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ISHTAR RISING BOOK 1

Michael A. Martin & Andy Mangels



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For James, William, and Jenny,

my morning, noon, and evening stars.

—M.A.M.

For all the librarians who kept my interest

in mythology stoked, especially those at

the Kalispell, Montana, library.

—A.M.

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Chapter

1

Thirty-nine Days Ago

This place is the closest I’ve ever come to hell.

Dr. Pascal Saadya gazed through the viewport at the heat-distorted vista that lay before him. The terrain was typical of Venus: Fractured rock surfaces flattened by the ninety-bar atmosphere stretched toward the walls of a steep canyon whose details grew indistinct with distance in the smoglike haze. He knew the lethal heat of the planet couldn't penetrate Hesperus Ground Station's reinforced duranium hull—at least not so long as the shields remained operational. Nevertheless, tiny beads of sweat formed on his upper lip.

Venus was a terraforming challenge unlike any other. She was a deadly foe, and his body refused to be convinced otherwise.

“After spending six years overseeing Project Ishtar,” said Adrienne Paulos as she inspected the instrument panel beside Saadya's, “it's hard to believe you've never been all the way down to the surface before.”

Still looking out through the viewport, Saadya imagined he could feel the atmosphere of Aphrodite Terra pressing down on the ground station's structure, like the hand of some merciless god inexorably closing into a fist.

He forced the image from his mind.

“The big-picture theoretical work requires a global perspective, Adrienne,” Saadya said, “and that's rather difficult to achieve down here beneath the clouds. Like trying to forecast Earth's weather from the bottom of the ocean. How are the force-field generators holding up?”

“Everything in the ground network is still looking nominal,” Paulos said, then turned toward the pair of Bynars who ran the computer console to her immediate left. “How do the atmospheric numbers and the probe network data look?”

1011 and 1110—known to the predominantly human crew members of Project Ishtar as Ten-Eleven and Eleven-Ten—spoke in their customary smooth, collaborative manner, each finishing the other's utterances.

“According to the probe data—”

“—and our last round of chaotic atmospheric motion simulations—”

“—the force-field generator network should succeed in lifting the bulk of the atmosphere from this valley—”

“—all the way to the superrotational region of the cloudtops—”

“—and safely disperse it there.”

The first step to setting this place to rights is to blow all the excess atmosphere off this Gehenna of a world. Saadya felt awed by the powers now at his command. Using only directed force fields, they were preparing to displace a mass comparable to that of the Indian Ocean, moving it about as though it were furniture.

Saadya smiled. “Let's do it, then.”

Paulos, the Bynars, and the rest of the crew—both in the ground station and up in the orbital facility—continued their work with resolve and professionalism. Within eight minutes, the force fields had pushed an immense swath of superheated, compressed carbon dioxide gas to an altitude of about sixty-nine-point-two kilometers above the canyon floor, where it came into contact with the fast-moving layers of the atmosphere, a torrent of noxious Venusian air that circled the entire slow-turning globe in a mere four Earth days.

The theory had been worked out superlatively. The numbers were right, as confirmed by the network of orbital satellites and the millions of tiny, interconnected probes that floated through the atmosphere. The force-field generators, the bulk of whose hardware was distributed among several hundred staffed and automated ground stations, were working to perfection.

Perfection. He smiled.

Then Saadya was momentarily struck speechless when the force-field generator network's computers became confused by the chaotic motions of the upper atmosphere and began feeding an ocean of ionized carbon dioxide—air displaced by the mass that Hesperus Station's energy fields had moved—straight back at the station dome with nearly the force of an asteroid impact.

“Abort!” shouted Paulos. The Bynar duo struggled to bring the forces the team had unleashed back under control, with no immediately apparent success.

From somewhere behind Saadya's instrument panel, one of the dome's support trusses groaned ominously.

Paulos evidently heard it, too. She cursed, then began speaking rapidly into a comm panel. “Ishtar Station, initiate backup force fields across the entire ground network.”

Damn! Saadya thought. This cock-up will take us weeks to set right.

A moment later, the local force field collapsed and intruding atmosphere rang Hesperus as though it were a colossal church bell. The impact rocked the station, throwing Saadya to his knees. The Bynars fell like dominoes, though Paulos somehow managed to remain at her console.

The atmosphere must have breached the outer hull, Saadya thought, swallowing panic.

Braces and beams shrieked in protest, responding to the irresistible heat and pressure bearing down on them from just outside the inner hull. The exterior viewport shattered as though the angry god's fist had abruptly closed. Saadya's ears popped from the sudden change in pressure. Something hot seared his cheek.

Clinging to her console, Paulos shouted to be heard over the surrounding din and chaos. “Beam everyone on Hesperus the hell outnow!”

Saadya's concerns about work setbacks now struck him as trivial. This planet wants to kill us all, he thought. His flesh began to crawl as though inundated by soldier ants, and he wondered if this is what flash incineration felt like.

Then a faint, semimusical tone reverberated in his ears, faded briefly, then returned to build into a labored crescendo.

To Saadya, the overstrained transporter's keening wail had never sounded so lovely.

* * *

Today

"Computer, run program Saadya Ishtar Endgame One."

From within the small holodeck, Dr. Pascal Saadya carefully opened an interior hatch and stepped out onto the rugged northern plains of Ishtar Terra. Black, gravel-strewn soil, so far able to support only intermittent patches of scrub vegetation, crunched beneath his boots.

As he always did whenever he ran this scenario, the terraformer reflected anxiously on the six years of his life he had already devoted to Project Ishtar, immersed in its monstrously complex theoretical and preparatory work.

I've survived the wait for six years. Surely I can wait a little longer to finish turning this world into the garden it is destined to become. Once the team finishes replacing the equipment that Aphrodite Terra devoured.

The air, already pleasantly warm, caressed Saadya's face, running its insubstantial fingers through his close-cropped, black-and-gray hair. The scent of wild strawberries wafted on the gentle breeze. He breathed the sweetness deeply into his lungs.

Saadya looked into the brightening sky and smiled. The moon—or rather, iron-gray Mercury, Venus's new surrogate natural satellite—presented a wide, gibbous disk as she descended slowly near the eastern horizon. Right where I want her to be, he thought. Just where she will need to be if I am ever to take Ishtar all the way to completion.

Turning toward the west, Saadya watched as the morning sun climbed over the steeply sloping prominence of snow-capped Maxwell Montes. The golden sun looked bloated, noticeably larger than it appeared when seen from the small village of his birth near Madras, India.

That was, of course, because Venus lay over forty million kilometers closer to the Sun than did Earth.

The grin on Saadya's dusky face intensified as he contemplated the enormity—and the sheer rightness—of this project. He gazed into an azure sky, now forever free of its crushing blanket of carbon dioxide. The clouds gathering on the southern horizon promised gentle, life-giving rains. This, he reflected, was how Venus should have been. How she will be, by the time Project Ishtar is finished.

Saadya wasn't the least bit startled by the sonorous voice that suddenly began speaking directly behind him. "I certainly must give you credit for ambition, Dr. Saadya."

He turned toward the sound, allowing the rising sun to warm his neck and shoulders. Before him stood three hologrammatic representations of men whose faces were especially familiar to scientists in Saadya's line of work.

"Good morning, Dr. Seyetik," Saadya said, bowing slightly toward the distinguished, gray-bearded man who had just spoken. "Please call me Pascal." This Saadya added despite the fact that the late flesh-and-blood version of Dr. Gideon Seyetik had always addressed him with the utmost formality, a

forced politeness that Saadya attributed as much to contempt as to envy. Saadya knew well that the real Seyetik's ego had been colossal, restless, and fragile in the extreme. During his long life, Seyetik had produced a seemingly endless stream of papers, books, paintings—and refurbished worlds. Blue Horizon, New Halana, and the scores of other planets Seyetik had terraformed would stand for ages as monuments to that ego—masterworks painted on planetary-scale canvases, displayed in galleries of cosmic proportion.

True, Saadya had not tamed quite so many harsh worlds as had Seyetik. But then, even the great Seyetik had never set his sights on that mother of all terraforming conundrums: Venus. Which of us, then, Saadya wondered, has the greater ego?

One of the other two men who stood beside Seyetik spoke up. "Ambition is a fine thing, Gideon," said Dr. Kurt Mandl, the second member of the trio, his Federation Standard colored with a thick Teutonic accent. The rising sun gleamed against Mandl's bald pate. "For instance, reigniting the fires of Epsilon 119 must have required ambition in no small measure."

Seyetik cast a wry look at Mandl. "There's ambition, Doctor, and then there are pipe dreams. Starfleet has been trying to terraform Venus for how long now? Twenty-five years, on and off? Trying to make this hellbeast of a planet habitable would put even my talents to the test."

"You make a fine argument for a new approach to the problem," Mandl replied, offering Saadya a fatherly smile. "Perhaps the problem with some of the previous Venusian terraforming notions was that they weren't sufficiently ambitious." To the third man, who had not yet spoken, Mandl added, "No offense intended, Carl."

The man Mandl addressed appeared to have scarcely heard his colleague's comments, so enthralled was he by his surroundings. He breathed deeply of the air. Then, speaking to no one in particular, he said, "This really is Venus. As it will appear after the terraforming process is finished."

Saadya enjoyed the awed look on the dark-haired man's face. This is how Surak might have looked had he lived long enough to witness peace finally breaking out on Vulcan. Or Einstein watching Cochrane accelerate the Phoenix past warp one.

"That's correct, Dr. Sagan," Saadya said.

The twentieth-century planetologist squinted at the horizon, examining the brightening sky the way a jeweler might inspect an intricately cut gemstone. "I can't see any trace of the parasol you must have used to cool the atmosphere down. And you appear to have greatly increased the Venusian rotation rate. I can see that you're pretty far along in the process. It must have taken millennia to—"

"You'd do best to think of our surroundings as a mere thought experiment rather than a true picture of the final result, Dr. Sagan," Seyetik said. "Our young host hasn't pulled off his prospective miracle just yet."

Carl Sagan trained his curious gaze upon Saadya. "So what we're experiencing is actually some kind of...simulation?"

Saadya felt his face flush with embarrassment, but he recovered swiftly. "Yes, sir. But it is an extremely accurate one. My staff and I will make it a reality very soon. The key to that reality is dealing with its complexity."

“Ah,” Sagan said. “Number crunching.”

Saadya nodded, trying to imagine the primitive state of computing during Sagan’s heyday. “To that end, the Bynars on my research team have increased our computational resources by orders of magnitude.”

Sagan looked puzzled. “Bynars?”

“Bynars or no Bynars,” Seyetik said to Saadya, apparently relishing the mellifluous sound of his own voice, “there are some extremely delicate calculations at play here. Needless to say, the state of the terraformer’s art has evolved far beyond the use of giant beach umbrellas and atmospheric bombardments of blue-green algae.” Seyetik’s eyes met Sagan’s as he made this last comment.

Dr. Sagan reddened, but was far too gentlemanly to rise to Seyetik’s bait. Saadya knew well that Sagan had been among the first twentieth-century planetary scientists to seriously advance the notion that Sol’s second planet might be made habitable. Back then, however, the mechanisms available for inducing such large-scale climate change were necessarily both primitive and prohibitively expensive. Sagan’s suggestions that Venus’s superhot atmosphere might be cooled down using giant spaceborne parasols and through the introduction of high-altitude microbes had eventually proved far too slow and difficult to work in actual practice.

Looking abashed by Seyetik’s boorishness, Mandl broke the ensuing silence. “Whatever we have accomplished in the field of terraforming during this century, Dr. Sagan, we owe in large part to you, sir. We stand humbly upon the shoulders of giants.”

