

TERRA CONFLICTUS

FIELD FICTION

VOLUME 03 | **THE CLEAN NUMBER** | THREE STORIES



JESSE ALEXANDER

TERRA CONFLICTUS 2066

FIELD FICTION · COLLECTED VOLUME 03

THE CLEAN NUMBER

26 JUL - 16 AUG 2066

3 STORIES · 10,914 WORDS

Three came in this stretch instead of the usual seven. The daily desk went dark for most of a fortnight and I am not going to pad around it. Three is what was filed and three is what is here.

EDITOR'S NOTE

Three came in this stretch instead of the usual seven. The daily desk went dark for most of a fortnight and I am not going to pad around it. Three is what was filed and three is what is here.

What they have in common is a number that is true. The Dawn Broadcast at Kalemie reads the water quality out every morning and the water quality is excellent, because nobody measures resonance and resonance is not on the list. Arcadia reads its district allocations at seven, and the only honest second in the whole briefing is a pause before the Canopy Core figure. In Neo-Tokyo a committee narrows an acceptable band four times in eleven years, each revision consulted on, published, open for comment, correct on its own paper, and eleven hundred people in the Shatter Belt wake up outside it without a cell of them having changed.

Nobody in these three is lying. That is the part I keep coming back to. The instruments are calibrated. The paperwork moves. The officials read out what they were handed. The harm sits off the sheet where no one has to sign for it, and when you go looking for the person at the bottom of it there is no person there.

*Read them in the order printed. A man who sinks opens it.
A man who will not put an eleven kilo case down holds the
middle. A nose that works too well closes it, and she sleeps
in her mask now.*

// EDDA SORREL, FIELD FICTION

FIELD FICTION DESK · TERRA CONFLICTUS 2066

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STORY 01 OF 03 · No. 30

BALLAST

KALEMIE / DEEP SURVEY ZONE · GORILLA / ACU TERRAIN
OPS · 3,207 WORDS

Sixty meters down in the lakebed intake tunnel under Kalemie, walking. Not swimming. Walking, boots on silt, one hand on the pipe wall, the way a man walks a corridor at night in a house he used to live in.

That is gorilla stock for you. They built me dense. Bone like green wood, muscle laid on in sheets, a chest they specced for terrain work at altitude and then sent to a lake. I do not float. I have never floated. Put me in water and I go to the bottom and stay there, and every diver I have ever worked with finds this hilarious for about four minutes and then stops laughing. The bottom is where I live. The surface is a place I have to earn. A baseline in trouble kicks up. I cannot kick up. If the tunnel goes, I walk out or I do not come out.

The other half of the spec sheet is air. I burn it. A Warden terrain rating breathes roughly three times what a baseline

breathes doing the same work, because the engine is three times the engine, and the scrubber in the pack on my back was rated for nine hours on a man half my size. On me it was five and a quarter. Chishimba knew that when she gave me the job. Chishimba knew everything when she gave me the job. That is the part I got to enjoy at leisure, later, standing in a flooded room with the whole thing finally in my hands.

The job, the way it was sold: the researcher is alive in the fracture, go get her before the window shuts.

Commandant Ruth Chishimba said it in a boat shed on the Lakeside Compact side, at two in the morning, with her collar tabs off. She was my lieutenant eleven years ago. She used to check my scrubber herself before a dive because she did not trust the quartermaster, and there is a kind of loyalty that gets installed in you in your twenties by a person doing small competent things for you, and it does not come out. Ask me how I know.

"Solange," she said. "The Brotherhood one. Eight months gone, everybody filed her drowned. She transmitted last night from inside the exclusion perimeter and the assessment attached to it is real. Only she writes like that." She put a chart on the bench between us and did not touch it. "Meridian East's survey crew came up through the sealed northern tunnels out of the Copperbelt. They broke a lakebed formation this week. They are inside the perimeter

from below and they do not know it. They will reach her before they reach the deposit."

"Send Wardens."

"Wardens go in kit with transponders and a chain of command that files. Whatever is in that fracture is below the survey coordinates, Idriss. It cannot be in a log." She said the next part flat. "The intake maintenance window opens at twenty-three hundred and the pumps come back at oh eight hundred. Nine hours of dry pipe. When the pumps come back the tunnel back-floods against you and there is no walking out of a nine-atmosphere differential."

"And the pay."

"Cardiac protocol. The full Warden course, the one they took off you when they mustered you out, four years of it, and a clinic slot at Base 7 for anyone you name."

There it is. My sister's girl is eleven and lives on Lakefire Shore and has spent six weeks doing a thing with her breathing where the top of it does not arrive. Three villages, all at once, same pattern, and Carrasco's people have a theory they cannot say out loud in a market. So I did not haggle. Chishimba knew I would not haggle. She had my file. She wrote most of my file.

The lake glows, by the way. Amber, deep, slow, and the whole city has agreed to call it algae. It used to pulse every seventeen seconds. My whole childhood, seventeen. It is fourteen now. The kids on the community dock keep a chart

of it in chalk on the wall of the fish shed, position and interval, because children notice the glow before adults do, and they have not been trained yet to know which questions cost money.

I went in through the intake access at twenty-three forty. Pipe two and a half meters across, drained to a skin of silt, and then the old service bore, and then the thing nobody has a name for.

The fracture is not a cave. It is a place where the lakebed came apart along a seam and the water found it, a stack of rooms and slots leaning off true, and the walls in there are seeded with the amber. Not veins. Not ore. It sits in the rock in slow smears like something spilled and left, and it pulses, and when it pulses the light comes through the water in a way that makes your own hands look like an X-ray of your hands. At six hundred meters in, the pulse got into my chest. That is not a metaphor and it is not fear. It is a physical thing. The resonance catches in a big chest cavity and rides your heartbeat, and there is a reason the corridor gene-forged call it lake drift and a reason ACU Medical has no billing code for it. Mine started as a stammer in the pulse, one beat arriving early every dozen or so, then two.

Four hours and forty on the scrubber by then. I remember because I had started doing the arithmetic every hundred steps, which is what you do instead of panicking.

