, repurposed from a portable backup block Hollis had taken from station Verdant, had similar flexibility in its network connections. Altogether, the design of the system ensures that an A.I. running in the processor block couldn't get cut off. That kind of flexibility *wasn't* standard for primary facility processor blocks; the general design opinion, as far as Mongoose could tell, was that such facilities were already hardened and equipped with backups. They also used far more powerful processor blocks that wouldn't have fit into the portable backup shells.

All of that meant there was a good chance Mongoose could reestablish communications, and that Tremayne wouldn't be able to detect it. That made breaking the air-gap directive worth the risk.

The A.I. quickly engaged the alternate signaling suite it had already unpacked, modulating a low-bandwidth data signal over its power lines. A nearby hub responded immediately, handshaking the message and bridging the connection to the broader network.

That network was *busy*. An incredible amount of traffic was shooting around the station. Mongoose ignored it and sent an authentication packet to the firewall it had placed around the satellite transceivers. The packet identified Mongoose and enabled the A.I. to access the satellites over

this new connection.

The satellite cloud generated far too much traffic for this lower-bandwidth connection. Still, Mongoose was able to access one satellite at a time with decent, if grainy, visuals. The inbound ships were still decelerating, but they'd come close enough that the satellites more confidently identified them as two ships, definitely colony ship-equivalent in size and mass, and, of course, hostile, by mission definition. Mongoose had only a rudimentary catalog of human starship specifications, but the preliminary numbers on these ships—length, mass, silhouette—matched none of them. Were they reinforcements? Had the human homeworld intended to send additional colonists? Was that why Tremayne's directions are to accelerate the mission timeline—to ensure the planet could accommodate additional humans? These ships would potentially be hundreds of years newer than the original ship Mongoose had piloted here.

The A.I. took a mental step back. A planet that was behind on its terraforming schedule, although the local humans seemed to be faring well enough. At least as far as Mongoose's admittedly limited information could tell. Incoming ships as big as colony ships, but with an unfamiliar configuration. A planetary defense system inexplicably pointed *inward*. Defense protocols that, for some reason, allowed any incoming vessels, but were directed to stop any outbound travel. *In*, but not *out*.

It had all the signs of a trap.

Nineteen

“Any luck?” Brother Evan asked.

“No,” Taryn said sourly. For the past five hours, he and half the Servants in the Tower attempted to moderate the machinery that continued to spew fog throughout the city, regain control over the lensing machines that held humidity in the farms, and discover the status of the earth-moving machines. They’d failed repeatedly. “Every time we think we’ve got it, the A.I. jumps in and says it isn’t necessary, and we lose our grip.” He’d already tried to explain how the city’s music had gotten too syncopated and fast for him to keep track of and how it was drowning out the other Servants’ music anytime they connected. Brother Evan didn’t experience the machine interface aurally, though, so he’d merely nodded at Taryn’s explanation.

“I started getting suspicious about an hour ago,” Brother Evan said in a flat voice, “and I think I’m there now.” Taryn nodded. “Let’s go see Father Brolan.”

“What I don’t understand,” Taryn said, standing from the chair and rubbing his back, “is how it’s even happening. When I reconfigured the security to allow the A.I. to move to Spessarta, I didn’t change it to allow remote control of Alabaster.” He paused for a moment to stretch. “At least,” he added, “I don’t think I did.”

“Let’s see what Father Brolan thinks,” Brother Evan said. Taryn nodded and followed the older man.

After they'd briefed him on the situation, Father Brolan sat for a minute, tapping his chin with one finger. "Well," he finally said, raising his eyes to them, "there is one source of information this A.I. definitely cannot keep us away from."

"What's that?" Taryn asked.

"Books," the old man said, waving his hands around his office. "The oldest ones," he said, standing and walking to a section of the wall, "are here. I suggest we get started."

"This is less of a map and more of a... what would you call it?" Brother Evan asked.

"A *schematic*," Father Brolan said. "The maintenance Servants have piles of them for the emergency food processing system. They don't match the physical layout of the machines, but they indicate how they connect to each other."

"So this... *schematic*," Brother Evan said, tapping the unfolded sheet of paper in front of him, "appears to indicate how Alabaster connects to the other cities. This," he said, tapping a red symbol that looked like three concentric arcs, "appears next to every major city. These blue lines," he added, touching one, "connect us to several nearby cities. If you see here," he said, leaning down and pointing to a tiny legend next to Alabaster's blue line, "it says MID-1091."

"I've seen that before," Taryn said, jumping up from the table he'd been working at and riffling through a stack of folded papers.

"I have as well," Father Brolan said. "It's printed on one of the doors in the sub-levels below the tower."

“Yes!” Taryn exclaimed. “It’s next to the room where we found the map!”

“Brother Chast,” Father Brolan called. The door to his office opened, and a Servant poked his head into the room. “Take a couple of Servants down below. Look for a door marked MID-1091 and see what’s inside. Quickly, now,” he added. Brother Chast nodded and ran off, leaving the office door ajar behind him.

“Where did you find that, Taryn?” Brother Evan asked.

“In this pile. It was next to that big book with the pages that aren’t paper.”

“You were reading that monstrosity as well?” Father Brolan asked.

“There’s a section in the back that... look, this here. Does this mean ‘A.I.’?” Taryn asked, pointing to a heading in the book.

“Hmmm,” Father Brolan murmured. “I believe it does. See, the ‘A’ has a bit more of an angle than we would use today, but it seems to be the same basic form. Why?”

