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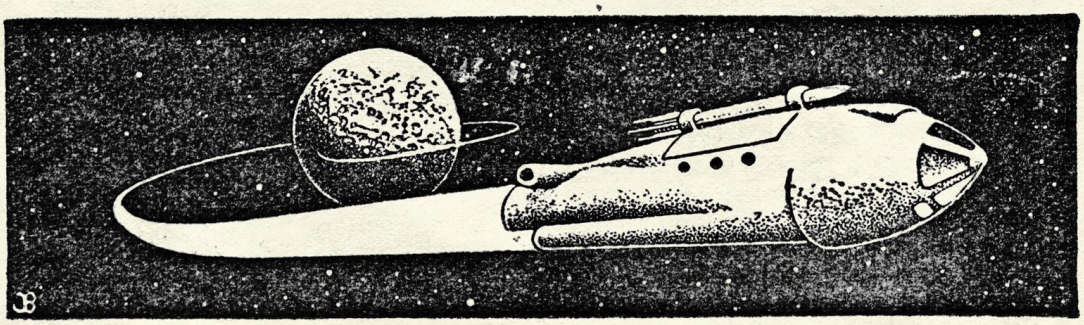

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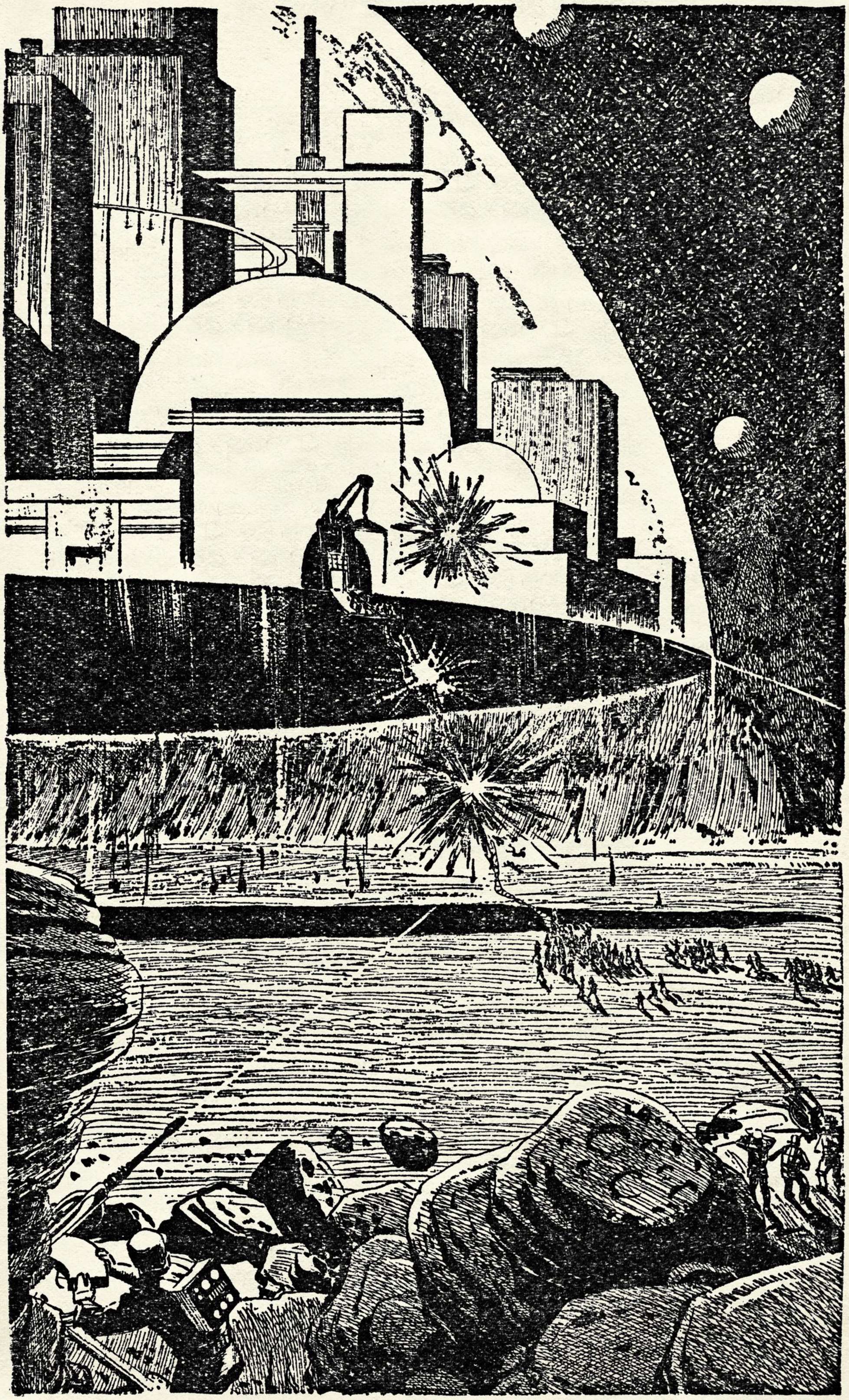

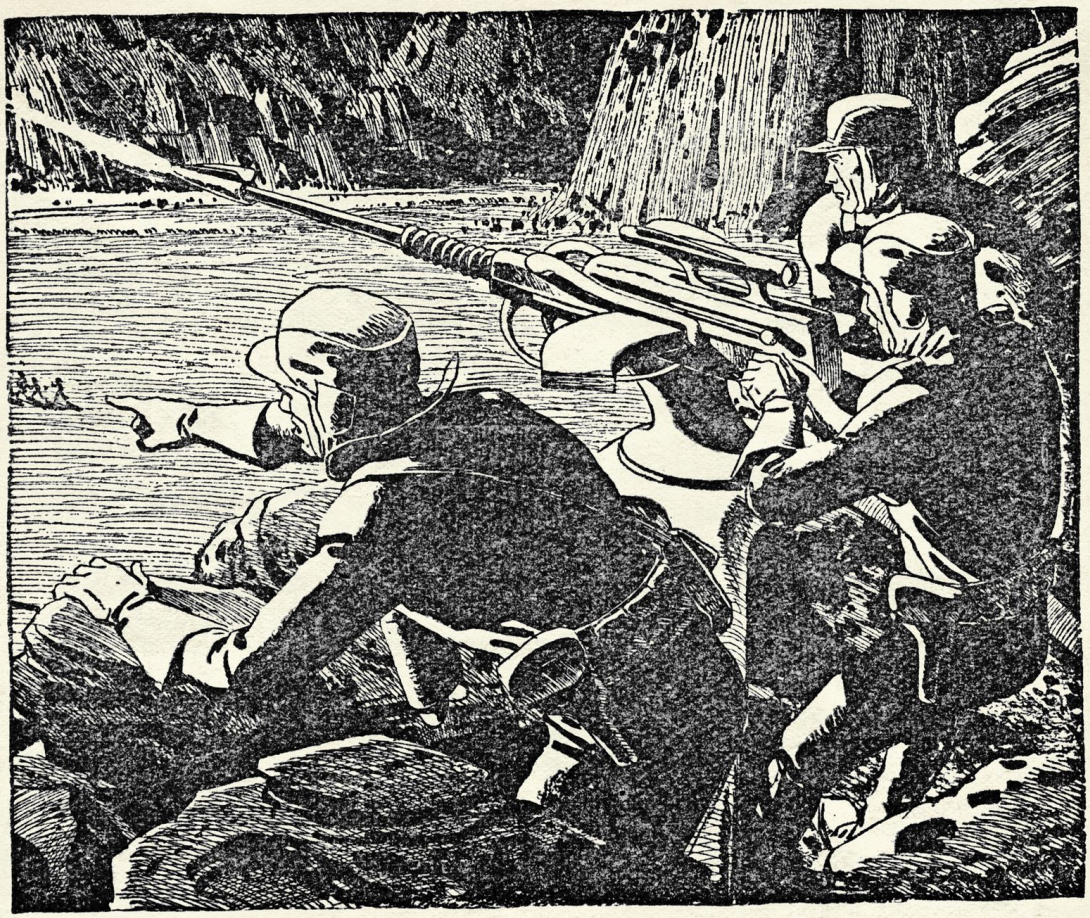

Sargasso of Lost Cities

By JAMES BLISH

The Okies were moving—after centuries of galaxy wandering the bankrupt sky-cities were returning en masse to an unreceptive Earth. Hidden among them was an even more unwelcome visitor—the Vegan monster.

I

A SPINDIZZY going sour makes the galaxy's most unnerving noise. The top range of the sound is inaudible, but it feels like a multiple toothache. Just below that, there is a screech like metal tearing, which blends smoothly into a sort of cataract of glass, slate, and boulders, which is the middle register. After that there is a painful gap in the sound spectrum, and the noise comes in again with a hollow round dinosaurian sob and plummets down into the subsonics, ending with a frequency which induces diarrhea and an almost unconquerable urge to bite one's thumbs.

The noise, which was coming from the 23rd Street spindizzy, permeated the whole city, but it was tolerable as long as the hold which contained the antigravity generator was kept sealed. Amalfi, the city's mayor, knew better than to approach the chamber. He surveyed the souring machine via instruments, and kept the audio prudently turned off. The sound transmitted through the walls was unnerving enough, even up here in the 34th Street control tower.

A hand came over his left shoulder, and

a long finger pointed at the recording thermocouple.

"She's beginning to smoke, boss," Mark Hazleton's voice said. "I wouldn't have said she'd have lasted this long—she's been obsolete for 130 years, and our last repair job was only an emergency rig. We'll have to shut her down, or she'll blow, for good and all."

Amalfi did not look around. Hazleton's moods were Amalfi's second nature, and he could sense completely the younger man's tension in the hand which rested upon his right shoulder.

"We'll keep her shoving," he said at last. "If the City Fathers can get this much juice through her, maybe they can get a little more. Maybe enough to get us down to a reasonable cruising speed.

"Besides—an overdriven spindizzy radiates. The City Fathers could step her down for us if we ordered it, but it'd take human beings to make repairs and re-tune the setup stages."

"It'll be a year before anything alive can go into that hold," Hazleton agreed gloomily. "How's our velocity now?"

"Negligible, with reference to the galaxy as a whole. But as far as the Acolyte stars proper are concerned—we'd shoot through the whole cluster at about eight times the city's top speed if we stopped decelerating now."

There was a stir behind the two men. Amalfi shut off the visor into the hold and turned around. Then he smiled.

There was something about Dee Hazleton, the companion Mark had found on a barbaric world called Utopia, that relaxed him. She had not been on board the space-cruising city long enough to acquire the characteristic Okie star-burn, nor yet to lose the wonder of being now, by Utopian standards, virtually immortal, and so she seemed still very pink and young and unharried.

Someday, perhaps, the constant strain of wandering from star to star, from crisis to crisis, exile of exile, would tell on her as it did upon all Okies. She would not lose the wanderlust, but the wanderlust would take its toll.

Or perhaps her resiliency was too great even for that. Amalfi hoped so.

"Excuse me," she said, hesitating just over the threshold of the liftshaft. "If you're busy—"

"No busier than usual," Hazleton said. "Just wondering about our usual baby."

"The 23rd Street machine. I could tell by the curvature of your spines. Why don't you have it replaced, and get it over with?"

Amalfi and the city manager grinned at each other, but the mayor's grin was short-lived.

"Well, why not?" he said suddenly.

"My god, boss, the cost," Hazleton said, with incredulity. "The City Fathers will have you shot for suggesting it."

"They've never had to run her all by themselves under max overdrive before now. I predict that they'll emerge from the experience clamoring to have her replaced, even if we don't eat for a year to pay for it. Besides, we should have the money, for once. We dug a lot of germanium while we were setting up the Hevian planet to be de-wobbled. Maybe the time really has come when we can afford a replacement."

Dee came forward swiftly, motes of light on the move in her eyes. "John, can that be true?" she said. "I thought we'd lost a lot on the Hevian contract—all this energy expenditure to get us back to the galaxy after He ran away with us—and we didn't have any chance to harvest the jungle for the death-curing drugs—"

"No," Amalfi rumbled, "that's not quite the way it was, Dee. Mark, run me up a treasury report, will you? I'd like to check this, but I'm almost sure my impression is right. It goes like this:

"We didn't get paid, officially, for our services to He. But we had to drill the crust of the planet, to set in reinforcements before we moved the place; and we did extract quite a bit of incidental germanium while we were at it. Our big loss, as you say, Dee, was in time: we couldn't harvest the jungle at the leisurely pace we'd planned, so our stock of anti-agapics is just about what it was before the Hevian job—adequate for the city, but with little left over to sell to anyone else."

"Sic transit," Hazleton murmured. He was probably the only man in the city, Amalfi thought, who could make sense of a second conversation while wearing bone-mikes.

"All right, *sic transit*. We're not rich, as we had hoped to be. Our current germanium reserve is just pocket-money; the anti-agapics would have made us affluent if we'd had time to harvest them."

"But we didn't," Dee said. "We had to run away."

"We ran away. We're not rich. But in terms of germanium alone we can call ourselves well off. Once we get back into the galaxy—if we can shuck ourselves of the outward-bound velocity of He soon enough to land on anything when we get back—we should be able to buy a new spindizzy. Right, Mark?"

HAZLETON listened to the voder-voice of the City Fathers a moment more, and then took off the bone-mikes. "It looks like you're right," he said. "Anyhow we can easily cover the price of an overhaul, or maybe even of a reconditioned, second-hand machine of a later model. Depends on whether or not the Acolyte stars have a service planet, and what the garage fees are there."

"They should be low enough to keep us solvent," Amalfi said, thrusting out his lower lip thoughtfully. "The Acolyte area is a backwater, but it was settled originally by refugees from an anti-Earth pogrom in the Malar system—there's a record of the Night of Hadjjii in the libraries of most planets, which means that the Acolytes aren't far enough away from normal trading areas to be proper frontier stars. Now that I come to think of it, the Acolytes were an important minor source of power-metals for part of this limb of the galaxy at one time. They'll have at least one service station, Mark, depend on it. They may even have work for the city to do."

"Sounds good," Hazleton said. "Too good. Actually we've *got* to sit down in the Acolytes, boss, because that 23rd Street machine won't carry us beyond them at anything above a snail's pace. I asked the City Fathers that while I was checking the treasury. *This is the end of the line for us.*"

He sounded tired. Amalfi frowned.

"That's not what's worrying you, Mark," he said. "We're always had that problem waiting for us somewhere in the future, and it isn't one that's difficult of solution. What's the real trouble? Cops, maybe?"

"All right, it's cops," Hazleton said, a little sullenly. "I know we're a long way away from any cops that know us by name. But the Earth police did chase us from the Utopia-Gort system all the way to the Rift, and not even you thought they'd do it. And then they came across the Rift to He, after the bindlestiff, and found us there. I don't see how we can assume, after those experiences, that any amount of distance is 'too great' for the cops to follow us if they really want us—and it seems that they do."

"Why, Mark?" Dee said. "We've done nothing serious."

"It piles up," Hazleton said. "Every time we pull some cute trick on the cops and skin out, we violate a Vacate order or some other restriction, and add a new fine to the collection we've accumulated, but seldom had to pay. When we're finally caught, we'll have to pay in full, and if that were to happen now we'd be bankrupt."

"Pooh," Dee said. "We could find work and build up a new treasury. It might be hard for a while, but we'd survive it. People have been broke before and come through it whole."

"People, yes; cities, no," Amalfi said. "Mark is right on that point, Dee. According to the law, a bankrupt city must be dispersed. It's essentially a humane law, in that it prevents desperate mayors and city managers from taking bankrupt cities out again on long job-hunting trips, during which half the Okies on board will die just because of the stubbornness of the people in charge."

"Exactly," Hazleton said.

"Even so, I think it's a bogey," Amalfi said gently. "I'll grant you your facts, but not your extrapolation, Mark. The cops can't possibly follow us from He's star to here. We didn't know ourselves that we'd wind up among the Acolytes. Look: we got loose from He at the last minute, only after we'd been carried out of our own galaxy entirely, and at the highest velocity ever attained by any previous entity within our or anybody else's knowledge. We headed back toward the nearest galactic limb, but He tore out of the galaxy so fast that the cops couldn't have plotted its course—let alone predict when or if we'd get free of

He, and where we'd go from there if we did. Right?"

"Of course. But—"

"And if the Earth cops alerted every local police force in the galaxy to every petty offender," Amalfi continued with gentle implacability, "no local police force would ever be able to do any policing. They'd be too busy, recording and filing and checking new alerts, coming in constantly from a million inhabited planets. Their own local criminals would mostly go free, to become a burden upon the filing system of every other inhabited area.

"So, believe me, Mark, the cops around here have never heard of us. The Earth cops, who do know us from every other Okie, are still floating in the Rift, peering out across the intergalactic gap toward Andromeda, wondering whether we were fools enough to try to leave He. Probably they'll figure that we were caught flat-footed when He ran away, and that we're still with the planet, making the first intergalactic crossing. If we'd stayed there another 90 seconds, that's just where we'd be now.