I found her lamp before I found her. A worklight wedged in a crack, running off a cell she had rigged to something in the rock, which is a sentence I did not enjoy writing down in my head at the time.

Solange was sitting in an air pocket the size of a bus, on a shelf above the waterline, wearing a sealed suit gone gray at the knees. Small woman. Fifty, maybe. Eight months of stores in crates behind her and a bore log spread out under stones so it would not curl.

She looked at me for a long moment.

"They sent a Warden," she said.

"They sent me."

"You are the same thing wearing different trousers." She was not being cruel. She was being accurate, and I let accurate people finish. She held up two fingers. "Two hours. You are not getting me out in less and you will want the two hours."

"The pumps come back at eight."

"Then you have the time you have." She stood up and her knees did not work well and she did not comment on it.

"Come and see what you came to see."

Here is what I came to see. I will lay it out the way it landed on me, one piece at a time, because that is the only honest way to tell it.

She took me down a slot in the rock into the room the survey crew have been drilling toward for three weeks. It is a chamber maybe forty meters across, half flooded, and the amber in the walls in there is so thick that the light comes off the water and up onto the ceiling and moves. That is the fourteen-second pulse. It is not a phenomenon. It is a wound with a heartbeat.

Two meters under, on the floor, was a bore plug.

I know a bore plug. I have carried a hundred of them. This one was ACU, standard extraction-test pattern, capped, and the cap had a serial and the serial had a date, and the date was nineteen months old, and around it on the floor lay four shot-hole casings and the tail end of a lift harness.

The harness was rigged with a doubled becket and a seizing on the standing part, tied backward, which is a stupid habit I have had since I was twenty-two because a rigger on the Mombasa Road taught it to me wrong and I never unlearned it.

I have tied that knot maybe four thousand times. I have never seen anyone else tie it.

I stood in that water with the light going up the walls in fourteen-second breaths and I did the thing I did not want to do, which was remember. Nineteen months ago I hauled forty tons of gear down the intake bore on a job filed as maintenance. Four nights. Sealed crates, no manifest, terrain rating and two Wild Dogs and a survey lead who never took his hood off. I set the lift lines myself. I rigged the harness that lowered the string. I never saw what went in the hole because we were pulled out at the third night and reassigned to the Copperbelt, and I signed the sheet, and I got a commendation with no citation attached, which at the time I thought was Warden humor.

The Meridian East crew did not break the lakebed formation this week.

The ACU opened it nineteen months ago. Ran an extraction test, took a core, capped the hole, filed nothing. And the cap did not hold, or the seam moved, or the rock decided, and the pulse went from seventeen seconds to fourteen and the seep went into the fracture and the fracture goes into the intake, which is the water, which is the promise, which is forty million lakeside and a Dawn Broadcast every morning at oh five thirty reading out numbers that are completely accurate about the wrong things.

The suppression is not hiding a deposit. Everybody in the Corridor is arguing about who gets to own a secret. The

secret is already in the water. It has been in the water for nineteen months and it is in the lungs of three villages of children, and it got there because someone in Command wanted a look and did not want a paper trail, and the man who carried the drill down the hole and tied the knot was me.

"How long have you known it was ACU?" I asked her.

"Six months." Solange was watching my face and not the rock. "I stayed because the moment I surface with this, the water governance contract is over and the Wardens are an occupation by Thursday, and the only thing standing between those villages and Meridian East's extraction protocol is a governance structure I would be destroying." She let that sit. "I have been down here for eight months trying to find a version of the truth that does not kill the people it is about. I have not found one. You will not find one in the next four hours either."

"And Chishimba sent me because."

"Because you are the one witness who cannot testify," she said, "without confessing."

That is when the shot went in.

Meridian East does not sneak. They arrived up the northern tunnel with lights and a compressor, and the noise

came through the rock as a pressure in the sinus before it came as sound. Their survey foreman was a rangy EO man named Teodor Vlach who had two Boars with him and a seismic charge string he had been walking toward this chamber for three weeks. Vlach did not want to kill anybody. Vlach wanted a confirmed formation reading so his people could file a first-mover claim before the ACU auditors ate his funding, and he was going to get it by putting a shot into a seam that a woman had spent eight months mapping as already failing, and he would have slept fine, because he had successfully not asked what the seam did.

Solange started shouting at him about the fracture geometry. Vlach's answer was to tell his Boar to walk her back.

The Boar came into the water toward her.

I would like to tell you that I made a decision. I have run this back a lot and I do not think a decision was involved. I went off the shelf into the chamber and I hit the water like the thing I am, which is a falling object, and I got a hand on his harness on the way down and took him to the floor with me, and the floor is where this argument was always going to be settled, because a Boar in water is buoyant and quick and I am neither, and none of that matters at nine meters with your back on rock. He fought well. He got a bar across my mask and a blade into the meat above my hip, and he did not know that the specific gift of the build is that I can simply be

heavier than a problem for longer than the problem can stay interested. That is the whole trick. There is no technique in it. I put him under me and I stayed there and I counted, and the amber went on doing its fourteen seconds on the ceiling above us, and eventually he stopped negotiating.

The second Boar put four rounds into the water at me. Water eats rounds. He learned that.

Vlach did the intelligent thing, which was to fire his string and run.

The shot took the roof of the north slot and put the whole ceiling down into the chamber, and the chamber filled, and I lost the light, and here is where the spec sheet came due.

Solange got knocked off the shelf. She had a pony bottle and a baseline body and she was going up, which is correct, which is what a floating person does. And I could not follow her. Not slowly, not badly, not at all. I went down onto the rubble like a dropped anchor with a hole in my hip and a scrubber reading fifty-one minutes and a route out that was now under a hundred tons of lakebed.

So I walked.

I got her ankle on the way past and pulled her down to me, which she did not enjoy and which saved her life, and I clipped her to my chest rig where the cargo goes. Then I put my shoulder into the collapse and found the seam of the old service bore by feel, because I had rigged lines in that bore nineteen months ago and my hands remembered the pitch of

the wall. I moved rock. Some of it was the size of a market stall. That is not heroism, it is displacement, and it is the only thing my body was ever for. It took eighty minutes to make a hole I could get a shoulder into. It took another hundred to walk the bore with a woman clipped to my chest and my own blood making a warm patch under the suit and the pulse in the rock riding my heart with two beats arriving early in every ten.