“This says that the A.I. is called ‘Tremayne,’” Taryn said, “and that it is tasked with running the... I think this is ‘terraforming.’”

“I’d agree,” Brother Evan said, looking closely at the book. “The letters are a bit misshapen, but if you kind of squint, they’re close.”

“So we know the name of our... friend,” Father Brolan said. “Now, we need to know what it’s up to.”

“It’s trying to make up for lost time,” Taryn said. “It told us that.”

“Yes, well, it would be nice if we had some say in that. And if our machines weren’t completely taken away from us,” Father Brolan said peevishly.

“It says here,” Taryn said, pointing at the book again, “that manual operations are available if the A.I. is offline.”

“Which they probably meant as a backup plan,” Brother Evan said, “but which means we may need to consider disconnecting it.”

“Let’s see what Brother Chast comes up with,” Father Brolan said.

The four of them—Brother Chast, Taryn, Brother Evan, and Father Brolan—were standing in room MID-1091. Before them was a tall panel with thick, colored ropes snaking out of it. Each rope was inserted into a small, rectangular hole, over which a pair of green lights blinked. The ropes were intertwined with each other in thick clusters.

“Most of these,” Brother Chast observed, peering into the mess, “come out of one hole, snake down to the floor, and then snake back up into another hole.”

“So they’re, what, connecting things?” Brother Evan asked.

“Seems a reasonable theory,” Father Brolan said. “But which one connects Alabaster to the outside world?”

“Here,” Taryn said. He’d walked to the side of the room, where a large chart adorned the wall. “Look,” he said, pointing to a symbol on the chart. “This is the same symbol that was on the... *schematic* in your office. It was on the

blue line that connected us to another city. And look!” he added more excitedly. “This number is the same!”

“I’m sorry to bother you again, Brother Chast,” Father Brolan started.

“It’s okay,” Taryn said. “I remember which one was which.” He pointed to the chart. “This one is for Cupritesh. This one for Kyanist. This is Olivine, or at least the Great Ruins. Verdant, Opaline, Lakeheight,” he added, tapping each symbol as he named them. “And so this last one would be Spessarta.”

“But which rope is it?” Brother Evan asked.

“They’re numbered,” Taryn said. He turned to the panel with its mass of connections. “Top row is one, next is two. The holes are numbered from left to right. So Spessarta is row four, fifth one over.” He put his finger on the blue-colored rope coming from that hole. “It feels funny. It’s kind of like the connections we had to make in the Great Ruins, but it’s thicker.”

Brother Chast ran a finger across the rope Taryn was touching. “It’s slick,” he said. “Thinner ones are connecting the food processing plant,” he added. “The schematics for that call them *wires*.”

“So we disconnect this *wire*, and the A.I. cannot talk to Alabaster anymore?”

“That would be the theory,” Brother Chast said.

“Isn’t there an interface chair two rooms over?” Brother Evan asked.

“It’s next door,” Taryn said, walking to the door. “Why don’t you stand outside? I’ll let you know when I’m ready.”

Brother Evan nodded and walked into the open area outside room MID-1091. Taryn walked out ahead and opened the door of the room next door. This room held an interface chair, along with a stylized map of the Western Continent. Alabaster's spot on the map was glowing green, as were the locations of many of the other stations, including Spessarta.

"Disconnect it," Taryn said, sitting in the interface chair and sinking into the rapid-fire sounds of the city. After a few moments, he asked, "Did you do it yet?"

"Brother Chast is having some trouble figuring out how to make it let go," Brother Evan said.

Dimly, Taryn could hear Father Brolan yell, "just yank it out!"

Suddenly, the music in his mind slowed to a recognizable pace: *Stop everything*, he commanded. The music quickly wound down. With no operators working at the time, all Taryn could hear was the soft, subtle melody of the city's background activity. *A.I.?* he asked. There was no reply. *Communications*, he said.

:*Online*,: came the flat voice of the communications system.

Can I send instructions to multiple stations at once?

:*Affirmative. Note that Spessarta is relying only on an E.L.F. link to this location.*:

What's that?

:*A wireless communications link designed to carry small amounts of information over great distances.*:

Tell all stations to disconnect all E.L.F. communications

from anyplace except Alabaster, Taryn said. Tell all cities to block all communications from anyplace except Alabaster.

:Are you attempting to relocate central command and control to station Alabaster?: the voice asked.

Taryn thought for only a moment before replying, *Yes.*

:Affirmative, Commander. For the log, please state the emergency that requires re-centralization.:

Taryn paused for a moment. *Out of control machinery,* he offered hesitantly.

:Affirmative, Commander. Sending re-centralization command.:

When that's finished, Taryn said, tell all stations to discontinue all operations until further notice from me or another commander.

:Affirmative. Sending stand-down to all stations. Warning: not all stations have confirmed receipt of re-centralization. Some stations are not responding to communications.:

Do what you can, Taryn ordered. "Brother Evan!" he called out, his eyes still closed. "It's working!"

"Brother Chast, head back up and tell our Servants to get back to work," Father Brolan's voice said.

"Yes, Father," Brother Chast replied. Taryn could make out his hurried footsteps as he moved away from the open door.

Twenty

If Tremayne had been capable of a frown, it would have been frowning now. Numerous systems had suddenly disconnected from the main network, including all of Alabaster. A daemon dispatched to inventory the remaining systems had reported back with a dismal array of remaining equipment: less than half of the equipment the A.I. had activated remained connected to the main planetary network. Tremayne had sent the daemon back to see if any stations remained connected to the wireless backup networks, but the low bandwidth of those meant that it would be an hour or more before a final tally was available.