"We're approaching a normal situation, that's all. The Acolyte cops haven't the slightest reason to treat us as anything but just another wandering, law-abiding Okie city."

"Good," Hazleton said, his chest collapsing to expel a heavy sigh.

Amalfi heard neither the word nor the sigh.

At the same instant, the big master screen, which had been showing the swelling, granulating mass of the Acolyte star-cluster, flashed blinding scarlet over its whole surface, and the scrannel shriek of a police-whistle made the air in the control room seethe.

GRAVITY was discovered—though it had been postulated long before—by the 2043 Jovian expedition, the last space-flight with Muir tape-mass engines which was completed on behalf of Earth's Western culture before that culture's collapse. The building, by remote control, of the Bridge on the face of Jupiter itself, easily the most enormous (and in most other respects the most useless) engineering project ever undertaken by man, had made possible direct, close measurement of Jupiter's magnetic field. The measurements provided final confirmation of the Blackett-Dirac equations, which as early as 1948 had proposed a direct relationship between magnetism, gravitation, and the rate of spin of any mass.

Nothing was done with the measurements in that century, or in the next. The despotic Bureaucratic State was opposed bitterly to the very concept of spaceflight; it would not even allow fiction writers to mention the subject. The ban extended to the speculations of physicists. The omnipresent thought police were instructed in the formulae of ballistics and other disciplines necessary to rocketry, and could detect such work—Un-Earthly Activities, it was called—long before it might have reached the proving stand stage.

But the thought police could not ban atomic research, because the new state's power rested upon it; and it was from the study of the magnetic moment of the electron that the antigravity generator—the spindizzy—had emerged. The West had had it, and had used it to scatter the nearby stars with colonists during the very last days of its existence. The new State had suppressed the device, and the thought police had never been told that Blackett's original equation was one of those in the "sensitive area." The State did not dare let even that much be known about it.

And so the spindizzy was rediscovered, quite inadvertently and innocently, in the nuclear physics lab of the Thorium Trust. From that point on, the Bureaucratic State was doomed.

Nothing could be done to prevent the Thorium Trust from transporting its plants bodily to other planets for mining purposes. By that time, such a step was clearly in the best economic interests of the State. After that, there was precedent for permissions to the Aluminum Trust, the Steel Trust, the Germanium Trust. In the end, whole cities were taking to the skies.

When it was all over, the Bureaucratic State, against its own will, had done what it had long promised to do "when the people were ready"—it had withered away. The Earth that it had once owned, down to the last grain of sand, was almost deserted. Earth's nomad cities—migratory

workers, hoboes, Okies—roamed the stars, looking for work among the colonies the dying West had scattered.

That state fell, but Earth still ruled. There was no possibility that an Okie city could fight off a battleship. The Okies had mobility, but what efficiency they had was dedicated, necessarily, to work, not to fighting.

Still, the hegemony of Earth was weak, for the most part. There were still many corners of the galaxy which knew Earth only as a legend, a green myth floating unknown thousands of parsecs away in space, known and ineluctable thousands of years away in history. Many of them remembered much more vividly the now-broken Tyranny of Vega, and did not know—some of them never had known—even the name of the planet that had broken that tyranny.

Such isolated star-systems might see an Okie city as often, on the average, as twice per century. If such a city thought them worth a stop-over, they might be blessed with enough stale news of Earth to revise their history books a little—if they cared. If they had work for the Okies to do, the city might stay with them under contract for as long as two years.

And if they attempted to exploit the city, or the city welched on the contract, the offended party might call for the Earth police, and the cops would come, on the double. Unless such a chain of events ran all the way out to its end, however, the stellar backwaters could never expect to see the bulging, pear-shaped bulk of a police cruiser within five hundred years or more.

Theoretically.

The cops swaggered and stomped on board the Okie city, and into Amalfi's main office in City Hall, as if the nothingness of the marches of the galaxy were their personal property. Their uniforms were not the customary dress coveralls—actually, space-suit liners—of the Earth police, however. Instead, they were flashy black affairs, much bemedalled, complete with Sam Browne belt and shiny boots. The blue-jowled thugs who had been jammed into these tight-fitting creations reminded Amalfi of a period which considerably antedated the Night of Hadjjii—or any other event in Acolyte history.

And the thugs carried meson pistols. These heavy, cumbersome weapons could be held in one hand, but two hands were needed to fire them. They were very modern side-arms to find in a border star-cluster. They were only about a century out of date. That made them thoroughly up to date as far as the city's own armament was concerned; a century was the usual time-lag between Okie and Earth technology.

The pistols told Amalfi several other things that he needed to know. Their existence here could mean only one thing: that the Acolytes had had recent contact with one of those pollinating bees of the galaxy, an Okie city. Furthermore, the probability was not high that it had been the sole Okie contact the Acolytes had had for a long time, as Amalfi might otherwise have assumed.

It took years to build up the technology to mass-produce meson pistols so that ordinary cops could pack them. It took more years still, years spent in fairly frequent contact with other technologies, to make adoption of the pistol possible at all. The pistol, then, confirmed unusually frequent contact with Okies; which, in turn, meant that there was a garage planet here, as Amalfi had hoped.

THE pistol also told Amalfi something else, which he did not much like. The meson pistol was not a good anti-personnel weapon.

It was much more suitable for demolition work.

The cops could still swagger in Amalfi's office, but they could not stomp effectively. The floor was too thickly carpeted. Amalfi never used the ancient, plushy office, with its big, black mahogany desk and other antiques, except for official occasions. The control tower was his normal on-duty habitat, but that was closed to non-citizens.

"What's your business?" the police lieutenant barked at Hazleton. Hazleton, standing beside the desk, said nothing, but merely jerked his head toward where Amalfi was seated, and resumed looking at the big screen back of the desk.

"Are you the mayor of this burg?" the lieutenant demanded.

"I am," Amalfi said, removing a cigar from his mouth and looking the lieutenant over with lidless eyes. He decided that he did not like the lieutenant. His rump was

too big. If a man is going to be barrel-shaped, he ought to do a good job of it, as Amalfi had. Amalfi had no use for top-shaped men.

"All right, answer the question, fatty. What's your business?"

"Petroleum geology."

"You're lying. You're not dealing with some isolated, type IV-Q podunk now, Okie. These are the Acolyte stars."

Hazleton looked with pointedly vague puzzlement at the lieutenant, and then back to the screen, which showed no stars at all within any reasonable distance.

The by-play was lost on the cop. "Petroleum geology isn't a business with Okies," he said. "You'd all starve if you didn't know how to mine and crack oil for food. Now give me a straight answer, before I decide you're a vagrant and get tough."

Amalfi said evenly: "Our business is petroleum geology. Naturally we've developed some sidelines since we've been aloft, but they're mostly natural outgrowths of petroleum geology—on which subject we happen to be experts. We trace and develop petroleum sources for planets which need the material."

He eyed the cigar judiciously and thrust it back between his teeth. "Incidentally, Lieutenant, you're wasting your breath threatening us with a vagrancy charge. You know as well as we do that vagrancy laws are specifically forbidden by article one of the constitution."

"Constitution?" The cop laughed. "If you mean the Earth constitution, we don't have much contact with Earth out here. These are the Acolyte stars, see? Next question: have you any money?"

"Enough."

"How much is enough?"

"If you want to know whether or not we have operating capital, our City Fathers will give you the statutory yes or no answer, if you can give them the data on your system that they'll need to make the calculation. The answer will almost assuredly be yes. We're not required to report our profit pool to you, of course."

"Now look," the lieutenant said. "You don't need to play the space lawyer with me. All I want to do is get off this town. If you've got dough, I can clear you—that is, if you got it through legal channels."

"We got it on a planet called He, some distance from here. We were hired by the Hevians to rub out a jungle which was bothering them. We did it by regularizing their axis."

"Yeah?" the cop said. "Regularized their axis, eh? I guess that must have been some job."

"It was," Amalfi said gravely. "We had to setacetus on He's left-hand frannistan."

"Gee. Will your City Fathers show me the contract? Okay, then. Where are you going?"

"To garage; we've a bum spindizzy. After that, out again. You people look like you're well past the stage where you've much use for oil."

"Yeah, we're up to the century here, not like some of these border areas you hear about. These are the Acolyte stars." Suddenly it seemed to occur to him that he had somehow lost ground; his voice turned brusque again. "So maybe you're all right, Okie. I'll give you a pass through. Just be sure you go where you say you're going, and don't make stopovers; understand? If you watch your step, maybe I can give you a hand here and there."

Amalfi said, "That's very good of you, Lieutenant. We'll try not to have to bother you, but just in case we do have to call on you, who shall we ask for?"

"Lt. Lerner, 45th Border Security Group."

"GOOD. Oh, before you go: I collect medal ribbons—every man to his hobby, you know. And that royal violet one of yours is quite unusual; I speak as a connoisseur. Would you consent to sell it? It wouldn't be like giving up the medal itself—I'm sure your corps would issue you another ribbon."

"I don't know," Lt. Lerner said doubtfully. "It's against regs—"

"I realize that, and naturally I'd expect to cover any possible fine you might incur. (Mark, would you call down for a check for 500 0c dollars?) No sum I could offer you would really be sufficient to pay for a medal for which you risked your life, but 500 0c is all our City Fathers will allow me for hobbies this month. Could you do me the favor of accepting it?"

"Yeah, I guess so," the lieutenant said. He detached the bar of faded, dismal purple from over his pocket with clumsy eagerness and put it on the desk. A second later, Hazleton silently handed him the check, which he pocketed without seeming to notice it at all. "Well, be sure you keep a straight course, Okie. C'mon, you guys, let's get back to the boat."

The three thugs eased themselves tentatively into the lift-shaft, and slithered down out of sight through the friction-field wearing expressions of sternly repressed alarm. Amalfi grinned. The principle of molar valence had been discovered by the city on an out-of-the-way planet called Utopia, and, quite obviously, frictionators and other gadgets using the principle were still generally unknown.

HAZLETON walked over to the shaft and peered down. Then he said: "Boss, that damn thing is a Good Conduct ribbon. The Earth cops issued them by the tens of thousands, about three centuries ago, to any rookie who could get up out of bed when the whistle blew three days running. Since when is it worth 500 0c?"

"Never until now," Amalfi said, tranquilly. "But the lieutenant wanted to be bribed, and it's always wise to appear to be buying something when you're bribing someone. I put the price so high because he'll have to split it with his men. If I hadn't offered the bribe, I'm sure he'd have wanted to look at our Violations docket."

"I figured that; and ours is none too clean, as I've been pointing out. But I think you wasted the money, Amalfi. The Violations docket should have been the first thing he asked to see, not the last. Since he didn't ask for it at the beginning, he wasn't interested in it."

"That's probably exactly so," Amalfi admitted. He put the cigar back and pulled on it thoughtfully. "All right, Mark, what's the pitch? Suppose you tell me."

"I don't know yet. I can't square the maintenance of an alert guard, so many parsecs out from the actual Acolyte area, with that slob's obvious indifference to whether or not we might be on the shady side of the law—or even be bindlestiff. Hell, he didn't even ask *who* we were."

"That rules out the possibility that the Acolytes have been alerted against some one bindlestiff city."

"It does," Hazleton agreed. "Lerner was far too easily bribed, for that matter. Patrols that are really looking for something specific don't bribe, even in a fairly corrupt culture. It doesn't figure."

"And somehow," Amalfi said, pushing a toggle to *Off*, "I don't think the City Fathers are going to be a bit of help. I had the whole conversation up to now piped down to them, but all I'm going to get out of them is a bawling-out for spending money, and a catechism about my supposed hobby. Damn! We're missing something important, Mark, something that would be obvious once it hit us. Something absolutely crucial. And here we are plunging on toward the Acolytes without the faintest idea of what it is!"

"Boss," Hazleton said.

The cold flatness of his voice brought Amalfi swiveling around in his chair in a hurry. The city manager was looking up again at the big screen, on which the Acolyte stars had now clearly separated out into individual points. "What is it, Mark?"

"Look there—in the mostly-dark area on the far side of the cluster. Do you see it?"

"I see quite a lot of star-free space there, yes." Amalfi looked closer. "There's also a visual double, with a red dwarf standing out some distance from the other components—"

"You're warm. Now look at the red dwarf."

There was also, Amalfi began to see, a faint smudge of green there, about as big as the far end of a pencil. The screen was keyed to show Okie cities in green, but no city could possibly be that big. The green smudge covered an area that would blank out an average Sol-type system.

Amalfi felt his big square front teeth beginning to bite his cigar in two. He took the dead object out of his mouth.

"Cities," he muttered. He spat, but the bitterness in his mouth did not seem to be tobacco juice after all. "Not one city. *Hundreds.*"

"Yes," Hazleton said. "There's your answer, boss, or part of it. It's a jungle.

"An Okie jungle."

II

AMALFI gave the jungle a wide berth, but he sent out two drones as soon as the city was safely down below top speed. The five-meter missiles sent back a fantastic and gloomy picture.

The empty area where the hobo cities had settled was well out at the edge of the acolyte cluster, on the side toward the rest of the galaxy. The nearest star to the area, as Hazleton had pointed out, was a triple. It consisted of two type G-O stars and a red dwarf, almost a double for the Sol-Alpha Centauri system. But there was one difference: the two G stars were quite close to each other, constituting a spectroscopic doublet, inseparable visually by the compensating Dinwiddie circuits in the ultrawave pickup, even at this relatively short distance; while the red dwarf had swung out into the empty area, and was now more than four light years away from its companions.

Around this tiny and virtually heatless fire, more than three hundred Okie cities huddled. On the screen they passed in an endless, boundary-less flood of green specks, like a river of fantastic asteroids, bobbing in space and passing and repassing each other in their orbits around the dwarf star. The concentration was heaviest near the central sun, which was so penurious of its slight rediation that it had been masked almost completely by the Dinwiddie code-lights when Hazleton first spotted the jungle. But there were late-comers in orbits as far out as three billion miles—spindizzy screens do not take kindly to being thrust into close contact with each other.

"It's frightening," Dee said, studying the screen intently. "I knew there were other Okie cities, especially after we hit the bindlestiff. But so many! I could hardly have imagined three hundred in the whole galaxy."

"A gross underestimate," Hazleton said indulgently. "There were about 18,000 cities at the last census, weren't there, boss?"

"Yes," Amalfi said. He was as unable to look away from the screen as was Dee. "But I know what Dee means. It scares the hell out of me, Mark. Something must have caused an almost complete collapse of the economy around this part of the galaxy. No other force could create a jungle of that kind. These bastardly Acolytes evidently have been exploiting it to draw Okies here, in order to hire the few they need on a competitive basis."

"At the lowest possible wages, in other words," Hazleton said. "But what for?"

"There you have me. Possibly they're trying to industrialize the whole cluster, to make themselves self-sufficient before the depression or whatever it is hits them. About all we can be sure of at this juncture is that we'd better get out of here the moment the new spindizzy gets put in. There'll be no decent work here."

"I'm not sure I agree," Hazleton said, redeploying his lanky, apparently universal-jointed limbs over his chair. "If they're industrializing here, it could mean that the depression is *here*, not anywhere else. Possibly they've overproduced themselves into a money shortage, especially if their distribution setup is as creaking, elaborate and unjust as it usually is in these backwaters. If they're using a badly deflated dollar we'll be sitting pretty."

Amalfi considered it. It seemed to hold up.

"We'll have to wait and see," he said. "You could well be right. But one cluster, even at its most booming stage, could never have hoped to support three hundred cities. The waste of technology involved would be terrific—and you don't attract Okies *to* a money-short area, you draw them *from* one."

"Not necessarily. Suppose there's an oversupply outside? Remember back in the nationalist era on Earth, artists and such low-income people used to leave the big Hamiltonian state, I've forgotten its name, to live in much smaller states where the currency was softer?"

"That was different. They had mixed coinage them—"

"Boys, may I break in on this bull-session?" Dee said, hesitantly, but with a trace of mockery in her voice. "It's getting a little over my head. Suppose this whole end of the star-limb has had its economy wrecked. How, I'll leave to you two; on Utopia we lived in a permanent state of war, and our economy was frozen at a fixed rate of turnover, and had been for as long as any of us could remember; so maybe I can be forgiven for not understanding what

you're talking about. But in any case, inflation or deflation, we can always leave when we have our new spindizzy."

Amalfi shook his head heavily. "That," he said, "is what scares me, Dee. There are a hell of a lot of Okies in that jungle, and they can't all be suffering from defects in their driving equipment. If there were someplace they could go where times are better, *why haven't they gone there?* Why do they congregate in a jungle in this godforsaken cluster, for all the universe as if there were no place else where they could find work? Okies aren't sedentary, or sociable either."