At oh seven fifty the pumps came back early.

You feel it before you hear it. The water in the pipe leans on you. I got maybe forty meters of walking done against it before it was not walking anymore, it was leaning into a wall that was moving, and the scrubber alarm was a small polite tone that nobody has ever redesigned to sound like the end of a life. Solange was unconscious against my chest. My vision had gone down to a tunnel with amber at the edges, and I could not tell you whether that was the CO₂ or the lake drift, and it did not matter, because both of them ran on the same clock and the clock was the build.

I made the access. I always make the access. I have caught every rail I have ever jumped for and one day I will not and I will not be around to file the report.

We came out at the community dock on Lakefire Shore at twenty past eight in the morning, which is after the Dawn Broadcast, so the day's clean numbers were already read out and hanging in the air over the market like a hymn. The water quality was excellent. It is always excellent. Nobody measures resonance because resonance is not on the list.

Carrasco's people took Solange. Elder Zawadi came down the dock with two of her sons and did not ask me a single question, which is its own kind of interrogation.

And out past the fish traps, standing in a shore skiff with the engine off, was a woman in cross-faction kit that did not match itself, watching me the way you watch a number you are adding to a column. Three months she has been on that perimeter. Amber, they call her, which is a joke somebody in Base 7 made and now cannot take back. She looked at what was in my hands and she made a decision about me and she did not tell me what it was. Then she started the engine and went north.

What is in my hands is the bore plug. I brought it up. It is forty centimeters of capped ACU steel with a serial and a date on it and a lift harness still shackled to the eye, and on the standing part of the harness is a seizing tied backward by a man who was taught wrong at twenty-two and never fixed it.

Give this to Zawadi and the water council has proof by nightfall, and the contract ends, and forty million people find out the promise broke nineteen months before anybody told them, and the Wardens who were born on this shore go home to families who now have to decide what they are. Give it to Chishimba and I get the cardiac protocol and a clinic slot and my niece gets seen by a Base 7 doctor who will chart her breathing and never once be allowed to write down the cause. Give it to Meridian East and they will thank me and start a seismic program that takes the lakebed apart, and the water changes, and forty million people will not need a document to tell them, because they grew up on it.

I have not decided. That is the true part and it is the part I would cut if I were making myself look better.

I sat down on the end of the community dock with the thing in my lap. Behind me on the fish shed wall the kids have their chart, chalk marks in a column, position and interval, six weeks of it in three different hands. Fourteen at the bottom. Fourteen. Fourteen. They will add today's after school.

The lake pulsed. I counted it against my own heart, which now has two beats arriving early in every ten and will have three by winter, and I sat there in the sun with my hip leaking and the whole broken promise capped in steel across my knees, heavy the way I am heavy, going down wherever I put it.

STORY 02 OF 03 · No. 26

WITHIN TOLERANCE

NEO-TOKYO / SUB-2 BELT · CORVID-STOCK / LINEAGE
UNRESOLVED · 4,509 WORDS

The stairwell between Sub-2 and Sub-1 had ninety-one steps and no lift a stranger could use, and Emeka Nwosu had come up forty of them when the woman with the lamp decided to sit down and watch.

She was maybe sixty, baseline, in a GHOST KIT jacket three sizes past hers, and she sat on the landing with the lamp between her knees and her chin on her fist like somebody settling in for the second half of a broadcast. She did not offer to help. He would not have accepted, and she seemed to know that, so the two of them had arrived at an understanding without spending a word on it.

The case weighed eleven kilos. It was the size of a fist inside a great deal of padding, and the padding was the point, because a reference standard that has been knocked about is a rock.

Somebody had numbered the steps in white paint a long time ago, and somebody else had kept it up. Beside some of the numbers there were names. Not many. Twenty or so in ninety-one steps, in more than one hand.

"You want to put that down," she said.

"Not on this surface."

"It's a stair."

"It's a stair with a temperature gradient." He took the forty-first. "Four degrees between here and the gallery. The case is rated for two."

She thought about it. "Then it's a stupid case."

"It's an excellent case. It's a stupid stairwell."

She laughed, and the laugh went up the shaft ahead of him, and somewhere above, a door opened to hear it and did not close.

Six days earlier, in the house above the tide line, Kimiya had put a scanner log on the table and said nothing for long enough that everyone stopped what they were doing.

"Belt cohort," she said. "Twelve. Flagged variance-positive on a district audit, Sub-2, eleven days ago. The recall paperwork is on its second signature."

Grigor did not look up from the harness he was rebuilding. "And."

"And the ambient at the time of the audit was four degrees. The instrument is specified for fifteen to thirty." She adjusted her glasses on their cord. "They ran a warm-room scanner in a cold gallery for six hours and flagged everybody who walked past it."

"So the flag is wrong," Idris said.

"The flag is wrong. The paperwork is correct." She looked at Duarte. "Which is the problem, because correct paperwork moves."

Emeka had the log turned around and was reading it upside down, the way he read everything on that table, and he had already found the part that mattered and was giving himself a moment before he said it out loud.

The auditor's signature block sat at the bottom of page one. Certification number, posting, name.

"Something," Kimiya said.

"No."

"You went somewhere."

"I'm reading."

"You stopped reading four lines ago. Your head does a thing." She tapped her own temple. "It goes over about six degrees. Halla says that's you filing."

"Halla says a lot of things in a very nice voice," Grigor said, from the harness.

Duarte had not spoken. She was looking at Emeka with the expression she used on people who were about to make

her rearrange a week, and after a moment she said, "Who ran the audit."

There was no version of the next hour that did not begin with him answering, so he answered.

"My daughter."

Ifeoma had called on a Tuesday, four weeks before that, and led with the weather in Neo-Tokyo, which was how she opened when she had something and wanted him to work for it.

"You're stalling," he said.

"I'm being social. You should try it."

"I'm sixty-two. I've tried it."

"I took a posting." Pause. Down the encryption, her breath came a half-beat late. "HELIX STANDARD. Variance audit, northern desk. I start on the ninth."

