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# Tulan

C. C. MacApp



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# TULAN

By C. C. MacAPP

***To disobey the orders of the  
Council of Four was  
unthinkable  
to a Space Admiral of the old  
school. But the trouble was,  
the school system had  
changed.  
A man, a fighter, an Admiral  
had to think for himself now, if  
his people were to live.***

**W**HILE facing the Council of Four his restraint had not slipped; but afterward, shaking with fury, the Admiral of the Fleets of Sennech slammed halfway down the long flight of stone steps before he realized someone was at his elbow. He slowed. "Forgive me, Jezef. They made me so mad I forgot you were waiting."

Jezef (adjutant through most of Tulan's career, and for some years brother-in-law as well) was shorter and less harshly carved than his superior. "So they wouldn't listen to you. Not even Grefen?"

"Even Grefen." That vote had stabbed deepest of all.

Jezef took it with the detachment that still irritated Tulan. "The end of a hundred years of dreams; and we go back under the yoke. Well, they've always been soft masters."

They reached the ground cars. Before getting into his own Tulan said coldly, "Since you're so philosophical about it, you'll be a good one to bear the sight of men saying good-bye to their families. We're to take full crews to Coar and surrender them with the ships. Requisition what help you need and get everybody aboard by noon tomorrow."

Jezef saluted with a hint of amused irony, and left.

Whipping through the dark icy streets, Tulan smiled sourly, thinking how Sennech's scientists had reversed themselves on the theory of hyperspace now that Coar had demonstrated its existence. Maybe the Council was right in mistrusting their current notions. As for himself, he saw only two things to consider: that with Coar swinging behind the sun, the accuracy of her new weapon had gone to pot; and that before she was clear again he could pound her into surrender.

His swift campaigns had already smashed her flabby fleets and driven the remnants from space, but the Council, faced with the destruction and casualties from just a few days of the weird surprise bombardment, was cowed.

He'd spent the previous night at home, but wasn't going back now, having decided to make his farewell by visiphone. It was the thing he dreaded most, or most immediately, so as soon as he reached the flagship he went to his quarters to get it over with.

Anatu's eyes—the same eyes as Jezef's—looked at him out of the screen, filling him with the familiar awkward worship. "You've heard?" he asked finally.

"Yes. You won't be home before you go?"

"No; I ..." He abandoned the lie he'd prepared. "I just didn't feel up to it."

She accepted that. "I'll wake the boys."

"No! It's—" Something happened to his throat.

She watched him for a moment. "You won't be back from Coar. You've *got* to speak to them."

He nodded. This wasn't going according to plan; he'd intended it to be brief and controlled. Damn it, he told himself, I'm Admiral of the Fleets; I've no right to feelings like this. He straightened, and knew he looked right when the two sleepy stares occupied the screen.

Their hair was stiff and stubborn like his own, so that they wore it cropped in the same military cut. It could have stood a brush right now. They were quiet, knowing enough of what was wrong to be frightened.

He spoke carefully. "I'm going to Coar to talk to them about stopping the war. I want you to look after things while I'm away. All right?"

"All right, Dad." The older one was putting on a brave front for the benefit of the younger and his mother, but the tears showed.

As Tulan cut the connection he saw that Anatu's eyes were moist too, and realized with surprise that he'd never before, in all the years, seen her cry. He watched the last faint images fade from the screen.

Sometime near dawn he gave up trying to sleep, dressed, and began composing orders. Presently Jezef came in with cups of steaming amber liquid. They sipped in silence for a while, then Jezef asked "You've heard about Grefen?"

Tulan felt something knot inside him. He shook his head, dreading what he knew was coming.

"He killed himself last night," Jezef said.

Tulan remembered the agony in the old Minister of War's eyes when he'd voted for surrender. Grefen had been Admiral in his day; the prototype of integrity and a swift sledgehammer in a fight; and Tulan's first combat had been under him. A symbol of the Fleet, Tulan reflected; and his death, yes, that too was a symbol—what was there but shame in surrender, for a man or a fleet or a world?

His hand clenched, crumpling the paper it was resting on. He smoothed the paper and re-read the order he'd been writing. He visualized the proud ranks of his crewmen, reduced to ragged lines shuffling toward prison or execution.

