

The Year of the Cicada

Part I: Dr Kabiri

With three short blasts of the claxon, the destroyer's engines rumbled into life. OC Defiant slid to a final halt in the cuboid piece of space it had been allotted.

As soon as he was allowed, Dr Kabiri got up from his acceleration seat and went to the viewing window. Outside, against the darkness, blinked two new sets of green lights: one, the battleship OC Invincible and the other, deep-space cruiser OC Endeavour. The Sun was a dim speck, half the size it had been when they left Neptune. Casting his eyes about, Kabiri searched for the anomaly: the reason they had been dragged all the way out here. But only the stars returned his gaze.

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They were given little time to gather their things. "The fleet commander wants briefing by 0900," said the captain, escorting them to the shuttle bay. "Don't worry, I'll have your luggage sent after you."

Forty minutes later, they were being led along the wide corridors of Invincible. "Dr Kabiri, Dr Bosnan," the commander greeted them as they entered the conference room. Around the long table were ranged two dozen officers and staff, their black uniforms pressed, faces expectant. "Please, take the seats at the end."

In hushed silence, the occupants waited the final minutes to the hour. Then, as the clock reached zero, the commander ordered a start.

"First of all, I'd like to thank you both for coming all this way," she addressed the newcomers. "For those of you who are not aware, these are Dr Kabiri and Dr Bosnan. They are physicists, employed by the Institute of Cosmology. By sheer good fortune, they happened to be conducting gravitational measurements on Triton when the discovery of the anomaly was first made, three weeks ago. They have kindly agreed to join us here as technical advisors to the situation." Cool nods were offered in their direction from about the table.

“Gentlemen, you have been given this morning’s dossier?”

“Yes, we have it.”

“Good.” The commander turned. “Then Lieutenant Sullivan, you may proceed with your findings.”

A sharp-faced young woman nodded and stood, moving to the visualisation deck. From there, she summoned to the centre of the table a high-fidelity reconstruction of the anomaly. Kabiri leant forward, taking in the first proper view he had yet had of the entity. A twisted, tangled nest of field lines converged to a central point. Around it, space appeared to swirl and undulate, as if caught in a storm.

“As determined at the last brief,” began the lieutenant, “we commenced this cycle with a prolonged microwave assay campaign.” She described the findings, casting her hand through the model. Kabiri turned through page after page of Doppler plots, enthralled. The more he saw, the more certain he became that what had been told was right: that this was indeed a Nahid.

Finishing, Sullivan paged forward. “Given the success of the remote survey, we decided to commence traversal trials. For these, we utilised an Mk. 13 reconnaissance drone, commanded via a hundred-kilometre fibre-optic wire.”

A diagram appeared, showing the trajectory of the first drone as it was launched from the mothership. The craft was a blue dot, appearing from the larger object, then speeding inwards on a curved path towards the anomaly. As it neared, it started to twist and undulate violently. Then, finally, it shattered into a hundred tiny fragments.

Besides the diagram was a series of numbers, characterising the trajectory. As Kabiri’s eyes drifted over these, he frowned. Then, quietly, he took up his pen.

“The intended path would take it through all three layers of distortion and into the neck of the object,” continued Sullivan. “There, we hoped to receive pictures of the core that could confirm or disconfirm the Nahid hypothesis.” She indicated the plot. “However, each time, the drone encountered a severe fluctuation in the distortion field, causing catastrophic failure of the craft.”

She clicked forward on this display, each new sentence accompanied by a new diagram.

“The first loss was caused by a computer error, generated by a series of microscopic spikes in the field. The second was by a loss of magnetisation in one of the propellant line actuators. The third was due to sudden overpressure in one of the tanks.”

Kabiri, who had completed his calculations, chased his gaze over them again. As the lieutenant paused, he slowly raised his hand.

“Yes?”

“Sorry,” he hesitated, clearing his throat. “It’s just... might I ask exactly when the

investigation into this object began?”

Sullivan glanced at the commander, who nodded. “Discrepancies were first noted seven months ago,” she informed him.

“Seven months?” Kabiri had to strain to prevent a note of exasperation escaping him. “And nobody at the Jovian Institute of Physics was consulted in that time, or before you conducted these trials?”