He had been standing at the counter with a cloth in his hand and he had gone on holding the cloth.

"That's a good desk," he said.

"That's not an opinion."

"It's a fact. I'm allowed facts."

"Dad." She let it sit. "You've got about four seconds before I decide what your silence meant, so you should probably use them."

He used them badly. He said the verification side had a better progression structure, and she heard the whole of him in it, the way she had been hearing the whole of him since she was nine, and she said, "That's not what I asked," and he changed the subject to her flat, and she let him, and he understood that she had filed the deflection rather than argued with it.

She had his instincts. He had never once been able to decide what to do about that.

Kimiya ran the approach in the seam between two Node 7 reroutes.

"Ninety seconds," she said. "From the Deep Rail service door to the Standards Wing loading bay. The patrol pattern is fourteen months stale and I can predict it."

"How confident," Duarte said.

"Ninety-one percent."

"That's not a number you use."

"It's the number I have." Kimiya's grain came out of the horn on her collar flat and unhurried, and the gap between her face moving and the sound arriving was the same forty milliseconds it had been for a decade, and she knew everybody in the room measured it, and she had stopped caring about that around the time she stopped being able to

stop it. "I'd like a second pass. There isn't one. Node 7 does something twice a shift the pattern doesn't explain, and I can't model it in the time we have, and if I wait for the model the paperwork clears its third signature."

"Then we take ninety-one," Grigor said.

"You're not the one taking it."

"No," he said. "That's why it's easy for me to say."

Idris had the Belt route already. He had drawn it in the notebook in the cipher and then drawn it again in plain lines for the others, and the plain version had a red mark at the Sub-2 gallery stair.

"There's a crew on that stair," he said. "The Ghosted run clinic supply through it. Six of them, seven if the woman with the lamp counts, and she does. They won't fight us."

"You sound certain," Duarte said.

"They'll make us an offer. That's worse." He looked at Emeka. "It's going to be a reasonable one."

The Standards Wing was the least interesting building on the Keiretsu Strip, which was the entire security architecture. Nobody breaks into metrology. There is nothing in a calibration lab that a market will pay for, unless you happen to know what the calibration is used for, and the people who knew that were mostly the people who did it.

Emeka went in behind Kimiya because the lab required a hand that could work at that scale and a body that could stand in a doorway and look like maintenance. The primary variance reference lived in a temperature-stabilised cabinet in a room with two cameras and a floor scale, and the floor scale was the good one, because the cabinet had been designed by somebody who understood that the threat model for a reference standard is not theft. It is a technician being clumsy.

Kimiya took the block out with both hands and held it a moment.

"Heavier than it looks," she said.

"Everything in this world is."

"That's a terrible line."

"I'm tired."

She put it in the case and closed the case and the lock did what a good lock does, which is nothing you can hear.

Eighty-one seconds later they were in the Deep Rail service corridor with the door shut behind them, and at eighty-eight a patrol went past the junction they had crossed at forty, and Kimiya stood in the dark with her hand flat on the wall for three seconds longer than she needed to.

"Ninety-one," Emeka said.

"Don't."

"I wasn't going to say anything."

"You were going to say it in that voice."

He had, in fairness, been going to say it in that voice.

His voice was the thing people took longest to get past. Corvid stock kept the syrx, and a syrx will do an extraordinary impression of human speech, close enough that a listener's ear accepts it for about four sentences and then starts hunting for the seam. He had never fitted a bridge. Two fitters had recommended it. He had declined both times, and told himself it was because the surgery would cost him field weeks, and knew that the real answer was that the sound coming out of him was the last thing about his body that had not been specified by somebody else.

The Ghosted crew leader was a pangolin, forty-ish, scale plate worn matte at the shoulders where a pack rode, and she waited on the Sub-2 gallery landing at step fifty-eight with her hands where he could see them.

"Riko," she said.

"Emeka."

"I know." She nodded at the case. "That's the primary."

"It's a case."

"It's the primary. You came up the Belt stair with it. You didn't want the Strip lifts. So the Strip doesn't know it's gone yet." She had a way of laying facts down like cards she did not need to win with. "I'll give you two weeks of clinic supply

for it. Holders, and the consumables to run a bench. Two hundred doses. That's the whole Belt not drifting for a fortnight."

"For a block of certified alloy."

"For the stamp. You know what a clinic can charge for a within-tolerance stamp down here? A forged with a clean cert can take a surface contract. Can put a kid in a school that logs attendance." She shrugged, and the plate moved. "I'm not stealing anything. It goes back in a month with a paper trail nobody can pull apart. You get your fortnight. Everybody up this stair gets a year."

Behind her, on the third gallery, the noodle counter was open. A big commercial-stock build in an apron the size of a tarpaulin was working the pass, ursine, grey right through the muzzle, moving with the exact economy of somebody whose knees had opinions. He had been built for a theme district. Emeka had known him nine minutes and had already read the whole file off the way he transferred weight at the counter.

He was one of the twelve. Kimiya had the list.

"What's his name," Emeka said.

Riko did not look around. "Sadao."

"He's on the flag."

"Whole gallery's outside. That's what a district audit is for. Every few years they find a new thing wrong with us, and

it's never the same thing twice." She let that sit. "So you understand my offer."

"I understand it."

"And?"

"You're right about all of it," Emeka said. "And if I hand you this, the audit stands, and the twelve go into recall with a clean stamp bought off a stolen standard, and the first person who checks the provenance takes the whole gallery down instead of twelve. You'd be trading a fortnight for the Belt."

"That's a maybe."

"It's a probability. You know the difference. You're just betting the other way, and you've got better reasons than I have."

Riko looked at him for a while.

"Old corvid," she said. "You always this cheerful."

"I'm rationing."

She stepped aside. She did not help with the case, and she watched him take the next flight, all of it, one step at a time, and she made everybody else watch too, and Emeka understood by step seventy that she had turned it into something for the gallery to see, and that whether she meant it as respect or as a lesson depended on things about her he did not have time to learn.

At step eighty-four, Sadao came down with a stool.

"Sit," he said.

"I'm fine."