Dr. Sagan smiled back at the older man, seemingly mollified. But he also appeared to be working very hard to ignore Seyetik.

Seyetik looked oblivious to this as he turned back toward Saadya. “Dr. Sagan might be interested in hearing how close your terraforming project came to utter destruction only—How long ago was it? A few weeks?”

Thirty-nine days, Saadya thought, gritting his teeth. He was beginning to regret having programmed the station’s holographic Seyetik simulacrum to be so faithful to the original.

Saadya noticed a moment later that both Sagan and Mandl were looking expectantly in his direction. “I will admit that Project Ishtar has suffered its share of setbacks recently,” he said at length. “What worthwhile scientific enterprise hasn’t?”

Sagan nodded, then resumed scanning the horizon and the distant, snow-bedecked steepness of Mount Maxwell. “The amount of energy you’ll need just to cool down the atmosphere is incredible. The number of megajoules required must be—”

“Billions and billions,” Seyetik said with a smirk.

Sagan sighed. “I never, ever said that. Why does everyone feel obliged to make that same pathetic joke every time they talk to me?”

Saadya felt obliged to steer the conversation back toward matters scientific and technical. “Actually, I’m taking the opposite approach, Dr. Sagan. I’ve chosen to thin the Venusian atmosphere by heating it up, rather than by cooling it down.”

“So you must be planning to thin the atmosphere by blowing most of it off into space,” Sagan said, looking intrigued. “But how?”

“Shaped force fields,” Saadya said.

Sagan seemed disappointed. “Oh. Magic, then.”

“Clarke’s Law,” said Mandl, shaking his head but maintaining a good-natured smile. “Any sufficiently advanced technology is indistinguishable from magic.”

“But only if that technology actually works,” Seyetik said. “Terraforming Sol Two is no mere feat of legerdemain. It is an act of creation worthy of the gods themselves.”

No pressure, Saadya thought, suppressing a nervous laugh.

Seyetik wasn’t finished. To Dr. Mandl, he said, “But at least there are no hidden indigenous life-forms here on Venus that might compromise the project. Such things put quite a crimp into your terraforming efforts on Velara III, did they not?”

Dr. Sagan looked horrified. A storm cloud crossed Mandl’s face. “There was no way to foresee that,” Mandl said before lapsing into a moody silence not unlike Sagan’s. Saadya had read the papers Dr. Mandl had written nearly a dozen years ago, after the partially terraformed planet Velara III had turned out to be the home of a subterranean species of sentient crystalline life.

Saadya knew all too well that such discoveries were the stuff of a terraformer’s worst nightmares.

Seyetik raised a hand in a gesture of truce. “Forgive me, Dr. Mandl. I know that the scanning technology your team had available then did not permit the detection of the native fauna until it was nearly too late.”

Mandl appeared content to forgive Seyetik’s behavior. “Such are the limits of technology.”

“Technology can be a finicky thing, indeed,” Seyetik said, nodding. “But failures of vision on the part of the powers that be have scuttled more good science than all of technology’s glitches and gremlins combined.”

“The Federation Council,” Saadya said, realizing too late that he had been thinking aloud.

“Exactly,” Seyetik said. He seemed to be warming up to full lecture-hall mode. “Governance is about resource allocation every bit as much as terraforming is. Unfortunately, the Federation has other resource priorities.”

Saadya swallowed hard. “The Council will resume giving the project its full support,” he said, “once the war damage on Betazed is put to rights.”

“Let us all hope so,” Mandl said, nodding sympathetically.

Seyetik mirrored Mandl’s expression, but somehow made it look mocking. “Indeed. Let’s hope they don’t make you wait in line behind all the other places that need rebuilding after the war. Don’t forget the beating that Bazar took. Or Durala V. Or Sybaron. Or Ajilon Prime. Hell, they’re even sending aid to Cardassia. I hope with all that going on the Council can still afford to throw you a few scraps.”

Saadya grinned. “As long as I have the assistance of the Bynars, you’d be surprised at how little else I need.”

As if cued, two high-pitched voices issued from Saadya’s wristcom, disrupting his train of thought. “Dr. Saadya?” said 1011 and 1110, uttering their words in alternation.

“Speak of the devil,” said Seyetik, a look of mock surprise blossoming across his face.

Saadya raised his wristcom. “Saadya here. Go ahead.”

“We are receiving an incoming communication.”

“It is from the Central Processor Pair—”

“—on Bynaus. They wish to confer—”

“—with you—”

“—immediately.”

The uncharacteristically jangled cadence in the Bynars’ tandem speech told Saadya at once that the news couldn’t be good. “I’m on my way,” he said, already walking toward the holodeck door.

“I’ll keep my fingers crossed for you, Dr. Saadya,” Seyetik called out as the hatch opened.

“Computer, delete—” Saadya paused on the threshold. He had been about to instruct the holodeck to delete the insufferably egomaniacal scientist. Then he smiled grimly as he realized that that description might just as easily be applied to Saadya himself. He was, after all, trying to accomplish the impossible.

“Computer, end program,” he said finally. Mandl, Sagan, Seyetik, and the transmogrified Venus all vanished like morning mist as Saadya strode quickly into the corridor.

* * *

Saadya trotted onto the orbiting station’s observation deck, which faced the planet, whose bilious yellow cloudtops seethed some three hundred and fifty kilometers below. Ishtar Station currently straddled the slow-moving day-night terminator of Venus.

Despite his hurry, Saadya spared a moment to glance at the clouds that concealed a surface that couldn’t have differed more from his terraformed-Venus holodeck scenario. Below that dense, poisonous atmosphere lay a surface whose temperature would quickly melt lead—and which could just as quickly destroy the string of tiny ground stations that lay along the equator, as well as their human crews, should their force-field generators suffer catastrophic failures of the kind that had burned up Ground Station Hesperus. The tiny planet Mercury was not in orbit around Venus, as had been the case in the holodeck scenario; the battered, iron-rich world still cleaved to the same sunward track it had followed since time immemorial. Here, in the unmodified reality of the inner solar system, the barren little planet would soon appear as an evening star, a bright dot visible only briefly between the setting sun’s waning glare and Venus’s gradually darkening western limb.

I know we can make Venus a reality, Saadya thought. All we need is more time. And perhaps a small miracle or two.

Adrienne Paulos cleared her throat, interrupting Saadya's reverie. One of Saadya's senior research assistants, the young Denevan had apparently materialized out of nowhere, as had the holodeck planetologists. He couldn't help wondering if this was a subtle hint that she, too, was destined for greatness.

When Saadya turned toward Paulos he immediately saw the stricken look on her face. "I see Bynaus didn't waste any time giving you the bad news," he said as they began walking together toward his small private office.

Paulos shook her head, and a shock of blond hair popped up from where she had pinned it back. "They won't talk to anybody but you, Pas. But you don't have to be a Betazoid to guess what they have to say. They're pretty grumpy."

"Well, you know how Bynars hate to be kept waiting when they have data they want to upload." Saadya smiled weakly. Though she returned the gesture, it was clear to him that his studied nonchalance wasn't reassuring her in the least.

1011 and 1110 stood sheepishly beside the office door, their pale, hairless heads bearing identical worried frowns.

"The Central Processor Pair remains—"

"—waiting on the open channel. We surmised—"

"—that you might wish—"

"—to speak to them—"

"—in the privacy—"

"—of your personal workspace."

Saadya thanked the diminutive computer experts and motioned for Paulos to accompany him inside the small, cluttered room. The office was dominated by a small viewport that faced Venus, several shelves sagging beneath the weight of dozens of ancient-looking hardbound books, and a battered desk topped with a veneer of half-billion-year-old Venusian igneous rock.

Two aged Bynars glowered at Saadya from the computer terminal sitting at the desk's center. "Your latest report contained little of use to us," said the Bynars, who spoke in an impatient tandem.

Saadya sat before the monitor and silently counted to five before responding. "Terraforming is often not subject to exact timetables, Honored Processors. There are always unknowns that require time to iron out."

The elderly Bynars nodded, though their expressions did not soften.

"That is as may be. However, time—"

"—has been at a premium for us—"

“—ever since our primary star—”

“—went nova.”

Saadya was well acquainted with the 2364 Beta Magellan supernova. It had threatened not only the planetary computer network upon which the entire Bynar civilization depended, but had also nearly extinguished all life in their solar system. During the latter phases of the Dominion War—when Project Ishtar hadn't been able to count on the unwavering support of either Starfleet or an understandably preoccupied Federation Council—Saadya had turned to the planetary government of Bynaas for help. Still recovering from the decade-old Beta Magellan disaster, the Bynars had been happy to lend their computational personnel to Saadya's Venusian terraforming effort—so long as the data it yielded proved useful in their own long-term ecological recovery efforts.

“Please be patient,” Saadya said. “I've only been working with the Venusian environment for six years, after all. That's hardly a drop in the ocean, so to speak, of the planet's four-billion-year history. Nevertheless, we are very close to being able to implement an accelerated terraforming program. It will be only a matter of a few weeks before we can begin making permanent physical changes to the planet.”

The Bynars appeared unmoved by Saadya's entreaty.

“You have promised imminent success before—”

“—but it seems that you are also—”

“—on the verge of disaster. Need we remind you—”

“—that the Bynar pair we lent you—”

“—could easily have perished when the shielding—”

“—collapsed in your surface facility?”

Saadya ground his teeth together involuntarily. He and Paulos had both nearly died that day as well. “That's why I had Ishtar Station maintain a constant transporter lock on all of us. 1011 and 1110 were in no more danger than I was myself. Ask them yourself.”

The Central Processor Pair sniffed as one.

“We do not wish to continue—”

“—placing them at risk—”

“—indefinitely. Not in the furtherance—”

“—of a project that appears rapidly—”

“—to be approaching a rather hazardous—”

“—dead end.”

“What are you saying?” Saadya said, a foul taste appearing in his mouth.

The Pair's black eyes flashed.

"We will recall our Calculation Team—"

"—in another two of your weeks. Unless—"

"—you can give us a tangible reason—"

"—to refrain from doing so."

A black hole yawned open in the pit of Saadya's stomach. "You know I can't guarantee—"

"We have never asked you—"

"—for guarantees, Dr. Saadya. However—"

"—our resources are limited—"

"—and our world's ecological problems—"

"—remain vast. If—"

"—you are indeed as close—"

"—to a breakthrough as you say, then—"

"—two more weeks should afford you—"

"—ample time."

The screen abruptly went blank.

The office remained silent until Paulos cleared her throat and said, "That certainly went well. There's only one problem."

Saadya nodded. "A two-week deadline will put us on a completely impossible schedule. We'd never have enough time to finish the chaotic Hadley-cell atmospheric modeling, to say nothing of the lithospheric response simulations."

"Not if we want to maintain a margin of safety when we activate the entire planetary force-field grid for real," Paulos said, leaning against the bookcase. She clearly hadn't forgotten the near-catastrophe that had resulted the last time their numbers had failed to jibe closely enough with the unpredictable vicissitudes of the real world.

"What if we were to ask the Federation Council for some additional short-term help?" she asked.

Saadya shook his head wearily. "It would probably take at least two weeks just to get a formal request in front of the Science and Technology Committee. No, Adrienne. I'm afraid we're on our own." And that could mean that six years of work is about to get tossed right out the airlock.

He realized glumly that none of Seyetik's projects had ever come to such an ignominious end.

"Then what we really need," she said, "is more Bynars to help Ten-Eleven and Eleven-Ten with the number-crunching."

"That's not funny." Saadya said, scowling. How could she make jokes at a time like this?

"No, I'm serious, Pas. So the authorities on Bynar are being stingy. Why can't we look elsewhere for what we need?"