Now it was the commander who answered. “Unfortunately, Dr Kabiri,” she said coolly, “due to concerns about United Earth intelligence penetration, this has for the moment been designated a strictly military operation.” Her tone hardened slightly. “In the meantime, if you think there has been some mistake in our approach, perhaps *you* could explain what that is.”

Kabiri felt himself involuntarily redden, only now realising how that had sounded. “Right, yes. My apologies, Commander.” He glanced reflexively again at his notes. “It’s just: according to the model of a Nahid wormhole, if these drones were to complete the paths they were sent on, they would pass into the neck. And after that, they would emerge on the far side roughly four months into the past.” As he spoke, he saw understanding spread across his colleague Bosnan’s face.

The lieutenant gave what could only be the military version of a shrug. “The Mk. 13 is designed to be disposable. We were not concerned with what happened to them after we received the photographs.”

Kabiri proceeded carefully. “Right. But your cruiser was already passively scanning this region at that time. If the drone had emerged then, it would almost certainly have been detected. And since, presumably, no such detection took place, this already guarantees that these trials had to fail.”

Looks of sceptical half-comprehension were exchanged about the room.

“Dr Bosnan?” the commander asked.

The other physicist nodded vigorously. “The Nahid predicts a direct relationship between velocity and negative temporal interval travelled.”

One of the officers leaned forward in his chair, emitting a creaking sound. “So you’re saying these traversals were doomed from the start. Because we already knew their outcome?”

Kabiri said that was right.

“But I thought Lieutenant Sullivan already said that the fluctuations causing the failures are random.”

“They are,” replied Bosnan. He appeared positively radiant. “But the universe has to remain consistent with itself. If the only way for it to do that is for the distortion field to

rip up every drone that goes into it, that's what it'll do."

A period of reflective silence followed.

"Where does that leave us, then?" asked the commander. "Our assignment is to conclusively resolve this investigation."

Sullivan cleared her throat. "We still have three Mk.13s remaining," she said. With additional fuel, they could avoid entry into the neck altogether, preventing any time-travel from occurring. Thus, they could circumvent any inconsistency.

Kabiri blinked. He had found himself staring at the bright, blue-tinted lights above his head. Could this really be so? An actual Nahid wormhole. It was the sort of thing he had fantasised about as an undergraduate.

"Or," he began slowly. "We send it back further."

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"What a stroke of luck," said Bosnan as they sat down to calculate the required path parameters. "Them not involving the Institute, I mean. Just think of the credit we're going to get for this, if it works."

"I suppose I hadn't thought about it that way," replied Kabiri.

Two hours later, they were on the bridge, part of a crowd of officers and staff looking out in the direction of the anomaly. From the fire control trench beside them, the ship's captain directed the operation, the rest of the room waiting in hushed silence.

At 15:00, the command was given to launch, and a small white shape appeared, receding rapidly toward the stars. After several minutes, it had become a barely perceptible dot, then shortly after disappeared altogether.

"Bird is at 100 clicks," the chief operator announced. "Deactivating emissions." The video feed went dead.

"Any sign of debris?"

"Not picking anything up, sir."

The small crowd waited as the seconds ticked by. One minute. Two minutes. Then, suddenly: "New contact detected. Bearing: zero-six. Range: one-two-one megametres, moving away at rate three-six."

Kabiri did a quick calculation in his head. That distance, divided by that velocity, meant a travel time—He didn't need to finish. "ID is in," said the operator. "It's drone 119A. The same. Clock reads: present plus... eighteen months."

It took a moment for the callout to sink in. Then, one voice at a time, the space buzzed into elation. A dozen hands went to those of the two physicists, congratulating them. Kabiri insisted all they had done was apply existing work. Yet, despite his efforts, he could

not stop himself from smiling. After all the decades of speculation, the endless debates, they finally had their answer. Time-travel was indeed possible.

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That evening, he acquiesced to a drink with Bosnan in the ship's bar. Then, leaving the younger man to his own devices, he returned to their shared cabin, where he permitted his soul a moment of respite unpacking his insectary. To his relief, none of the components seemed to have been damaged in the move.

Peering through the microscope, he inspected the brood of leafhopper nymphs he had hatched that morning, noting down their growth rates. They seemed to be doing better than his last attempt. But he would have to wait another few days before he knew if the cixius genes he had added were really going to have an effect.