"You're not, and I've got a queue, so sit." He set the stool down. "I'm mascot stock. The warranty went when the company did. I know what a hip sounds like from four steps up."

He sat. Sadao went back up with the stool under his arm, and did not say anything else, and Emeka took the last seven steps four minutes later with the case in both hands and his hip doing the thing it had been doing since the Shatter Belt, which was reporting late and inaccurately, like a subordinate protecting himself.

Two hours after, in a rented room off the Hikari Bazaar with a BURNER crate for a table, Kimiya had the block on a cradle and three instruments around it and an expression Emeka had seen twice before, both times on people looking at an autopsy that had gone wrong in an interesting way.

"It's fine," she said.

"Define fine."

"It's within one part in ten to the seventh of its certificate. It has never been out of tolerance. It has not drifted, it has not been swapped, it has not been tampered with." She sat back. "It's the best-behaved object in this city."

"Then the scanner."

"The scanner was cold. That explains twelve people, in one gallery, on one day." She turned the display. "It does not explain this."

The plot was a rate. Variance-positive flags on that cohort profile, hemisphere-wide, by year. It went up. It went up in steps.

"Eleven years," she said. "Same profile. Same population. In warm rooms, in cold rooms, in the Nordics, in the Metroplex, on instruments that were calibrated last week and instruments that were calibrated in 2059. Rate climbs." She put a finger on the display, on a riser. "There. And there. And there. And there."

"Four."

"Four."

Emeka took his glasses off and put them back on, which he had stopped noticing he did.

"You'll tell me the population changed."

"The population did not change. The bodies are the same bodies." She pulled the second document up. "The band changed."

It was a committee record. Genomic Tolerance Working Group, standing subcommittee of a standards body whose name had been three different things since 2049. Revision history, four entries.

2055. 2058. 2061. 2064.

Each one narrowed the acceptable variance band. None of them by much. The 2055 revision took eleven percent off the upper bound and cited instrument improvement, which was true. The 2058 revision harmonised two regional bands into one and took the tighter of the two, which was standard practice. The 2061 revision responded to a consultation in which four member bodies requested a conservative posture, and the paper said so, and named them. The 2064 revision corrected a rounding convention.

Four different chairs. Four different drafting secretaries. Eleven pages of minutes between them, all of it reasonable, all of it reviewed, all of it approved by people who would have been able to defend their reasoning at any point in the following decade to anybody who asked.

Nobody had asked.

"Forty thousand," Kimiya said. "That's the reclassification. People who were inside the band in 2055 and are outside it now, without one cell of them changing."

"In the Belt?"

"In the world. The Belt is eleven hundred." She took her glasses off. "Emeka. There is nobody at the bottom of this."

"I know."

"There's no operation. There's no directive. I went looking for the memo and there is no memo, because nobody ever needed to write one. It's four sensible decisions taken years apart by people who never met each other and every

single one of them is correct on its own paper." Her voice had gone quiet, and the room went with it. "I have spent thirty years being told I am difficult because I am correct. This is the first thing I have ever found where being correct four times in a row is how it happened."

Emeka looked at the block on the cradle.

Eleven kilos. Ninety-one steps. A woman with a lamp on a landing and a stool at step eighty-four.

"It's a paperweight," he said.

"It's a very good paperweight."

"Kimiya."

"Yes. It's a paperweight. The number is in a document. You could put that block in the Thames and the band would still be the band on Monday." She rubbed her eyes with the heels of her hands. "I'd like to say I'd have got there faster twenty years ago."

"You wouldn't have. You'd have got here at the same speed and been ruder about it."

She laughed, once, and it caught her off guard, and it was the first time in three months that he had heard it.

The vote happened over the net at 0400 London, which meant Duarte had been awake for it and Grigor had been awake anyway.

Publish it themselves, and a stateless corvid with an unresolvable build and no institutional standing makes a claim against a standards body. The claim would be right. It would be dismissed inside a month, and it would take with it the credibility of anyone whose name touched it.

Or hand the finding to somebody with standing.

There was one auditor in the northern hemisphere whose signature was already on a variance flag traceable to a cold instrument, who had already filed a request for review of her own audit eleven days into the job, and who would be believed.

"You know what you're asking her to carry," Duarte said.

"Yes."

"For the rest of her career."

"Yes."

"And you've considered that you might be doing this because you cannot put it down yourself and she is a way to hand it to somebody."

Somewhere in the house a floorboard took her weight and gave it back. Emeka let the question stand as long as it deserved.

"I've considered it," he said. "I can't rule it out. That's the honest answer and it's the only one I have."

Idris said, on the open channel, "It's her file already. She flagged her own audit before we knew any of this existed."

She was going to get to the scanner. She wasn't going to get to the band."

"She'd have got to the band," Emeka said.

"In four years."

"In four years."

Halla had not spoken for eleven minutes. When she did, it came out in that warm expensive grain, and it was the cruellest thing anybody said that night.

"You are going to tell her the truth about the number," she said. "Are you going to tell her the truth about you."

Nobody filled the silence after it. That was the courtesy.

He met Ifeoma at seven in a room off the Keiretsu Strip that RELAY HOUSE kept for people who wanted four walls and no record. She came in with her coat still on and stopped when she saw the case on the table.

"That's a metrology case."

"It is."

"That's the metrology case." She sat down slowly. "Dad."

"It's going back this afternoon. It hasn't been opened and it hasn't been out of spec and there's a courier docket that will survive an audit, because the man who wrote it has been writing them for thirty years and is better at it than the people who check them."

"That's not the part I'm worried about."

"I know." He turned the display toward her. "This is."

She read the rate plot first, which he had known she would, and she read it the way he read a body, going straight to the risers and reading backward from them for cause. She did not ask a question for six minutes. He watched her not ask.

At the fourth riser she stopped and put her thumb on the year.

"2064 is a rounding convention," she said.

"Yes."

"A rounding convention did that."

"It did about nine hundred of it. The other three did the rest."

She went to the committee record. She read all eleven pages of minutes, and she took a pen out of her coat, an actual pen, and started making notes in the margin of a printed sheet he had put there because he had known she would want to write on something. Her notation was small and even and ran up the right-hand margin when it ran out of room at the bottom, and it was his, exactly his, and he had not taught it to her, and he sat with that for a while.