Saadya sighed in resignation. It was obvious that she was determined to draw this out. "Look where?"

"The last time I checked," Paulos said, "there was a Bynar pair working as civilian observers aboard a Starfleet Corps of Engineers ship. One of those retro-looking Saber -class jobs."

Despite having served in Starfleet decades ago, Saadya hadn't kept up with the starship configurations of the past several years. These days, he wasn't sure he could distinguish a Saber from a Sovereign.

But he cautiously allowed hope to rise within him anyway. "What ship?"

"Theda Vinci, I think."

Theda Vinci. The name triggered a sudden avalanche of memories. What spectacular luck.

"Would you do me a favor, Adrienne?" Saadya asked.

"Shoot."

Saadya grinned. "Find out if David Gold is still in command of that ship."

Chapter

2

Captain David Gold headed straight to his ready room the moment Pascal Saadya had finished making his somewhat oblique request for assistance.

"So he didn't say what help, precisely, he was hopin' you could provide?" said Captain Montgomery Scott, the Starfleet Corps of Engineers' official liaison, and Gold's immediate superior, from the small computer terminal on the ready room's desk.

"Not exactly."

Scott offered a good-natured scowl. "Typical. But you also say he's one of your oldest friends."

"That's right."

Gold thought he saw a wistful look pass across Scott's face. "Old friendships are something I can appreciate," Scott said. "But I have to be honest with you, lad—I'm not thrilled about Saadya's plans to

play billiards with the inner solar system.”

“Haven’t you played a bit of planetary pool yourself, Scotty?” Gold said. “I seem to remember reading about a tide-locked planet that you once helped spin up to something resembling an Earth-normal day-night cycle.”

Scott sighed. “Aye, I have to admit to helpin’ the Dumada put the planet Rimillia to rights. But that was a very long time ago—very nearly came to a bad end for millions of people.”

“You’re not saying you regret it, are you, Scotty?” Gold said, grinning.

“Not at all. But that mission did give me a healthy respect for the forces of nature.” Scott paused contemplatively for a moment before continuing. “I suppose I must seem hypocritical.”

Very deliberately, Gold adopted a demeanor of wide-eyed innocence. “Perish forbid I should even suggest such a thing.”

Scott appeared to have come to a decision. “An old commander of mine once warned me that I ought to be more tolerant of fresh ideas. All right, then. Far be it from me to stand in the way o’ progress. Besides, maybe havin’ an S.C.E. contingent watchin’ over the critical phases of his experiment will keep Saadya’s haggis out of the fire. Just give me a detailed report once all the shoutin’s over.”

“Thank you, sir,” Gold said, smiling. After Scott had signed off, Gold tapped his combadge. “Wong, this is the captain.”

“Aye, sir,” came the conn officer’s response.

“There’s been a small change in plans. Best speed back to the Sol System.” Theda Vinci had only just departed Earth a few weeks earlier. “And tell everyone to bring their suntan lotion. We’re in for some warm weather.”

“Sir?”

“We’re off to Venus. Gold out.”

* * *

“Dropping into a standard equatorial orbit,” said Lieutenant Songmin Wong, still working the conn station.

“Very good, Wong,” said Gold, sitting in the command chair at the center of the U.S.S. da Vinci’s busy bridge. He stroked his chin with his biosynthetic left hand as he stared contemplatively at the amber, cloud-shrouded world that already half-filled the main viewer.

He couldn’t help but recall that it had been in a similarly hellish planetary atmosphere that he had lost his hand not very long ago. But Galvan VI had cost him a good deal more than that—half his crew had died there, and Theda Vinci herself had very nearly been pulled down to a fiery demise in the superdense core of that gas-giant world.

So many good people lost, he thought, his mind conjuring faces out of the broad swirls of the cloudtops. He would never forget McAllan, the tactical officer who had always insisted on such spit-and-polish

formality on the bridge—and who had died while pushing Gold away from several collapsing bridge ceiling support beams. Or Barnak, who had been immolated along with most of his engine-room crew while saving the ship from an imminent warp-core breach.

And Duffy, whose sacrifice had saved not only theda Vinci but Galvan VI's resident global civilization as well, a race of energy beings who called themselves the Ovanim.

If any force in the universe could have restored those lives in exchange for his own, he'd have struck the bargain in a heartbeat.

The turbolift doors hissed open directly behind the captain, interrupting his grim meditation. He turned and watched his first officer, Commander Sonya Gomez, enter the bridge. Trailing behind her was Lieutenant Commander Domenica Corsi, chief of security, and Lieutenant Commander Tev, the ship's new second officer.

Gold glanced over his shoulder and observed Gomez and Corsi watching the screen, apparently enthralled by the spectacular image displayed there. Tev merely glared down over his flat Tellarite nose at the viewer, his blunt, hirsute face a study in disdain.

If the tableau on the viewer provoked any Galvan VI-related unease in Gomez or Corsi, neither officer revealed it. Instead, both women seemed momentarily awestruck, like children seeing the Grand Canyon or the Valles Marineris for the first time.

"Venus," Gomez said. "I've never taken the time to come here before."

Gold smiled, thinking of all the denizens of New York City who had never managed to fit a visit to the Statue of Liberty into their hectic schedules. His New York-bred wife, Rabbi Rachel Gilman, had yet to make the brief trip downtown to the reconstructed monument.

"I haven't been here since I took dense-atmosphere flight training back at the Academy," Corsi said, her gaze captivated by the lethal, deceptively placid-looking cloudtops. "It's funny how little the planet has changed since then. Considering how long terraforming efforts have been going on here, I mean."

"That's why we're here," Gomez said. "To help the Ishtar team fix whatever seems to be holding the project back."

"How long has the project been under way?" Corsi said.

"It's been six years and change since Pascal Saadya took the reins," Gold said. "And Starfleet had been studying the whole Venus-terraforming concept for a couple of decades before that."

Gomez whistled, evidently surprised. "Six years. That seems like sort of a long time for one of Dr. Saadya's terraforming jobs."

Gold nodded. "Dr. Saadya told me that preparing and testing mathematical climate models has taken up the lion's share of his time up until now. But he claims that the numbers phase of the work is finally coming to an end. So the time has come, at long last, to apply a bit of elbow grease and start turning the nuts and bolts."

Corsi made a face. "I wonder how he was able to sit on his hands for such a long time and do nothing but...calculate."

Gold shook his head and allowed an impish grin to spread across his face. "Maybe six years sounds like a long stretch to you and me, but Saadya can be a patient cuss when he needs to be."

But it's never taken him more than four years, tops, to renovate an entire planet from soup to nuts, Gold thought. Strange.

"I've read some of Dr. Saadya's papers," Gomez said, sounding impressed. "He's already terraformed a couple dozen pretty inhospitable planets. He'll probably go down in history right alongside some of planetology's real legends, like Gideon Seyetik and Carl Sagan."

Gold maintained his grin. "That's what Pas always believed. I can already tell that the two of you are going to get along great."

Gomez's jaw dropped. "You know him personally?"

"Before he went full-time into the business of recreating the heavens and the Earth, he was a junior science officer aboard the *Gettysburg*. We struck up a friendship there and we've tried to keep up with each other's careers ever since. But before yesterday I hadn't heard from him in years."

He only seems to get in touch when he needs a favor from Starfleet. Or has an extremely farshinkener sore of a problem that he needs somebody else to fix in a hurry.

"Saadya's project is obviously suffering from some fundamental efficiency problems," said Tev, shaking his head dismissively at the image displayed on the screen. Theda Vinci was quickly approaching the planet's night side.

"I'm no planetologist," Corsi said, apparently in reluctant agreement, "but maybe Dr. Saadya has bitten off more than he can chew with this project."

Gold shrugged. "We'll find out soon enough." He couldn't help but wonder whether Corsi was right. Had his old friend finally taken on a world that even his great talents couldn't tame? Pas certainly hasn't lost any of his chutzpah. Nobody can take that away from him.

"Faugh," said Tev. "Some truly egregious errors have been committed here, despite Saadya's alleged 'patience.' Otherwise the terraformers wouldn't have destroyed one of their own key ground stations."

Turning to face the Tellarite, Gold said, "I'm sure Dr. Saadya will be delighted to accept your keen engineering insights, Tev. And that Project Ishtar's problems, whatever they may be, will soon be in the most capable of hands."

Tev nodded to Gold, clearly accepting the compliment with what passed for good grace among Tellarites. Though Gold knew his praise sounded superficially sarcastic, his words were, in fact, utterly sincere. Despite Tev's lengthy inventory of personality deficits—vanity, arrogance, and overweening conceit predominating among them—none of Tev's crewmates could dispute his technical brilliance.

"Ishtar," Gomez repeated, still staring at the hot-house planet. Theda Vinci continued moving languidly toward the terminator that demarcated one end of the long Venusian night. "I know that name's from some old myth or other."

"Mesopotamian," Corsi said. "Assyrian and Babylonian, mostly. She was a fertility goddess. They used

to call this planet Ishtar all over the ancient Middle East.”

Gold’s eyebrows lifted in surprise. “Have you started working Abramowitz’s side of the street, Corsi?”

The security chief shrugged. “I guess I got interested in ancient cultures back at the Academy around the same time I was memorizing Sun-Tzu’s Art of War.” Gold wondered briefly if, in turn, Abramowitz, the ship’s cultural specialist, had secretly cultivated some unarmed combat expertise that she was keeping to herself. Go figure, he thought.

“This is simply an N-class world with a toxic, reducing atmosphere,” Tev said. “Perhaps this so-called Project Ishtar is less than efficient because the humans running it have chosen to waste so much of their time and energy on romantic superstitions and unproductive tale-telling.”

Gomez scowled. “Romantic or not, most of us humans find ‘tale-telling’ a rewarding pastime. And a lot of fun to boot.”

“I am not here to have ‘fun,’” sniffed Tev. “I am here to repair what others have broken.”

“I’m sure we’ll all have a positively delightful time,” Corsi said, deadpan.

Standing behind the tactical console located at the rear of the bridge, Lieutenant Anthony Shabalala interrupted Tev’s response. “Ishtar Station is coming into view, Captain.”

On the screen, the exterior running lights of the half-kilometer-long Ishtar Station had become visible, peeking out from beyond the dark side of the planet’s terminator.

“Hail them, Shabalala,” Gold said, grateful to get back to business.

“Aye, sir,” the tactical officer said. “Hailing frequency open.”

A moment later, the noxious cloudscape vanished from the screen, replaced by the face of a dark-skinned man who appeared to be in his early sixties. When Pascal Saadya saw Gold he smiled, displaying his even, brilliantly white teeth.

“David! It’s good to see you again, my old friend.”

Rising from his command chair, Gold returned Saadya’s smile. “Likewise, Pas. What can we do for you? I know it has something to do with assistance for your terraforming project, but our last conversation was a bit, ah, vague.” As, Gold thought, was the initial message Saadya had sent him the previous day.

Saadya’s smile faltered for a moment, but quickly recovered much of its wattage. “I’d prefer we discuss that in private, if you don’t mind. Could we meet aboard the station?”

Something’s got him rattled, Gold thought.

Aloud, he said, “My first officer and I will beam right over.”

* * *

It was long past midnight as the schedule was reckoned aboard Ishtar Station, and most of the staff had

already retired for the evening. But Pascal Saadya wasn't one who tended to waste much of his precious time sleeping. He regarded the dearth of other people in the vicinity of his office principally as an absence of distraction.

Saadya was beside himself with both joy and relief as he watched Gold and his first officer materialize on the transporter pad near his office. The joy was sincere and heartfelt, for it had been too many years since he'd seen his old friend David in person. The relief stemmed from what Saadya had heard about the crack team of engineers David commanded.