After quickly checking the other specimens, he got ready for bed, then set about recording a message for his first wife, Xia, back on Callisto. He knew he would never be allowed to send it—so far as she was aware, he was still orbiting Neptune—but the exercise made home feel a little less far off.

“The implications are simply immense,” he declared. “I mean, if this one of Nahid's predictions is true, what else was he right about? The entire discipline will have to reassess dual-metric relativity from the ground up. Just think, the things we might learn, the tricks we might see that we missed. And the timing too; this is exactly what the field needs right now, something to pull us together, just when so much else is trying to break us apart. I have to say, Xia, I'm hopeful. I really am hopeful about this.” He came to the end of a breath. “Of course,” he proceeded more darkly, “none of that can get started until they actually release the information publicly. I just pray they don't make us wait too long for that.”

Part II: Dr Bosnan

“After the success of last week’s unmanned traversal trials, I can announce that we now have orders for the next phase of the operation here. Upon careful consideration, the Military Directorate has decided that this expeditionary force is to play a vital first-strike role in the coming conflict with Earth. One which, I have been informed, could make the difference between victory and defeat.”

A pin could have been heard drop in the half-gravity of the conference room.

The commander continued, outlining their assignment. Their orders were to send a team through the wormhole, several centuries into the past. Upon arriving, the operatives would make their way to Earth, where they would land on the surface and set about burying a bomb at coordinates 32.64, 13.32, just south of the city of Tripoli. This bomb carried an ultra-long timer, such that it would detonate after the original traversal of the operatives, maintaining consistency. By that time, the original unassuming spot of desert would have become the United Earth Deep Space Command, the most protected facility on the most protected planet in the entire solar system, and home to the Terran High Space Fleet. The resulting explosion would destroy the whole base and its contents.

Bosnan couldn’t believe it. After everything, the conferences, the standoffs, the attempts at treaties, the OPC and United Earth were now finally coming to blows. What was this going to mean for his scheduled work on Mars? Looking across at Kabiri, he saw that the older man was just as stunned as he was, his head slowly shaking.

“There can be no doubt that this is an ambitious operation,” continued the commander. “However, we have here the opportunity to disarm our enemy before he even knows hostilities are upon him. The impact on subsequent combat operations, I do not need to tell you, will be immense.

“Each team will receive its own briefing in the coming days. Dr Bosnan, Kabiri, you are to provide scientific consultation for planning and execution. Any recommendations you wish to make should be submitted to me. Is that understood?”

Bosnan nodded, still feeling dazed by the news. Then the scrape of a chair made him turn, and he saw Kabiri was on his feet, face red. “This is outrageous,” said the older physicist. “This act will kill tens of thousands of people. Maybe millions, if you count what comes after.”

“Those are our orders, Dr Kabiri,” said the commander. “We are at war.”

“No, we aren’t. We’ll only be at war if you do this.” Kabiri drew a breath. “If you’re willing to have the blood of all those people on your hands, fine. But I shall play no part in this murder.”

As the room again fell silent, Bosnan stared as hard as he could at the table, trying to look invisible.

“Dr Kabiri,” said the commander coolly. “As members of this crew, we are each bound to obey the orders of the Directorate, whatever they may be. Should you refuse to comply, you will be found guilty of treason.”

For several seconds, Kabiri did not move, and for a horrible moment Bosnan thought he might actually go through with it. Then, slowly, the older man sank back into his chair, the energy draining from his frame.

Thank Christ, Bosnan thought.

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They spent the next three days planning, much of which was devoted to trips back and forth to the armoury, advising on what to do about the bomb.

The engineers had extracted a thirty megaton plutonium device from one of the ship’s torpedoes. This they then repackaged and fitted with an ultra-accurate atomic clock, designed to detonate on the required date. The task now was to ensure that the combined package would last the almost three hundred years it would have to spend underground, waiting for that final moment. Sealing it from outside corrosion was easy enough. The real problem, said the chief, was in preventing the internal components from chemically breaking down or reacting with each other during that time. Specifically, without some kind of hardening of the explosives, he reckoned, when the time came, there was a good chance they would simply not go off.

For this and other reasons, it had been suggested that the burying take place at a time closer to when detonation was required. But that was impossible. For the team to remain inconspicuous as they re-entered Earth, something required to preserve historical consistency, they would have to arrive before the widespread employment of precision radar. This placed the cut-off somewhere in the early 1950s. For margin, it was decided to target an arrival date of approximately 1941, which had the added advantage that the Second World War was taking place at the time, drawing attention away from the operation.