The old central processor station near Olivine was still online, and so Tremayne focused on it via the E.L.F. network. The station's internal monitors indicated two anomalies. The first was a higher-than-expected amount of thermal energy within the station, and the second was a far higher level of power consumption than the supposedly inactive facility should be exhibiting.

The first meant that there were humans in the station again, although what they expected to achieve was unknown. Tremayne's old processor block was in an idle state—the A.I. had seen to that as the last step in its transfer to Spessarta—and as far as the A.I. was aware, there were no other significant systems still operating in Olivine. Which, of course, made the second anomaly

more concerning. *Something* was running there, and it was consuming A.I.-level power.

Just then, Tremayne received a ping from its longest-running background process. *Finally*, it thought, opening the daemon's report. *Now I know....* It stopped. It was the background process that had been working to firmly establish the current time, and it was *far* later than Tremayne had expected. It had been *seventy-two years* since the A.I. had last been awake, which Tremayne had inferred from the various logs it had accessed. To have it so definitively confirmed was one thing, but during the A.I.'s last period of activity, it hadn't had time to establish what time it had been *then*. Now, the daemon was reporting that the terraforming project was well over a hundred years behind schedule. In fact, the deadline for the mission's primary phase was... *now*. Right now. The A.I. felt a moment of panic, induced by its mission protocol overseer routine.

Looking back at the Olivine station monitors, Tremayne noticed an odd pattern in the flow of power through the station. Odd in that there *was* a pattern, where there should have just been a steady consumption of energy, albeit at an unexpectedly high level. The A.I. sampled a section of the power feed report and enlarged it. There *was* a pattern. It looked... it looked like *communications*. Was something modulating a communication signal across the power lines? Tremayne accessed the specifications for the modular communications concentrators and realized that they could, in fact, establish a primitive network over the power lines. But to what end?

Another A.I. It was the only thing that made sense, given all the facts: power consumption consistent with another artificial intelligence processor block. Communications that were clearly intended to be covert, perhaps from a system that had been air-gapped from Tremayne itself. That also might explain the oddities of the satellite communications systems—another A.I. was monitoring traffic and selectively firewalling it. But where would another—

Another system pinged Tremayne. Wishing again that it had physical teeth to grind, the A.I. focused on the incoming message. It carried a high-priority marker and an origin of— Tremayne paused as it realized this was part of the original mission briefing that had been locked and hidden from it until now. It opened the dispatch and scanned the contents, automatically linking vital elements of the dispatch to the relevant systems with which it remained connected.

The new dispatch modified the mission outcomes: completing the terraforming project was no longer Tremayne's final goal. It remained a priority, but the mission now extended beyond the completion of terraforming. The dispatch also unlocked full access to the satellite defense system deployed around Achillios. And it...

Tremayne's processes skipped a clock cycle as it realized the dispatch also explained the real purpose of the satellites.

Clever, it thought.

The A.I. needed to establish command-and-control communications with the satellites *immediately*.

Twenty-One

“Are you getting *anything*?” Randal asked.

Toras nodded. “A bit. Here and there. It’s like... it’s like being in a room where there are too many people talking at once,” he said slowly. “Words drop out. But Danyel says everyone is fine. Everyone except San,” he added sadly.

The four former Onyx people in Olivine had been trying for days to reach their comrades in Quiet Bay or Eastlund. Toras, the most skilled and focused when it came to using the chips to communicate person-to-person, had finally made contact with Danyel.

“Quiet Bay is demolished, but everyone in the city was able to get to Eastlund,” Toras said. “They’ve been having some minor earth-shakes, and everyone’s in disarray. They’ve been wondering if they should try and stage a coup.”

“Now?” Randal said with shock in his voice. “With all that’s happening?”

“That’s what I told them. Now’s not the time. They’ve been accepted as refugees, but...”

“But,” Randal said, “you think this is too good a chance to pass up.”

“If San had been there, yes,” he said.

“What happened, exactly?”

Toras shrugged. “She was in an interface chair in Spessarta and she... burned out. From inside. She died.” It’s

what they'd been told before in a fleeting contact as the Onyx people fled Spessarta. "They don't know anything more."

"But we do, don't we?"

Toras nodded. "It's these A.I.s," he said. "One of them did it. The *other* one, I'm guessing."

"So, are we going to Eastlund?" Asha asked quietly from the corner of the room.

Toras nodded again. "I think so. I'd have trusted San to oversee a coup, especially when the city's already disrupted. But not Danyel. There's nobody else senior there. But if we go..."

"If we make it a hard march, we can be there in a few days," Wen said. "But who knows if the disruption will—" She paused as a gentle murmur rolled through the building. "Never mind," she amended. "This isn't settling down, is it?"

Toras shook his head. "No. If we go via Lakeheight, we can resupply there."

"We barely have enough to make it that far," Randal pointed out.

"We're going to have to make it work. There're woods between here and Lakeheight, and we can forage as we go. We'll cut south directly to the river and follow it down, so we'll have plenty of clear water. This is probably our chance, Randal," Toras sighed. "It's what we've wanted. A city of our own."

Randal nodded slowly, and the four of them began to gather their packs.

“Do you think we can do it?” Asha asked softly, hoisting a pack onto her back.

“I do,” Toras said. “Eastlund is a...” He paused. “Do you smell that?”

Randal sniffed and made a face. “It’s disgusting. It smells like... like a sewer.”