It seemed impossible, against the laws of nature, that men should strive mightily and win, then be awarded the loser's prize. His anger began to return. "I've a mind to defy the Government and only take skeleton crews," he said. "Leave the married men, at least."

Jezef shrugged. "They'd only be bundled into transports and sent after us."

"Yes. Damn it, I won't be a party to it! All they did was carry out their orders, and superbly, at that!"

Jezef watched him with something like curiosity. "You'd disobey the Council? You?"

Tulan felt himself flush. "I've told you before, discipline's a necessity to me, not a religion!" Nevertheless, Jezef's question wasn't unfair; up to now it really hadn't occurred to him that he might disobey.

His inward struggle was brief. He grabbed the whole pad of orders and ripped them across. "What's the Council, with Grefen gone, but three trembling old men? Get some guns manned, in case they get suspicious and try to interfere."

Blood began to surge faster in his veins; he felt a vast relief. How could he have ever seen it differently? He jabbed at a button. "All ships' Duty Officers; scramble communication circuits. This is the Admiral. Top Secret Orders...."

Shortly before noon the four-hundred-odd ships lifted out of Sennech's frosty atmosphere, still ignoring the furious demands from the radio. Fully armed, they couldn't be stopped.

Tulan's viewer gave a vivid picture of the receding fifth planet. The white mantle of ice and snow was a backdrop for blue artificial lakes and the dark green of forest-strips (hardy conifers from Teyr) alternated with the lighter shades of surface farms. The ice had been almost unbroken until men came, bringing more heat than Sennech had ever received from a far-off sun.

That had been before the First Solar War, when Teyr (the race of Aum had originated there) ruled. That awful struggle had bludgeoned the home planet back to savagery, and left Coar and Sennech little better off.

With recovery, Coar had taken over and prospered immensely. Teyr stayed wild except for small colonies planted there by the other two planets, and Sennech lagged for a while.

Within Tulan's lifetime his world had found itself ready to rise against the lax but profit-taking rule of Coar, and that rebellion had grown into the present situation.

Sennech's wounds were plainly visible in the viewscreen; great man-made craters spewing incandescent destruction blindly over farm, city, or virgin ice. The planet was in three-quarters phase from here, and Tulan could see the flecks of fire in the darkness beyond the twilight zone. Near the edge of that darkness he made out the dimmer, diffused glow of Capitol City, where Anatu would be giving two small boys their supper.

He checked altitude, found they were free of the atmosphere, and ordered an acceleration that would take them halfway to the sun in fifty hours. It was uncomfortable now, with Sennech's gravity added, but that would fall off fast.

Jezef hauled himself in and dropped to a pad. "I wish I had your build," he said. "Do you really think we can pull this off?"

Tulan, in a good mood, grinned at him. "Have I ever led you into defeat yet, pessimist?"

"No; and more than once I'd have bet ten to one against us. That's why the Fleet fights so well for you; we have the feeling we're following a half-god. Gods, however, achieve defeats as terrible as their victories."

Tulan laughed and sat down beside Jezef with some charts. "I think I'll appoint you Fleet Poet. Here's the plan. No one knows what I intend; we could be on our way around the sun to overtake Coar and either fight or surrender, or we might be diving into the sun in a mass suicide. That's why I broke off the siege and pulled all units away from Coar; the fact that they're coming back around to meet us will suggest something like that."

"Are they going to join up?"

"No; I want them on this side of the sun but behind us. I have a use for them later that depends on their staying hidden. Incidentally, I'm designating them Group Three.

"In a few hours we're going to turn hard, this side of the sun, and intercept Teyr. I want to evacuate our forces from the moon, then decoy whatever the enemy has there into space where we can get at them. That's their last fleet capable of a sortie, and with that gone we can combine our whole strength and go around to Coar. She'll probably give up immediately, on the spot."

Jezef thought it over. "Will they be foolish enough to leave the moon? As long as they're safely grounded there, they constitute a fleet-in-being and demand attention."