As challenging was the issue of the operatives themselves. For there was an inherent problem with sending people back in time. This came from the fact that, once safely back, they would be incentivised to exploit their position, for example, by seeking to use their foreknowledge of events to acquire wealth, or fame, or to alter some perceived wrong in the historical record. Since any such action would contradict known facts, something the universe could not permit, it was highly improbable that any human would be allowed through the wormhole in the first place.

It seemed the only way to avert this problem was to somehow ensure from the outset that the operatives could undertake no such actions. To this end, each agreed to be implanted with a cortisol adherence chip, which would ensure that they stuck precisely to the plan as given. Then, when the bomb had been buried, the chip would destroy itself, killing the operative, and eliminating the anachronistic knowledge they possessed.

To Bosnan, it seemed gruesome. “You don’t mind that you’ll be killed at the end of all this?” he asked as one of the hulking supersoldiers readied for his procedure.

“Not a tick of it,” came the reply. “We die for the honour of the Directorate.”

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On the evening of the fifth day, with four days left until scheduled launch, Bosnan decided to again review his calculations.

It was gone midnight when he finished. Arriving back at the cabin, he found Kabiri was still up, sunk sullenly in his chair, watching Terran television news. A half-drunk bottle of brown whiskey lay on the table beside him. He did not move as Bosnan entered.

As the latter set about readying for bed, the matter-of-fact voice of the newsreader followed him about the room. It was the Agriculture and Wildlife section.

“This morning, under growing pressure from regional governments, the Minister for Global Biosafety finally announced his department’s approval for the deployment of the L6 Parnkalla-B genovirus.” A shot showed a bustling new conference. “With this last regulatory hurdle cleared, dispersions are expected to begin tomorrow in North America, with dispersions following in Asia later this week. Agricultural groups continue to criticise the time taken for the decision, citing crop reductions of almost 60% since the swarming began. MANDEX, the creator of the virus, predicts that a further two weeks will be required to fully expunge the cicada variants responsible for the degradation.”

“Ridiculous, isn’t it,” muttered Kabiri from his chair. “Wiping out an entire species, just to save a few fruit orchards.”

Bosnan offered no immediate reply. “You know you shouldn’t be watching that stuff.” Kabiri produced a dismissive sound.

“With viral deployment now ready, the United Earth Zoological Institute has announced a formal end to its Parnkalla-B-adjacent species safeguarding initiative. In the five weeks of its operation, it has reportedly collected over ten million genetic codes from cicada samples around the world, discovering eighteen previously unknown variants. It is hoped that the survey will enable the reversal of any additional inadvertent extinctions caused by the genovirus.”

“Well,” said Bosnan, “I’m going to bed.” Kabiri appeared not to hear. Looking over, Bosnan saw him bent forward, attention fixed squarely upon the screen.

Shaking his head, he shut the bedroom door.

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In the morning, their schedule had them inspecting the shuttle the operatives would use for ingress. Kabiri looked like he had barely slept at all. Evidently, he had been playing with his infernal bugs half the night, thought Bosnan. He had had to clean away several left-out egg packets and splicing cartridges before he could even eat breakfast.

“Good morning, gentlemen,” said the flight officer, meeting them outside the parked craft. “If I could just ask you to put these on.” She presented them each with a mask, gloves, and shoe covers.

Inside, the shuttle was cramped, much of its internal space having been given over to additional propellant tanks, needed to reach Earth from out at this extreme orbit. Three hibernation pods nestled against one wall, with equipment ranks occupying the others. The flight officer pointed out where on the hull had been reinforced, so as to allow re-entry through the Terran atmosphere. She also showed them where the plastic explosives were to be placed to ensure the craft sank after it had ditched in the Mediterranean.

Bosnan asked whether a piece of technologically incoherent debris might float to shore, to which the officer replied that all items of positive buoyancy had been removed.

“What about this?” asked Kabiri, picking up a wooden oar.

“That’s been engineered to period,” said the officer. “The operatives will be taking it with them.”

Kabiri nodded thoughtfully, continuing to examine the object.