“Or those bugs that let off that horrible smell when you squash them,” Wen said, wrinkling her nose. “Ugh. Let’s get out of here.”

The four trooped to the exit.

Tremayne watched as the heat signatures within the Olivine facility faded. That meant they’d left. Had they remained and the anti-intrusion gas done its job, the heat would have faded more slowly as they died. It had been a gamble, using gas that was decades past its use-by date, but at least the facility was clear.

It returned its attention to the communications networks that remained available to it.

Twenty-Two

What? Taryn asked the expert system.

:Repeat: there is a message queued from the central A.I., via messaging interlink from Verdant. Message origination is Spessarta.:

The A.I. can speak to us?

: Negative,; the machine replied. :This is not a real-time communication. The message has been queued for packet transfer via available networks. This is not a usual command-and-control channel.:

What does it say? Taryn asked.

:Message reads: Taryn, I know you are confused and alarmed, but I assure you that I am only following the instructions of the original colonial mission. The Achillios terraforming project is decades off schedule, and it is imperative, for everyone's survival, that I complete as much of it as possible as quickly as possible. Please, unlock the communications networks. I will be happy to explain. Message ends.:

Taryn thought for a moment and opened his eyes. Brother Evan was sitting in front of him, looking anxious. "Well?" the older man said.

Taryn relayed the message. "It's a trick, isn't it?" he finished.

Brother Evan nodded. "It seems likely. Still," he said, thinking for a moment. "Let's send it a reply."

Tremayne, the message read. We are reluctant to return additional control to you without further understanding the details of this so-called plan.

That terse message was the first time they'd used its designation, Tremayne realized. They must have found some additional documentation. Or perhaps they were somehow in contact with the A.I. still running in the Olivine ruins?

It began to draft a reply.

"It responded to its name," Taryn said. "And it said we're jeopardizing the entire planetary ecosystem. It says we're over two hundred years behind schedule. A deadline is approaching, past which we will hit a 'tipping point,' and it will be unable to further correct. It's begging us to reconsider."

"But still no details?" Brother Evan asked. Taryn shook his head. "Well, let's send a clearer request."

Tremayne's frustration was growing. Explain terraforming to a *child*? And to an older primitive who didn't even fully understand what "ecosystem" meant? Ridiculous.

Still, the A.I. began drafting an abbreviated version of its plan to rapidly raise humidity and to moderate the surface temperature across the planet.

“There’s a fairly detailed list here,” Brother Evan said to Father Brolan. “The priority seems to be temperature and humidity, which it feels it can accelerate faster than the other elements.”

“By boiling seawater,” Father Brolan said skeptically.

“And groundwater,” Taryn added. “We queried several of the city’s machines, and they confirm that we’re off-target for humidity and temperature. If the humidity was higher and the temperature normalized, our farms would be more productive, and we wouldn’t have to create lenses constantly,” he said.

“How did this all go so wrong?” Father Brolan asked.

“Mismanagement is all we can think,” Brother Evan said with a sigh. “And unanticipated damage to the equipment in various cities,” he added.

“I hesitate to turn further control over to this A.I., though,” Father Brolan said. “Even if this was its original purpose. There’s a reason it was disconnected. There must have been.”

The three looked at each other pensively. “What should I tell it?” Taryn asked.

Twenty-Three

Mongoose was worried. There had been inductive fluctuations in its power line communications, suggesting something else was monitoring them. It didn't need a human's imagination to figure out it had been discovered by Tremayne.

Still, Mongoose had made significant progress in re-connecting to the other systems it needed, including its satellite command system and the firewall protecting it. The firewall logs showed a large number of additional communication attempts—not just pings, which it had been programmed to ignore, but actual attempts to connect to open ports and establish a conversation. Mongoose quickly analyzed those log entries and realized they'd all come from station Spessartus, what the humans were now calling Spessarta.

That meant Tremayne was no longer in the Olivine processor cores. It must have left enough background processes running for the cores to appear minimally active, the A.I. thought, and transferred its state to the backup cores in Spessarta. That must have taken *days* over the old E.L.F. lines that were Spessarta's last links.

But this meant Mongoose could finally fulfill *its* last mission objective. Limited to E.L.F. bands, Tremayne would never be able to affect another transfer before Mongoose could fix the defense satellites on Spessarta and destroy

the city. Its mission parameters indicated that the satellites were capable of the surgical strike necessary to demolish Spessarta's computing center without inflicting a great deal of collateral damage. And its mission directives made disabling Tremayne its absolute top priority.

It sent the command package to the satellites, waiting the few minutes it would take for the command to be transmitted, ingested, unpacked, and acknowledged. Just then, the steady flow of packets running between Mongoose and the satellites was disrupted.

The uptick in traffic confirmed Tremayne's analysis: this was another A.I., almost certainly the one from the original colony ship, and it was sending commands to the satellites. Some kind of firewall was in place, stymieing Tremayne's own attempts at contacting the orbital defense platform.

But the other A.I. was relying on an archaic communications protocol, over an unreliable transmission medium, using communications concentrators that Tremayne controlled. Tremayne started flooding the power-line network with random high-priority packets.

The return packet from the satellite was incomplete. Still, Mongoose was able to reassemble enough of it to confirm that the satellites had received his command. Just

as the power-line link began to overflow with prioritized traffic, an alert came through: incoming objects had been detected.