Hazleton began drumming his fingers lightly on the arm of his chair, and his eyes closed slightly. "Money is energy," he said. "Still, I can't say that I like that any better. The more I look at it, the more I think this is one fix we won't get out of by any amount of cute tricks. Maybe we should have stuck with He."

"Maybe."

Amalfi turned his attention back to the controls. Hazleton was subtle; but one consequence of his subtlety was that he tended to expend unnecessary amounts of time speculating about situations the facts of which would soon become evident in any case.

THE city was now approaching the local garage world, which bore the unlikely name of Murphy, and maneuvering among the close-packed stars of the cluster was a job delicate enough to demand the mayor's own hand upon the space-stick. The City Fathers, of course, could have teetered the city through the conflicting gravitic fields to a safe landing on Murphy, but they would have taken a month at the job. Hazleton would have gone faster—he was usually the city's pilot in any case—but the City Fathers rather mistrusted him, and would have monitored his route all the way and snatched control from him at the slightest transgression of the margins of error they had calculated. Being machines, they were not equipped to respect shortcuts.

Being machines, they were also unequipped to appreciate the direct intuition of spatial distances and mass pressure which made Amalfi a master pilot. But over Amalfi they had no authority, except the ultimate authority of the revocation of his office.

As Murphy grew on the screens, technicians began to file into the control room, activating with personal keys desks which had been disconnected for more than a century—ever since the last new spindizzy had been brought on board. Readying the city's drive machinery for new equipment was a major project. Every other spindizzy on board would have to be retuned to the new machine. In the present case, the job would be further complicated by the radioactivity of the defective unit. While the garagemen should have special equipment to cope with that problem—degaussing, for instance, was the usual first step—no garage could know the machinery involved as well as the Okies who used it. Every city is unique.

Murphy, as Amalfi saw it on his own screen, was a commonplace enough world. It was just slightly above the size of Mars (Amalfi, of course, had never seen Mars, but the names of the Solar planets were part of a long-respected and still useful classification system) but pleasanter to live on, since it was closer to its primary by a good distance.

But it looked deserted. As the city came closer, Amalfi could see the 20-mile pockmarks which were the graving docks typical of a garage; but every one of those perfectly regular, machinery-ringed craters in the planet's visible surface turned out to be empty.

"That's bad," he heard Hazleton murmur. It was certainly unpromising. The planet turned slowly under his eyes.

Then a city slid up over the horizon. Hazleton's breath sucked sharply through his teeth. Amalfi could also hear soft a stirring sound, and then footsteps—several of the technicians had come up behind him to peer over his shoulder.

"Posts!" he growled. The technies scattered like leaves.

On the idle service world, the grounded city was startlingly huge. It thrust up from the ground like an invader—but a naked giant, fallen and defenseless without its spindizzy screens. There was, of course, every good reason why the screens were not up, but still a city without them was a rare and disconcerting sight, like a flayed corpse in a tank. There seemed to be some activity

at its perimeter. Amalfi could not resist thinking of that activity as bacterial.

"Doesn't that answer the question Dee's way?" Hazleton suggested at last. "There's an outfit that had dough for repairs, so money from outside the Acolyte area must still be good. It's having the repairs made, so it can't be quite hopeless—it thinks it has someplace to go from here. And it's a cinch to be a smart outfit, well worth consulting. It's prevented the Acolytes from fleecing it—and some form of Acolyte swindle is the only remaining explanation for the existence of the jungle. We'd best get in touch with it before me land, boss, and find out what to expect."

"No," Amalfi said. "Stick to your post, Mark."

"Why? Surely it can't do any harm."

Amalfi didn't answer. His own psi-sense —spatial orientation—had already told him something that knocked Hazleton's argument into a cocked helmet, but that something showed on Hazleton's own instruments, if Hazleton cared to look. The city manager had allowed an extrapolation to carry him off into Cloud-Cuckoo Land. It was one of the reasons why the City Fathers distrusted Hazleton, and why even Amalfi, on increasingly frequent occasions during the last century, had lost his temper with him.

Abruptly the board began to wink with directional signals. Automatic guides from the control tower on Murphy were waving the city to a readied dock. Amalfi shifted the space-stick obediently, awaiting the orange blinker that would announce some living intelligence ready with an opinion as to the desirability of Okies on Murphy.

But neither opinion nor blinker had yet asked for his attention even when Amalfi had begun to float the city for its planting in the unpromising soil below. Evidently, business was so poor on Murphy that the garage had lost most of its staff to more "going" projects. In that case, no entities but the automatics in the tower would be on hand to supervise an unexpected landing.

With a shrug, Amalfi cut the City Fathers back in. There was no need for a human being to land a city, as long as the landing presented no problem in policy. There were more than enough human uses for human beings; routine operations were the proper province of the City Fathers.

"First planetfall since He," Hazleton said. He seemed to be brightening a little. "It'll feel good to stretch our legs."

"No leg-stretching or any other kind of calisthenics," Amalfi ruled. "Not until we get more information. I haven't gotten a yeep out of this planet yet. For all we know, we may be restricted to our own premises by the local customs."

"Wouldn't the tower have said so?"

"No tower machine would be empowered to deliver a message like that to all comers. It might scare off an occasional legitimate customer. But it could still be so, Mark; you should know that. Let's do some snooping first."

Amalfi picked up his mike. "Get me the perimeter sergeant. Anderson? This is the mayor. Arm ten good men from the boarding squad, and meet the city manager and me at the Cathedral Parkway lookout. Station your men at the adjacent sallyports, well out of sight of the localites, if there are any such around. . . . Yes, that'd be just as well, too. . . . Right."

Hazleton said: "We're going out."

"Yes. And, Mark—*this star cluster may well be the last stop that we'll ever make.* Will you remember that?"

"I'll have no difficulty remembering it," Hazleton said, looking directly at Amalfi with eyes as gray as ice, "seeing that it's exactly what I told you four days ago. I have my own notions of the proper way to cope with the possibility, and they probably won't jibe with yours. Four days ago, you were explaining to me that I was being excessively defeatist. Now you've expropriated my conclusion because something has forced it on you—and I know you better than to expect you to tell me what that something is—and so now you're telling me to 'Remember Thor V' again. You can't have it both ways, Amalfi."

"I'm not trying to have it both ways," Amalfi said. "My reasons for expecting this stop to turn out badly have nothing to do with the bum spindizzy, which is the base you were arguing from. When you advanced that argument, we hadn't yet seen the jungle —or that mess we're landing on now. And I'll tell you this much, too: you're right

about a new factor having entered the picture, and just as right about my not telling you what it is. If you'll think back a century or so to the days when you were being trained for your job, you'll remember why I don't tell you these things when you fail to see them for yourself."

For a second the two men remained locked, pupil with pupil.

"You two," Dee's voice said, "might just as well be married."

FROM the skywalk of the graving dock in which the city rested at last, a walk level with the main deck of the city, the world of Murphy presented to Amalfi the face of a desolate mechanical jungle.

It was an elephant's graveyard of cranes, hoists, pallets, dollies, spur-lines, donkey-engines, cables, scaffolding, half-tracks, camel-backs, chutes, conveyors, bins, tanks, hoppers, pipelines, waldoes, spindizzies, trompers, breeders, proxies, ehrenhafts, and half a hundred other devices of as many eras which might at some one time be needed in servicing some city.

Much of the machinery was rusty, or fallen in upon itself, or whole on the surface but forever dead inside, a spurious wholeness that so simple an instrument as the dosimeter every man wore on his left wrist could reveal as sub-microscopic scandal. Much of it, too, was still quite usable. But all of it had the look of machinery which no one really expected to use.

On the near horizon, the other city, the one that Amalfi had seen from aloft, stood tall and straight. Tiny mechanisms puttered about it.

And far below the skywalk, on the cluttered surface of Murphy, in the shadow of the bulge of Amalfi's city, a tiny and merely human figure danced and gesticulated.

Amalfi led the way down the tight spiral of the metal staircase, Hazleton and Anderson behind him. Their steps were muffled in the thin air. He watched his own carefully; on a low-gravity world it was just as well to temper the use of one's muscles. The fact that one fell slower on such worlds did not much lessen the thump at the end of the fall, and Amalfi had found long ago that, away from the unvarying one-G field of the city, his bull strength often betrayed him even when he was being normally careful.

The dancing doll proved to be a short, curly-haired technie in a new but mussed uniform. Possibly he had slept in it; at least it seemed clear that he had never done any work in it. He had a smooth, chubby face, dark of complexion, greasy and stippled with clogged pores. He glared at Amalfi truculently with eyes like beer-bottle ends.

"What the hell?" he said. "How'd you get here?"

"We swam, how else? When do we get some service?"

"I'll ask the questions, bum. And tell your sergeant to keep his hand off his gun. He makes me nervous, and when I'm nervous, there's no telling what I'll do. You're after repairs?"

"Yeah."

"We're busy," the garageman said. "No charity here. Go back to your jungle."

"You're about as busy as a molecule at zero," Amalfi roared, thrusting his head forward. The garageman's shiny, bulbous nose retreated, but not by much. "We need repairs and we mean to have 'em. We've money to pay, and Lt. Lerner of your own local cops sent us here to get 'em. If those two reasons won't suit you, I'll have my sergeant put his gun hand to some use—he could probably draw and fire before you tripped over something in this junkyard."

"Who the hell are you threatening? Don't you know you're in the Acolyte stars now? We've broken up better—no, now wait a minute, sergeant, let's not be hasty. I've been dealing with bums until they're coming out of my ears. Maybe you're all right after all. You did say something about money—I heard you distinctly."

"You did," Amalfi said, remaining impassive with difficulty.

"Your City Fathers will vouch for it?"

"Sure. Hazleton—oh, hell. Anderson, what happened to the city manager?"

"He took a branching catwalk farther up," the perimeter sergeant said. "Didn't say where he was going."

It didn't, after all, pay to be too cautious, Amalfi thought wrily. If his brains hadn't been so exclusively on his feet, he would have detected the fact that only one other pair of feet was with him as soon as

Hazleton had begun to cat-foot it away.

"He'll be back—I hope," Amalfi said. "Look, friend; what we need is repair work. We've got a bad spindizzy in a hot hold. Can you haul it out and give us a replacement, preferably the newest model you've got?"

The garageman considered it. The problem seemed to appeal to him; his whole expression changed, so thoroughly that he looked almost friendly in his intimate ugliness.

"I've got a 6R6 in storage that might do, if you've got the reflux-laminated pediments to mount it on," he said slowly. "If you haven't, I've also a reconditioned BC77Y that hums as sweet as new. But I've never done any hot hauling before—didn't know spindizzies ever hotted up enough to notice. Anybody on board your burg that can give me a hand on decontamination?"

"Yes, it's all set up and ready to ride. Check the color of our money, and let's get on it."

"It'll take a little time to get a crew together," the garageman said. "By the way, don't let your men wander around. The cops don't like it."

"I'll do my best."

The garageman scampered away, dodging in and out among the idle, rust-tinted machines. Amalfi watched him go, marvelling anew at how quickly the born technician can be gulled into forgetting who he's working for, let alone how his work is going to be used.

First you mention money—since technies are usually underpaid; then you cap that with a tough and inherently interesting problem—and you have your man. Amalfi was always happy when he met a pragmatist in the enemy's camp.

"Boss—"

AMALFI spun. "Where the hell have you been? Didn't you hear me say that this planet is probably taboo to tourists? If you'd been on hand when you were needed, you'd have heard the 'probably' knocked out of that statement—to say nothing of speeding matters considerably!"

"I'm aware of that," Hazleton said evenly. "I took a calculated risk—something you seem to have forgotten how to do, Amalfi. And it paid off. I've been over to that other city, and found out something that we needed to know. Incidentally, the docks around here are a mess. This one, and the one the other city is in, must be the only ones in operation for hundreds of miles. All the rest are nearly full of sand and rust and flaked concrete."

"And the other city?" Amalfi said, very quietly.

"It's been garnisheed; there's no doubt about it. It's shabby and deserted. Half of it is being held up by buttressing, and it's got huts pitched in the streets. It's nearly a hulk. There's a crew over there putting it into some sort of operating order, but they're in no hurry, and they aren't doing a damn thing to make the city habitable—all they want it to do is run. It's not the city's own complement, obviously. Where *they* are, I'm afraid to think."

"There's considerable thinking you have not done," Amalfi said. "The original crew is obviously in debtors' prison. The garage is putting the city in order for some kind of dirty job that they don't expect it to outlast—and that no city still free could be hired to do at any price."

"And what would that be?"

"Setting up a planethead on a gas giant," said Amalfi. "They want to work some low-density, ammonia-methane world with an ice core, a Jupiter-type planet, that they can't conquer any other way. It's my guess that they hope to use such a planethead as an inexhaustible source of poison gas."

"That's not your only guess," Hazleton said, his lips thinned. "I expect to be disciplined for wandering off, Amalfi, but I'm a big boy, and won't have rationalizations palmed off on me just to keep the myth of your omniscience going."

"I'm not omniscient," Amalfi said mildly. "I looked at the other city on the way in. And I looked at the instruments. You didn't. The instruments alone told me that almost nothing was going on in that city that was normal to Okie operation. They also told me that its spindizzies were being tuned to produce a field which would burn them out within a year, and they told me what that field was supposed to do—what kind of conditions it was supposed to resist.

"Spindizzy fields will bounce any fast-

moving, large aggregate of molecules. They won't much impede the passage of gases by osmosis. If you so drive a field as to exclude the smallest possible molecular exchange, even under a pressure of more than a million atmospheres, you destroy the machine. That set of conditions occurs only in one kind of situation, a situation no Okie would ever commit himself to for an instant: setting down on a gas giant. Obviously, then, since the city *was* being readied for that kind of job, it had been garnisheed—it was now state property, and nobody cares about wasting state property."

"Once again," Hazleton said, "you might have told me that in time to prevent my taking my side-jaunt. However, this time it's just as well you didn't, because I still haven't come to the main thing I discovered. Do you know the identity of that city?"

"No."

"Good for you for admitting it. I do. It's *the* city we heard about when it was in the building three centuries ago: the so-called all-purpose city. Even under all the junk and decay, the lines are there. These Acolytes are letting it rot where it makes a real difference, just to hot-rod it for one job only. We could take it away from them if we tried. I studied the plans when they were first published, and—"

He stopped. Amalfi turned toward where Hazleton was looking. The garageman was coming back, at a dead run. He had a meson pistol in one hand.

"I'm convinced," Amalfi said swiftly. "Can you get over there again without being observed? This looks to me like trouble."

"Yes, I can. There's a—"

"Yes is enough for now. Tune our City Fathers to theirs and set up Standard Situation N in both. Cue it to our 'spin' key—straight yes-no signal."

"Situation N? Boss, that's a—"

"I know what it is. I think we need it now. Our bum spindizzy prevents us from making any possible getaway without the combined knowledge of the two sets of City Fathers; we just aren't fast enough. Git, before it's too late."

The garageman was almost upon them, emitting screams of fury each time he hit the ground at the end of a leap, as if the sounds were jolted out of him by the impact. In the thin atmosphere, the yells sounded like toots on a toy whistle.

Hazleton hesitated a moment more, then sprinted up the stairway. The garageman ducked around a trunnion and fired. The meson pistol howled at the sky and flew backwards out of his hand. Evidently he had never fired one before.

"Mayor Amalfi, shall I—"

"Not yet, sergeant. Cover him, that's all. Hey, you! Walk over here. Nice and slow, with your hands locked behind your head. That's it. Now then: what were you doing firing at my city manager?"

The dark-complected face was livid now. "You can't get away," he said thickly. "There's a dozen police squads on the way. They'll break you up for fair. It'll be fun to watch."

"Why?" Amalfi asked, in a reasonable tone. "You shot at us first. We've done nothing wrong."

"Nothing but pass a bum check! Around here that's a crime worse than murder, brother. I checked you with Lerner, and he's frothing at the mouth. You'd damn well better pray that some other squad gets to you before his does!"

"A bum check?" Amalfi said. "You're blowing. Our money's better than anything you're using around here, by the looks of you. It's germanium—solid germanium."

"Germanium?" the dockman repeated incredulously.

"That's what I said. It'd pay you to clean your ears more often."

The garageman's eyebrows continued to go higher and higher, and the corners of his mouth began to quiver. Two fat, oily tears ran down his cheeks. Since he still had his hands locked behind his head, he looked remarkably like a man about to throw a fit.

Then his whole face split wide open.

"GERMANIUM!" he howled. "Oh, haw, haw, haw! *Germanium!* What hole in the plenum have you been living in, Okie? Germanium—haw, *haw!*" He emitted a weak gasp and took his hands down to wipe his eyes. "Haven't you any silver, or gold, or platinum, or tin, or iron? Or something else that's worth something? Clear out, bum. You're broke. Take it from me as

a friend; clear out; I'm giving you good advice."