"We'll give them a reason to move, then ambush them. Right now we've a lot of reorganizing to do, and I want you to get it started. We're splitting this Force into Groups One and Two. Here's what I want."

They cut drives and drifted in free fall while supplies were transferred between ships, then Tulan held an inspection and found crews and equipment proudly shipshape. Despite the proliferating rumors, morale was excellent.

A few hours later the realignment began. Space was full of the disc-shapes; thin, delicate-looking Lights with their projecting external gear, and thicker, smoothly armored Mediums and Heavies. He had twenty-three of the latter in Group One, with twice as many Mediums and a swarm of smaller craft.

Group Two, composed of the supply ships and a small escort, was already formed and diverging away. That was a vital part of his plan. From a distance they'd look to telescope or radar like a full combat fleet.

He was almost ready to swerve toward the third planet and its moon, but first he had a speech

to make. It was time to squash all the rumors and doubts with a dramatic fighting announcement.

He checked his appearance, stepped before the scanner, and nodded to Communications to turn it on. "All hands," he said, then waited for attention.

The small monitor screens showed a motley sampling of intent faces. He permitted himself a tight smile. "You know I have orders to surrender the Fleet." He paused for effect. "Those are the orders of the Council of Four, and to disobey the Council would be unthinkable.

"Yet it is also unthinkable that a single ship of the Fleet should surrender under any circumstances, at any time; therefore I am faced with a dilemma in which tradition must be broken.

"The Council of Four has lost courage, and so, perhaps, have many of the people of Sennech. We have ways of knowing that the people of Coar, far more than our own, clamor at their government for any sort of peace.

"Coar's fleets are smashed and the remnants have fled from space.

"Clearly, courage has all but vanished from the Solar System; yet there is one place where courage has not wavered. That place is in the Fleet of Sennech.

"At this moment we are the only strength left in the Solar System. We dominate the System!

"Would we have history record that the Fleet won its fight gloriously, then cravenly shrank back from the very brink of victory?

"We left Sennech fully armed, though our orders were directly opposite. I need not tell you that I have made the decision any man of the Fleet would make.

"This is our final campaign. Within a short time we shall orbit Coar herself and force her surrender. That is all."

There was a moment so quiet that the hum of the circuits grew loud, then the monitors shook with a mighty cheer.

Later, alone, Jezef congratulated him amusedly. "They are certainly with you a hundred percent now, if there was any doubt before. Yet there was one argument you didn't even hint at; the strongest argument of all."

"What was that?"

"Why, you're offering them a chance at life and freedom, where they might be going to imprisonment or execution."

That irritated Tulan. "I'm sure you're not so cynical about Fleet loyalty and tradition as you pretend," he said stiffly. "I wouldn't affront the men by using that kind of an argument."

Jezef grinned more widely. "Did it even occur to you to use it?"

Tulan flushed. "No," he admitted.

Teyr and her moon Luhin, both in quarter-phase from here, moved steadily apart in the viewers.

Group One's screen of light craft probed ahead, jamming enemy radar, and discovering occasional roboscouts which were promptly vaporized. Far behind, Group Two showed as a small luminescence. It would never be visible to Luhin as anything else, and then only when Tulan was ready.

They reversed drives, matched speeds neatly, and went into forced orbit around Luhin. On the flagship's first pass over the beleaguered oval of ground held by Sennech's forces—unsupported and unreinforced since the home planet's defection—Tulan sent a message squirting down. "Tulan commanding. Is Admiral Galu commanding there? Report situation."

The next time around a long reply came up to them. "This is Captain Rhu commanding. Galu killed. Twenty percent personnel losses. Six Lights destroyed; moderate damage to several Mediums and one Heavy. Ground lines under heavy pressure. Ships' crews involved in fighting at perimeter. Food critical, other supplies low. Several thousand wounded. Combat data

follows." There was a good assessment of the struggle, with some enemy positions that were known.

The Fleet Force that had escorted nearly one hundred thousand ground troops included five Heavies and other craft in proportion, besides the transports and supply ships. Alone, they'd been pinned down by superior enemy ground forces and by a sizable fleet holed up all around the satellite. With Tulan's support they could be taken off.