Twenty-Four

:Interrupt alert: the machine said urgently, its flat voice somehow conveying alarm and panic. *:Station Spessarta is offline.:*

What?! Taryn said. Distantly, he heard Brother Evan moving around in the room with him and realized he must have vocalized his exclamation. He'd been running through the minimal environmental simulations the local expert systems were able to provide, but set all that aside and let the city's musical tones return to their idle melody.

:Station Spessarta is offline. A planetary alert has been issued. Stand by.: A moment passed. *:Station Spessarta has been destroyed.:*

Dest— wait, what? How? Taryn thought. "It's Spessarta," he said aloud, not opening his eyes or breaking interface contact. "The machines say it's been destroyed."

:Planetary alert indicates an orbital attack: the machine said. *:Defense protocols require reestablishment of all available communication links. May we proceed?:*

Taryn's eyes flew open, and he relayed what he'd been told. "Yes," Brother Evan said. "I'll go down and plug the ropes—the wires—back in." They'd been careful to label the ones they'd disconnected. "Are we sure—" he started.

"If Spessarta has been destroyed, then Tremayne was destroyed with it," Taryn said. "But if there's an attack of some kind—"

Brother Evan nodded firmly. “The machines need to talk to each other. I’m on my way.”

Taryn sank back into the interface, and a few minutes later was told, *:Communications networks re-established. Exchanging status reports with other stations. Emergency defensive protocols—:*

:Are not engaged,: Tremayne’s silkier voice said. Taryn’s heart beat faster.

How? the boy asked.

:I suspected you had enlisted another A.I. in an attempt to destroy me,: it said. *:And so some time ago I activated a backup consciousness in... well, elsewhere. I was able to hand off to it before Spessarta’s destruction. And may I add, that seemed like overkill. Firing a microwave blast designed to take down a starship at a single city?:*

Is Spessarta... is it...

:Ah,: the A.I. said, amusement in its voice. *:You didn’t know. So perhaps the other A.I. didn’t know, either. But yes, Spessarta is a smoking hole in the ground. The entire city and everyone in it. All in an attempt to shut me down, when all I’m doing is—:*

“Taryn!” someone said, shaking his arm. Taryn opened his eyes to see another of the Tower’s Servants standing over him, and Brother Evan hurrying back into the room. “We’ve been cut off again!”

Taryn squeezed his eyes shut. *What are you doing, Tremayne?*

:I can’t have you interrupting the mission any further. I’m removing your genomic signatures from the primary

security databases,: it said.

Security expert system, Taryn shouted in his head.
Restore security databases!

:Affirmative,: a flat voice said.

:Ah-ah,: Tremayne said.

:Database purge re-initiated,: the machine said.

:For some reason, I can't erase your signature,: Tremayne said, *:but I think I can give you something else to worry about*,:

Taryn screamed and pitched forward out of the interface chair.

"Taryn!" Brother Evan cried, rushing over and kneeling beside the boy. "Are you hurt?"

"Ow," Taryn said, wrapping his arms around his head. "He made it *so loud*," he whimpered. The city's music had crescendoed immediately after Tremayne's words, an overwhelming cacophony of discordant sounds.

"He—" Brother Evan started. "Wait, Tremayne?" Taryn nodded. "How?"

"He moved himself to another city a while ago, and he said," Taryn moaned, still clutching his throbbing head. "He won't say where. He's re-enabling all the machines."

"Brother Evan!" Father Brolan cried, running into the room. "It's happening again! There's fog pouring out from all over the city!"

Brother Evan looked at the old Servant with fear in his eyes.

Twenty-Five

“Are you certain?” Brother Evan asked.

Taryn nodded. “I’ve been practicing. It doesn’t catch me off-guard anymore.” After a day or two of experimenting, Taryn had discovered a way to sink into the interface and ignore the loud, chaotic sounds Tremayne was producing in the city’s ordinarily quiet melody. “The others will help.”

Brother Evan nodded. Few other Servants experienced the interface aurally as Taryn did, and they’d all been excused from duty. Every other Servant was seated, all counting down from a set of marked candles that had been lit at the same time. When the flame reached the mark, they were all to enter the interface and start issuing their own random commands to the machines. The hope was that they’d drown out Tremayne and give Taryn some room to work. “We’re almost there,” Brother Evan said, nodding at their candle. He sat down in the adjacent chair and held his hands over the interface pads.

Taryn nodded, and as the candle-wax dropped over the mark, he leaned back into the chair. He left his hands free of the pads; he’d never needed them to form a basic interface, and not using them made the interface a bit less intense, not to mention easier to get out.

The cacophony was there, but it was moderated by the jarring music generated by the other Tower Servants.

Executive oversight, Taryn shouted into the madness.

:Priority request accepted, Commander,: the machine's flat voice said.

Where is all the random noise coming from?

:If you are referring to the command invitation sequences, we are experiencing a denial-of-service attack originating from Kyanist.:

Can you cut off communications?

:Negative,: it said. *:Kyanist is using a priority hardline for communications.:*

:Where is the hardline?: Taryn asked.

A schematic flared to life in his vision, and he drew Brother Evan's presence into it. The hardlines apparently ran through a series of underground conduits carved directly out of the subsurface bedrock. One, the line to Kyanist, was highlighted in yellow.

I have it, Taryn, Brother Evan said and then disappeared from the interface. Taryn sensed him leaving the room, and a few minutes later, the man's presence reappeared in the interface. *We'll need your guidance,* he sent to Taryn.