He seemed to have calmed down a little. Amalfi said, "What's wrong with germanium?"

"Nothing," the dockman said, looking at Amalfi over his incredible nose with a mixture of compassion and vindictiveness. "It's a good, useful metal. But it just isn't money any more, Okie. I don't see how you could have missed finding that out. Germanium is trash now—well, no, it's still worth something, but only what it's *actually* worth, if you get me. You have to buy it; you can't buy other things with it.

"It's no good here as money. It's no good anywhere else, either. *Anywhere* else. The whole galaxy is broke. Dead broke.

"And so are you."

He wiped his eyes again. Overhead, a siren groaned, softly but urgently.

Hazleton was ready, and had sighted the incoming cops.

III

Amalfi found it impossible to understand what happened when he closed the 'spin' key. He did not hope to understand it at any time in the future, either; and it would do no good to ask the City Fathers, who would simply refuse to tell him. Whatever they had had in reserve for Standard Situation N—that ultimate situation which every Okie city must face eventually, the situation where what is necessary to prevent total destruction is only and simply to *get away fast*—it was drastic and unprecedented. Or, it had become so, when the City Fathers had been given the chance to pool their knowledge with that of the City Fathers of the other city.

The city had simply floated away from Murphy. It was as unspectacular as that. Not a shot had been fired. The cops had come in upon Murphy in fair order, but only a moment after the city had taken off they had fallen into unbecoming and baffling confusion; they went shooting back and forth across the sky like demented actors looking for a crucial collar-button. The city went through them like water through a pipe, almost as if the cops had not been looking for the city at all.

An hour later, without the slightest advance warning, the other city left Murphy. By that time the cops were scattered in all directions, still hunting something that they evidently had had no prior idea would turn up missing. The all-purpose city, despite what the Acolytes had done to it, soared clear and true and clean.

By the time the garagemen had recovered enough to sound an alarm, the all-purpose city was gone; and by the time the cops had managed to reform enough to follow it, it had stopped operating, and thus had become indetectable.

It was floating now in an orbit half a million miles away from Amalfi's city. Its screens were down again. If there had been any garagemen on it when it took off, they were dead now; the city was airless.

And it would do no good to ask the City Fathers how all this had been accomplished. They honestly did not know; or, rather, they no longer knew. Standard Situation N was keyed in by a sealed and self-blowing circuit. It had been set up that way long ago, to prevent incompetent or lazy city administrators from calling upon it at every minor crisis. It could never be used again.

And Amalfi knew that he had called it into use, not only for his own city, but for the other one as well, in a situation which had not really been the ultimate extreme, had not really been Situation N. He had squandered the final recourse of both cities.

He was still equally certain that neither city would ever need that circuit again.

The two cities, linked only by an invisible ultraphone tight-beam, were now floating free in the starless area, three light years away from the jungle, and eight parsecs away from Murphy. The dim towers of the dead city were not visible to Amalfi, who stood alone on the belfry of City Hall; but they floated in his brain, waiting for him to tell them to come to life.

Whether or not his act of extreme desperation in the face of a not ultimately desperate situation had in actuality murdered that city was a question he could not decide. In the face of the galactic disaster, the question seemed very small.

He shelved it to consider what he had learned about his own bad check. Germanium never had had the enormous worth

in real terms that it had had as a treasure metal. It did have properties which made it valuable in many techniques: the germanium lattice would part with an atom at the urging of a comparatively low amount of energy; the P-N boundary functioned as a crystal detector; and so on. The metal found its way into uncountable thousands of electronic devices; and, it was rare.

But not *that* rare. Like silver, platinum, and iridium before it, geranium's treasure-value had been strictly artificial—an economic convention, springing from myths, jewelers' preferences, and the jealousy of statal monopolies. Sooner or later, some planet or system with a high technology—and a consequently high exchange rate—would capture enough of the metal to drive its competitors, or, more likely, its own treasury, off the germanium standard; or, someone would learn to synthesize the element cheaply. It hardly mattered which would happen, now.

What mattered was the results. The actual metallic germanium on board the city now had only an eighth of its former value, at current rates of sale. Much worse, however, was the fact that most of the city's funds were not metal, but paper, 0c dollars, issued against government-held metal back on Earth and a few other administrative canters. This "money," since it did not represent any metallic germanium that belonged to the city, was now unredeemable—valueless.

The new standard was a drug standard. Had the city come away from He with the expected heavy surplus of anti-agapics, it would now have been a multi-billionaire. Instead, it was close to being a pauper.

Amalfi wondered how the drug standard had come about. To Okies, cut off for the most part from the main stream of history, such developments frequently seemed like the brainstorms of some unknown single genius; it was hard to think of them as evolving from a set of situations, when none of the situations could now be intimately known.

Still, however it had arisen, the notion had its points. Drugs can be graded exactly as to value, by their therapeutic effect and their availability. Drugs that could be made synthetically in quantity at low cost would be the pennies and nickels of the new coinage—and those that could not, and were rare and always in heavier demand than the supply could meet, would be the hundred-dollar units.

Further, even expensive drugs could be diluted, which would make debt payment flexible; drugs could be as amenable to laboratory test for counterfeit as metal had been; and finally, drugs became outmoded rapidly enough to make for a high-velocity currency which could not be hoarded or cornered, even by the most predatory measures.

It was a good standard. Since it would be impossible to carry on real transactions in terms of fractions of a cc of some chemical—just as it had been impractical to carry a ton and a half of germanium about in order to pay one's debts—there would still be a paper currency.

But on the drug standard, the city was poor. It had none of the new paper money at all, though it would, of course, sell all its metallic germanium at once to get a supply. Possibly its germanium-based paper money might also be sold, against Earth redemption, at about a fifth of the current market value of the metallic equivalent, if the Acolytes cared about redeeming it.

The actual drugs on board the city could not be traded against. They were necessary to maintain the life of the city. Amalfi winced to think of the size of the bite medical care was going to take out of every individual's budget under the new economy. The anti-agapics, in particular, would pose a terrifying dilemma: Shall I use my anti-agapic credits now, as money, to relieve my current money miseries, or shall I continue to live in poverty in order to prolong my life? . . .

REMORSELESSLY Amalfi drove one consequence after another through the stony corridors of his skull, like a priest wielding the whip behind lowing sacrifices. The city was poor. It could find no work among the Acolyte stars at a rate which would make the work justifiable. It could look for work nowhere else without a new spindizzy.

That left only the jungle. There was no place else to go.

Amalfi had never set down in a jungle before, and the thought made him wipe the palms of his hands unconsciously against his thighs. The word in his mind—it had always been there, he knew, lying next to the word "jungle"—was *never*. The city must always pay its own way, it must always come whole out of any crisis, it must always pull its own weight . . .

Those emblems of conduct were now clichés; while *never* had turned out to be a time, like any other time—and that had implicit in it the inevitable time-word:

Now.

Amalfi picked up the phone which hung from the belfry railing.

"Hazleton?"

"Here, boss. What's the verdict?"

"None yet," Amalfi said. "Supposedly we snitched the city next door for some purpose; we now need to know what the chances are of abandoning ship at this point and getting out of here in it. Get some men in suits over there and check on it."

Hazleton did not answer for a moment. In that moment Amalfi knew that the question was peripheral, and that the verdict was already in. A line by the Earth poet Theodore Roethke crept across the floor of his brain like a salamander: *The edge cannot eat the center.*

"Right," Hazleton's voice said.

Half an eternal hour later, it added: "Boss, that city is worse off than we are, I'm afraid. It's got good drivers still, but of course they're all tuned wrong. Besides, the whole place seems to be structurally unsound on a close look; the garagemen really did a thorough job of burrowing around in it. Among other things, the keel's cracked—the Acolytes must have landed it, not the original crew."

It would be of course impossible to claim foreknowledge of any of this, with Hazleton's present state of mind teetering upon the edge of some rebellion Amalfi could not yet understand; and in any event Amalfi had allowed himself to be stampeded into stealing the other city by Hazleton, even in the face of the foreknowledge, to keep peace in the family. He said instead:

"What's your recommendation, Mark?"

"I'd cast loose from it, boss. I'm only sorry I advocated snitching it in the first place. We have the only thing it had to give us that we could make ours: our City Fathers now know everything their City Fathers knew. We couldn't take anything else but a new spindizzy, and that's a job for a graving dock."

"All right. Give it a 0.34% screen to clinch its present orbit and come on back. Make sure you don't give it more than that, or those overtuned spindizzies will advertise its position to anyone coming within two parsecs of it, and interfere with our own operation to boot."

"Right."

And now, there were the local cops to be considered. They had now chalked up against Amalfi's city, not only the uttering of a bad check, but the theft of state property, and the deaths of Acolyte technicians on board the other city. Only the jungle was safe, and even the jungle was safe only temporarily. In the jungle, at least for the time being, one city could lose itself among three hundred others—many of which would be better armed than Amalfi's city had ever been.

There might even be a chance, in such a salmon-pack of cities, that Amalfi would see at last with his own eyes the mythical Vegan orbital fort—the sole non-human construction ever to go Okie, and now the center of an enormous saga of mythical exploits woven about it by the star-men. Amalfi was as fascinated by the legend as any other Okie, though he knew the meagre facts well: the fort had circled Vega until the smashing of the Tyranny's home planet, and then—unexpectedly, since the Vegans had never been given to flying anything bigger than a battleship—had taken off for parts unknown, smashing its way through the englobement of police cruisers almost instantly. Nothing had ever been heard of it since, though the legend grew and grew.

The Vegans themselves had been anything but an attractive people, and it was difficult to say why the story of the orbital fort was so beloved with the Okies—of course, Okies generally disliked the cops and said that they had no love for Earth; but this hardly explained why the legend of the fort was spoken of so often among them. The fort was now said to be invulnerable and unlimited; it had done miracles in every

limb of the galaxy; it was everywhere and nowhere; it was the Okies' Beowulf, their Cid, their Sigurd, Gawaine, Roland, Cuchulain, Prometheus, Lemminkäinen . . .

Amalfi felt a sudden chill. The thought that had just come to him was so outrageous that he had almost pitched it away instinctively. The fort—probably it had been destroyed centuries ago; but if it did still exist . . . Yes, it was possible. It was possible. And definitely worth trying.

But if it actually worked . . .

Having made the decision, he put the idea resolutely aside. In the meantime, one thing was sure: as long as the Acolytes continued to use the jungle as a labor pool, their cops would not risk smashing the jungle up indiscriminately, only in order to search out one single "criminal" city. To the Acolytes' way of thinking, all Okies were lawbreakers, by definition.

Which, Amalfi thought, was quite correct as far as his own city was concerned. The city was not only a bum now, but a bindlestiff to boot—by definition.

The end of the line—unless there was really such a thing as the Vegan orbital fort.

"Boss? I'm coming in. What's the dodge? We'll need to pull it soon, or—"

Amalfi looked up steadily at the red scarf

Amalfi looked up steadily at the red dwarf star above the belfry.

"There is no dodge," he said. "We're licked, Mark. We're going to the jungle."

THE cities drifted along their sterile orbits around the little red sun. Here and there a few showed up on the screen by their riding lights, but most of them could not spare even enough power to keep riding lights going. The lights were vital in such close-packed quarters, but power to maintain spindizzy screens was more important still.

Only one city glowed—not with its riding lights, which were all out, but by street lighting. That city had power to waste, and it wanted the fact known. And it wanted it known, too, that it preferred to waste the power in sheer bragging to the maintenance of such elementary legalities as riding lights.

Amalfi looked at the image of the bright city soberly. It was not a very clear image, since the bright city was in a preferred position close to the red dwarf, where that sun's natural and unboundable gravitational field strained the structure of space markedly. The saturation of the intervening area with the smaller screens of the other Okies made the seeing still worse, since Amalfi's own city had been unable to press through the pack beyond 18 AU's from the sun, a distance about equivalent to that from Sol to Uranus. For Amalfi, consequently, the red dwarf was visually only a star of the tenth magnitude—the G-O star four light years away seemed much closer.

But obviously, three hundred-odd Okie cities could not all huddle close enough to a red dwarf to derive any warmth from it. Somebody had to be on the outside. It was equally obvious, and expectable, that the city with the most power available to it should be the one drawn up the most cosily to the dull stellar fire, while those who most needed to conserve every erg shivered in the outer blackness.

What *was* surprising was that the bright city should be advertising its defiance of local law and common sense alike—

While police-escorted Acolyte ships were shoving their way into the heart of the jungle.

Amalfi looked up at the screen banks. For the second time within the year, he was in a chamber of City Hall which was almost never used. This one was the ancient reception hall, which had been fitted with a screen system of considerable complexity about fifteen hundred years ago, just after the city had first taken to space. It was called into service only when the city was approaching a heavily-developed, highly-civilized star-system, in order to carry on the multiple negotiations with various diplomatic, legal and economic officials which had to be gone through before an Okie could hope to deal with such a system. Certainly Amalfi had never expected to have any use for the reception hall in a jungle.

There was a lot, he thought grimly, that he didn't know about living in an Okie jungle.

One of the screens came alight. It showed the full-length figure of a woman in sober clothing of an old style, utilitarian in cut, but obviously made of perishable materials. The woman inside the clothes was hard-

eyed, but not hard of muscle: an Acolyte trader, evidently.

"The assignment," the trader said in a cold voice, "is a temporary development project on Hern VI, as announced previously. We can take six cities there, to be paid upon a per-job basis."

A third screen faded in. "Attention, Okies."

Even before the image had stabilized in the locally-distorted space-lattice, Amalfi recognized its outlines. The general topology of a cop can seldom be blurred by distortion of any kind. He was only mildly surprised to find, when the face came through, that the police spokesman was Lt. Lerner, the man whose bribe had turned to worthless germanium in his hands.

"If there's any disorder, nobody gets hired," Lerner said. "Nobody. Understand? You'll present your offers to the lady in proper fashion, and she'll take or leave your bids as she sees fit. Those of you who are wanted outside the jungle will be held accountable if you leave the jungle—we're offering no immunities this trip. And if there's any damn insolence—"

Lt. Lerner's image drew its forefinger across its throat in a gesture that somehow had never lost its specificity. Amalfi growled and switched off the audio; Lerner was still talking, as was the trader, but now another screen was coming on, and Amalfi had to know what words were to come from it. The speeches of the trader and the cop could be predicted almost positively in advance—as a matter of fact, the City Fathers had already handed Amalfi the predictions, and he had listened to the actual speeches only long enough to check them for barely possible unknowns.

But what the bright city near the red dwarf—the jungle's boss, the King of the hoboes—would say—

Not even Amalfi, let alone the City Fathers, could know that in advance.

Lt. Lerner and the trader worked their mouths soundlessly while the wavering shadow on the fourth screen jelled. A slow, heavy, brutally confident voice was already in complete possession of the reception hall.

"Nobody takes any offer less than 60," it said. "The class A cities will ask 124 for the Hern VI job, and class B cities don't get to underbid them until the goddam trader has all the A's she'll take. If she picks all six from the A's, that's tough. No C's are to bid at all on the Hern VI deal. We'll take care of anybody that breaks ranks, either right away—"

The image came through. Amalfi goggled at it.

"—or after the cops leave. That's all for now."

The image faded. The twisted, hairless man in the ancient metal-mesh cape stood in Amalfi's memory for quite a while afterwards.

The Okie king was a man made of lava. Perhaps he had been born at one time; but now he looked like a geological accident, a column of black stone sprung from a fissure and contorted roughly into the shape of a man.

And his face was shockingly disfigured and scarred by the one disease that still remained unconquered, unsolved, though it no longer killed.

Cancer.

A voice murmured inside Amalfi's head, coming from the tiny vibrator imbedded in the mastoid bone behind the mayor's right ear.

"That's just what the City Fathers said he would say," Hazleton commented softly, from his post uptown in the control tower. "But he *can't* be as naive as all that. He's an oldtimer; been aloft since before they knew how to polarize spindizzy screens against hard radiation. Must be two thousand years old at a minimum."

"You can lay up a lot of cunning in that length of time," Amalfi agreed, in a similarly low voice. He was wearing throat-mikes under a high military collar. As far as the screens were concerned, he was standing motionless, silent, and alone; he was an expert at talking without moving his lips, and the fuzziness of local transmission conditions made it unlikely that another such expert could detect him at it. "It doesn't seem likely that he means what he says. But we'd best sit tight for the moment."

IN THE auxiliary battle tank, which, since it was camouflaged as a desk and could be seen into only from behind, was out of sight of any eye but Amalfi's, color-coded

points of light showed the trader's ship, and four police vessels: one command cruiser, very probably Lerner's vessel, and three light cruisers. It was not much of a force, but then there was no real need for a full squadron here. With a minimum of organization, the Okies could run Lerner out of the jungle, even at some cost to their own number—but where would the Okies run to after Lerner had yelled for navy support? The question answered itself.