Tulan composed orders. "Withdraw ships' crews from lines and prepare to lift. Get wounded aboard transports and prepare to evacuate troops. Set up fire control network to direct our ground support."

The tedious job of shrinking the perimeter, a short stretch at a time, began, harassed by the quickly adapting enemy.

During the first twenty hours the hostile fire was all from ground projectors, the enemy ships not risking detection by joining in. By that time one section of the front had pulled back to where several ships, sheltered in a crater, would have to lift.

Lines of men and equipment converged on the ships and jammed aboard. The actual lift was preceded by a diversion a few miles away, which succeeded in pulling considerable enemy fire. The ships got off in unison, slanting back across friendly territory and drawing only light missiles which the defenses handled easily.

Then, suddenly, a salvo of heavy stuff came crashing in, too unexpected and too well planned to stop. One of the lifting ships, a transport, vanished in a great flash.

Tulan yelled into his communicator. "Plot! Where did that come from?"

"I'm sorting, sir. Here! A roboscout got a straight five-second plot before they downed it!"

"Intelligence!" Tulan snapped. "Get the co-ordinates and bring me photos!"

There were already pictures of the area where the salvo must have originated, and one of them showed a cave-like opening in a crater wall. "That's it!" Tulan jabbed a pencil at it. "You could hide a dozen ships in there. Let's get a strike organized!"

The strike group included four Heavies besides the flagship, with twelve Mediums and twenty Lights. They slanted down in a jerky evasive course while pictures flashed on screens to be compared with the actual terrain.

Ground fire, chemically propelled missiles, erupted ahead of them and the small craft went to work intercepting it. They were down to a hundred miles, then fifty, streaking along the jagged surface so close they seemed to scrape it. This was point-blank range; as the computers raced with the chaos of fire and counter-fire, human senses could only register a few impressions—the bruising jerks, the shudder of concussions, white streaks of rocket-trails, gushers of dirt from the surface, winking flashes of mid-air interception.

Then the Heavies were on target. The flagship jumped as the massive salvo leaped away—not chemical missiles, but huge space torpedoes propelled by Pulsor units like the ships' drives, directing their own flocks of smaller defensive missiles by an intricate network of controls. The small stuff, augmented by fire from the lighter ships, formed momentarily a visible tube down which the big stuff streaked untouched.

The whole crater seemed to burst upward, reaching out angry fingers of shattered rock as they ripped by, rocking and bucking with the blasts. Tulan's viewer swivelled aft to hold the scene. Secondary blasts went off like strings of giant firecrackers. Great black-and-orange fungi-like clouds swirled upward, dissipating fast in the thin atmosphere. Then Tulan spotted what he was looking for: three small ships flashing over the area, to get damage-assessment pictures. There was still a lot of ground-fire from farther out, and it caught one of the three, which wobbled crazily then disappeared in a flash which blanked out the viewscreen.

"Intelligence!" Tulan shouted. "Casualties?"

Intelligence was listening to his earphones and punching buttons. "Two Lights lost, sir. Slight damage to seven more and to one Medium."

"All right. Get a telecopy of those pictures as soon as you can; we certainly hit something. Maybe a Heavy or two." He relaxed, aching, and reflected that he was getting a little mature for actual combat.

The pull-back went on, drawing only the local ground-fire now that the enemy had been taught his lesson. Groups of ships lifted almost constantly. The final position was an oval forty by sixty miles, held almost entirely from the sky. The last evacuees straggled in like weary ants, and when the radio reported no more of them the last fifty ships lifted together and ran the gauntlet with slight losses.

Tulan pulled the Force away for rest and repair. Group Two was idling at extreme radar range, making a convincing blip, and he designed some false messages to be beamed toward it with the expectation of interception. The impression he wanted to give was that Group Two was the Force that had been bombarding Coar, coming in now to join him. Actually, the latter fleet was farther away, hidden in the sun and, he hoped, unsuspected.

Things were going according to plan except for one puzzling item: there was no message from Sennech's small garrison on Teyr. All he could get from the planet was a steady radar scan, which might mean that Sennech's colony had been conquered by Coar's.