"The 2061 consultation," she said. "Four member bodies requested a conservative posture. Which four."

"Page nine."

She found it. "None of them are gene-forging programs."

"No."

"They're instrument manufacturers." She looked up.

"They asked for a tighter band because a tighter band sells instruments. That's not even corruption, that's just what you'd say if somebody asked you what your industry needed."

"That's the whole of it," Emeka said. "There's nothing under it. I looked. Kimiya looked, and she's better than I am."

"Somebody has to have noticed."

"Somebody noticed each revision. Every one of them was consulted on, and published, and open for comment for ninety days, and there are comment records, and they're thoughtful." He let that sit. "Nobody has ever put the four of them on the same page. There was no reason to. They're eleven years apart and they're in four different documents and the population they moved doesn't get consulted on anything."

She sat back. The coat was still on.

"You want me to file it."

"I want you to decide whether to file it."

"That's the same sentence with better manners."

"It isn't," he said. "But I understand why it sounds like it from where you are."

She looked at him, and he was aware of being read, and of being read well, and of the specific discomfort of that after

forty years of doing it to other people at a rate they could not match.

"If I file this," she said, "I am the auditor who filed against her own standards body in her first three months. I will be right, and it will be verifiable, and it will follow me into every room I am ever in."

"Yes."

"And if I don't file it, I know it, and I audit against that band on Monday."

"Yes."

"And you'd have filed it yourself if there were any version where it worked."

"There isn't. I'm a build that doesn't resolve. I'd be the reason they didn't have to read it."

She turned the printed sheet over and wrote something on the back that he could not see from where he was sitting, and then she said, without looking up:

"Why did you tell me pediatrics."

He had been ready for a great many questions. Not that one, and not in that order, and there was a period afterward where the room contained the ventilation and nothing else.

"Because I wrote an assessment in 2061," he said. "In good faith. It was accurate. Eight months later somebody used it as the authorising document for a cohort recall I was never told about, and I have spent five years being unable to decide whether that makes me the instrument or the hand."

He kept his own hands still on the table, which took some doing. "And when you told me the posting, what I heard was that you were going to spend your life writing documents that other people would use, and that you would find out what they had been used for afterward, the way I did. So I told you the pay structure was better on the verification side, because that was a sentence I could get out."

Ifeoma put the pen down.

"That's the worst piece of career advice anybody has ever given me," she said.

"Yes."

"By a considerable margin."

"Yes."

"You could have said that in four seconds. On the call. In August." Her voice did not rise. That was the family style and he had never been so aware of having taught it to somebody. "I would have taken the job anyway. I'd have taken it knowing what you knew."

"I understand that now."

"Do you."

"I'm learning it at the speed I learn things," Emeka said. "Which is slower than you'd like and slower than it used to be."

She picked the pen back up. She turned to the second page of the minutes, and found the 2058 harmonisation, and made a note, and asked him a question about the tighter of

the two regional bands, and he answered it as a medic and not as her father, because that was the only door that was open and both of them could see it.

They worked for two hours. Twice she asked him something he could not answer and he said so, and both times she wrote down the question rather than the gap, which was a thing he had never seen anybody else do.

At nine the surface grid came up, and the light through the window went from the colour of the Belt to the colour of the Strip, and Ifeoma stopped and looked at the case on the table.

"It's really fine," she said. "The block."

"It's the best-behaved object in this city. Kimiya's words."

"Is that a joke?"

"It's a measurement." He got up, and got up badly, and did not disguise it, which was new. "The joke is that we carried it up ninety-one steps."

His daughter laughed. It went on slightly too long, the way laughter does when it has been holding a door shut, and then she got her coat off at last and hung it on the back of the chair and sat down again with the pen.

"Right," she said. "Show me the rounding convention."

Sadao's counter opened at eleven.

Emeka took a seat at the end where the gallery draught came through, because the draught was four degrees and he wanted to sit in the thing that had flagged eleven hundred people, and Sadao put a bowl down in front of him without being asked and stood there with the cloth over his shoulder.

"You're the one with the case," he said.

"I was."

"Riko says you turned her down."

"I did."

Sadao considered this. He had a face built in a laboratory to be delightful to children and it had aged into something you could not read at all, which was its own kind of joke and nobody in this world was going to laugh at it.

"Any good for me?" he said. "The turning down."

"Not this month."

"Next?"

"I don't know."

Sadao nodded, like a man receiving the only answer that had ever been worth anything.

"Better than the last three who came through here," he said, and went back to the pass.

Above them, on the surface, the city was running perfectly. It had all the numbers it needed. Every one of them was inside the band.

STORY 03 OF 03 · No. 29

GROUND TRUTH

ARCADIA / THE ROOT · TRUFFLE HOUND / BIOSECURITY
STOCK · 3,198 WORDS

Low tide at the Flats pulls the water out from under the aquaculture piers and leaves eight hundred meters of grey mud with the docks stranded above it like furniture in a room somebody moved out of. Everybody in Arcadia calls the flats ugly. It is the only ground in this city where nothing is watching, so I do most of my working life standing in it up to the knee.

I was out there at zero one hundred with a filter mask hanging around my neck and four hours of tide, looking for one container out of ninety.

Ninety on the Warehouse 7 apron, all legal, all stamped AQUACULTURE BIOLOGICAL SUPPLEMENT by a Calderwood subsidiary that exists on paper the way a good lie exists in a sentence. Port Authority scans them going in. The scan reads seals and mass and manifest numbers. It does not read what I read. I am truffle hound stock, an NAF

agricultural biosecurity build that got funded for six years and cancelled in one, made to walk the vertical farms in the Canopy Core and find blight in a rack of beans before the leaves knew they were sick. Sixty million receptors packed into my sinus and a bulb behind my face taking up room a baseline uses for other things. They gave me a nose that can pull one strain of rot out of a warehouse, then they closed the program and let the stock go. Wrong zoo. That is the term for it. The build works exactly as ordered. It is the situation around the build that never got funded.