A string of twenty-three small "personal" screens came on now, high up along the curve of the far wall. Twenty-three faces looked down at Amalfi—the mayors of all but one of the class A cities in the jungle; Amalfi's own city was the twenty-fourth. Amalfi valved the main audio gain back up again.

"Are we ready to begin?" the Acolyte woman said. "I've got codes here for twenty-four cities, and I see you're all here. Small courage among Okies these days—twenty-four out of three hundred of you for a simple job like this! That's the attitude that made Okies of you in the first place. You're afraid of honest work."

"We'll work," the king's voice said. His screen, however, remained grey-green. "Look over the codes and take your pick."

The trader looked for the voice. "No insolence," she said sharply. "Or I'll ask for volunteers from the class B's. It would save me money, anyhow."

There was no reply. The trader frowned and looked at the code list in her hand. After a moment she called off three numbers, and then, with greater hesitation, a fourth. Four of the screens above Amalfi went blank, and in the tank, four green flecks began to move outward from the red dwarf star.

"That's all we need for Hern VI except for a pressure job," the woman said slowly. "There are eight cities listed here as pressure specialists. You there—who are you, anyhow?"

"Bradley-Vermont," one of the faces above Amalfi said.

"What would you ask for a pressure job?"

"124," Bradley-Vermont's mayor said sullenly.

"O-ho! You've a high opinion of yourself, haven't you? You may as well float here and rot for a while longer, until you learn something more about the law of supply and demand. You—you're Dresden-Saxony, it says here. What's your price? Remember, I only need one."

Dresden-Saxony's mayor was a slight man with high cheekbones and glittering black eyes. He seemed to be enjoying himself despite his obvious state of malnutrition; at least he was smiling a little, and the eyes glittered over the dark shadows which made them look large.

"We ask 124," he said, with malicious indifference.

The woman's lids slitted. "You do, eh? That's a coincidence, isn't it? And you?"

"The same," the third mayor said, though with obvious reluctance.

The trader swung and pointed directly at Amalfi. In the very old cities, such as the one the king operated, it would be impossible to tell who she was pointing at, but probably most of the cities in the jungle had compensating tri-di. "What's *your* town?"

"We're not answering that question," Amalfi said. "And we're not pressure specialists, anyhow."

"I know that, I can read a code. But you're the biggest Okie I've ever seen, and I'm not talking about your belly, either. And you're modern enough for the purpose. The job is yours for one hundred; no more."

"Not interested."

"You're a fool as well as a fat man. You just came into this hell-hole and there are charges against you—"

"Ah, you know who we are. Why did you ask?"

"Never mind that. You don't know what a jungle is like until you've lived in it. You'd be smart to take the job and get out now, while you can. You'd be worth 110 to me if you could finish the job under the estimated time."

"You've denied us immunity," Amalfi said. "And you needn't bother offering it, either. We're not interested in pressure work for any price."

The woman laughed. "You're a liar, too. You know as well as I do that nobody arrests Okies on jobs. And you wouldn't find it difficult to leave the job once it's finished. Here now—I'll give you 120.

That's my top offer, and it's only four less than the pressure experts are asking. Fair enough?"

"It may be fair enough," Amalfi said. "But we don't do pressure work; and we've already gotten in reports from the proxies we sent to Hern VI as soon as Lt. Lerner said that that was where the job was. We don't like the look of it. We don't want it. We won't take it at 120, we won't take it at 124—we won't take it at all. Understand?"

"Very well," the woman said, with concentrated viciousness. "You'll hear from me again, Okie."

The king was looking at Amalfi with an unreadable, but certainly unfriendly expression. If Amalfi's guess was right, the king thought Amalfi was somewhat overdoing Okie solidarity. It might also be occurring to him that the expression of so much independence might be a bid for power with the jungle itself. Yes, Amalfi was sure that that, at least, had occurred to the king.

The hiring of the class B cities was now all that remained, but nevertheless it took quite a while to get started. The woman, it emerged, was more than a trader; she was an entrepreneur of some importance. She wanted the cities, twenty of them, each for the same identical piece of dirty work; working low-grade carnotite lies on a small planet too near a hot star. Twenty mining cities on one such planet would reduce it to as small and sculptured a lump of trash as a meteorite before very many months. The method, obviously, was to get the work done fast without paying more than a pittance for it.

Then, startlingly, while the woman was still making up her mind, the voice came through. It was weak and indistinct, and without any face to go with it.

"We'll take the job. Take us."

THERE was a murmuring from the screens, and across some of the faces there the same shadow seemed to run. Amalfi checked the tank, but it told him little. The signal had been too weak. All that could be made certain was that the voice belonged to some city far out on the periphery of the jungle—a city desperate for energy.

The Acolyte woman seemed momentarily non-plussed. Even in a jungle, Amalfi thought grimly, some crude rules had to be observed; evidently the woman realized that to take on the volunteer before interviewing the others might be—resented.

"Keep out of this," the voice of the king said, so much more slowly and heavily than before that its weight was almost tangible upon the air. "Let the lady do her own picking. She's got no use for a class C outfit."

"We'll take the job. We're a mining town from way back, and we can refine the stuff, too, by gaseous diffusion, mass spectrography, mass chromatography, whatever's asked. We can handle it. And we've got *to have it."*

"So do the rest," the king said, coldly unimpressed. "Take your turn."

"We're dying out here! Malnutrition, cold, thirst, disease!"

"Others are in the same state. Do you think any of us like it here? Wait your turn!"

"All right," the woman said suddenly. "I'm sick of being told who I do and who I don't want. Anything to get this over with. File your coordinates, whoever that is out there, and—"

"File your coordinates and we'll have a Dirac torpedo there before you've stopped talking!" the king roared. "Acolyte, what are you paying for this rock-heaving? Nobody here works for less than sixty—that's flat."

"We'll go for fifty-five."

The woman smiled an unpleasant smile. "Apparently somebody in this pest-area is glad of a chance to do some honest work for a change. Who's next?"

"Hell, you don't need to take a class C city," one of the rejected class A's blurted. "We'll go for fifty-five. What can we lose?"

"Then we'll take fifty," the outsider whispered immediately.

"You'll take a bolt in the teeth! As for you—you're Coquilhatville-Congo, eh?—you're going to be sorry you ever had a tongue to flap."

There was already a stir among the green dots in the tank. Some of the larger cities were leaving their orbits. The woman began to look vaguely alarmed.

"Hazleton!" Amalfi murmured quickly. "This is going to get worse before it gets better. Set us up, as fast as you can, to move in to one of the vacated orbits close to the red star, the moment I give the word."

"We won't be able to put on any speed—"

"I wouldn't want us to even if we could. It'll have to be done slowly enough so that it won't be apparent in any tank that we're moving counter to the general tendency. Also, get me a fix on that outfit on the outside that broke ranks, if you possibly can. If you can't do it without attracting attention, drop the project at once."

"Right."

"By Hadjjii's nightshirt, you've got a lesson coming!" the woman was exclaiming. "The whole deal is off for today. No jobs; not for anybody! I'll come back in a week. Maybe by then you'll have some common sense back. Lieutenant, let's get the hell out of here."

That, however, proved to be a difficult assignment. There was a sort of wave-front of heavy-duty cities between the Acolyte ships and open space, expanding outward into the darkness where the weaklings shivered. In that second frigid shell most of the class C cities were panicking; and, still farther out, the brilliant green sparks of the cities whose promised jobs had just been written off were plunging angrily back toward the main cloud.

The mayor's reception hall was a bedlam of voices, mostly those of other mayors trying to establish that they had not been responsible for the break in the wage-line. Somewhere several cities were still attempting to shout new bids to the Acolyte woman under cover of the confusion. Through it all the voice of the king whirled like a bull-roarer.

"Clear the sky!" Lerner shouted. "Clear it up out there, by—"

As if in response, the tank suddenly crackled with hair-thin sapphire tracers. The static of the scattered mesotron-rifle fire rattled speakers, and cross-hatched the desperate, shouting faces on the screens. Terror, the terror of a man who finds suddenly that the situation he is in has always been deadly, turned Lt. Lerner's features rigid. Amalfi saw him reach for something.

"All right, Hazleton, *spin!*"

The defective spindizzy sobbed, and the city moved, painfully. Lerner's elbow jprked back toward his midriff, and from his ship came the pale guide-light of a Bethé blaster.

Seconds later, something went up in the white agony of a fusion explosion—something so far off from the center of the riot that Amalfi first thought, with a shock of fury, that Lerner had undertaken to destroy Okie cities unselectively, simply to terrorize. Then the look on Lerner's face told him that the shot had been fired at random. Lerner was as taken aback as Amalfi, and seemingly for much the same reasons, at the death of the unknown bystander.

The depth of the response surprised Amalfi anew. Perhaps there was hope for Lerner yet.

Some incredible fool of an Okie was firing on the cop now, but the shots fell short; mesotron rifles were not primarily military instruments, and the Acolytes had almost worked free of the jungle. For a moment Amalfi was afraid that Lerner would fling a few vindictive Bethé blasts back into the pack, but evidently the cop was recovering the residues of his good sense; at least, no further shots came from the command cruiser. It was possible that he had realized that any further exchange of fire would turn the incident from a minor brawl to a mob uprising which would make it necessary to call in the Acolyte navy.

Not even the Acolytes could want that, for it would end in cutting off their supply of cheap skilled labor.

The city's spindizzies cut out. Lurid, smoky scarlet light leaked down the stone stairwell which led out of the reception hall to the belfry.

"We're parked near the stinking little star, boss. We're less than a million miles out from the orbit of the king's own city."

"Good work, Mark. Break out a gig. We're going calling."

"All right. Anything special in the way of equipment?"

"Equipment?" Amalfi said, slowly. "Well—no. But you'd best bring Anderson along. And, Mark—"

"Yes?"

"Bring Dee, too."

IV

The center of government of the king's city was enormously impressive: ancient, stately, marmorial. It was surrounded, on a lower level, by a number of lesser structures of equally heavy-handed beauty. One of these was an archaic cantilever bridge for which Amalfi could postulate no use at all; it spanned an enormously broad avenue which divided the city in two, an avenue virtually untravelled; the bridge, too, carried only foot traffic now, and not much of that.

He decided finally that the bridge had been retained only out of respect to history; perhaps that avenue had once been a riverbed. There seemed to be no other sentiment which fit it, since the normal mode of transportation in the king's city, as in every other Okie city, was by aircab. Like the city hall, the bridge was beautiful; possibly that had spoken for its retention too.

The cab rocked slightly and grounded. "Here we are, gentlemen," the Tin Cabby said. "Welcome to Buda-Pesht."

Amalfi followed Dee and Hazleton out onto the plaza. Other cabs, many of them, dotted the red sky, homing on the palace and settling nearby.

"Looks like a conclave," Hazleton said. "Guests from outside, not just managerial people inside this one city; otherwise, why the welcome from the cabby?"

"That's my guess, too, and I think we're none too early for it, either. It's my theory that the king is in for a rough time from his subjects. This shoot-up with Lerner, and the loss of jobs for everybody, must have lowered his stock considerably. If so, it'll give us an opening."

"Speaking of which," Hazleton said, "where's the entrance to this tomb, anyhow? Ah—that must be it."

They hurried through the shadows of the pillared portico. Inside, in the foyer, hunched or striding figures moved past them toward the broad ancient staircase, or gathered in small groups, murmuring urgently in the opulent dimness. This entrance hall was marvelous with chandeliers; they did not cast much light, but they shed glamour like a moulting peacock.

Someone plucked Amalfi by the sleeve. He looked down. A slight man with a worn slavic face and black eyes which looked alive with suppressed mischief stood at his side.

"This place makes me homesick," the slight man said, "although we don't go in for quite so much sheer mass on my town. I believe you're the mayor who refused all offers, on behalf of a city with no name. I'm correct, am I not?"

"You are," Amalfi said, studying the figure with difficulty in the ceremonial dimness. "And you're the mayor of Dresden-Saxony, Franz Specht. What can we do for you?"

"Nothing, thank you. I simply wanted to make myself known. It may be that you will need to know someone, inside." He nodded in the direction of the staircase. "I admired your stand today, but there may be some who resent it. Why is your city nameless, by the way?"

"It isn't," Amalfi said. "But we sometimes need to use our name as a weapon, or at least as a lever. We hold it in reserve as such."

"A weapon! Now that is something to ponder. I will see you later, I hope." Specht slipped away abruptly, a shadow among shadows. Hazleton looked at Amalfi with evident puzzlement.

"What's his angle, boss? Backing a long-shot, maybe?"

"That would be my guess. Anyhow, as he says, we can probably use a friend in this mob. Let's go on up."

In the great hall, which had been the throne-room of an empire older than any Okie, older even than spaceflight, there was already a meeting in progress. The king himself was standing on the dais, enormously tall, bald, scarred, terrific, as shining black as anthracite. Ancient as he was, his antiquity was that of stone, featureless, eventless, an antiquity without history, against the rich backdrop of his city. He was anything but an expectable mayor of Buda-Pesht; Amalfi strongly suspected that there were recent bloodstains on the city's log.

Nevertheless, the king held the rebellious Okies under control without apparent effort. His enormous, gravelly voice roared down about their heads like a rock-slide, overwhelming them all with its raw momentum

alone. The occasional bleats of protest from the floor sounded futile and damned against it, like the voice of valley lambs objecting to the coming avalanche.

"So you're mad!" he was thundering. "You got roughed up a little and now you're looking for somebody to blame it on! Well, I'll tell you who to blame it on! I'll tell you what to do about it, too! And by God when I'm through telling you, you'll *do* it, the whole pack of you!"

Amalfi pushed through the restive, close-packed mayors and city managers, putting his bull shoulders to good use. Hazleton and Dee, hand in hand, tailed him closely. The Okies on the floor grumbled as Amalfi shoved his way forward; but they were so bound up in the king's diatribe, and in their own fierce, unformulated resistance to the king's battering-ram leadership tactics, that they could spare nothing more than a moment's irritation for Amalfi's passage among them.

"Why are we hanging around here now, getting pushed around by these Acolyte hicks?" the king roared. "You're fed with it. All right, I'm fed with it, too. I wouldn't take it from the beginning! When I came here, you guys were bidding each other down to peanuts. When the bidding was over, the city that got the job lost money on it, every time. It was me that showed you how to organize. It was me that showed you how to stand up for your rights. It was me that showed you how to form a wage line, and how to hold one. And it's going to be me that'll show you what to do when a wage line breaks up."

Amalfi reached behind him, caught Dee's free hand, and drew her forward to stand beside him. They were now in the front row of the crowd, almost up against the dais. The king saw the movement; he paused and looked down. Amalfi felt Dee's hand tighten spasmodically upon his. He returned the pressure.

"All right," Amalfi said. When he was willing to let his own voice out, he could fill a considerable space with it. He let it out. "Show, or shut up."

The king, who had been looking directly down at them, made a spasmodic movement—almost as if he had been about to take one step backwards. "Who the hell are you?" he shouted.

"I'm the mayor of the only city that held the line today," Amalfi said. He did not seem to be shouting, but somehow his voice was no smaller in the hall than the king's. A quick murmur went through the mob, and Amalfi could see necks craning in his direction. "We're the newest—and the biggest—city here, and this is the first sample we've seen of the way you run this wage-bidding. We think it stinks. We'll see the Acolytes in hell before we take their jobs at *any* of the prices they offer, let alone the low pay-levels you set."

SOMEONE nearby turned and looked at Amalfi slantwise. "Evidently you folks can eat space," the Okie said drily.

"We eat food. We won't eat slops," Amalfi growled. "You up there on the platform—let's hear this great plan for getting us out of this mess. It couldn't be any worse than the wage-line system, that's a cinch."

The king had begun to pace. He whirled as Amalfi finished speaking, arms akimbo, feet apart, his shiny bald cranium thrust forward, gleaming blankly against the faded tapestries.

"I'll let you hear it," he roared. "You bet I'll let you hear it. Let's see where your big talk comes to after you know what it is. You can stay behind and try to pry boom-time wages out of the Acolytes if you want; but if you've guts, you'll go with us."

"Where to?" said Amalfi calmly.

"We're going to march on Earth."

There was a brief, stunned silence. Then a composite roar began to grow in the hall.

Amalfi grinned. The sound of the response was not exactly friendly.

"Wait!" the king bellowed. "Wait, dammit! I ask you—what's the sense in our fighting the Acolytes? They're just local trash. They know just as well as we do that they couldn't get away with their slave-market tactics and their private militia and their shoot-ups if Earth had an eye on 'em."

"Then why don't we holler for the Earth cops?" someone demanded.

"Because they wouldn't come here. They can't. There must be Okies all over the galaxy that are taking stuff from local systers and clusters, stuff like what we're taking. This depression is everywhere, and there

just aren't enough Earth cops to be all over the place at once.

"But we don't have to take it. We can go to Earth and demand our rights. We're citizens, every one of us—unless there are any Vegans here. You a Vegan, buddy?"