Particularly his Bynar pair.

"I have to tell you, Pas," David Gold said after the initial greetings and pleasantries were exchanged, "my boss wasn't keen on diverting the *Vinci* here."

Leaning against the side of his cheerfully disordered desk, Saadya steepled his fingers. "Ah. Montgomery Scott. A true traditionalist. Tell me, what specifically bothers him about the project?"

Saadya watched as Gold's eyes strayed to the cloudtops that were visible through the office viewport. "Captain Scott seems to have more than one objection."

Saadya did his best not to scowl. Deliver me from the Starfleet brass and their retrograde thinking. And they say Venuspins backward.

"For instance?" Saadya asked carefully.

Gold appeared to consider his words for a moment before speaking. "For starters, he's not thrilled with your plan to tow Mercury into a new orbit around Venus."

Saadya chuckled. "I see. No doubt because I wish to tamper with the familiar early-morning skies of his youth. Unfortunately, it's a step I will have to take eventually if Venus is ever to take her rightful place as Earth's twin world."

Gold offered Saadya a blank look, then gazed toward Gomez. The *Vinci*'s first officer appeared to understand.

"You need to create tidal effects," she said. "You're planning to jump-start the Venusian core by generating a magnetic field to keep out hard radiation."

Saadya felt a broad, involuntary smile cross his face. "Mercury will also stabilize the Venusian rotational axis over multimillion-year timescales."

Gold's eyebrows rose as the true enormity of Project Ishtar appeared to sink in. "You've taken on quite a job, Pas," he said at length. "No wonder it's taken six years just to get through the number-crunching phase."

"I do not believe in taking half-measures, David. Of course, one mustn't get ahead of oneself. These steps won't be taken until after the atmospheric reconditioning is completed."

"And there, I'm guessing, lies the problem," Gold said, nodding. "And the reason you've asked the S.C.E. for help."

“Precisely,” Saadya said, trying to keep the edge of desperation out of his voice.

“I’m not sure exactly what we can do for you, though,” Gomez said. “Theda Vinci doesn’t carry a lot of atmospheric processing equipment.”

“I know,” Saadya said. “But that’s not why I asked you to come. What I need is your crew’s computational brilliance, to tie up the final loose ends of our atmospheric dynamics simulations. Particularly that of your resident Bynar pair.”

Gold and his first officer reacted in a manner that Saadya didn’t expect—they cast distinctly uncomfortable looks at one another.

The captain was the first to break the ensuing silence. “Ah, Pas, something’s happened that you obviously weren’t made aware of.”

Saadya felt the emotional scaffolding behind his smile begin to crumble. He struggled not to show any anxiety. “What do you mean? You do have a Bynar pair serving aboard the Theda Vinci, don’t you, David?”

“Hada Bynar pair,” Gold said.

A pit of despair opened in Saadya’s belly. He couldn’t keep his eyebrows from vaulting heaven-ward. “They’re gone?” He trailed off in confusion. For a brief, irrational moment, he wondered if the Central Processor Pair on Bynaas had discovered his plan to draft a second Bynar pair and recalled Gold’s Bynars out of sheer spite.

“One of our two Bynar crew members was killed on an away mission earlier this year,” Gold said quietly.

Without that Bynar pair, Saadya thought, there truly is very little these people can do to help save Ishtar.

“Pas, how the hell did you even know we had a Bynar pair on board?” Gold said. “Your Starfleet membership card lapsed a long time ago.”

Hearing no heat behind his old friend’s words, Saadya offered him a rueful smile. “Surely you’ve spent enough time around us technical types, David, to know that we’re nothing if not resourceful.”

“You forgot to mention sneaky and underhanded,” Gold said, returning the smile. “But it’s reassuring that you don’t seem to be quite sneaky and underhanded enough to steal current information. Anyway, we’ve just got the one, now.”

Saadya’s brow wrinkled. “Just the one what?”

“Bynar. After 111’s death, 110 decided to stay on board. He’s going by the name Soloman now, and he’s our resident computer expert.”

Hope rekindled within Saadya. All right. If I can’t have access to another Bynar pair, perhaps a solo Bynar will do in a pinch.

Aloud, Saadya said, “I thought Bynars always stayed in bonded pairs.”

“They generally do—if they expect to integrate back into Bynar society,” Gomez said. “Single Bynars

tend to be pariahs among their own people.”

Saadya briefly considered whether a Bynar social leper might succeed in expediting the computational efforts that were taking up so much of 1011’s and 1110’s time these days. Surely they wouldn’t let a social stigma affect a working relationship, he thought. Not on something as important as Project Ishtar.

“Soloman,” Saadya said aloud, parsing the name’s evident meaning. “Doesn’t that name seem vaguely insulting to you? It sounds like a reminder of what he’s lost.”

“He’s never complained about it,” Gold said, his tone growing defensive. “We both sort of arrived at it together.”

Gomez cocked an eyebrow and adopted an almost lecturing tone. “In fact, I think the name helps him deal with his single status successfully. And it might even give him a perspective on information technology that’s completely unique among Bynars.”

Fascinating. A Bynar who stands astride both Bynar and human experience, Saadya thought, hope returning. Perhaps he could be useful in ways I haven’t even anticipated yet.

Saadya held out his hands in a placating gesture. “Forgive me, David. I did not mean to criticize your crewperson’s choice of nomenclature.” He sighed. “Will you help us?”

“No offense taken, Pas,” Gold said. “And as long as the *theda Vinci* is in the neighborhood, you’ll have all the engineering and material support we can spare. Commander Gomez will supply you with whatever you need. Including the able assistance of Soloman.”

Saadya felt his smile broaden. “Thank you, David. You may well be the salvation of Team Ishtar’s efforts.”

Perhaps I won’t need that second Bynar pair after all. Maybe one individual will make all the difference.

If not, he knew he had run out of other options.

Chapter

3

Gold was pleased to see that the *theda Vinci*’s senior staff was already assembled when he and Gomez arrived together in the starship’s main briefing room at 0758. Present around the irregularly shaped table were Tev, Soloman, tactical systems specialist Fabian Stevens, and structural systems specialist P8 Blue. The former three individuals already were seated, while Blue sat in her specially modified chair at the end of the table. Also present were Corsi, cultural specialist Carol Abramowitz, cryptography expert Bart Faulwell, and Dr. Elizabeth Lense, the *theda Vinci*’s chief medical officer.

A few hours earlier, Dr. Saadya had supplied Gold and Gomez with copious amounts of data regarding Project Ishtar, intended to bring the *theda Vinci*’s staff up to speed as quickly as possible. From the intent manner with which most everyone was studying their pads, Gold intuited that his people were still doing as much last-minute homework as they could cram.

“Good morning, everybody,” he began as he sat at his usual spot at the head of the table. “As I’m sure you’ve all already noticed by now, the project we’re going to assist Dr. Saadya and his team with is pretty heady stuff.”

Corsi’s earlier expression of awe had been replaced by a furrowed brow, a change no doubt caused by prolonged exposure to cold, hard data. As usual, the security chief didn’t mince words. “It looks pretty damned dangerous, sir,” she said, setting her padd down on the table. “If everything doesn’t go perfectly to plan, it’s going to be a real challenge just keeping everybody on the team alive.”

Gold tried to muster a smile, but failed as recollections of Galvan VI sprang to mind unbidden. “That’s why I invited you to the party.” He took a seat, then faced Dr. Lense. “And you, too, Doctor. As Corsi has pointed out, this project is liable to suffer a catastrophe during its next phase—unless everybody involved is very careful. Lots of people could be injured.”

Lense did not look enthusiastic. “Anybody exposed to that witch’s cauldron of an atmosphere for more than a couple of seconds will be way past my ability to help.”

To break the pensive silence he sensed was about to engulf the room at that statement, Gold nodded to Gomez, signaling her to begin the technical briefing.

“The real dangers are hard to evaluate objectively,” Gomez said, still standing as she looked over the figures on her own padd. As she continued, Gold noticed that she, too, now seemed haunted by memories of the hellworld where her lover, second officer Kieran Duffy, had died. “Venus isn’t the most human-friendly environment in the solar system, so any approach to terraforming it is certain to involve some unavoidable hazards.”

Gold admired his first officer’s talent for under-statement. With a temperature of around four hundred and eighty degrees Celsius, Venus’s surface was the hottest in the solar system, except for the sun’s photosphere. Flesh would vaporize in moments, and its surface pressure of ninety bars would just as swiftly crush humanoid bones—or a Nasat exoskeleton—flat. “Venus” and “friendly” shouldn’t even be used in the same sentence.

Corsi seemed to be having similar thoughts. “Doing the work from orbit seems to me a surefire way of avoiding the worst of those hazards,” she said dryly.

Gold silently conceded that the security chief’s point was an excellent one. Why subject anyone to unnecessary risks on that pressure cooker of a planet?

“Unfortunately, the whole project depends on a large number of networked ground stations,” Gomez said. “The equipment and software are pretty complex, and only some of these facilities can be automated by slaving them to other stations. But somebody’s got to run and monitor at least the key surface stations.”

“What about using telepresence?” Faulwell said, a skeptical frown creasing his boyish features. “I’d think that techies in a nice, safe orbit could run the equipment remotely just as easily as people on the ground could.”

“Amen,” Corsi said.

“That’s because your respective specialties involve word puzzles and brute force,” Tev interjected testily, addressing both Corsi and Faulwell, “rather than the fluid dynamics of N-class planetary

atmospheres.”

Gomez quickly interceded, prompting Gold to wonder what pungent reply Faulwell had been about to deliver to the second officer. “It’s a good question, Bart. But that superheated carbon dioxide ocean that separates us from the planet’s surface makes ship-to-ground communications pretty spotty. Also, the atmosphere is filled with literally millions of tiny, reinforced probes. They’re in constant subspace contact with each other, the ground stations, the satellite network, and Station Ishtar up in orbit. That web of transmissions can create interference problems with high-bandwidth communications as well. But without it, the force-field generators can’t stay ahead of the atmosphere’s chaotic motions.”

Stevens spoke up. “I think somebody had better point out that the superrotational zone—” at the blank looks from Corsi, Lense, Abramowitz, and Faulwell, he quickly added, “—that’s the turbulent atmospheric layer that circles the planet once every four days, can play hob with a transporter beam. Those people at Hesperus Ground Station were lucky they were able to beam out before the atmosphere flooded in and flattened the place.”

“That’s a potential problem, I’ll admit,” said Gomez. “But the project scientists have already provided a lot of good atmospheric data that will help us compensate for that, as well as information on beaming through the gaps in their force-field nodes. When you’re talking about moving an entire planetary atmosphere the way the Ishtar team plans to do it, you can’t afford either comm glitches or transporter foul-ups. So even though it’s dangerous, I’m afraid we’re stuck with the up-close-and-personal approach.”

Looking overwhelmed, Faulwell set his padd on the tabletop and pushed it away as though it were a plate filled with writhing Klingongagh. “Can somebody please explain to me exactly what we’re getting involved with here? Preferably without all the columns of figures. Any language will do. Even Tellarite.” He glanced playfully at the second officer.

Tev snorted. “Linguists. Perhaps we should have arranged the data into rhyming stanzas for your benefit.”

“All right,” Gomez said, putting up a hand in an apparent effort to encourage Bart and Tev to bury the hatchet. “Remember, this mission is as much about data processing as it is about making brute-force changes to the planet.” She gestured toward Soloman.

“I will help coordinate the data-flow between the probe network and the ground stations on a full test of Ishtar’s hardware and software,” the slight Bynar said, his hands primly folded on the table beside his padd.