He'd been hoping to get certain supplies from Teyr, and now he took a strong detachment in close to the planet to find out what was wrong. The threat finally raised an answer. "This is the Chief of Council. What is it that you want?"

"Chief of Council? What are you talking about? I want the Garrison Commander."

"I suppose you're Admiral Tulan. There's been a change here, Tulan; Teyr is now an independent planet. Your garrison, with Coar's, comprise our defense forces."

Tulan stared at the planet's image. "You're at war with Coar!"

"Not any more, we aren't." There was a chuckle. "Don't sound so shocked, Admiral; we understand you're in mutiny yourself."

Tulan slapped the microphone onto its hangar. He sat, angry and bewildered, until he remembered something, then buzzed Communications. "Get me that connection again. Hello? Listen. I have sixty thousand troops in transports, with almost no food. I intend to land them."

"They're welcome as noncombatants, Admiral. They'll have to land disarmed, in areas we designate, and live off the country. We've already got more refugees than we can handle."

"Refugees from where?"

"Haven't you been in contact with Sennech at all?"

"No."

"Oh." There was a thoughtful pause. "Then you don't know. There's bad radiation in the atmosphere and we're hauling as many away as we can. We can use your ships if you're finished playing soldier."

Tulan broke the connection again and turned, fuming, to Jezef. "We'll blast our way in and take over!"

Jezef raised his eyebrows. "What good would that do?" he asked.

"Why; they—for one thing, we've got to think of those troops! We can't land them unarmed and let them be slaughtered by the savages!"

Jezef grinned. "I doubt if they'll refuse to let them have enough small arms to defend themselves. They can't stay where they are."

"But they're military men, and loyal!"

"Are they? The war's over for them, anyway. Why not let them vote on it?"

Tulan jumped up and strode around the command room, while Jezef and the staff watched him silently. Gradually, the logic of it forced itself upon him. "All right," he said wearily, "We'll let them vote."

A few hours later he studied the results gloomily. "Well, after all, they're not Fleet. They don't have the tradition."

Jezef smiled, then lingered, embarrassed.

"Well?" Tulan asked.

"Sir," (that hadn't come out, in private, for years) "I'd like to be relieved."

It was a blow, but Tulan found he wasn't really surprised. He stared at his brother-in-law, feeling as if he faced an amputation. "You think I'm wrong about this whole thing, don't you?"

"I'm not going to judge that, but Sennech's in trouble far worse than any question of politics, including your own family."

"But if we turn back now Coar will recover! It's only going to take us a few more hours!"

"How long does it take people to die?"

Tulan looked at the deck for a while. "All right. I'll detach every ship I can spare, and put you in charge. You'll have the transports too, as soon as they're unloaded." He stared after Jezef, wanting to call out to him to be sure to send word about Anatu and the boys, but somehow feeling he didn't have the right.

He took the fighting ships away from Teyr, to where Group Two could join up without being unmasked, then started sunward as if he were crossing to intercept Coar. A few miles in, where they'd be hidden in the sun, he left a few scouts.

As he saw it, the enemy commander on the satellite, noting the armada's course and finding himself apparently clear, would have no choice but to lift his ships and start around the sun by some other path to help his planet.

That other path to Coar could be intercepted, and as soon as Tulan was lost near the sun he went into heavy drive to change direction. He drifted across the sun, waiting for word from his scouts. At about the time he'd expected, they reported ships leaving the satellite.

He looked across the room toward Plot. "Plot! Feed that data to Communications as it comes in, will you?" And to Communications: "Can we beam Group Three from here?"

"Not quite, sir; but I can relay through the scouts."

"All right; but make sure it's not intercepted. I want Group Three under maximum acceleration for Luhin, and I want them to get running reports on the enemy."

"Right, sir."

Tulan was in the position he wanted, not needing to use his own radar, but able to pick up that of Coar's fleet at extreme range, too far to give them a bounce. He'd know their course, speed, and acceleration fairly well, without even being suspected himself.

He held that position until the enemy was close enough to get a bounce, then went into drive on an intercepting course.

One of the basic tenets of space maneuver was this: if two fleets were drawing together, with radar contact, neither (barring interference from factors such as the sun or planets) could escape the other; for if one applied acceleration in any direction the other could simply match it (human endurance being the limitation) and maintain the original relative closing speed.