The scarred face stared down at Amalfi, smiling gruesomely. A nervous titter went through the hall.

"The rest of us can go to Earth and demand that the government bail us out. What else is government for, anyhow? Who produced the money that kept the politicians fat all through the good centuries? What would the government have to govern and tax and penalize if it weren't for the Okies? Answer me that, you with the orbital fort under your belt!"

The laughter was louder and sounded more assured now. Amalfi, however, was quite used to gibes at his pod; such thrusts were for him a sure sign that his current opponent had run out of pertinent things to say. He returned coldly:

"More than half of us had charges against us when we came here—not local charges, but violations of Earth orders of one kind or another. Some of us have been dodging being brought to book on our Violations dockets for decades. Are you going to offer yourselves to the Earth cops on a platter?"

The king did not appear to be listening with more than half an ear. He had brought up a broad grin at the second wave of laughter, and had been looking back down at Dee for admiration.

"We'll send out a call on the Dirac," he said. "To all Okies, everywhere. 'We're all going back to Earth,' we'll say. 'We're going home to get an accounting. We've done Earth's heavy labor all over the galaxy, and Earth's paid us by turning our money into waste paper. We're going home to see that Earth does something about it'—we'll set a date—'and any Okie with spaceman's guts will follow us.' How does that sound, eh?"

Dee's grip on Amalfi's hand was now tighter than any pressure he could have believed she could exert. Amalfi did not speak to the king; he simply looked back at him, his eyes metallic.

From somewhere fairly far back in the throne-room, a newly familiar voice called:

"The mayor of the nameless city has asked a pertinent question. From the point of view of Earth, we're a dangerous collection of potential criminals at worst. At best we're discontented jobless people, and undesirable in large numbers anywhere near the home planet."

Hazleton pushed up to the front row, on the other side of Dee, and glared belligerently up at the king. The king, however, had looked away again, over Hazleton's head.

"Anybody got a better idea?" the immense black man said drily. "Here's good old Vega down here; he's full of ideas. Let's hear his idea. I'll bet it's colossal. I'll just bet he's a genius, this Vegan."

"Get us there, boss," Hazleton hissed. "You've got 'em!"

Amalfi released Dee's hand—he had some difficulty in being gentle about it—bounded clumsily but without real effort onto the dais, and turned to face the crowd.

"Hey there, mister," someone shouted. "You're no Vegan!"

The crowd laughed uneasily.

"I never said I was," Amalfi retorted. Hazleton's face promptly fell. "Are you all a pack of children? No mythical fort is going to bail you out of this. Neither is any fool mass flight on Earth. There isn't any easy way out. There *is* one tough way out, if you've got the guts for it."

"Let's hear it!"

"Speak up!"

"Let's get it over with!"

"All right," Amalfi said. He walked back to the immense throne of the Hapsburgs and sat down in it, catching the king flat-footed. Standing, Amalfi despite his bulk was a smaller man than the king, but on the throne he made the king look, not only smaller, but also quite irrelevant. From the back of the dais, his voice boomed out as powerfully as before.

"Gentlemen," he said, "our germanium is worthless now. So is our paper money. Even the work we do doesn't seem to be worth much now, on any standard. That's our trouble, and there isn't much that Earth can do about it—they're caught in this collapse, too."

"A professor," the king said, his seamed lips twisting.

"Shaddap. You asked me up here. I'm

staying up here until I've had my say. The commodity we all have to sell is labor. Hand labor, heavy work, isn't worth anything. Machines can do that. But brainwork can't be done with anything but brains; art and pure science are beyond the compass of any machine.

"Now, we can't sell art. We can't produce it; we aren't artists and aren't set up as such; there's an entirely different segment of galactic society that's supplying that need. But brainwork in pure science is something we can sell, just as we've always sold brainwork in applied sciences. If we play our cards right, we can sell it anywhere, for any price we ask, regardless of the money system involved. It's the ultimate commodity, and in the long run it's a commodity which no one but the Okies could merchandise successfully.

"Selling that commodity, we could take over the Acolytes or any other star system. We could do it better in a general depression than we could ever have done it before, because we can now set any price on it that we choose."

"Prove it," somebody called.

"THAT'S easy. We have here a round three hundred cities. Let's integrate and use their accumulated knowledge. This is the first time in history that so many City Fathers have been gathered together in one place, just as it's the first time that so many big organizations specializing in different sciences have ever been gathered together. If we were to consult with each other, pool our intellectual resources, we'd come out technologically at least a thousand years ahead of the rest of the galaxy. Individual experts can be bought for next to nothing now, but no individual expert—*nor any individual city or planet*—could match what we'd have.

"That's the priceless coin, gentlemen, the universal coin: human knowledge. Look now: there are 85 million undeveloped worlds in this galaxy ready to pay for knowledge of the *current* vintage, the kind we all share right now, the kind that runs about a century behind Earth on the average. But if we were to pool our knowledge, then even the most advanced planets, even Earth itself, would see their coinages crumble—in the face of their eagerness to buy what we would have to offer."

"Question!"

"You're Dresden-Saxony back there, right?" Amalfi said. "Go ahead, Mayor Specht."

"Are you sure accumulated technology *is* the answer? You yourself said that straight techniques are the province of machines. The ancient Gödel-Church theorems show that no machine or set of machines can score significant advances on human thought. The designer has to precede the machine, and has to have achieved the desired function before the machine can even be built."

"What is this, a seminar?" the king demanded. "Let's—"

"Let's hear it," someone called.

"After that mess today—"

"Let 'em talk—they make sense!"

Amalfi waited a moment and then said, "Yes, Mayor Specht. Go ahead."

"I had about made my point. The machines cannot do the job you offer as the solution to our troubles. This is why mayors have authority over City Fathers, rather than the other way around."

"That's quite true," Amalfi said. "And I don't pretend that a completely cross-connective hookup among all our City Fathers would automatically bail us out. For one thing, we'd have to set the hookup pattern very carefully as a topological problem, to be sure we didn't get a degree of connectivity which would result in the disappearance of knowledge, instead of its accumulation. There's an example of just the kind of thing you were talking about: machines can't handle topology, because it isn't quantitative.

"I said that this was the hard way of solving the problem, and I meant just that. After we'd pooled our machine-accumulated knowledge, furthermore, we'd have to interpret it, before we could put it to some use.

"That would take time. Lots of time. Technicians will have to check the knowledge-pooling at every stage; they'll have to check the City Fathers to be sure they can take in what's being delivered to them—as far as we know, they have no storage limits, but that assumption hasn't ever been tested before on the practical level. They'll have to assess what it all adds up to in the end,

run the assessments through the City Fathers for logical errors, assess the logic for supra-logical bugs beyond the logics that the City Fathers use, check all the assessments for new implications needing complete rechecks —of which there will be thousands. . . .

"It'll take more than two years, and probably closer to five years, to do even a scratch job. The City Fathers will do their part of it in a few hours, and the rest of the time will be consumed by human brain-work. While that part of it's going on, we'll have it thin. But we've got it damn thin already, and when it's all over, we'll be able to write our own tickets, anywhere in the galaxy."

"A very good answer," Specht said. He spoke quietly, but each word whistled through the still, sweat-humid air like a thin missile. "Gentlemen, I believe the mayor of the nameless city is right."

"The hell he is!" the king howled, striding to the front of the dais and trying to wipe the air out of his way as he walked. "Who wants to sit for five years making like a pack of scientists, while the Acolytes have us all digging ditches?"

"Who wants to be dispersed?" someone countered shrilly. "Who wants to pick a fight with Earth? Not me. I'll stay as far away from the Earth cops as I can. That's common sense for Okies."

"Cops!" the king shouted. "Cops look for single cities. What if a thousand cities marched on Earth? What cop would bother with one city on one disorderly conduct charge? If you were a cop and you saw a mob coming down at you, would you try to bust it up by pinching one man in it who'd run out on a Vacate order, or shaded a 3% fruit-freezing contract? If that's common sense for Okies I'll eat it!

"You guys are chicken, that's your trouble. You got knocked around today and you hurt. You're tender. But you know damn well that the law exists to protect *you*, not scum like the Acolytes. It's a cinch we can't call the Earth cops here to protect us—the cops are too few for that, we're too few, and besides we'd get nabbed individually for whatever we've got written against us. But in a march of thousands of Okies—a peaceful march, to ask Earth to give you what belongs to you—you couldn't be touched individually. But you're scared! You'd rather squat in a jungle and die by pieces!"

"Not us!"

"Us neither."

"When do we start?"

"That's more like it," the king said.

Specht's voice said: "Buda-Pesht, you are trying to force a stampede. The question is not closed yet."

"All right," the king agreed. "I'm willing to be reasonable. Let's take a vote."

"We aren't ready for a vote yet. The question is still open."

"Well?" said the king. "You there on the overstuffed potty—you got anything more to say? Are you as afraid of a vote as Specht is?"

Amalfi got up, with deliberate slowness.

"I've made my points, and I'll abide by the voting," he said, "if it's physically possible for us to do so; our spindizzy equipment wouldn't tolerate an immediate flight to Earth, if the voting goes that way. But I've made my point. A mass flight to Earth would be suicide."

"One moment," Specht's voice cut in again. "Before we vote, I for one want to know who it is that has been advising us. Buda-Pesht we know. But—*who are you?*"

THERE was instant, dead silence in the throne-room.

The question was loaded, as everyone in the hall knew. Prestige among Okies depended, in the long run, upon only two things: time aloft, and coups recorded by the interstellar grapevine. Amalfi's city stood high on both tallies; he had only to identify his city, and he would stand at least an even chance of carrying the voting. Even while nameless, for that matter, the city had earned considerable kudos in the jungle.

Evidently Hazleton thought so too, for Amalfi could see the frantic, covert hand signals he was making. *Tell 'em, boss. It can't miss. Tell 'em!*

After a long, suspended heartbeat, the mayor said: "My name is John Amalfi, Mayor Specht."

A single broad comber of contempt rolled through the hall.

"Asked and answered," the king said, showing his ragged teeth. "Glad to have

you aboard, Mister Amalfi. Now if you'll get the hell off the platform we'll get on with the voting. But don't be in any hurry to leave town, Mister Amalfi. I want to talk to you, man to man. Understand?"

"Yeah," Amalfi said. He swung his huge bulk lightly to the floor of the hall, and walked back to where Dee and Hazleton were standing, hand in hand.

"Boss, why didn't you tell 'em?" Hazleton whispered, his face hard. "Or did you *want* to throw the whole show away? You had two beautiful chances, and you muffed 'em both!"

"Of course I muffed them. I came here to muff them. I came here to dynamite them, as a matter of fact. Now you and Dee had better get out of here, before I have to give Dee to the king in order to get back to our city at all."

"You staged that too, John," Dee said. It was not an accusation; it was simply a statement of fact.

"I'm afraid I did," Amalfi said. "I'm sorry, Dee; it had to be done, or I wouldn't have done it. I was also sure that I could fox the king on that point, if that's any consolation to you. Now move, or you will be sunk. Mark, make plenty of noise about getting away."

"What about you?" Dee said.

"I'll be along later. Git!"

Hazleton stared at Amalfi a moment longer. Then he turned and pushed back through the crowd, the frightened, reluctant girl at his heels. His method of making "plenty of noise" was characteristic of him: he was so completely silent that everyone within sight of him knew that he was making a getaway; even his footsteps made no sound at all. In the surging hall his noiselessness was as conspicuous as a siren in church.

Amalfi stood his ground long enough to let the king see that the principal hostage was still on hand, still obeying the letter of the king's order. Then, the moment the king's attention was distracted, he faded, moving with the local current in the crowd, bending his knees slightly to reduce his height, tipping his head back to point his conspicuous baldness (an affliction which had become very rare since the achievement of personal immortality) away from the dais, and making only the normal amount of sound as he moved—becoming, in short, effectively invisible.

By this time the voting was in full course, and it would be five minutes at the least before the king could afford to interrupt it long enough to order the doors closed against Amalfi. After Hazleton's and Dee's ostentatiously alarmed exits, an emergency order in the middle of the voting would have made it painfully obvious what the king was after. All Okie cities had puritanical laws on the subject of women in the lives of city mayors—designed to prevent, at all costs, the foundation of nepotistic administrations—and while the laws did not forbid non-fruitful relationships specifically, they cast a serious unofficial pall of disapproval over any public expression of interest in the opposite sex.

Of course, had the king had the foresight to equip himself with a personal transmitter before mounting the dais, the outcome might have been different. The king's failure to do so strengthened Amalfi's conviction that the king had not been mayor of Buda-Pesht long, and that he had not won the post by the usual processes.

But Dee and Hazleton would get out all right. So would Amalfi. On this limited subject, Amalfi had been six jumps ahead of the king all the way.

Amalfi drifted toward the part of the crowd from where, roughly, he estimated that the voice of the mayor of Dresden-Saxony had been coming. He found the worn, bird-like slav without difficulty.

"You keep a tight holster-flap on your weapons," Specht said in a low voice.

"Sorry to disappoint you, Mayor Specht. You set it up beautifully. It might cheer you up a bit to know that the question *was* just the right one, all the same, and many thanks for it. In return I owe you the answer; are you good at riddles?"

"Riddles?"

"*Raetseln,*" Amalfi translated.

"Oh—conundrums. No, but I can try."

"What city has two names twice?"

Evidently Specht did not need to be good at riddles to come up with the answer to that one. His jaw dropped. "You're N—" he began.

Amalfi held up his hand in the conven-

tional Okie FYI sign: "For your information *only.*" Specht gulped and nodded. With a grin, Amalfi drifted on out of the palace.

There was a lot of hard work still ahead, but from now on it should be all downhill. The "march" on Earth would be carried in the voting.

Nothing essential remained to be done now in the jungle but to turn the march into a stampede.

BY THE time he reached his own city, Amalfi found he was suddenly intensely tired. He berthed the second gig Hazleton had had the perimeter sergeant send for him, and went directly to his room, where he ordered his supper sent up.

This last move, he was forced to conclude, had been a mistake. The city's stores were heavily diminished, and the table that was set for him—set, as it would have been for anyone else in the city, by the City Fathers with complete knowledge of his preferences—was meagre and uninteresting. It included fuming Rigellian wine, which he despised as a drink for barbarians; such a choice could only mean that there was nothing else to drink in the city but water.

His weariness, the solitude, the direct transition from the audience-hall of the Hapsburgs to his bare room under the mast in the 34th Street building—it had been an elevator-winch housing until the city had converted to friction-fields—and the dullness of the meal all combined to throw him into a rare and deep state of depression. What he thought he could see of the future of Okie cities did not exactly cheer him, either.

It was at this point that the door to his room irised open, and Hazleton stalked silently through it, hooking his chromoclav back into his belt.

They looked at each other stonily for a moment. Amalfi pointed to a chair.

"Sorry, boss," Hazleton said, without moving. "I've never used my key before except in an emergency, you know that. But I think maybe this is an emergency. We're in a bad way—and the way you're dealing with the problem strikes me as crazy. For the survival of the city, I want to be taken into your confidence."

"Sit down," Amalfi said. "Have some Rigel wine."

Hazleton made a wry face and sat down.

"You're in my confidence, as always, Mark. I don't leave you out of my plans, except where I think you might shoot from the hip if I did. You'll agree that you've done that occasionally—and *don't* throw up the Thor V situation again, because there I was on your side; it was the City Fathers who objected to that particular Hazleton gimmick."

"Granted."

"Good," Amalfi said. "Tell me what you want to know, then."

"Up to a point I understand what you're out to do," Hazleton said without preamble. "Your use of Dee as a safe-conduct in and out of the meeting was a shrewd trick. Considering the political threat we represented to the king, it was probably the only thing you could have done. Understand, I resent it personally and I may yet pay you off for it. But it was necessary, I agree."

"Good," the mayor said wearily. "But that's a minor point, Mark."

"Granted, except on the personal level. The main thing is that you threw away the whole chance you schemed so hard to get. The knowledge-pooling plan was a good one, and you had two major chances to put it across. First of all, the king set you up to claim we were Vegan—nobody has ever actually seen that fort, and physically you're enough unlike the normal run of humanity to pass for a Vegan without much trouble. Dee and I don't look Vegan, but we might be atypical, or maybe renegades.

"But you threw that one away. Then the mayor from Dresden-Saxony set you up to swing almost everybody our way, by letting them know our name. If you'd followed through, you would have carried the voting. Hell, you'd probably have wound up king of the jungle to boot.

"And you threw that one away, too."

Hazleton took his slide rule out of his pocket and moodily pushed the slide back and forth in it. It was a gesture frequent enough with him, but ordinarily it preceded or followed some use of the rule. Tonight it was obviously just nervous play.