“What’s involved,” Gomez continued, “is a complex, planetwide network of surface-deployed devices designed to thin out and cool the Venusian atmosphere. Rather than using slower methods, like giant orbiting ‘parasols,’ Dr. Saadya is using a radically different approach: His plan is to use specially shielded, tandem-operated field generators to create a partially gas-permeable force field. The overall operation will follow a carefully orchestrated meteorological plan. But the field will constantly adjust itself to adapt in real time to observed changes in air pressure, temperature, and velocity as it envelops the entire planet and slowly expands outward toward the sunward side.”

If Stevens repeats that crack about “Venus enlargers” I overheard him make last night, Gold thought, I’m putting him on report.

Stevens merely sat listening attentively, his eyes twinkling with suppressed mischief, as Gomez continued.

“The goal is to push the bulk of the atmosphere far enough away from the surface so that the sun will heat it even further, blowing most of it off into space in a matter of days.”

“Pas was never one for taking the slow road if he could avoid it,” Gold said.

Gomez continued. “The net result is a quick reduction of both the atmospheric pressure and the green-house effect, in the direction of something considerably more Earth-like than what’s there now. The process should knock hundreds of degrees off the planet’s surface temperature virtually overnight.”

“Sounds too good to be true,” Corsi said.

Tev waved his padd before him, and spoke in a throaty rumble. “The theoretical work appears sound. What remains to be proved is whether or not it will work in practice.” Gold wasn’t certain, but he thought he heard grudging admiration in the Tellarite’s tone.

“For all that effort and danger, I still don’t see how it’s going to turn Venus into another Earth,” said Lense. “The planet still takes, what, three months to turn on its axis.”

“One hundred and seventeen days,” said Pattie.

“Whatever. It’s still a problem. Along with the planet’s complete lack of free oxygen, or even a magnetic field. Think of all the radiation-related health hazards that alone will create for anybody trying to live on the surface.”

“TANSTAAFL,” Abramowitz said.

“Excuse me?” said Gold.

“A very ancient homily that every good scientist or engineer ought to remember. ‘There Ain’t No Such Thing As A Free Lunch.’”

“Exactly,” Gomez said, nodding with apparent enthusiasm. “Remember, folks, the initial ‘big blowoff’ we’re assisting with here will only be the first step in a many-years-long process. Adding in the appropriate amounts of nitrogen, oxygen, and surface water will come next, from comets barged down from the Kuiper Belt. Huge surface-mounted impulse engines will be set up to try to speed the planet’s slow, retrograde rotation up to an approximately twenty-four-hour cycle, like that of Earth or Mars.”

Pondering the planet’s bizarre backward spin, Gold wondered what it would be like to live on a world where the sun rose in the west and set in the east. Probably not the place where Rachel and I will want to retire, he thought wryly, warm weather notwithstanding.

Gold listened as Gomez continued: “Using similar techniques, the planet Mercury can be relocated into a lunarlike orbit around Venus, where its tidal effects on the planet’s core should create a radiation-repelling magnetic field. The Federation Council will probably provide increased resources for these later steps once Saadya and his team achieve a successful blowoff.”

“And no doubt Starfleet Command will be persuaded then to schedule a return engagement for the S.C.E.,” Gold said. “And theda Vinci.”

Gomez smiled enthusiastically. “One can only hope.”

A broad grin appeared on Stevens's face as well. Turning toward Gomez, he said, "You sound like the president of Saadya's fan club, Commander."

"Well, it's hard not to admire what he's already accomplished all over the quadrant," Gomez said. Gold wasn't certain, but he thought she might be blushing. "What he's about to achieve here—essentially rebuilding Venus into a duplicate of Earth—is nothing short of extraordinary."

Gold looked around the room, gauging the reactions of his staff. Other than Corsi's skeptical frown, he saw nothing but nods of agreement and murmurs of assent. Even Tev looked uncharacteristically upbeat.

"That's it, people," the captain said, rising to adjourn the meeting. "The journey of a thousand miles begins with a single step. I trust that all of you essentially know what you have to do to assist Team Ishtar. Commander Gomez will organize the teams who will report to Dr. Saadya and his staff. Let's get to work."

As the crew filed out, Gold thought, *And I, as usual, will do what any other good cat-herder would do in my place: do my best to stay out of the way of the technical wizards.*

Unless something goes seriously *mish-mosh* down there.

Chapter

4

The outlines of four humanoids and one wider, smaller mass shimmered for a moment in the air, before the members of the engineering team solidified on the transporter platform. Saadya was waiting for them, and as he stepped forward he adjusted his well-worn lab coat.

"Welcome aboard Ishtar Station again, Commander Gomez," he said, extending his hand to the young, dark-haired woman who stood in the small group's center.

The woman stepped off the platform, followed by the others. Smiling mischievously, she took his hand. "It seems like it's been... hours, Dr. Saadya." She gestured to the others behind her. "This is our second officer, Lieutenant Commander Tev, and our tactical systems specialist, Fabian Stevens."

But it was the pair to Gomez's right that held the better part of Saadya's interest. One was the Bynar, and the other most closely resembled a giant pillbug. I've never actually stood so close to a member of the Nasat species, Saadya thought, suppressing a revolted shudder. Gomez introduced the Bynar as Soloman, and the giant insect as "Pattie" Blue.

Saadya guided the group out of the transporter room and into a corridor. "I'm sorry that my lead assistant, Adrienne Paulos, won't be able to join us for this dry run. She's down on the surface overseeing some repairs at Ground Station Sukra."

He pressed a panel next to a doorway, and the door slid open, revealing a large room. "This holodeck features an exact re-creation of Ground Station Vesper, although it could really be just about any of the stations. They're all built essentially from the same design. We have a skeleton crew at each of the stations presently, so that as many of our personnel as possible can engage in these simulations." He swept one arm wide as a gesture for the others to enter.

They filed in and saw a number of workers bustling away at computer terminals, checking pads and gauges, and generally looking very busy. Then several of them moved aside, giving the Vinci team an unobstructed view of the far end of the room.

Saadya turned just as Gomez's jaw dropped open and her features took on a look of surprise. Damn. I forgot to tell them!

* * *

Everything about Saadya's operation had seemed very well-designed, if a bit overly cautious in terms of resource consumption. Despite the obviously budget-conscious philosophy at work here—or perhaps because of it—Gomez was impressed as she viewed the ground station's holographic representation. The simulated viewscreens faithfully displayed the brown-yellow swirls of noxious wind that billowed high above the compound. Or at least the ones that go whipping across the sky over the real ground stations, she thought.

Then some of Saadya's workers moved to other stations, revealing the rows of computer banks arrayed farther into the room.

And the two diminutive Bynars who were working amid this compact maze of silicon, cortenide, and polyalloy.

Gomez realized with a start that her mouth was hanging open, and she shut it with a snap. Sparing a quick glance over to Soloman, she gave Saadya a sharp look. "You neglected to tell us that you already had Bynars working on this project. Or are they holograms as well?"

Saadya's features darkened slightly, and he looked apologetic. "No, they're quite real. I'm sorry. I thought I had mentioned something about this to Captain Gold." He gulped. "I hope their being here won't present a problem."

Stepping forward, Soloman furrowed his expansive brow slightly. "It will not be a problem for me, Doctor," he said. "Certainly, the mass of information the three of us will be able to process will be far greater than anything I could manage by myself, and will also greatly exceed their tandem capacities as a dual processing unit." Soloman glanced at Gomez, and she saw a bit more trepidation in his eyes than his words communicated. However, he intended to be professional about it, which was her primary concern. Let's just hope those two Bynars have the same intention.

Clearing her throat softly to table this line of discussion for the moment, Gomez gestured around the room. "Which stations do you want us to take?"

Saadya clapped once, gaining the attention of everyone in the room, except that of the Bynars, who remained fixated on their computer screens. They had yet to look up or acknowledge anyone else's presence in the room. "Everyone, this is the engineering team from the Vinci. As I briefed you all before, they're here to help us run this simulation, and if all—when all works out properly, help us implement the actual atmosphere reduction programs we'll be running on the ground." He looked back at the assembled S.C.E. personnel and added, "These fine Starfleet officers have had all of Project Ishtar's schematics since yesterday, which means that they're already familiar with the broad ideas if not every aspect of the actual implementation. Those of you who were assigned partners, please help bring them up to speed on the operational specifics."

As technicians came forward to introduce themselves, and the other members of the team moved toward them, Gomez put a hand on Soloman's shoulder. The small, slight Bynar looked up at her, his eyes guileless. "Are you sure you're all right with this?" she asked, taking care to keep her voice low.

He cocked his head marginally, as if considering the question, then nodded. "Yes. Even though I am no longer bonded, I am still one of them."

I certainly hope so, Gomez thought.

As soon as Saadya brought Soloman near the Bynars, they turned. As if controlled by a single mind, both pairs of eyes narrowed. Gomez could see that the Bynar pair had not been as surprised by Soloman's presence as he had been by theirs. Did Saadya purposely keep the existence of these two Bynars from us, or was it just an oversight? Gomez wasn't certain—in fact, she hated to question the motives of someone whose work she so admired—but she intended to discuss this with the captain once she returned to the *Vinci*.

The Bynars—she couldn't tell which was 1011 and which was 1110, even though Saadya had just introduced them—began speaking to each other, voices high-pitched and chattering, and definitely not in Federation Standard. She hadn't heard the sound since 111 had been aboard the *Vinci*, discussing technical issues with 110. She could hear the same type of data-stream in their sounds as she had heard from some ancient pre-World War III communication devices they had studied while at the Academy.

Abruptly they stopped, and both of them looked at Soloman. One of them spoke again, in a slower code.

Soloman sighed. "Of course I can still understand binary language. I am not mentally deficient. I am unbonded due to an accident that befell my mate."

The Bynars looked surprised. One spoke, in English now. "Why have you—"

"—not bonded again—"

"—with another?"

Soloman looked as if he was about to sigh again, but Gomez was relieved to see that he didn't. "The reasons I have not rejoined with another Bynar are not germane to this mission. My personal decisions have nothing to do with atmospheric pressure, force-field mechanics, wind vectors, planetary realignment, or any other aspect of this terraforming project."

The Bynars looked up at Saadya with concern showing in their features. "That is not—"

"—an acceptable answer. How—"

"—do we know that—"

"—he is not infected with a virus—"

"—which will be transferred—"

"—to us if we link with him?"

Soloman's voice got a bit louder, and more stern. "You might at least look at me when discussing me, please." Once the pair had returned their gaze to him, flinching slightly, he continued. "I am alone because my partner, 111, was killed on a mission. She was brave and beautiful and able to process data as quickly as any Bynar in the upper cluster. When she was killed, I felt that if I were to re-bond, it would dishonor the memory of her that I carry within my heart."

The Bynars blinked once, then twice, then chattered at each other in a stream of code. Seeing that Soloman was making every effort not to wince or evince other emotions, Gomez wanted to rap them on the top of their bald little heads. Within moments, they had stopped again.

"We will attempt to—"

"—work alongside you—"

"—as long as you do not—"

"—try to infect us with your—"

"—perverse lifestyle."

Gomez had to bite her tongue to suppress a snort. Luckily, Dr. Saadya spoke up quickly. "It is my understanding that 110 is one of the mostcapable Bynars that has ever worked with Starfleet. I have no doubt he will be an excellent coworker."

The two Bynars turned away and stepped back to their workstation, tapping the touch-sensitive monitor. A bright multicolumn stream of data began pouring downward on the screen. They began their code-like chatter almost immediately.

Soloman looked up at Saadya, who guided him toward another station located several paces away. The scientist resumed pointing at a few panels, and Soloman appeared to understand his tasks very quickly.