When the enemy commander discovered Tulan's armada loafing ahead of him, he'd been accelerating for about ten hours and had a velocity of a million miles per hour, while Tulan was going the same direction but at half the speed. The quarry began decelerating immediately, knowing it could get back to Luhin with time enough to land.

Tulan didn't quite match the deceleration, preferring to waste a few hours and lessen the strain on his crews. He let the gap close slowly.

He could tell almost the precise instant when the other jaw of his trap was discovered, for Plot, Communications, and Intelligence all jerked up their heads and looked at him. He grinned at them. What they'd picked up would be an enemy beam from Luhin, recklessly sweeping space to find the Coar fleet and warn it of the onrushing Group Three.

The enemy commander reacted fast. It was obvious he'd never beat Group Three to Luhn, and he made no futile attempts at dodging, but reversed drives and accelerated toward the nearest enemy, which was Tulan. Tulan was not surprised at that either, for though Coar's fleets had bungled the war miserably, when cornered they'd always fought and died like men.

He matched their acceleration to hold down the relative speeds. The swift passing clash would be brief at best. He formed his forces into an arrangement he'd schemed up long ago but never used: a flat disc of lighter ships out in front, masking a doughnut-shaped mass behind. He maneuvered laterally to keep the doughnut centered on the line of approach.

Roboscouts appeared and blossomed briefly as they died. The fuzzy patch of light on the screens swelled, then began to resolve into individual points. The first missiles arrived. Intricate patterns of incandescence formed and vanished as fire-control systems locked wits.

A sudden, brilliantly planned salvo came streaking in, saturating the defenses along its path. Ships in Tulan's secondary formation swerved frantically, but one darting, corkscrewing missile homed on a Heavy, and for an instant there were two suns.

Tulan, missing Jezef's smooth help, was caught up in the daze and strain of battle now. He punched buttons and shouted orders as he played the fleet to match the enemy's subtle swerving. Another heavy salvo came in, but the computers had its sources pinpointed now, and it was contained. These first few seconds favored the enemy, who was only fighting the light shield in front of Tulan's formation.

Now the swelling mass of blips streaked apart in the viewers and space lit up with the fire and interception. Two ships met head on; at such velocities it was like a nuclear blast.

Then Coar's ships crashed through the shield and into the center of the doughnut. Ringed, outgunned, outpredicted, they hit such a concentration of missiles that it might as well have been a solid wall. Ships disintegrated as if on a common fuse; the ones that didn't take direct hits needed none, in that debris-filled stretch of hell.

Tulan's flagship rocked in the wave of expanding hot gasses. There was a jolt as some piece of junk hit her; if she hadn't already been under crushing acceleration away from the inferno she'd have been holed.

From a safer distance the path of destruction was a bright slash across space, growing into the distance with its momentum. It was annihilation, too awful for triumph; there was only horror in it. Tulan knew that with this overwhelming tactic he'd written a new text-book for action against an inferior fleet. He hoped it would never be printed. Sweating and weak, he slumped in his straps and was ill.

While brief repairs and re-arming were under way, he sent scouts spiraling out to pick up any radio beams from Sennech or Teyr. There were none. The telescopes showed Sennech's albedo down to a fraction of normal; that, he supposed, would indicate smoke in the atmosphere. He wavered, wondering whether he should detach more ships to send out there. Reason and training told him to stick to the key objective, which was Coar's surrender. He waited only for Group Three to achieve a converging course, then started around the sun again.

They didn't encounter even a roboscout. He crossed the sun, curved into Coar's orbit, matched speeds, and coasted along a million miles ahead of the planet, sending light sorties in to feel out any ambushes. Still there was no sign of fight, so he went in closer where the enemy could get a good look at his strength. Finally he took a small group in boldly over the fourth planet's Capitol and sent a challenge.

The answer was odd. "This is Acting President Kliu. What are your intentions?"

Tulan realized he was holding his breath. He let it out and looked around the silent command room, meeting the intent eyes of his staff. He had an unreal feeling; this couldn't be the climax, the consummation—this simple exchange over the radio. He lifted the microphone slowly. "This is Admiral Tulan, commanding the Fleets of Sennech. I demand your immediate and unconditional surrender."