The buyer wanted the off-manifest container. One box in that stack had gone through Tide Flats customs without a customs number, and Dr. Rafael Moya had signed for it himself instead of sending a courier, which is the kind of detail that costs more than the cargo.

Rina Matsuda brokered it out of a back room in Drift with the climate control cycling off around us and the air going from managed to raw Pacific in about thirty seconds.

"They don't want it opened," she said. "They want it found and moved. Four hours."

"Who's they."

"Warehouse 3." She let that sit. Everybody in Drift knows Warehouse 3 sits unrented at the Flats with about two hundred thousand in signals equipment inside it pointed at the watershed, and nobody has ever been able to sell you a

faction that owns it. Not NAF. Not the Foundation. Not the exchange program. A fifth chair at a table with four chairs.

"Pay," I said.

"A live bio-signature. Clean intake, current, keyed to a Cedar Row address."

I am not going to lie about my own price. Arcadia revoked my monitoring signature two years ago for obstruction of data transmission, which is what they call it when you take out the implant. Since then I have been administratively invisible. I cannot cross a district boundary in daylight. I cannot draw water at a public point. I sleep in the Root among people the city knows about and does not acknowledge. Rina offered to make me a resident of the most livable city in North America and I took the job in the time it takes to breathe in.

The tide was already turning when I got out to the apron.

Here is how a stack smells. Ninety boxes of cultured shellfish feed, kelp starter, aquaculture supplement, all of it wet organic matter under refrigeration, all of it stinking of iodine and cold protein in a way that fills my whole head like a shout in a stairwell. You do not sniff through that. You sniff past it. I went down the rows with my mask off and my mouth open to pull air over the roof of my palate the way the trainers taught us before the program folded, and for twenty minutes I got nothing but the shout.

Then row eleven, third box up, and the shout had a whisper under it.

Cold, faintly sweet, mineral at the back like a coin held too long. Not shellfish. Not kelp. It went through the seal and the steel and the refrigerated skin of that container the way woodsmoke goes through a closed house, and my eyes watered, and something at the base of my skull sat up and paid attention in a way I did not authorize. I knew the smell. Anybody who has walked the eastern fence line in Cedar Row at night knows it now without knowing they know it. It is the smell of the treeline that used to be twelve meters from the fence and is eight meters from the fence.

I had my hand flat on the box, which is not a thing I remember deciding to do, when the light came across the mud.

Deakin came out of the dark at the end of row eleven with a handlamp and a case the size of a lunch pail slung at his hip. Baseline. Big through the shoulders, moved with the neatness they train into Aurora Rangers and never manage to train out. The case was SCA bio-monitoring gear, the good kind, the kind Rina says a dealer acquired last spring and everyone in Drift got quiet about.

"Don't run," he said. "I've got you on the box already."

The case chimed. Four seconds after he pointed it, which I filed away, because four seconds is a long time when you are the thing being pointed at.

I ran.

Running on the flats is not running. The mud takes you to the knee and gives you back on its own schedule, and the trick is to stay on the shell beds where the aquaculture crews have laid crushed oyster for footing, and I knew where they were because I could smell them, chalk and old salt in lines under the surface. I went along a shell bed at a flat sprint with a hundred and forty kilos of container on my shoulder, which sounds like a lie. It is not. The build came with the frame to carry field kit through a farm block all day. What it did not come with is any ability to bleed off heat, and by the second pier I was cooking in my own coat and my heart was going like a bird's.

Deakin took the boardwalk. Smarter. He had the angle at the pier gate and he knew it, so I went under instead, into the mud between the pilings where low tide leaves a meter and a half of clearance and the underside of the pier hangs down in weed and mussel and forty years of rope.

I lay with my face turned and breathed through my coat sleeve while his beam went over me twice, and the second time it stopped, because he was not using his eyes. He was using the case. Hold it out, wait the four seconds, step. Hold, wait, step. He was walking a chemical gradient toward me the way a ranger walks a blood trail. What got me out of there was the tide coming into the pilings around us both

and making the mud a soup his boots did not understand and mine did.

I came up on the Drift side at the aquaculture pier with the container on my back and Lucia Armand watching me from the night office window, not moving, not reaching for the log. I owe her for that. She has a kid and she photographed something that washed up last month and she has been afraid ever since, and she still did not pick up the handset.

I opened the box in a service bay under the tram bridge, because a nose that works is not the same as a person who can leave things alone.

Eleven ampoules in a chilled cradle. Clear amber, the color a dead leaf goes when the light comes through it. An injector rig with a threaded head. And a routing chit in the lid pocket, a physical chit, paper, because whatever this shipment was it was not going anywhere near a data system.

The chit said R-14.

I stood there in the dark with the cold coming off the cradle and did the arithmetic that ruins the whole night. R-14 is not a berth. The Flats berths run alphabetical off the Port Authority charter and always have. R-14 is a junction tag off the Root's water main schematic, the Cedar Row feed, the corridor Pavel Kovic has been pulling biological samples out of for four months and submitting to a Foundation lab that never once sent him a result.

The cargo was not being shipped out of Arcadia. It had been walked through customs, laundered, and put in a stack of ninety identical boxes so that anyone watching the port would see a shipment leaving. It was going down. Under the city.

Caleb Strand met me at the Root access behind the logistics yard an hour later because I called in the only marker I had. He is Foundation field logistics. He started this job moving conservation supplies, he is moving containers with biological hazard markings now, and he has been looking for a door out since spring.

"You opened it," he said, and put a hand over his eyes.

"What is it."

"It's the stop." His voice went flat. "Moya's people call it the kill-switch line. Introduce it into the watershed feed at the right density and the mycorrhizal mat dies from the roots up, all the way out to the Old Growth, in about eleven days."

"Then why is it going in tonight instead of sitting in a safe."

"Because it's not a safety. It's the invoice." He looked at the crate the way you look at a dog that has bitten someone. "It sits at R-14 in the feed housing where the Foundation techs go every week, and every week Elliot Calderwood sees it sitting there. Sixty days out from critical mass and the exchange program owns the ending of the whole project. Leverage in a pipe."

"So somebody hired me to plant a gun in a room."