"But Mark, I didn't want to be king of the jungle," Amalfi said slowly. "I'd much

rather let the present incumbent hold that responsibility. Every crime that's ever been committed, or will be committed in the near future in this jungle, will be laid at his door eventually by the Earth cops. On top of that, the Okies here will hold him personally responsible for every misfortune that comes their way while they're in the jungle. I never did want that job; I only wanted the king to think that I wanted it. Incidentally, did you try to raise that city out on the perimeter, the one that said it had mass chromatography?"

"Sure," Hazleton said. "They don't answer."

"Okay. Now, about this knowledge-pooling plan: it wouldn't work, Mark. First of all, you couldn't keep a pack of Okies working at it long enough to get any good out of it. Okies aren't philosophers, and they aren't scientists except in a limited way. They're engineers and merchants; in some respects they're adventurers too, but they don't think of themselves as adventurers. They're *practical*—that's the word they use. You've heard it."

"I've used it," Hazleton said, edgily.

"So have I. There's a great deal of meaning packed into it. It means, among other things, that if you get Okies involved in a major analytical project, they'll get restive. They want sets of applications of principles, *not* principles pure and useless. And it isn't in their natures to sit still in one place for long. If you convince them that they should, then they'll try—and the whole thing will wind up in a terrific explosion.

"But that's only point one. Mark, have you any idea of the real scope of the knowledge-pooling project? I'm *not* trying to put you on the spot, believe me. I don't think anybody in that hall realized it. If they had, they'd have laughed me off the platform. There again, Okies aren't scientists, and their outlook is too impatient to let them carry a really long chain of reasoning to a conclusion."

"You're an Okie," Hazleton pointed out. "You carried it to a conclusion. You told them how long it would take."

"I'm an Okie. I told them it would take from two to five years to do even a scratch job. As an Okie, I'm an expert at half-truths. It would take from two to five years even to get the project set up! And the rest of the job, Mark, would take *centuries*."

"For a scratch job?"

"No such thing as a scratch job in this universe of discourse," Amalfi said, reaching for the fuming wine and reconsidering at the last minute. "Those cities out there represent the accumulated scientific knowledge of all the high-technical-level cultures they've ever encountered. Even allowing for the usual information gaps, that's about 5,000 planetsfull of data, at a minimum estimate. Sure, we could pool all that knowledge—just as I said at the meeting, the City Fathers could take it all in, and classify it, in only a little over an hour—*after we'd spent two to five years setting them up to do it.* And then we'd have to integrate it. And you've got to integrate it, Mark; you've got to know it thoroughly enough to be able to make it *do* something. You couldn't offer it for sale unless you did that. Would you like the job?"

"NO," HAZLETON said slowly, but at once. "But Amalfi, am I ever going to know what you're doing, if you persist in proceeding like this? You didn't go to that meeting just to waste time; I can trust you that far. So I have to assume that the whole maneuver was a trick, designed to force the march on Earth, rather than to defeat it. You gave the cities a clearly-defined, superficially sound, and less attractive alternative. Once they had rejected the alternative, they had committed themselves to the king's tactics, without knowing it."

"That's quite right."

"If that's right," Hazleton said, looking up suddenly with a flat flash of almost-violet eyes, "I think it's stupid. I think it's stupid even though it was marvellously devious. There's such a thing as outsmarting yourself."

Amalfi said, "That could be. In any event, if the choice had been limited to marching on Earth versus staying in the jungle, the cities would have stayed in the jungle. But I'm more interested in your complaint that you didn't know *in advance* what I was doing. I know why you didn't know. You know, too."

"Dee?"

"Certainly," Amalfi said. "You weren't

asking the right question. You were emotionally driven to ask why I wanted Dee along. The question was pertinent enough, but it wasn't exactly central. If you had stood back a little further from the *whole* problem, you'd have seen why I want the march on Earth to go through, too."

"I'll try," Hazleton said grimly. "Though I'd prefer to be told. You and I are getting farther apart every year, boss. It used to be that we thought very much alike. Then you developed your habit of not telling me the whole story. It was a training device, I think now. The more I was made to worry about the total plan, and the more I was required to think the thing out for myself—which meant trying to figure *you* out—the more training I got in thinking like you. And of course, to be a proper city manager, I had to think like you. You had to be sure that any decisions I made in your absence would be the decisions you would have made, had you been around.

"All this hit me after our tangle with the Duchy of Gort. That incident was the first time that you and I had been out of touch with each other long enough for a situation of really major proportions to develop, a situation about which I could know very little until I could get back from Utopia and get briefed.

"When I got back, I found that I was damn lucky *not* to have thought like you. My first failure to comprehend your whole plan—and your training method of leaving me to puzzle things out alone—apparently had doomed me in your mind. You had written me off, and you were training Carrel as my successor."

"All this is accurate reportage," Amalfi said. "If you mean to accuse me of keeping a hard school—"

"—a fool will learn in no other?"

"No. A fool won't learn at all. But I don't deny keeping a hard school. Go on."

"I haven't far to go, now. I learned, in the Gort-Utopia system, that thinking the way you think can sometimes be deadly for me. I got off Utopia by thinking *my* way, not yours. The confirmation came when we hit He; had I been thinking entirely like you in that situation, we'd still be on the planet."

"Mark, you still haven't made your point. I can tell. It's perfectly true that I've often relied on your plans, and precisely because they come from a mind most unlike my own. What of it?"

"This of it. You're now out to rub out whatever trace of originality I have. You used to value it, as you say. You used to use it for the city, and defend it against the City Fathers when they had an attack of conservatism. But now you've changed, and so have I.

"These days, I seem to be tending toward thinking more and more like a human being, with human concerns. I don't feel like Hazleton the master conniver any more, except in flashes. The opposite change is taking place in you. You're becoming more and more alienated from human concerns. When you look at people, you see—machines. After a little more of this, we won't be able to tell you from the City Fathers."

Amalfi tried to think about it. He was very tired, and he felt old. It was not yet time for his anti-agapic shot, not by more than a decade, but knowing that he would probably not get it made the centuries he had already traversed weigh heavily upon his back.

"Or maybe I'm beginning to think that I'm a god," he said. "You accused me of that on Murphy. Have you ever tried to imagine, Mark, how completely crippling it is to any man's humanity to be the mayor of an Okie city for hundreds of years? I suppose you have—your own responsibilities aren't lighter than mine, only a little different. Let me ask you this, then: isn't it obvious that this change in you dates from the day when Dee first came on board?"

"Of course it's obvious," Hazleton said, looking up sharply. "It dates from the Utopia-Gort affair. That's when Dee came on board; she was a Utopian. Are you about to tell me that *she's* to blame?"

"Shouldn't it also be obvious," Amalfi continued, with weary implacability, "that the converse change in me dates from that same event? Gods of all stars, Mark, *don't you know that I love Dee, too?*"

Hazleton froze and went white. He looked rigidly, with suddenly-blind eyes, at the remains of Amalfi's miserable supper. After a long time, he laid his slide rule on the table, as delicately as if it were made of

spun sugar.

"I do know," he said, at long last. "I did know. But I didn't—want to know that I knew."

Amalfi spread his big hands in a gesture of helplessness he had not had to use for more than half a century. The city manager did not seem to notice.

"That being the case," Hazleton resumed, his voice suddenly much tighter, "that being so, Amalfi, I—" He stopped.

"YOU needn't rush, Mark. Actually it doesn't change things much. Take your time."

"Amalfi—*I want off.*"

Each evenly spaced word struck Amalfi like the strokes of a mallet against a gong, the strokes which, timed exactly to the gong's vibration period, drive it toward shattering. Amalfi had expected anything but those three words.

They told him that he had had no real idea of how helpless he had become.

I want off was the traditional formula by which a starman renounced the stars. The Okie who spoke them cut himself off forever from the cities, and from the long swooping lines of the ingeodesics that the cities followed through space-time. He became planet-bound.

And—it was entirely final. The words were seared into Okie law. *I want off* could never be refused—nor retracted.

"You have it," Amalfi said. "Naturally. I won't tax you with being hasty, since it's too late."

"Thanks."

"Well, where do you want it? On the nearest civilized planet, or at the city's next port of call?"

These, too, were merely the traditional alternatives, but Hazleton didn't seem to relish either of them. His lips were white, and he seemed to be trembling slightly.

"That," he said, "depends on where you're planning to go next. You haven't yet told me."

Hazleton's disturbance disturbed Amalfi too, more than he liked to recognize. Mechanically, it would almost surely be possible for the ex-city manager to withdraw his decision; and mechanically, it would be possible to make that suggestion to Hazleton. Those three words had been neither overheard nor recorded as far as Amalfi knew, except—a small chance—by the treacher, the section of the City Fathers which handled table-waiting. Even there, however, the City Fathers wouldn't be likely to scan the treacher's memory-bank more than once every five years. The treacher had nothing interesting to remember but the eating-preference patterns of the Okies, and such patterns change slowly and, for the most part, insignificantly. No, the City Fathers need not know that Hazleton had resigned, not for a while yet.

But allowing the city manager to back down did not even occur to Amalfi; the mayor was too thoroughly an Okie for that. Had it been proposed to him, Amalfi would have objected that the uttering of those three words had put Hazleton as totally under Amalfi's smallest command as was a private in the city's perimeter police; and he could have shown reasons why subservience of that kind was now required of Hazleton. He could also have shown that those three words could never be actually revoked, however closely they were kept a secret between Hazleton and himself; if pressed, he could have shown that he could never forget them, and that Hazleton couldn't either. He might have explained that, every time Amalfi decided against a plan of Hazleton's, the city manager would put it down to secret rancor against that smothered resignation. Or, being Amalfi, he might merely have noted that the conflict between the two men had already been deep-running, and that after Hazleton had said "I want off" it would become outright pathological.

Actually, however, no one of these things entered his mind. Hazleton had said, "I want off." Amalfi was an Okie, and for an Okie "I want off" is final.

"No," the mayor said, at once. "You've asked for off, and that's the end of it. You're no longer entitled to any knowledge of city policy or plans, except for what reaches you in the form of directives. Now's the time when you can use your training in thinking like me, Mark—obviously you'll have no difficulty in thinking like the City Fathers—because it'll be your only source of information on policy from now on."

"I understand," Hazleton said formally. He stood silent a moment longer. Amalfi waited.

"At the next port of call, then," Hazleton said.

"All right. Until then, you're outgoing city manager. Put Carrel back into training as your successor, and begin feeding the City Fathers predisposing data toward him now. I don't want any more fuss from them when the election is held than we had when you were elected."

Hazleton's expression became slightly more set. "Right."

"Secondly, get the city moving toward the perimeter to intersect the town you couldn't raise. I'll want an orbit that gives us logarithmic acceleration, with all the real drive concentrated at the far end. On the way, ready two work teams: one for a fast spin-dizzy assessment, the other to run up whatever's necessary on the mass chromatography equipment, whatever that may be. Include medium heavy dismounting tools, below the graving dock size, but heavy enough to handle any job less drastic."

"Right."

"Also, ready Sgt. Anderson's squad, in case that city isn't quite as dead as it sounds."

"Right," Hazleton said again.

"That's it," Amalfi said.

Hazleton nodded stiffly, and made as if to turn. Then, astonishingly, his stiff face exploded into a torrential passion of speech.

"BOSS, tell me this before I go," he said, clenching his fists. "Was all this to push me into asking for off? Couldn't you think of any way of keeping your plans to yourself but kicking me out—or making me kick myself out? I don't believe this love story of yours, damned if I do. You know I'll take Dee with me when I disembark. And the Great Renunciation is just slop, just pure fiction, especially coming from you. You aren't any more in love with Dee than I am—"

And then Hazleton turned so white that Amalfi thought for a moment that the man was about to faint.

"Score one for you, Mark," Amalfi said. "Evidently I'm not the only one who's staging a Great Renunciation."

"Gods of all stars, Amalfi!"

"There are none," Amalfi said. "I can't do anything more, Mark. I've said goodbye to you a hell of a lot of times, but this has to be the last time—not by my election, but by yours . . . Go and get the jobs done."

Hazleton said, "Right." He spun and strode out. The door reached full dilation barely in time.

Amalfi sighed, as deeply as a sleeping child.

Then he flipped the treacher switch from "Set" to "Clear." The treacher said: "Will that be all, sir?"

"What do you want to do, poison me twice at the same meal?" Amalfi growled. "Get me an ultraphone line."

The treacher's voice changed at once. "Communications," it said briskly.

"This is the mayor. Raise Lt. Lerner, 45th Acolyte Border Security Group. Don't give up too easily; that was his last address, but he's been upgraded since. When you get him, tell him you're speaking for me. Tell him also that the cities in the jungle are organizing for some sort of military action, and that if he can get a squadron in here fast enough, he can break it up. Got it?"

"Yessir." The Communications man read it back. "If you say so, Mayor Amalfi."

"Who else would say so? Be sure Lerner doesn't get a fix on us. Send it pulse-modulated if you can."

"Can't, boss. Mr. Hazleton just put us under way. But there's a powerful Acolyte AM ultraphone station somewhere nearby. I can get our message into synch with it, and make the cop's detectors focus on the vector. Is that good enough?"

"Better, even," Amalfi said. "Hop to it."

"There's one other thing, boss. That big drone you ordered last year is finally finished, and the shop says that it has Dirac equipment mounted in it and ready to go. I've inspected it and it looks fine, except that it's as big as a lifeship and just as detectable."

"All right, good; but that can wait. Get the message out."

"Yessir."

The voice cut out entirely. The incinerator chute gaped suddenly, and the dishes rose from the table and soared toward the opening in solemn procession. The goblet of

wine left behind a miasmic trail, like a miniature comet.

At the last minute, Amalfi jerked out of his reverie and made a wild grab in mid-air; but he was too late. The chute gulped down that final item and shut again with a satisfied slam.

Hazleton had left his slide rule upon the table.

V

THE spacesuited party moved cautiously and with grim faces through the black, dead streets of the city on the periphery. At the lead, Sgt. Anderson's hand torch flashed into a doorway and flicked out again at once.

No other lights whatsoever could be seen in the city, nor had there been any response to calls. Except for a weak spindizzy field, no power flowed in the city at all, and even the screen was too feeble to maintain the city's air pressure above four pounds per square inch—hence the spacesuits.

Inside Amalfi's helmet a voice was saying: "The second phase is about to start in the jungle, Mr. Mayor. Lerner moved in on them with what looks from here like all of the Acolyte navy he dared to pull out of the cluster itself. There's an admiral's flagship in the fleet, but all the Big Brass is doing is relaying Lerner's suggestions in the form of orders; he seems to have no ideas of his own."

"Sensible set-up," Amalfi said, peering ahead unsuccessfully in the gloom.

"As far as it goes, sir. The thing is, the squadron itself is far too big for the job. It's unwieldy, and the jungle detected it well in advance; we stood ready to give the alarm to the king as you ordered, but it didn't prove necessary. The cities are drawing up in a rough battle formation now. It's quite a sight, even through the drones. First time in history, isn't it?"

"As far as I know. Does it look like it'll work?"

"No, sir," the proxy pilot said promptly. "Whatever organization the king's worked out, it's functioning only partially, and damn sloppily. Cities are too clumsy for this kind of work even under the best hand, and his is a long way from the best, I'd judge. But we'll soon see for ourselves."

"Right. Give me another report in an hour."

Anderson held up his hand and the party halted. Ahead was a huge pile of ultimately solid blackness, touched deceptively here and there with feeble stars where windows threw back reflections. Far aloft, however, one window glowed softly with its own light.

The boarding squad men deployed quickly along opposite sides of the street while the technies took cover. Amalfi sidled along the near wall to where the sergeant was crouching.

"What do you think, Anderson?"

"I don't like it, Mr. Mayor. It stinks of mousetrap. Maybe everybody's dead and the last man didn't have the strength to turn out the light. On the other hand, just *one* light left burning for that reason, in the whole city?"

"I see what you mean. Dulany, take five men down that side-street where the facsimile pillar is, follow it until you're tangent to the corner of this building up ahead, and stick out a probe. Don't use more than a couple of microvolts, or you might get burned."

"Yessir." Dulany's squad—the man himself might best be described as a detector-detector—slipped away soundlessly, shadows among shadows.

"That isn't all I stopped us for, Mr. Mayor," Anderson said. "There's a grounded air-cab just around the corner here. It's got a dead passenger in it. I wish you'd take a look at him."

Amalfi took the proffered torch, covered its lens with the mitten of his suit so that only a thin shred of light leaked through, and played it for half a second through the cab's window. He felt his spine going rigid.

Wherever the light touched the flesh of the hunched corpse, it—glistened.

"*Communications!*"

"Yes, sir!"

"Set up the return port for decontamination. Nobody in our party gets back on board our town until he's been boiled alive—understand? I want the works!"

There was a brief silence. Then: "Mr. Mayor, the city manager already has that in the works."

Amalfi grimaced wrily in the darkness.

Anderson said: "Pardon me, sir, but—how did Mr. Hazleton guess?"