There was something in the reply that might have been dry amusement: "Oh; by all means; but I hope you're not going to insist upon an elaborate ceremony. Right now we don't give a

damn about the war; we're worried about the race."

There was more silence, and Tulan turned, uncertainly, looking at the bare spot where Jezef ought to be standing. He buzzed for Communications. "Connect me with Captain Rhu. Rhu; I'm advancing you in rank and leaving you in charge here. I'm going down to accept the surrender and find out what this man's talking about."

Kliu was gaunt and middle-aged, wearing, to Tulan's surprise, the gray of Coar's First Level of Science. He was neither abject nor hostile, agreeing impatiently to turn over the secret of Coar's weapon and to assist with a token occupation of the planet. Again Tulan had the unreal, let-down feeling, and judging by Kliu's amused expression, it showed.

Tulan sent couriers to get things started, then turned back to the scientist. "So you have had a change of government. What did you mean, about the race?"

Kliu watched him for a moment. "How much do you know about the weapon?"

"Very little. That it projects matter through hyperspace and materializes it where you want it."

"Not exactly; the materialization is spontaneous. Mass somehow distorts hyperspace, and when the projected matter has penetrated a certain distance into such distortion, it pops back into normal space. The penetration depends mainly upon a sort of internal energy in the missile; you might think of it more as a voltage than as velocity. You've made it very hard for us to get reports, but I understand we successfully placed stuff in Sennech's crust."

"Yes; causing volcanoes. Our scientists speculated that any kind of matter would do it."

"That's right. Actually, we were projecting weighed chunks of rock. When one bit of matter, even a single atom, finds itself materializing where another already is, unnatural elements may be formed, most of them unstable. That's what blew holes in your crust and let the magma out."

Tulan considered the military implications of the weapon for a few moments, then pulled his mind back. "I see; but what about the radiation? It wasn't more than a trace when I left."

Kliu looked away for a while before answering. "When we learned you'd defied your government, our own military got out of hand. They had a couple of days before the sun cut us off completely, and they began throwing stuff as soon as it could be dug and hauled to the projectors. They used high energies to get it past the sun. As we realize now, a lot of it hit the planet deeper than at first, below the crust. Under such pressure a different set of fissionables was formed. Some of them burst out and poisoned the atmosphere, but most of them are still there." He leaned forward and eyed Tulan hard. "We've got to get an expedition out there to study things. Will you help?"

There was another of the palpable silences, and when he spoke Tulan's voice sounded unnatural. "I—yes; we'll help. Whatever you want. Is ... Sennech finished?"

Kliu smiled tightly. "Sennech, for sure; and she may take the rest of us with her. Nobody conceived what this might come to. A lot of those deep materializations produced pockets of dense fissionables, and they're converging toward the center under their own weight. When they get to a certain point, we'll have a fine monument to Man's ingenuity. A planet-size nova." He stood up. "I'll start organizing."

Tulan existed someway through the preparations, and when they were in space again the solid familiarity of his ship helped. His staff was carrying on wonderfully; shielding him, he suspected, from considerable hostility. Discipline held up.

A technology that had spanned five orbits and probed beyond was at bay, and the expedition was tremendous. Hardly an art or science was unrepresented. If need be, whole ships could be built in space.

A beam from Teyr as they passed told of refugees by the hundreds of thousands, dumped in the wilderness with a few ships still trickling in. Tulan would have traded everything he could command to hear a word of Jezef or the family, but Teyr wasn't concerned with individuals and he didn't ask.

Sennech was dull gray in the telescopes, showing, as they neared, flecks of fire. They went in

fast, using her gravity to help them curve into a forced orbit as they strained to decelerate. Thermocouples gave readings close to the boiling point of water; that, probably, was the temperature of the lower air.

Roboscouts went down first, then, as conditions were ascertained, manned ships. Tulan took the flagship down once. Her coolers labored and her searchlights were swallowed in murk within a few feet. Sounds carried through the hull; the howl of great winds and the thumps of explosions. Once a geyser of glowing lava spattered the ship.