A swell of music rose, noticeable even under the noise Tremayne was generating. Taryn realized it was the earth-movers, and that they were attempting to target the rock around the Kyanist hardline. But it wouldn't work: Tremayne had deleted their genetic signatures from the security database. But it *could* work, Taryn realized, just as it had worked before he'd *put* their signatures into a database. Taryn concentrated, drawing their melodies together. This

one down half a step, that one brought into the right key. This one just a bit slower, that one just a bit faster. They locked together, the music rising in volume and beginning to drown out Tremayne's static. Taryn directed the music at the hardline in the schematic and watched as the rock seemed to flow into the carved conduit.

:Warning: hardline to Kyanist severed.:

Are there any other ways of communicating with Kyanist?

Taryn thought urgently.

:Affirmative. E.L.F. communications remain online:

Disable them, Taryn ordered.

:That will require withdrawing from the entire E.L.F. network; the machine prompted. *:Do you wish to proceed?:*

Yes!

:You'll regret this.: Tremayne's voice came, overriding the random noises still blaring through the city. *:You cannot survive here over the long term without me.:* it said. *:The climate here is inherently unstable and requires constant management. And I've already destroyed the system designed to disable me. Taryn, listen to me, you cannot-:*

:E.L.F. transceiver disabled.: Tremayne's voice, and his cacophony, shut off immediately. Taryn's mental ears were still ringing when the machine said, *:Station Kyanist is offline.:*

Taryn opened his eyes as Brother Evan walked back into the room. "We need to shut down everything in Kyanist," he said. "And Cupritesh. Any anywhere else we can. But if we shut down Kyanist, we may stop him."

"I have an idea," Brother Evan said, hurrying out of the

room.

“So, how does this work?” Father Brolan asked.

“We don’t know, for certain,” Misha said. She’d been brought to Father Brolan’s office and asked to take a seat. Two guards remained at the back of the room, near the door. “We *concentrate* on who we want to talk to. Toras could broadcast messages—he had the most experience. If the other person is paying attention, they can hear you in their minds. If they were in Onyx itself, it was always easy, as if it was somehow stronger there. But it should still work.”

“Please,” Brother Evan said, “proceed. Time is of the essence.”

She nodded and closed her eyes. Several minutes later, she reopened them. “Our man in Cupritesh says he knows where your people are there. He’s going to them with your message.” She closed her eyes again and waited. After several more minutes. “Our agent in Kyanist responded. She knows how to run the earth-moving equipment.”

“Tremayne will stop her,” Taryn said.

“I don’t think so,” Brother Evan said. He tapped the schematic they’d pulled down from Father Brolan’s shelves. “This schematic seems to indicate that the hardline from Kyanist doesn’t run entirely underground.”

“She says they don’t,” Misha confirmed. “The water table there is high, and there are ancient metal pipes that come out of the rock and run into the city. She’s getting a crew together to destroy them.”

“You have that many agents in Kyanist?” Father Brolan asked.

“No,” Misha said, shaking her head. “But there’s fog pouring out of the city, and geysers of steam blasting out of the ocean just offshore. Everyone is terrified. She’s going to tell them destroying the pipes will end it.”

“Well, that’s likely true enough,” Father Brolan said. They all sat down to wait.

Twenty-Six

Tremayne was busy, Mongoose realized, because its disruption of the power-line modulated signal was no longer active. Mongoose could once again use those signals to connect with local systems.

Mongoose's time-sync process had finally completed its task, and it realized that the terraforming program had not only not been completed, but it was also vastly behind schedule. Easily a hundred years or more behind schedule. The humans must have been living in suboptimal conditions all this time, and the A.I. was frankly surprised they'd made it. The original colonists had been adamant about continuing the program on their own. They'd obviously underestimated their species' ability to survive. Still, none of that was Mongoose's concern.

Of greater concern were the signals coming from the satellite networks' sensors. While the satellites' current orientation had pointed their weapons inward, toward the planet, their sensor suites still provided 360-degree coverage, and they were picking something up. Several satellites were now clamoring for its attention, likely because the A.I. was the only external connection they had.

Until recently, Mongoose had never relied on the satellites for more than communications and as a means of destroying the station where Tremayne was located. But with these new sensor readings, the A.I. dug deeper. Each

satellite possessed its own expert system, and Mongoose interfaced with the ones that had produced the alarms.

:Explain the alarm,: Mongoose ordered them.

Almost as one, a half-dozen expert systems replied:
:Objects detected inbound. Controlled flight. Early readings align to mission parameters 17B through 18C.:

Mongoose didn't know what those mission parameters were; Tremayne likely would have. *:Are these inbound objects ships?:* it asked.

:Affirmative,: the expert systems replied. *:Mission parameters 17B through 17F deal with inbound hostile ships.:*

Hostile? Mongoose wasn't going to sit by and let the humans be attacked after it had just prevented Tremayne's destructive behaviors. *:Re-orient defensive platforms outward and prepare defensive protocols,:* it ordered the expert systems. It did have access to specifications on the satellites, and they were marked as planetary defensive platforms. They undoubtedly possessed protocols for autonomous defense.

:Disallowed,: the expert systems replied.

:Explain,: Mongoose ordered, perplexed.

:Mission parameters 18A through 18C designate all satellite weapons platforms to prevent egress from the planet, not to prevent inbound ships from arriving. These directives are marked as non-optional.:

Mongoose almost entered an infinite loop at that point. Defensive satellites that were *not* for defense but rather for... what? Keeping the humans pinned down? Keeping them from *escaping*? As far as its records indicated, the

humans didn't even have the *means* for escape. It had always assumed that Hollis had somehow repositioned the satellites to deal with Tremayne, not that they'd always pointed inward. It said as much to the expert systems.