Gomez cast an evil-eye glance at the backs of the other two Bynars' crania. She didn't think of herself as someone who often felt vindictive, but these two had been indescribably rude to her friend and colleague.

* * *

All thirteen stations had been linked, and the simulation was going well.No, perfectly, Pascal Saadya thought, allowing himself a wide smile behind the hands steeped in front of his mouth. He moved from bank to bank, as the many technicians monitored the programs that were regulating the endlessly shifting interactions between the simulated force fields and thefaux Venusian atmosphere. Between the presence and advice of the Starfleet engineers, all the preparatory work that Team Ishtar had done, and Saadya's own elated vigilance, the feeling of success in the room was almost palpable.

Suddenly the Tellarite bellowed, "Faugh!" Pandemonium followed.

"We have a cascading node failure commencing northward along meridian number thirty-eight!" said Shaowa Isyami, her usually reserved voice raised in alarm.

"The field is buckling at points 0456 and 0892," chimed in Kent Laczmyr. "Now points 2487 and 4511. Now 4582."

As Kent bleated numbers, those around him pressed on the screens, trying to correct the problems.

“Major power surge at Helel Ground Station. Shields are—Oh my God! We’ve lost her!”

As Saadya rushed toward the monitors, the acidic winds above the chamber—lifted tens of kilometers high by the coordinated force fields—howled and rushed down at them in seconds. “Reinforce the fields at all junctures,” he yelled. “Concentrate power at points 8242 and 2983!”

But it was too late. The ceilings and walls groaned, and bolts began to scream as they scraped out of their sockets. Even as the station began to collapse around them, Saadya called out, “Computer, freeze program.”

Instantly, the holographic chaos went both still and silent.

Saadya looked around the room toward the people at their stations, a grim look on his face. Some of the technicians were rattled by the holographic disaster around them, bringing things too close to home for those who had witnessed the final moments of Hesperus Station at close range.

“Any idea what went wrong?” he asked, running his hand up and through his hair. “Anyone?”

The Bynars stepped forward.

“We believe that—” said 1110.

“—the presence of a—” added 1011.

“—contaminant in our—”

“—thought processes—”

“—caused a miscalculation—”

“—which allowed us to—”

“—deploy an incorrect—”

“—vector. We have been—”

“—shamed.”

Saadya’s eyes widened. The Bynars are admitting they were wrong? Or are they?

He saw Gomez cast a nasty look toward the Bynars, and she stepped forward. “Doctor, I suggest we take this data back to the da Vinci to study it, and that your people do the same here. How soon can you have another simulation prepared?”

Time was running out, but Saadya knew that it would be many hours before this data was analyzed. “How about 0830 tomorrow? Would that be a good time?”

“I think so. I’ll discuss it with my engineers.”

Saadya saw Soloman step away from his console to rejoin his Starfleet companions. He didn't even glance at his fellow Bynars, until one of them spouted a few short syllables of code at him.

Then Soloman squared his shoulders and stalked out of the holodeck, some of his coworkers trailing after him.

Saadya gave an apologetic look to Gomez as she, too, left. And then he counted to ten. And then twenty. He couldn't afford to make 1011 and 1110 angry, nor could he risk losing the help of the third Bynar if the project was to stand any chance of success before Bynaus and Starfleet recalled the lot of them. What did those two say to Soloman, anyway?

Saadya counted to forty, just to be sure he wouldn't blow up before he turned back around to face his technicians.

Chapter

5

"They called you a what?" Dr. Elizabeth Lense leaned forward, her hands splayed on the desktop.

"Singleton."

Lense looked at Soloman, her eyebrows raised. She was trying very hard not to look amused, realizing that cultural differences gave the term much greater weight on her friend's homeworld. "And this is an offensive slur on Bynaus?"

"The worst." Soloman slumped back in a chair on the other side of her desk, looking for a moment like a petulant, wounded child. "A singleton is not just a person who is unbonded; it is someone who is incapable of being bonded. It is a rejected person. Someone who cannot fit into our society. A perversion."

"But you know that isn't you, Soloman," Lense said. "You were bonded, and as far as I know, you fit into the society on Bynaus just fine. Not only that, but you are one of the few Bynars who's integrated yourself into an outside society: Starfleet. You have to understand that their taunts are nonsense."

Soloman sighed and opened his mouth to speak, then closed it again. After a clear moment of reflection, he finally did reply. "I understand that I am not fully the singleton that they have identified me as being. But their comments do give me cause to wonder whether my decision to remain alone does not stem from my fear that I may not be able to become bonded again."

Lense wasn't able to stop herself from a brief laugh, though she quickly smiled in an effort to let the Bynar know she wasn't laughing at him. "Sorry. I don't mean to laugh, but you really have been picking up new traits from living among us humans. That's a very human response, whether it comes from the death of a significant other, divorce, or a breakup. Everyone wonders whether they're tainted, whether anyone will ever want them again. That's just something that seems to be built into close human relationships." She leaned back in her chair and propped her elbows on the chair arms. "Trust me on that one. I know from personal experience. You go through the five stages of grief, and then—if you want another relationship—you just have to get back on the horse."

Soloman looked at her quizzically. “The horse? What does a Terran riding animal have to do with human relationships?”

“It’s a metaphorical horse, Soloman. When you’re learning to ride a horse, if it throws you off, you have two choices. You can either leave and never learn to ride, or you can get back on the horse and try again, until you get it right. That’s what relationships are like.”

He nodded. “Were you ever . . . thrown off the horse?”

“Oh yeah,” she said. “Almost everybody who comes out of Starfleet Academy has a doomed romance or two in their history. For example, I’ve got a short-lived marriage and an ex-husband in my past.”

“You’ve never mentioned that before.”

“No need to. He’s off in some other area of Starfleet and with luck, I’ll never have to see him again.” Lense put a fist under her chin and regarded the diminutive Bynar for a moment. “So, do you want to get back on the horse?”

Soloman thought a bit before answering. “I do not think so. My relationship with 111 was what made me complete then. Now, I feel that I am complete on my own. I do not feel that I need another person to be the—” he smiled “—the zero to my one.”

“Then that’s what you need to remember when those rude little Bynars aboard Ishtar Station start in on you again,” Lense said, returning the smile. “You’ve worked very hard to forge an individual identity for yourself, and it’s one that both respects the memory of 111 and helps you grow on your own.”

The Bynar’s features brightened for a moment, and then a cloud seemed to pass over his face again. “While this solution may help me on an emotional level, I am also concerned about our interaction on a physical level.”

Lense didn’t want her mind to go where that statement had led it, so she asked, “Could you clarify that physical part, please?”

“It seems to me that the most effective way to accomplish the task ahead of us in the next few days is to allow a physical data link among the three of us. This would process information faster and reduce the margin for error. And by subjugating our personalities to the link, it would—”

“Okay, let me stop you right there,” Lense said, interrupting Soloman. “First, as I understand it, your entire culture and language are dependent on two integers: 0 and 1. By introducing a third element into that equation, don’t you risk blowing a circuit at the very least? I seem to recall from some medical texts that Bynars who tried a three-way link suffered permanent brain damage. A few even died. There’s a sound physiological reason why your people aren’t called Trynars, Soloman.” He started to speak, and she held up a hand, palm outward. “I’m not finished yet. You came to me for advice, so listen to what I have to say.” Once it became clear she had his full attention, Lense continued. “Second, it seems to me that tonight’s show-stopping error came from the paired Bynars. They made the fubars that brought the simulation down because they were so busy condemning you that they didn’t pay close enough attention to what they were doing. So the best way to eliminate those sorts of errors next time would be for them to get over their petty prejudices. Third, how can you even entertain the idea of subjugating your personality? You have come a tremendous distance in establishing your individuality. And that individuality may bring you the solutions that have eluded your paired counterparts so far. Maybe not tomorrow, but

someday.

“Finally, I’m concerned that your joining in any way with this pair might erode whatever protective emotional ‘scar tissue’ you have accumulated while grieving the loss of 111. The process could leave you even worse off emotionally than you were right after 111 died. As this ship’s chief medical officer, I can’t allow you to harm yourself physically or emotionally if I can help it. And Starfleet has given me the authority to help it, let me assure you.”

Soloman looked at her expectantly, watching as she settled back in her chair. “May I speak now?” he asked. When Lense nodded, he continued. “I am aware of these dangers, and yet, as a great Federation diplomat once said, ‘The needs of the many outweigh the needs of the few.’ This mission needs to succeed for the benefit of the many. It is not just for the sake of my commander and shipmates, nor for Dr. Saadya and his terraformers.” He leaned forward as if to emphasize his point. “I need to succeed for my own people, for Bynaus. It has only been about twelve of your years since the star in our system went nova and wiped out the memory banks of Bynaus. It’s been only slightly less time than that since a quartet of Bynars hijacked the U.S.S. Enterprise and used it to transfer the core data of our civilization back to our inert planet. Bynaus is still a world in turmoil and recovery. My people still desperately need to learn all they can about terraforming and ecosphere reconstitution techniques.”

Almost absentmindedly, he reached up to scratch the skin around the chip implanted into the side of his head. “No matter what the cost, I will not allow my estrangement from the ways of mainstream Bynar society get in the way of my duty to my homeworld. Just as I would sacrifice myself for my friends here on Theda Vinci, so too will I sacrifice myself for my planet if need be.”

“You don’t need to be either a pariah or a martyr to your people to help them,” Lense said. “You need to find a solution to Project Ishtar’s problems that accomplishes your goals in a way that only you can accomplish them. You. As an individual. Thinking outside the numbers, as it were.”

Soloman regarded her in silence. Lense wondered whether she had made her point effectively, or if the message had been lost. Time will tell, she thought.

Chapter

6

Soloman squared his shoulders and walked forward toward the pair of Bynars. He had spent most of the night reflecting on his discussion with Dr. Lense. He was determined to find a way to make the situation work, and he would not allow himself to get the worse end of the bargain.

As the two Bynars stared at him through baleful eyes, he spoke. “Reflecting on the events of yesterday’s trial, it occurs to me that if we create a three-way datalink, we might be able to sift through the data more quickly and accurately.”

“You want us to—”

“—allow you to—”

“—link with us?” The looks on their faces had now switched from contempt to incredulity.

“We think that’s a great idea.” A voice from behind Soloman forced all three Bynars to look to the side. It was Fabian Stevens, with a pair of the regular Ishtar Station scientists. “Several of us discussed that option earlier, and we believe that Soloman may be on to something.”

“It is possible for the three of you to link, isn’t it?” asked a sallow-skinned female scientist.

“It is—”

“—theoretically possible—”

“—but hardly an—”

“—optimal situation.”

“What is optimal in our situation?” the woman asked with a smile. “Why don’t you guys try it for this simulation and see if it works?”

Soloman looked over at his fellow Bynars, and saw them opening and closing their mouths like fish stranded on a beach. Finally, 1011 said, “We will attempt it—”

“—this once, but we—”

“—do not expect it to—”

“—be a success.”

Minutes later, the holodeck simulation began again, with most of the same scientists, technicians, and engineers in the same places they had occupied the previous day. Soloman and the two Bynars synchronized the signals to the interfaces on the sides of their heads and the data buffers they carried on their belts.

The high-speed multiplex language of the Bynars suddenly filled his senses in every fashion, jolting Soloman into a reality from which he had been removed for far too long. The code-language used by 1011 and 1110 began as a low-pitched whine, and Soloman began to speak back to them.

As they talked, numbers scrolled on viewscreens in front of them. Not only were they keeping track of the columns directly in their sight, but the linked-mind synchronization meant that a residual sense of the columns being studied by the other two Bynars maintained a palpable presence in the consciousness of each.