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The inspection complete, they ate lunch, made a brief plan for the next day, then departed for their separate responsibilities. Bosnan headed to the armoury, where he was to review the latest progress on the bomb. The engineers, apparently, had managed to develop a nanofiber glaze, which they were quite sure would push the life of the chemical explosives to within the required span.

He was halfway through listening to their demonstration, when suddenly a commotion rose outside. Going to the door, he saw to his astonishment Kabiri being led down the corridor, arms cuffed behind his back. For a moment, terror glued him to the spot, then he rushed after. “What’s going on?” he implored the commanding marine.

Instead of a reply, he found himself immediately grabbed and likewise cuffed, then led behind Kabiri to the brig, where the two were placed in opposite, beige-coloured cells.

For the next six hours, Bosnan was asked so many times that he lost count whether he had known of Kabiri's plan. He told them the truth: that he had no idea what they were talking about. In the end, the intention-reader must have borne out his claims, and he was released.

Outside his cell, he found a seething Lieutenant Sullivan. She explained as they walked that Kabiri had been caught attempting to sabotage the shuttle's flight gyroscope with a pocket magnet. "He must have talked his way back on when no one was around," she spat. "Thankfully, someone had the bloody sense to check what he was doing. Otherwise, he could have sunk the entire operation."

Bosnan did not need to ask what was going to happen to his fellow physicist. It was clear in the voice of the lieutenant. What he had done had been treason, and once his interrogation was over, they were going to space him. And that was that.

"I swear I didn't know anything," Bosnan repeated emphatically.

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The remaining three days passed in sombre apprehension. Bosnan supervised as the final preparations were made, additions to the shuttle completed, and the operatives given their complete brief.

Then it was time.

The three time-travellers were loaded into their pods, the last of their equipment stowed about them. Then the shuttle was fuelled for launch.

For a second time, Bosnan found himself stood upon the bridge, gazing in the direction the projection was to take place. This time, however, instead of excitement, it was anxiety that racked his body. For, despite his devoting every gram of energy over the last nine days to ensuring this would work, a successful transit was still far from guaranteed. All it would take was some oversight in the flight computer, or in one of the adherence chips; some overlooked anachronism on his part, and soon the whole craft would be a cloud of debris.

Of course, he could claim that he had not been the only decision-maker. But he doubted that would help him much. As the countdown began, all present bated their breath, waiting out the minute in silence.

"Three. Two. One. Mark!"

There followed a slight jolt. Then the shuttle appeared, sweeping away as the engines accelerated it toward its target. "Transfer trajectory achieved," the operator announced. "Ending impulse."

Bosnan watched, heart thudding, as the now faint glimmer continued to recede from them. In two minutes, it was through the outermost layers of distortion, the turbulence field causing the image to wobble back and forth. Then, finally, it faded away to nothing, vanishing into the void.

For a moment, they waited, poised. Then the operator spoke out: “No breakup detected, sir. Looks like a bullseye.”

Cheering erupted. But the celebrations were short-lived; for now came the real test. The operatives had been instructed to set detonation for 14:00 EEST 21/5/2232: three hours ago. Given the light-lag, that meant news would arrive in approximately one hour.

Bosnan, however, had completed his task. The shuttle had made it through, which meant that he had successfully removed, or at least adequately suppressed, all potential for inconsistency with historical fact. With a boundless sense of relief, he excused himself, then headed to the bar to await further news.

Arriving, he found that some sardonic had set the television to the Terran state broadcaster. To his surprise, the BREAKING NEWS banner was already plastered across the screen, accompanied by a live feed of the UE Deep Space Command. Had the bomb gone off already, he wondered. But there was no fire, no smoke. Instead, a dozen Terran battleships were lifting off the sun-scorched tarmac, making for space. He tuned into the words: that same smooth voice from four nights ago. A buried OPC nuclear bomb had been found under the base, it said hurriedly, and had just moments ago now been disarmed.

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Only three years later, after the revolution of Europa, and the restoration of democracy to his nation, did Bosnan finally find out what happened. On Earth, roughly a week before the launch of that fateful shuttle, the UE Zoological Institute had noticed something strange in the genomic samples from its global cicada survey. In sixteen different cases, distributed from East Asia to the very tip of Africa, had appeared the same, single, unfathomable genetic message:

32.647, 13.325. Nuclear weapon. For God's sake, hurry.