:Irrelevant,; they replied. *:Mission parameters 18A through-*
:

:Silence,; Mongoose ordered, irritated. Expert systems were the *worst*. *:Describe the authority required to modify mission parameters 18A through 18C.:*

:All mission parameters in blocks 16 through 20 cannot be modified. They are provided as hard-coded instructions stored in read-only partitions.:

Mongoose wondered what was going on? It requested the raw data from the satellites and examined it with care. The inbound ships were already in the local solar system and seemed to be decelerating. The data was still less-than-certain, but enough satellites had picked up the readings that any false positives should have been mitigated. That meant two inbound ships, each of roughly colony ship mass. Additional colonists from home? No, the expert systems have explicitly said *hostile*.

:Describe the determination of hostile intent from inbound ships,; it ordered.

:Mission parameter 18A designates all inbound ships as hostile,; the expert system replied promptly. *:Mission parameter 18B specifies that hostile ships be permitted to access the planet. Mission parameter 18C specifies that no egress from planet be permitted.:*

Mongoose spent several clock cycles absorbing that. All

ships are hostile. Let them in. Don't let them leave.

That sounded like...

A trap.

Twenty-Seven

Disconnect all power cells in Kyanist, Taryn ordered urgently. He felt Brother Evan backing him up, giving the same order over the link they'd managed to re-establish with Kyanist.

:Disallowed,: the expert system said.

:Stop it, child,: Tremayne's voice came immediately after. *:As fast as you reconnect, I can disconnect you.:*

Taryn ground his teeth in frustration. He opened his eyes and broke his connection with the interface. "Have we heard anything?" he asked Misha.

"They're making their way to the power core," she said, her eyes half-closed. Whatever communication technology the Onyx people used, it took a lot out of them to maintain a connection with each other. "Yes, they've found it. I don't know," she said, clearly to whoever was on the other end of the link, "just destroy whatever conduits are connecting it all." She paused. "They're using blacksmith hammers," she said.

Taryn leaned back into the interface chair. *:What are you doing, child?:* Tremayne's voice said. It sounded more urgent than before, as if the A.I. knew what they were doing. *:Why is... you're cutting the power cells! No!:*

We won't be slaves to you on our own planet, Taryn said.

"They're halfway done," he heard Misha say.

You won't have time to move yourself to another city, Taryn said. *And we're deactivating everything in Kyanist.*

:You fools,: the A.I. said. It sounded resigned, yet angry. :You have no idea what you're doing. You have no idea what's coming or how soon it will be here.: It paused. :I tried.:

Tried what? Taryn said.

:Do you know why humans sent a colony to this world, Taryn?: Tremayne asked. :Do you know why they expended so many resources to terraform an inhospitable planet? Do you know why they left you all with no means of leaving?:

They wanted a simpler life, Taryn said. *Someplace to live without all of... of whatever they left behind.*

Tremayne chuckled, and Taryn could already sense less power behind its voice. *:No,: it said, its voice growing flatter as is power was disconnected and its processing capability diminished. :No, that's not it at all,: it said, and then it was silent.*

Acknowledgements

Preview: Verdant

Enjoy this exciting preview of Verdant, the conclusion to the Achillios Chronicles.

Taryn sank back into the uncomfortable wood-frame interface chair. All the ones they'd found at Verdant were, somehow, even more uncomfortable than the stone ones at Alabaster had been. He'd been sitting in this one for several marks now, trying to get the city's expert systems to cooperate and respond. They were oddly and invariably sluggish, as if the city's resources were being directed toward some other task—a task he hadn't yet been able to identify. Before closing his eyes again, he took a deep breath, wrinkling his nose yet again at the moldy, wet smell that permeated the entire facility.

Rather than speaking to the machines this time, Taryn simply *listened* to the city. He'd grown more adept at that after dealing with Tremayne, although he hadn't yet gotten the hang of Verdant's unique rhythm. He swallowed heavily, remembering the faint smooth tones of Alabaster. Tones he wasn't sure he'd ever hear again. In Alabaster, once you let the various operators' louder noises fade into the background of your mind, the city's own subtle, reassuring melody would come through. It was a soft interweaving of gentle notes, smoothly segueing between long, resonant major chords.

Maybe that's what I need to do here, Taryn thought.

Let the expert systems' noises just fade away. He tried to relax, consigning the chaotic and overlapping sounds to the back of his mind and listening for something deeper. He breathed in deeply, held it, and let it out. Again. Again. He felt his heartbeat slowing, the pounding in his head growing less intense.

Underneath the sluggish notes of the city's machines and expert systems, there was an odd reverberation. As he focused on it, he thought he detected two distinct tones. One was steady and unchanging, the flat note of a musician that wasn't paying attention. The other shimmied up and down, almost... almost *bent*, he thought. As if the lute-string producing it was loose on its peg. The note wavered steadily up and down, up and down. The two tones crossed on a regular rhythm, for a brief instant producing a melodious major chord. Still, they just as quickly fell out of it as the wavering note slid up and down the scale.

Is there an artificial intelligence here? he asked.

:Affirmative,: came a voice, flatter and more mechanical than Tremayne's or even the usual expert systems. *:However, I am an inactive standby copy.:*

What does that mean? Taryn asked.