"Somebody hired the only person in this city who can find the right pipe by smell," Strand said. "The Root's dark to VERDANT below the second level. Half those junction runs aren't on any schematic since the tendrils came through the housings and nobody's been down the Cedar Row corridor with a working sensor in a year." He was already backing toward the ladder. "Roz. There's no version of this where you carry that box and you're not part of it."

I went down anyway. Two years I have slept in the Root. It is the only address I have.

The corridor under Cedar Row runs nine hundred meters with amber emergency lighting every forty and a water main you can hear working through the wall like a big animal breathing next to you. It used to smell of chlorine and hot metal and the particular dust that lives in a place with no weather. It does not smell like that now.

I had the mask on for the first four hundred meters. That is what a mask is for. Then the housings started, one junction and then another, and I could not read them, because a filter that takes out the compound also takes out everything I use to work. So I pulled it down onto my neck at junction R-9 and took the air in raw.

They tell residents thirty minutes unfiltered in the Old Growth before euphoria and disorientation. Thirty minutes is a baseline number. It is written for a body with five million

receptors and no reason to care. I have sixty million and a bulb built to bind exactly the class of molecule the SCA designed these organisms to signal with, and I got about ninety seconds.

The first thing it does is make everything beautiful. I want to be clear that this is not a metaphor. The amber light went warm, the sound of the main going through the wall became a good sound, the pale filaments coming through the micro-fractures in the pipe housings looked like something I had been waiting a long time to see. There was a tag on the housing at R-11 that read BIOFOULING, SCHEDULED FOR CLEANING and I stood in front of it and laughed until my ribs hurt.

The second thing it does is give you a direction. Not a thought. A pull, low and physical, like a hand between the shoulder blades. Every junction I passed the pull got stronger and it wanted the same thing every time, which was for me to put my hands into the mat growing out of the housing seam and hold on. The Root crews have been telling each other about the dreams for months. Soil under the fingernails on the third floor, all of that. I always figured they were tired men frightening each other. Down there I understood that they were not describing dreams. They were describing an instruction they had been given politely and had not managed to refuse.

I refused it by counting the junction plates out loud like a child and walking with my hands in my pockets. R-12. R-13.

Deakin was standing at R-14 with the case open on the housing.

He was not there for me. He got there ahead of me because his machine reads density gradients and the density at R-14 is the highest in the corridor, which is the whole reason the exchange program picked it. He had a filter mask, a proper one with a chemical cartridge, and he had his sidearm out and pointed at the crate on my shoulder rather than at me, which told me what he had been paid to protect.

"Set it down," he said through the mask.

"Whose are you."

"Does it matter."

It did not, particularly. Solberg has been quantifying the surveillance capability on her own time and building a sales brochure out of it, and there is an unknown buyer moving water data through a Calderwood cutout, and there is Warehouse 3, and any of them would want the stop in their hands rather than in the Foundation's. I set the crate down slow. The pull was on me hard by then. My hands wanted the housing seam so badly that setting a box on the floor felt like an act of enormous personal discipline.

Then he swung the case to cover me while he reached for the crate, and it chimed.

Four seconds. Same tone. The exact tone it had made on the container at row eleven.

He looked at the readout. He looked at me. He held the case out further and back again, the way you shake a thermometer that has given you a number you do not like, and it chimed both times, and I watched a man's whole understanding of the night reorganize itself behind his eyes.

"It's reading you the same as the cargo," he said.

I had my hand on the pipe housing by then. I do not remember putting it there. The mat was warm, warmer than the water in the main behind it, and it moved a little under my palm the way an animal's flank moves.

Sixty million receptors tuned to bind exactly the class of chemical signal the SCA's Bioengineering Division built these organisms to speak with. An agricultural biosecurity program funded for six years by an NAF that thought it was buying blight detection, cancelled in one, the stock let out into the cities to find work. They built the bug and they built the dog. Same division, same chemistry, and one half of it walking around Drift cheap enough to hire.

I was the assay. The thing you carry into a room to find out whether the room is ready. The buyer was never paying for the box. The box was how you get a detector-line body into a live feed housing with its mask off while a machine watches what happens. Nobody in that stack needed a courier. They needed a reading.

Deakin got about half of that. He got enough. He picked up his case and he went up the corridor at a walk that turned into something faster and he left the ampoules and the injector on the floor of the Root with me, which I think is the single most honest thing anybody did in Arcadia that night.

I sat with the crate for a while and let the pull have my hands. That is the part I am least proud of and the part I will not pretend did not happen.

Then I threaded the injector head, and I did not use R-14.

R-14 feeds Cedar Row and it runs downhill from there into Drift and into the vertical farm irrigation that three hundred thousand people eat from. Kill the mat off that feed and you kill it under the whole eastern slope, and the forest that has come back over three years goes with it, and Yusuf Bey's patients still have the compound in them and nothing left to bind it. I went back the way I came, past R-13 and R-12 and R-11 and its polite maintenance tag, up two levels to the loop the Root crews call the pretty run, because it serves the Canopy Core.

The Foundation campus gardens. The show terraces. Elliot Calderwood's private grove behind the glass, where he goes to feel the thing he thinks is communion.

Eleven ampoules into the Core feed at 0410, with my mask back on and my hands shaking so badly it took three tries to seat the threaded head.

The Morning Hydration Briefing runs at 0700 on every public channel, district by district, the way it has for fifteen years. I listened to it from the roof of a Drift container stack with the raw Pacific air coming in off the sound. Drift held. Cedar Row held. Tide Flats held. Then there was a pause before the Canopy Core number, about a second and a half of dead air, and the official read out a three percent reduction in the Core allocation in the voice of a man reading a word he has never had to say in that order before.

Three percent. Drift takes worse than that most weeks and nobody pauses.

They will find it in the terraces first. Discoloration in the show gardens, then the private grove, then eleven days of the mat coming apart under the campus while VERDANT files it as seasonal variance and the Foundation runs a contamination investigation on itself. Somebody very rich is going to have to say in public what is in his own water and where he bought it.

I keep the mask on to sleep now. It does not always help. Some mornings the pull is already up and waiting, and my window faces east, and the treeline is closer than it was in a way that no instrument in this city is willing to say out loud.