Within hours the picture began to form. The surface was a boiling sea broken only by transient mountain peaks which tumbled down in quakes or were washed away by the incessant hot rain. It would have been hard to find a single trace of the civilization that had flourished scant hours before.

The slower job was learning, by countless readings and painful deduction, what was going on inside the planet. Tulan occupied himself with organizational tasks and clung to what dignity he could. After an eternity Kliu had time for him.

"She'll blow, all right," the scientist said, sinking tiredly into a seat. "Within half a year. Her year."

"Twenty thousand hours," Tulan said automatically. "How about the other planets?"

"Coar has one chance in a hundred, Teyr possibly one in ten."

Tulan had to keep talking. "The outer satellites. We can do a lot in that time."

Kliu shrugged. "A few thousand people, and who knows what will happen to them afterward? It's going to be a long time before the System's inhabitable again, if ever."

"Ships ... people can live a long time in ships."

"Not that long."

"There must be something! The power we've got, and this hyperspace thing."

Kliu shook his head. "I can guess what you're thinking; we've been all over it. There's no way to get to the stars, and no way to move a planet out of its orbit. Don't think we haven't been pounding our skulls, but the figures are hopeless."

Tulan stared at the ulcerous image on the screen, built up by infra-red probing through the opaque atmosphere. "She looks ready to fall apart right now. How much of her could you blast off?"

Kliu smiled wearily and without humor. "We've worked that idea to the bone, too. If you could build a big enough projector, and mount it on an infinitely solid base, you could push something deep enough and accurately enough to throw off stuff at escape velocity, but it's a matter of energy and we can't handle one percent of what we'd need. Even if you could generate it fast enough, your conduits would melt under the current." He got up and walked a few steps, then sat down again. "Ironic, isn't it? All we can do is destroy ourselves."

Tulan's mind couldn't accept it; he was used to thinking that any amount of energy could be handled some way. "There must be something," he repeated, feeling foolish as he said it.

He went over the figures he knew so well; the acceleration and the total energy necessary to drive a ship to the nearest stars. Even a ship's Pulsors, pouring energy out steadily, were pitiful compared to that job. Schoolboys knew the figures; mankind had dreamed for generations ...

He sat up abruptly. "This hyperspace; didn't you tell me there were such things as velocity and momentum in it?"

Kliu's eyes focussed. "Yes; why?"

"And that a projector could be built to put an entire ship into hyperspace?"

Kliu stared at him for a second. "Kinetic energy! Built up gradually!" He jumped to his feet. "Come on! Let's get to the computers!"

Several hundred hours later Tulan lay watching the pinpoint on his viewscreen that represented Sennech. He'd been building up speed for a long time; he ached from the steady double-gravity. The ship, vastly beefed up, was moving at a good fraction of the speed of light. It wouldn't be much longer.

The cargo of carefully chosen matter, shifting into hyperspace at the right instant, would be taken deep into Sennech by the momentum he'd accumulated in normal space. If the calculations were right, the resulting blast would knock a chunk completely out of the planet. Each of the thousands of other ships tied to him by robot controls would take its own bite at the right time and place. Providing the plan worked.

The Solar System would have a few hot moments, and would be full of junk for a long time, but the threatening fissionables inside Sennech would be hurled far apart, to dribble away their potence gradually. Kliu admitted no one could calculate for sure even how much, if any, of Sennech would remain as a planet, but Teyr, at least, with her thick atmosphere, should withstand the rain of debris.

He wondered about his family, and Jezef. Kliu had tried to get word, but the tragically few refugees were scattered.

He smiled, recalling how severely he'd had to order his staff to abandon him. He was proud to remember that much of the fleet would have come along, if he'd let them; but live men were going to be at more of a premium on Teyr than heroic atoms drifting in space. Machines could handle this assault. He himself had not had to touch a single control.

The indicators began to flash, and, sweating with the effort, he hauled himself erect to attention. It was good to be winding up here in his own command room, where he'd lived his moments of triumph. Still, as the red light winked on, he couldn't help thinking how very quiet and lonely it was without Jezef and the staff.

## THE END

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