Soloman had not spoken like this—had not shared data in this fashion—since before 111 had died. The act had never seemed so intimate before, but perhaps that was because as an adult, he had never linked with anyone other than his bond-mate. Now, the linkage seemed not only intimate, but also euphoric. The information poured in a torrent from the computer screens to their eyes to their brains to each other to their mouths to their ears to their brains...

He had not noticed the higher pitch that 1011’s and 1110’s chatter had reached until he felt the connections being severed. One by one, faster and faster, he was being blocked. His mind raced to find an entrance, but like a dam constructed midstream in a river, the paired Bynars were now methodically—and quickly—obstructing him. The revulsion they felt at his presence in their link was so strong it almost appeared as a color; not a vibrant bright or dark, but a swirling, muddy, grayed tone.

Soloman spoke to them in their language, trying to impress upon them the need to cooperate, but it was too late. He felt his ejection from the link like a physical blow. Indeed, his body reacted as if it had been shoved, and Soloman fell backward, his arms pin-wheeling as he fell to the deck.

His mind still reeling from his expulsion, Soloman became aware that the holodeck simulation had been halted once again. And Dr. Saadya did not look happy as his gaze settled on all three Bynars.

* * *

Domenica Corsi was no happier about the da Vinci crew's involvement in the terraforming project now than she had been when Captain Gold and his staff had first discussed it. She hadn't expressed it out loud—though she and Stevens had discussed it late last night—but she didn't feel that altering Venus to support terrestrial life was a priority that the Federation should be expending time and energy toward. As intriguing as Project Ishtar was, thousands of M-class planets already existed, as well as countless other N- and K-class worlds that could be terraformed with far greater ease than this one.

Stevens had countered her concerns by noting that the proximity of Venus to Earth was clearly a large part of the reason behind Saadya's efforts. Fabian's explanation accounted for why Mars hadn't been completely terraformed before Venus, if only in an emotional way; Mars was the god of war, and that world had always been called "the angry red planet." Stevens had argued that the romance of Venus—the goddess of love—probably played an unconscious role in all the decision making.

Of course, it was fairly common knowledge that it had been the discovery of native Martian microbes in the twenty-first century—and not romantic notions of gods and goddesses—that had jumped Venus to the head of the terraforming line. Even I know that, Corsi thought, smiling just a little. Fabian may have the tactical instincts of Garth of Izar and the soul of a poet, but what he doesn't know about planetology could fill a library.

But whatever her personal feelings and misgivings, Corsi knew she had an assignment to fulfill. After the second test run had failed earlier today, she had decided to watch the next simulation from Ishtar Station's holodeck, instead of just looking over the data after it was collected. She wasn't the only da Vinci crew member here either; Fabian, Captain Gold, and Dr. Lense were also present, stationed throughout the room and observing discreetly over various shoulders.

Fabian approached Corsi and spoke in a low tone. "So, what do you think?"

"I think Saadya's done the best he can with what he's got," Corsi admitted. "But I still have to question the need in the first place." Under her breath, she quietly added, "To tell you the truth, I'm also pretty much at a loss to understand most of the theoretical science they're using, too. Weapons I know, and I even get the force-field applications they're using. But this kind of planetary science is way out of my specialty." She offered a wry smile, and added, "I mean, what do I shoot if something goes wrong?"

Stevens chuckled. "You got me there. But somehow I don't think weapons fire is going to help much if the atmosphere suddenly decides it doesn't want to be repositioned."

Corsi's eyebrow rose, and she nodded slowly. Something had been nagging at the back of her mind, and it had finally crystallized. Looking across the room, she saw Dr. Saadya and waved him over.

"I have a concern, Doctor," she said.

“Well, now’s the time to voice it,” he said, obviously feigning an air of conviviality. She could tell he was hiding a tremendous amount of stress. Or attempting to hide it.

“You’re using the linked force fields to push the atmosphere upward, but asymmetrically, correct?”

He nodded. “Yes. Pushing the gases into space on the night side of Venus will not allow them to dissipate. So, we are forcing them to flow toward the sunlit side, where the heat will help burn them off. The overall shape of the combined force fields will be similar to that of a pear.”

“So, the stress from the atmospheric pressure will be greatest on the sunlit side, under the apex of the wide part of the pear?”

Saadya smiled. “Exactly. The strain of the dataloads being carried by the dayside ground stations, atmospheric probes, and force-field relays will also be greatest.”

Corsi nodded slowly. “So, once you start the process, it’s all or nothing, right?”

“That’s what all these simulations are for. If it doesn’t go smoothly, we risk the destruction of some of the surface stations, almost as if the atmosphere were a tidal wave crashing down.” Saadya looked around the room, beaming. His gaze stopped for a moment on the Bynars. The pair was now working at one area, while Soloman was set up nearby at a similar station. Assisting, he had told her, with the Bynar pair’s dataloads in a “merely superhuman” capacity, rather than trying once again to engage in a three-way link with them.

“With luck,” Saadya said, “this will be the final simulation.”

“Have you planned a retreat?” Corsi asked.

“Excuse me?” Saadya looked momentarily bewildered.

“If there is a problem, do you have any way to reverse the procedure safely during the blow-off?”

Now Saadya blanched. “Reverse it? Not precisely, no.”

“Well, I think it would be a good idea to run some simulations for that possibility,” Corsi said, noting from the corner of her eye that Stevens was nodding.

Saadya regarded her for a moment, silently. Then, with a curt nod, he said, “Yes, well, thank you for that bit of advice, Security Chief Corsi. But I think I’ll take it up with the engineers if we can’t perfect our calculations on this run. In the meantime, I prefer to look at this project somewhat more positively than you do, rather than with a defeatist attitude.” He began to turn away. “If you’ll excuse me, Commander, I think we’re ready to begin.”

Corsi watched him walk away toward some of his technicians. She turned to Stevens, and in a low voice said, “That could be a big problem. If he hasn’t built in enough margin for error, he’d better hope there aren’t any more errors. Otherwise, we just might find ourselves trying to run from that tidal wave.”

* * *

Perfection, Saadya thought forty-five minutes later, as a cheer rang out across Ishtar Station’s holodeck. This time the simulation had not only gone without a hitch, it had also moved the bulk of the holographic

Venusian atmosphere into space with minimal strain on either the force-field network or the ground station shielding. And it had done so with vast amounts of power to spare.

As his technicians cheered, hugged, and mobbed each other happily, Saadya scanned the room. Catching the eye of the dour security officer he had spoken with earlier, he gave her a large grin, and an exaggerated thumbs-up sign just as someone popped a champagne bottle.

Corsi smiled back politely as glasses clinked and the spontaneous cheers, applause, and embraces continued. After the demonstration he had just delivered, surely even the hard-nosed Lieutenant Commander Corsi had to be a believer now.

Tomorrow, his work here—the real, nonvirtual work—would prove just as successful as had today’s demonstration. And he would enter the history books as the man who tamed Venus.

Chapter

7

It seemed to Soloman that the transporter took an extraordinarily long time to reassemble him inside Ground Station Vesper. He wasn’t surprised, however, given the unusually dense Hadley cell—in essence, a hemisphere-spanning bubble of slow-moving, superheated, convection-lifted carbon dioxide—that had been observed hanging directly over the station for the past several days.

The moment the transporter beam released him he tapped his combadge. “Soloman toda Vinci. I have arrived safely.” Aware that the safe operation of the transporter depended upon perfect targeting of the narrow gaps between the networked force-field nodes, Soloman hoped that no hasty departures would be needed. In that eventuality there was no guarantee that the “node gap” necessary for transport would be available.

“Understood, Soloman,” responded the voice of Captain Gold, somewhat distorted by its passage through the thick atmospheric blanket. “We’re maintaining a transporter lock on you and everyone else in your ground station. And we’re prepared to assist Station Ishtar in evacuating any of the other ground stations, if they should run into any serious problems. Just in case.”

“Acknowledged,” Soloman said. “However, the last round of simulations indicates that you might be taking an overly cautious approach.” I hope.

“Maybe so. But considering what became of Ground Station Hesperus, Gomez and Tev are recommending we wear a belt and suspenders both. Gold out.”

From directly behind him, a pair of voices spoke up.

“So. You have—”

“—come back—”

“—to shame—”

“—us further.”

Turning to face 1011 and 1110, Soloman felt his face flushing to a temperature that rivaled the air outside the station dome. Nevertheless, he remained determined not to react overtly to the expressions of naked contempt etched across the smooth, pallid faces of his fellow Bynars.

Only then did Soloman notice the presence of members of the ground team's human staff.

"Listen, guys," Adrienne Paulos said, looking tired and harried as she scowled at each of the three Bynars. "I don't know what sort of grudges you're carrying around and I don't care. But in spite of our success in the simulator yesterday, our margin for error is stillway too slim to allow for anybody's private hissy fits. Understood?"

The Bynar pair said nothing. They merely continued staring impassively at Soloman.

"I came here to assist Dr. Saadya with work that will benefit our people, as well as the people of Earth," Soloman said carefully, his eyes alternately boring into 1011's and 1110's. "I trust that my conspecifics feel the same way. Unless I missed the point of all those atmospheric simulations we've been running in preparation for today's task."

The Bynar pair continued their stony silence. Moving as one, they turned their attention to a tandem console situated amid a complex cluster of computer terminals that lined the small room's cramped center. As one, the pair began interfacing with the computer, speaking to it in high-pitched, rapid-fire ululations of vocalized machine code.

Soloman felt a surge of envy for the rich dataflow in which the other Bynars immersed themselves with such apparent ease. So much like what 111 and I shared—

With a supreme effort of will, he forced the thought from his mind, as though purging a computer of a damaged file.

"I'm glad that's settled," Paulos said, a sour half-smirk crossing her face as she crossed to one of the other nearby consoles, where a trio of human technicians busied themselves with similar tasks. She quickly examined her readouts, then paused to confer with the other human staff members.

Feeling even more awkwardly alone than usual, Soloman took his seat at a console adjacent to the one being used by the Bynar pair, neither member of which deigned to look in his direction. Working in silence, Soloman summoned several columns of figures to the touch-sensitive display screen.

Turning his chair slightly away from the other Bynars, Soloman was relieved to note that only the other humans now lay within his immediate line of sight. Let 1011 and 1110 think whatever they wanted about him. He was determined to put their ill will out of his mind, concentrating instead on monitoring and checking their dataflow, which roared through his terminal like the desert winds of Bynaus.

Then he noticed one of the human technicians, a female, glancing at him and shuddering, evidently involuntarily. Though the incident occupied only some small fraction of a second, Soloman thought the woman might have tried to do a better job of concealing her revulsion.

The woman's reaction brought to mind a warning that Fabian Stevens had once given him. Some humans, Stevens explained, felt uncomfortable around members of the slight, large-brained, computer-dependent Bynar race. "Creeped out" was the expression he had used to describe this unconscious flinching reaction.

I truly am at home nowhere, Soloman thought, sparing a quick glance at his—thankfully preoccupied—Bynar brethren.

“Aphrodite Ground Station ready,” declared a voice carried over the comm speakers. The scratchy message instantly brought Soloman’s entire concentration back to the mission before him.

“Helel Ground Station, check,” another distant voice reported.

“Ground Station Sukra, ready to go,” came the next.

One by one, each of the thirteen remaining staffed ground stations, distributed at even intervals around the planet’s equator and along its prime meridians, reported their status to the central surface-based hub at Ground Station Vesper. Each of these facilities were virtually identical, and each now stood ready to link its technological capabilities to all the others.

1011 and 1110, looking through Soloman as though he weren’t even present, exchanged nods with Paulos and one of the other human technicians.

Soloman swallowed. The moment of truth was fast arriving.