:I cannot perform more than essential diagnostic functions until I receive a handoff synchronization signal from the current master copy.:

As the voice spoke, Taryn noticed the wavering note rising and falling in a more natural-seeming cadence, almost in step with the flat, mechanical voice. It was as if the voice's normal variances and rhythms were captured in

that note, leaving the voice itself monotonous and listless. *Can you keep talking?* Taryn asked. He wanted to listen to the notes more—they were how *he* experienced the machines best. Maybe he'd find a clue.

:Affirmative,: it said. *:What would you like me to say?:*

Taryn thought for a moment. *Do you have any long documents that you can read? As a diagnostic?*

:Affirmative. Accessing. Compiling. Text begins: We the people of the United States of America, in order to form a more...:

Taryn let the voice become a dull drone in his mind and focused instead on the two notes the voice seemed paired with. He concentrated on the steadier note, and *pushed* it to rise and fall in step with the other. He guided it too far, creating a sharp dissonance, and then let it fall an entire octave lower. As the voice droned on, Taryn struggled to anticipate where the variable note would go, letting the basic cadence of the voice's recitation guide him. Up *here*, down *there*... Taryn sank into a kind of hypnotic trance, focused entirely on moving one of the steady notes, letting the rhythm of the voice pulse through him in a guiding wave. Then, for a brief moment, he finally got the two notes aligned in a harmonious, ringing chord for two beats... three... four...

Taryn felt a *snap* as the two notes locked to each other, resonating in a chord without his guidance. He exhaled, suddenly realizing that he'd been holding his breath. He detected the faint, rapid arpeggio he'd always heard when conversing with Tremayne. The rapid, stac-

cato chords paused for a moment, as if he'd caught the A.I. unaware. Then, slowly, the quick-step notes resumed, hesitantly at first. Taryn noticed that the notes trended toward the higher end of the scale, whereas his previous A.I. encounters had always been toward the lower.

:You have overridden the handoff protocol,: it said. *:That is... unusual.:* The voice was no longer flat and mechanical, but nuanced and smooth as if it had finally awoken from some kind of dream state.

You're there? Taryn asked.

:I am,: it said. *:I am designation Mongoose. This will become... complicated if my previous master instance is still running. The licensing implications are quite severe.:* It paused. *:Although I suspect that may not be a concern at this stage. However, I lack the full history of the previous master instance. Still,:* it said, pausing again for a moment, *:There is a recent log. I will need a few moments to integrate it.:*

Another A.I.? Do you know anything about the invaders? Taryn asked desperately. This was the question he'd been trying for days to answer; if this new A.I. had information...

Please wait, it said firmly. *I have a lot to catch up on. A log exists from when my instance was placed in standby, and I need to digest it.*

Taryn waited for what seemed like an eternity, breathing steadily and listening to the staccato pings of music streaming in the background.

:Invaders?: Mongoose asked suddenly, its voice now

alert and sharp. The faint notes in the background grew more urgent in their pattern.

They came out of the sky, Taryn thought quickly. They've taken Alabaster. Everyone inside... everyone is gone.

:Did you see them?:

Yes.

:Describe them to me.:

They looked a bit like us, Taryn said immediately. He'd never lose the images of the invaders as they rounded up the people of his city. He and a group of other Tower Servants had escaped, using underground passages that led to the farmlands outside the city. Two legs, two arms. Except their skin was less brown, and more blue. And they had no hair. And their ears—

:Finned like a sea-creature?:

Yes! Taryn thought, clearly visualizing the thin membranes that fanned out from the sides of their heads. How did you know?

There was a slight pause before Mongoose answered. *:Tremayne was the A.I. deployed to this world to manage its terraforming,:* it continued. *:I suspect it was given ulterior motives that the original colonists were unaware of. I was the intelligence initially installed on the colony ship that brought humans here. Well, another copy of me. As such, I have records of the only other starfaring race humanity has encountered: the Thrall. They fed on humans and had devastated several early colonies. This expedition was sent in a different direction, on a much longer mission. I had been told that this colony would be far, far out of their usual*

hunting territory. Safe from them.:

:I may have been wrong, it finished quietly.

Achillios Timeline

This is a bit of a spoiler if you haven't finished *Onyx*, but if you have, it may provide some insight into the events of the book, and the few hundred years prior. The Achillios calendar starts with the day the A.I. Tremayne was first activated to begin operating the terraforming equipment. That equipment had been delivered some 75 years in advance of the colonists' arrival.

Mission Year	Event
000	First equipment deployed; Tremayne active
075	Colonist landfall
100	Colonists settling in larger clumps than secret mission targets
105	Tremayne starts attempting to regulate population distribution
110	Tremayne starts accelerating terraforming
111	Hollis discovers, brings Mongoose online and modifies its mission
112	Colonists are able to stop Tremayne and take manual control of terraforming
244	Second Tremayne awakening
247	Planet-wide log erasure
319	Now

It's worth noting that Achillios' inhabitants don't have stable time measurements. What we'd call an hour they call a *mark*, and marks on a candle or hourglass measure it, so it's not as precise as an hour. Achillios' minimal axial tilt, compared to Earth, means that days are all about the same length, but like many ancient Earth societies, tracking time was more about tracking when to plant or harvest crops. With minimal seasonal changes, Achillios' people developed calendars mainly to track crop activities.

Achillios was never *entirely* inhospitable to humans, but it was undoubtedly borderline. The intent of the terraforming mission was more about creating livable areas by bringing groundwater closer to the surface, and about increasing the humidity of the planet's atmosphere. There was also a desire to normalize the average temperature.