Paulos punched a key on her console and leaned forward. “Paulos to Ishtar Station. Vesper reports ready as well. All other stations showing green for go.”

“Saadya here. Everything looks good from up here.”

Soloman felt his pulse beginning to race, and his rate of breathing increasing. This was no simulation.

Then he noticed 1011 and 1110 watching him with narrowed eyes.

“Try to—”

“—keep up—”

“—with the dataflow—”

“—singleton.”

Say nothing to them, Soloman thought, trying to ignore the slur.

His jaw tightened as he returned his attention to the ranks of marching figures. So far, nothing in the sensor readings appeared to necessitate making any new adjustments to the force-field network parameters. Field strengths were holding, and remained in balance. All was proceeding as planned, and the numbers attested to it.

The behavior of numbers, unlike that of flesh-and-blood beings, had the virtue of being understandable, logical, and predictable. But the figures were moving so very quickly. Nearly as fast as the dataflow to which he and 111 had been long accustomed...

Concentrate on the numbers. Nothing exists except for the numbers.

Saadya's voice came over the speakers again, via a somewhat atmosphere-distorted signal. "I wish I could be down there with you, Team Ishtar."

"We've been over this a million times, Pas. You've got to delegate. And who better to get a God's eye view of things than you?"

"All right, Adrienne," Saadya said, still sounding wistful. "I promise to stay up on Ishtar Station and just watch. Now go ahead and raise the roof."

Soloman saw from his readouts that the so-called "roof-raising" was already well begun. He stared into his terminal, whose edges soon grew indistinct and vanished altogether, leaving nothing in his sight but the figures that expressed the shape, ebb, flow, and strength of the force-field network that strained and flexed in its effort to cage the broiling Venusian sky.

Wading alone into the rapid information torrent, Soloman exulted wordlessly in his ability to let the numbers occupy all of his concentration. He no longer had time to consider his outcast status, nor to ponder the enormity of what he and Team Ishtar were undertaking as they guided the bulk of the Venusian atmosphere away from the planet's surface and toward the endless gulf of space.

But somewhere deep within him burned the persistent hope that these understandable, logical, predictable numbers would take no unexpected turns into chaos.

* * *

Pascal Saadya stood in his office, having had far too many cups of coffee to remain in his padded chair for very long. He leaned against the transparent aluminum window, watching the stately yellow world that turned below him.

"The force fields are networking nicely," said Adrienne, her voice crackling with static no doubt exacerbated by the increasingly complex interplay among Project Ishtar's artificial energy fields, atmospheric probes, and the planet's high-pressure, acid-laden air. "We're detecting no node failures, power surges, or significant deviations. And the probe network shows the atmosphere behaving exactly as the models predicted."

So far. Saadya stood in silence, his mouth forming a grim slash as he stared down at Venus. After having worked so long and hard planning for this day, he could scarcely allow himself to taste of his triumph now that it had finally arrived.

Then he saw it. The first tangible, undeniable sign of his success. Venus, a world that had been utterly changeless for hundreds of millions of years, now appeared to be...

...bulging.

Saadya grinned, elated. It really is working!

* * *

With most of the da Vinci's senior staff present, the small bridge seemed crowded enough to make David Gold reminisce about his youth. He recalled the time he had stuffed himself into a small hovercar along with eleven other first-year Starfleet Academy cadets.

Gold sat in the captain's chair, watching the forbidding hellworld that filled the viewer, along with everyone else present. The tension in the air was palpable, and he realized too late that his biosynthetic fingers had dug themselves completely through the upholstery at the base of the chair's left armrest. Instinct can get too big a push from technology sometimes.

He hoped Pas stopped to consider such things occasionally.

"The procedure seems to be working well," Tev said, grunting in apparent disbelief as he leaned over the engineering console.

"Has anybody noticed the predicted expansion effect yet?" said Gomez, who had situated herself at one of the science stations, across the bridge from Tev. "It's already measurable and it's steadily increasing. Looks like those newest atmospheric models were pretty accurate."

Gold turned and glanced around the rear of the bridge. Abramowitz, who stood between Corsi and Stevens, watched the forward viewer closely, squinting as if to tease out every possible detail.

"Looks the same as ever to me," Abramowitz said. "Of course, I suppose I must be the proverbial untrained eye."

"Then consider this your training," Stevens said. "Keep watching the cloud bands near the equator. We're in for quite a show."

Corsi remained silent, her body taut as a bowstring. Her gaze was riveted to the screen as though she were seeking a target onto which to lock every weapon in the ship's arsenal.

Gold turned back toward the screen and continued watching in silence. At first he thought it was his imagination, but as the minutes piled up, he knew there could be no denying it.

Venus was growing, especially in the middle.

"Look at that," Corsi said.

Abramowitz whistled. "I'll be damned."

Gold pushed a button on the arm of his chair. "Gold to Saadya."

"Saadya here. Ishtar is finally rising, David. I'm glad you've come to assist in her ascent."

"Me, too, Pas." Gold watched as the planet's atmosphere continued pushing outward and upward, like a river flooding and overflowing its banks. The normally slow-moving cloudtops had begun whipping themselves into a frenzy, and golden streamers of gases were reaching spaceward, delicately tapered fingers probing the shallow shoreline of the cosmos. As they rose, the plumes of vapor lengthened, attenuated, and vanished in brilliant, thousand-kilometer-long streaks of auroral blue, violet, and magenta, scattered and ionized by the fierce onslaught of the solar wind. The rising gaseous tracteries began appearing—and vanishing—faster and faster as the force-field network gradually ramped up its power output, pushing oceans of atmosphere to higher and higher altitudes.

Through the gathering brilliance of the ionized atmospheric "blow-off," Gold could see that the planet's sweltering carbon dioxide blanket had to be dissipating at a phenomenal rate, like a balloon whose air was being abruptly released. He could only watch in wonderment.

Gold was startled, just for an instant, by an alarm Klaxon from the science station from which Gomez was monitoring the proceedings. Noting that his channel to Saadya was still open, he momentarily interrupted the audio feed.

“Report,” Gold said, turning his chair toward his first officer.

“This can’t be good,” Gomez said. “Maybe Dr. Saadya should have spent more time running geological simulations.”

“Why do you say that?”

“I’m reading a massive geological upheaval occurring beneath the tessera of Alpha Regio. About twenty degrees south latitude.”

“What could be causing it?” Gold wanted to know.

“We know that the Venusian surface lacks plate tectonics,” she said, lifting her gaze from her readouts. “And that causes the planet to experience torrential eruptions of liquid magma every half-billion years or so because of the seismic stresses that accumulate without there being any plate motion to relieve them.”

Gold blinked at her. “And this has exactly what to do with the price of halvah?”

“My point is that the last time this happened was about five hundred million years ago. Venus is due for another large eruption right about now.”

“Give or take ten million years,” Stevens quipped.

Gold scowled. “That’s a little too much coincidence for me to believe in.”

“I agree,” Tev said. It occurred to Gold that he’d never heard the Tellarite use that particular expression before. “The likely culprit is Project Ishtar itself.”

“You mean the force-field network is setting off quakes?” asked Gold.

Tev shook his head impatiently. “Only indirectly, by causing a precipitous change in air pressure at the surface datum.”

Gold rose from his chair and approached the science station. “How bad is it? Are any of the ground stations in harm’s way?”

Gomez consulted her sensors once again, then faced Gold, who felt a mounting sense of alarm as he watched her face suddenly drain of all color. “One of the lower-elevation ground stations is right in the path of the lava flow—and it’s going to be engulfed in less than two hours.”

“Two hours,” Gold repeated, allowing himself to feel relieved as he turned the information over in his mind. “That should give us enough time to evacuate.”

Gomez continued to look worried. “Maybe. As long as things don’t get any worse.”

A worm of apprehension turned in the pit of Gold’s stomach. “What do you mean? How much worse

could it get?”

“I’m reading the mother of all volcanic eruptions letting loose right now under Alpha Regio. It might set off a domino effect that ends up repaving most of the planet’s surface—in the span of three or four hours.”

“I’ll start coordinating the evacuation plan,” Corsi said.

Gold nodded to his security chief. Oy. Looks like we might have arrived just in time for the half-billion-year barbecue.

He reopened the audio feed to Ishtar Station. “Pas, I think we have a huge problem on our hands...”

* * *

TO BE CONTINUED...

About the Authors

MICHAEL A. MARTIN, whose short fiction has appeared in *The Magazine of Fantasy & Science Fiction*, is coauthor of *Star Trek: The Next Generation: Section 31: Rogue*; *Star Trek: Deep Space Nine: Mission: Gamma Book 3: Cathedral*; and *Roswell: Skeletons in the Closet* (all cowritten with Andy Mangels). Martin was the regular cowriter (also with Andy) of Marvel Comics’ monthly *Star Trek: Deep Space Nine* comic-book series, and has generated heaps of copy for Atlas Editions’ *Star Trek Universe* subscription card series. He has written for *Star Trek Monthly*, *Dreamwatch*, *Grolier Books*, *WildStorm*, *Platinum Studios*, and *Gareth Stevens, Inc.*, for whom he has penned several *World Almanac: Library of the States* nonfiction books. *Ishtar Rising* is the third prose *Star Trek* story to bear his name. Martin and Mangels currently have several more collaborative projects in the works, including two *Star Trek* novels involving the crew of the *U.S.S. Excelsior* (including *The Sundered*, the first volume in the forthcoming *Star Trek The Lost Era* series), a couple of short stories for the *Star Trek: Deep Space Nine: Prophecy and Change* and *Star Trek: Tales of the Dominion War* anthologies, and a pair of *Roswell* novels (titled *Pursuit* and *Turnabout*; both are set after the conclusion of that late, lamented television series). When not hunkered over a keyboard in his high-windowless basement, Martin reads voraciously, plots the revolution, and plays with his two wee bairns, James and William. He lives in Portland, Oregon, with his wife, Jennifer J. Dottery, their aforementioned children, and a mortgage of galactic proportions.

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ANDY MANGELS is the coauthor (with Michael A. Martin) of *Star Trek: The Next Generation: Section 31: Rogue*; *Star Trek: Deep Space Nine: Mission: Gamma Book 3: Cathedral*; *Roswell: Skeletons in the Closet*; and several more future *Star Trek* and *Roswell* projects. Flying solo, he is also the author of *Animation on DVD: The Ultimate Guide*, as well as the best-selling book *Star Wars: The Essential Guide to Characters*, plus *Beyond Mulder & Scully: The Mysterious Characters of The X-Files* and *From Scream to Dawson’s Creek: The Phenomenal Career of Kevin Williamson*. Mangels has written for *The Hollywood Reporter*, *The Advocate*, *Just Out*, *Cinescape*, *Gauntlet*, *Dreamwatch*, *Sci-Fi Universe*, *SFX*, *Anime Invasion*, *Outweek*, *Frontiers*, *Portland Mercury*, *Comics Buyer’s Guide*, and scores of other entertainment and lifestyle magazines. He has also written licensed material based on properties of *Lucasfilm*, *Paramount*, *New Line Cinema*, *Universal Studios*, *Warner Bros.*, *Microsoft*, *Abrams-Gentile*, and *Platinum Studios*. His comic-book work has been published by *DC Comics*, *Marvel Comics*, *Dark Horse*, *WildStorm*, *Image*, *Innovation*, *WaRP Graphics*, *Topps*, and others, and he was the editor of the

award-winning Gay Comics anthology for eight years. He will be editing a new comic anthology, GAY, INK., in 2003. In what little spare time he has, he likes to country dance and collect uniforms and Wonder Woman memorabilia. He lives in Portland, Oregon, with his longtime partner, Don Hood. Visit his Web site at www.andymangels.com.