"Why, that's not too hard to see, at least after the fact, sergeant. This city we're on was desperately poor. And being poor under the new money system means being low on drugs. The end result, as Mr. Hazleton saw, and I should have seen, is—plague."

"The sons of bitches," the sergeant said bitterly. The epithet seemed intended to apply to every non-Okie in the universe.

At the same moment, a lurid scarlet glare splashed over his face and the front of his suit, and red lanes of light checkered the street. There was an almost-simultaneous flat crash, without weight in the thin air, but ugly-sounding.

"TDX!" Anderson shouted, involuntarily.

"Dulany? Dulany! Damn it all, I told the man to take it easy with that probe. Whoever survived on that squad, report!"

Underneath the ringing in Amalfi's ears, someone began to laugh. It was as ugly a sound as the TDX explosion had been. There was no other answer.

"All right, Anderson, surround this place. Communications, get the rest of the boarding squad and half the security police over here on the double."

The nasty laughter got louder.

"Whoever you are that's putting out that silly giggle, you're going to learn how to make another kind of noise when I get my hands on you," Amalfi added viciously. "Nobody uses TDX on my men, I don't care whether he's an Okie or a cop. Get me? Nobody!"

The laughter stopped. Then a cracked voice said:

"You lousy damned vultures."

"Vultures, is it?" Amalfi snapped. "If you'd answered our calls in the first place there'd have been no trouble. Why don't you come to your senses? Do you *want* to die of the pestilence?"

"Vultures," the voice repeated. It carried an overtone of sinister idiocy. "Eaters of carrion. The gods of all stars will boil your bones for soup." The cackling began again.

Amalfi felt a faint chill. He switched to tight-beam. "Anderson, keep your men at a respectable distance, and wait for the reinforcements. This place is obviously mined to the teeth, and I don't know what other surprises our batty friend has for us."

"I could lob a gas grenade through that window—"

"Don't you suppose they're wearing suits too? Just ring the place and sit tight."

"Check."

Amalfi squatted down upon his hams behind the air-cab, sweating. There just might be enough power left in the dying city's accumulators to put up a Bethé fender around the building, but that wasn't the main thing on his mind. This business of boarding another Okie city was easily the hardest operation he had ever had to direct. Every move went against the grain. The madman's accusation had hit him in his most vulnerable spot.

AFTER what seemed like a whole week, his helmet ultraphone said: "Proxy room. Mr. Mayor, the jungle beat off Lerner's first wave. I didn't think they could do it. They got in one good heavy lick at the beginning—blew two heavy cruisers right out of the sky—and the Acolytes act scared green. The admiral's launch has run out completely, and left Lerner holding the bag."

"Losses?"

"Four cities definitely wiped out. We haven't enough drones out to estimate cities damaged with any accuracy, but Lerner had a group of about 30 towns enfiladed when the first cruiser got it."

"You haven't got the big drone out there, have you?" the mayor said in sudden alarm.

"No, sir; Communications ordered that one left berthed. I'm waiting now to see when the next Acolyte wave gets rolling; I'll call you as—"

The proxy pilot's voice snapped off, and the stars went out.

There was a shout of alarm from some technie in the party. Amalfi got up cautiously and looked overhead. The single window in the big building which had shown a light was blacked out now, too.

"What the hell happened, Mr. Mayor?" Anderson's voice said quietly.

"Spindizzy screen close around us, at least half-drive. Probably they've dropped their main screen entirely. Everybody keep to cover—there may be flares."

The laughter began again.

"Vultures," the voice said. "Little mangy vultures in a big tight cage."

Amalfi cut back in on the open RF band. "You're going to wreck your city," he said steadily. "And once you tear this section of it loose, your power will fail and your screen will go down again. You can't win, and you know it."

The street began to tremble. It was only a faint trembling now, but there was no telling how long the basic structure of the dying city could hold this one small area in place, against the machine that was trying to fling it away into space. Hazleton, of course, would rush over a set of portable nutcrackers as soon as he had seen what had happened—but whether this part of the city would still be here when the nutcrackers arrived was an open question.

In the meantime, there was exactly nothing Amalfi could do about it. Even his contact with his own city was cut off.

"It isn't your city," the voice said, suddenly, deceptively reasonable. "It's our city. You're hi-jacking us. But we won't let you."

"How were we supposed to know any of you were still alive?" Amalfi demanded angrily. "You didn't answer our calls. Is it our fault if you didn't hear them? We thought this town was open for salvage—"

His voice was abruptly obliterated by a new one, enormous yet familiar, which came slamming into his helmet as if it intended to drive him out of his suit entirely.

"EARTH POLICE AA EMERGENCY ACOLYTE CLUSTER CONDENSATION XIII ARM BETA," it thundered. "SYSTEM UNDER ATTACK BY MASS ARMY OF TRAMP CITIES. POLICE AID URGENTLY NEEDED. LERNER LIEUTENANT 45th BORDER SECURITY GROUP ACTING COMMANDER CLUSTER DEFENSE FORCES ACKNOWLEDGE."

Amalfi whistled soundlessly through his teeth. There was evidently a Dirac transceiver in operation somewhere inside the close-drawn spindizzy screen, or his helmet phones wouldn't have caught Lerner's yell for help; Diracs were too bulky for the usual drone, let alone for a spacesuit. By the same token, everybody else in the galaxy possessing Dirac equipment had heard that yell—it had been the instantaneous propagation of Dirac pulses that had dealt the death-blow to the West's hyper-complex relativity theories, millennia ago.

And if a Dirac sender was open inside this spindizzy bubble—

"LERNER ACOLYTE DEFENSE FORCES YOUR MESSAGE IN. SQUADRON ASSIGNED YOUR CONDENSATION ON WAY. HANG ON. BETA ARM COMMAND EARTH."

—then Amalfi could use it. He flipped the chest switch and shouted, "Hazleton, are your nutcrackers rolling?"

"Rolling, boss," Hazleton shot back instantly. "Another 90 seconds and—"

"Too late, this sector will tear loose before then. Tune up our own screen to 24% and hold—"

He realized suddenly that he was shouting into a dead mike. The Okies here had caught on belatedly to what was happening, and had cut the power to their Dirac. Had that last, crucial, incomplete sentence gotten through, even a fragment of it? Or—

Deep down under Amalfi's feet an alarming sound began to rise. It was part screech, part monstrous rock-slide, part prolonged and hollow groan. Amalfi's teeth began to itch in their sockets, and his bowels stirred slightly. He grinned.

The message had gotten through—or enough of it to enable Hazleton to guess the rest. The one spindizzy holding this field was going sour. Against the combined power of the nearby drivers of Amalfi's city, it could no longer maintain the clean space-lattice curvature it was set for.

"You're sunk," Amalfi told the invisible defenders quietly. "Give up now and you'll not be hurt. I'll skip the TDX incident—Dulany was one of my best men, but maybe there was some reason on your side, too. Come on over with us, and you'll have a city to call your own again. This one isn't any good to you any more, that's obvious."

There was no answer.

Patterns began to race across the close-pressing black sky. The nutcrackers were being brought to bear. The single tortured spindizzy howled with anguish.

"Speak up, up there," Amalfi said. "I'm trying to be fair, but if you force me to drive you out—"

"Vultures," the cracked voice sobbed.

The window aloft lit up with a searing

glare and burst outward. A long tongue of red flame winnowed out over the street. The spindizzy screen went down at once, and with it the awful noise from the dead city's power deck; but it was several minutes before Amalfi's dazzled eyes could see the stars again.

HE STARED up at the exploded scar on the side of the building, outlined in orange heat swiftly dimming. He felt a little sick.

"TDX again," he said softly. "Consistent to the last, the poor damned idiots."

"Mr. Mayor?"

"Here."

"This is the proxy room. There's a regular stampede going on in the jungle. The cities are streaming away from the red star as fast as they can tune up. No discernable order—just a mob, and a panicky mob, too. No signs of anything being done for the wounded cities; it looks to me like they're just being left for Lerner to break up, as soon as he gets up enough courage."

Amalfi nodded to himself. "All right, O'Brian, launch the big drone now. I want that drone to go with those cities and stick with them all the way. Pilot it personally; it's highly detectable and there'll probably be several attempts to destroy it, so be ready to dodge."

"I will, sir. Mr. Hazleton just launched her a moment ago; I'm giving her the gun right now."

For some reason this did not improve Amalfi's temper in the least.

The Okies set to work rapidly, dismounting the dead city's spindizzies from their bases and shipping them into storage on board their own city. The one which had been overdriven in that last futile defense had to be left behind, of course; like the 23rd Street machine, it was hot, and could not be approached, except by a graving dock. The others went over, as whole units. Hazleton looked more and more puzzled as the big machines came aboard, but he seemed resolved to ask no questions.

Carrel, however, suffered under no such self-imposed restraints. "What are we going to do with all these dismounted drivers?" he said.

All three men stood in a sallyport at the perimeter of their city, watching the ungainly bulks being floated across.

"We're going to fly another planet," Hazleton said flatly.

"You bet we are," Amalfi agreed. "And pray to your star-gods that we're in time, Mark."

Hazleton didn't answer. Carrel said: "In time for what?"

"That I won't say, until I have it right under my nose on a screen. It's a hunch and I think it's a good one. In the meantime, take my word for it that we're in a hurry, like we've never been in a hurry before. What's the word on that mass chromatography apparatus, Hazleton?"

"Just what we've seen half a dozen times before. It can't be made to run, as far as the team can see. All the records we've found indicate that the guys who owned this city couldn't make it run, either."

"Uh-huh," the mayor said contentedly. "Another Lyran invisibility machine—or the no-fuel drive the bindlestiff blew itself up with on He. Is the equipment massive?"

"Enormous. The area it occupies is 12 city blocks on a side."

"Leave it there," Amalfi decided at once. "Evidently this outfit was just bragging from sheer desperation when it offered the technique for the Acolyte woman's job. If she'd taken them up on it, they wouldn't have been able to deliver, and I don't care to subject us to any similar temptation."

"In this case the knowledge is as good as the equipment," Hazleton said. "Their City Fathers will have all the information we could possibly worry out of the apparatus itself."

"Very likely. I'm just as glad not to have to worry about it."

"Would somebody give me the pitch on this exodus of cities from the jungle?" Carrel put in. "I wasn't along on your trip to the king's city, and I still think the whole idea of a march on Earth is crazy."

Amalfi remained silent. After a moment, Hazleton replied: "It is and it isn't. The jungle doesn't dare stand up to a real Earth force and slug it out, and everybody knows now that there's an Earth force coming here. The cities want to be someplace else in a hurry. But they still have some hope of getting Earth protection from the Aco-

lyte cops and similar local organizations, if they can put their case before the authorities outside of a trouble area."

"That," Carrel said, "is just what I don't see. What hope do they have of getting a fair shuffle? And why don't they just contact Earth on the Dirac, as Lerner did, instead of making this long trip? It's 63,000 or so light years from here to Earth, and they aren't organized well enough to make such a long haul without a lot of hardship."

"And they'll do all their talking with Earth over the Dirac even after they get there," Amalfi added. "Partly, of course, this march is sheer theatricalism. The king hopes that such a big display of cities will make an impression on the people he'll be talking to. Don't forget that Earth is a quiet, rather idyllic world these days—a skyful of ragged cities will create a lot of alarm there.

"As for getting a square shuffle: The king is relying on a tradition of at least moderately fair dealing that goes back many centuries. Don't forget, Carrel, that for the last two thousand years the Okie cities have been the major unifying force in our entire galactic culture."

"That's news to me," Carrel said, a little dubiously.

"But it's quite true. Do you know what a bee is? Well, it's a little Earth insect that sucks honey from flowers. While it's about it, it picks up pollen and carries it about; it's a prime factor in cross-fertilization of plants. Most habitable planets have similar insects. The bee doesn't know that he's essential to the ecology of his world—all he's out to do is collect as much honey as he can—but that doesn't make him any less essential.

"THE cities have been like the bee for a long time. The governments of the advanced planets, Earth in particular, know it, even if the cities generally don't. The planets distrust the cities, but they also know that they're vital, and must be protected. The planets are tough on bindlestiffs for the same reason. The bindlestiffs are diseased bees; the taint that they carry gets fastened upon innocent cities, cities that are needed to keep new techniques and other essential information on the move from planet to planet. Obviously cities and planets alike have to protect themselves from criminal outfits, but there's the culture as a whole to be considered, as well as the safety of an individual unit; and to maintain that culture, the free passage of legitimate Okies throughout the galaxy has to be maintained."

"The king knows this?" Carrel said.

"Of course he does. He's a thousand years old; how could he help but know it? He wouldn't put it like this, but all the same, it's the essence of what he's depending upon to carry through his march on Earth."

"It still sounds risky to me," Carrel said dubiously. "We've all been conditioned almost from birth to distrust Earth, and Earth cops especially—"

"Only because the cops distrust us. That means that the cops are conditioned to be strict with cities about the smallest violations; so, since small violations of local laws are inevitable in a nomadic life, it's smart for an Okie to steer clear of cops. But, for all the real hatred that exists between Okies and cops, we're both on the same side. We always have been."

On the underside of the city, just within the cone of vision of the three men, the big doors to the main hold swung slowly shut.

"That's the last one," Hazleton said. "Now I suppose we go back to where we left the all-purpose city we stole, and relieve it of its drivers, too."

"Yes, we do," Amalfi said. "And after that, Mark, we go on to Hern VI. Ready a couple of small fission bombs for the Acolyte garrison there—it can't be large, but we've no time left to play patty-cake."

"Is Hern VI the planet we're going to fly?" Carrel said.

"It has to be," Amalfi said, with a trace of impatience. "It's the only one available. Furthermore, this time we're going to have to control the flight, not just let the planet scoot off anywhere its natural converted rotation wants it to go. Being carried clean out of the galaxy once is once too often for me."

"Then I'd better put a crack team to work on the control problem with the City Fathers," Hazleton said. "We didn't have them to consult on He, so we'll have to

screen every scrap of pertinent information they have in stock. No wonder you've been so hot on this project for corralling knowledge from other cities. I only wish we could have gotten started on integrating it sooner."

"I haven't had this in mind quite that long," Amalfi said. "But, believe me, I'm not sorry it turned out this way."

Carrel said: "Where are we going?"

Amalfi turned away toward the airlock. "Home," he said.

Mounting Hern VI—as desolate and damned a slab of rock as Amalfi had ever set down upon—for guided spindizzy flight was incredibly tedious work. Drivers had to be spotted accurately at every major compass point, and locked solidly to the center of gravity of the planet; and then each and every machine had to be tuned and put into balance with every other. And there were not enough spindizzies to set up a drive for the planet as a whole which would be fully dirigible when the day of flight came. The flight of Hern VI, when all the work was finally done, promised to be giddy and erratic.

But at least it would go approximately where the master space-stick directed it to go. That, Amalfi thought, was all that was really necessary—or all that he hoped would be necessary.

Periodically, O'Brian, the proxy pilot, reported on the progress of the march on Earth. The mob had lost quite a few stragglers along the way, as it passed attractive-looking systems where work might be found, but the main body was still streaming doggedly toward the mother planet. Though the outsize drone was as obvious a body as a minor moon, so far not a single Okie had taken a pot-shot at it. O'Brian had kept it darting through and about the marchers in a sine curve through three dimensions, at its top speed and with progressive modulations of the phasing based on a quatenary square wave, so that it was a virtually impossible target. If the partial traces which it made on any individual city's scope were not mistaken for meteor-tracks, predicting its course closely enough to lay a gun on it would keep any ordinary computer occupied full time.

It was a superb job of piloting. Amalfi made a mental note to see to it that the task of piloting the city itself was split off from the city manager's job when Hazleton stepped down. Carrel was not a born pilot, and O'Brian was obviously the man Carrel would need.

At the beginning of the Hern VI conversion, the City Fathers had placed E-Day —the day of arrival of the marchers within optical telescope distance of Earth—at five years, four months, 20 days. Each report which came in from the big drone's pilot cut this coordinate-set back toward the flying present, as the migrating jungle lost its laggards and became more and more compact, more and more able to put on speed as a unit.

Amalfi consumed cigars faster and drove his men and machines harder every time the new computation was delivered to his desk.

But a full year had gone by since installation had started on Hern VI, before O'Brian sent up the report he had been dreading, and yet had been counting upon to arrive sooner or later.

"The march has lost two more cities to greener pastures, Mr. Amalfi," the proxy pilot said. "But that's routine. We've *gained* a city, too."

"GAINED one?" Amalfi said tensely. "Where'd it come from?"

"I don't know. The course I've got the drone on doesn't allow me to look in any one direction more than about 2.5 seconds at a time. I have to take a census every time I pass her through the pack. The last time I went around, there was this outfit on the screen, just as if it had been there all the time. But that isn't all. It's the damnedest looking city I've ever seen, and I can't find anything like it in the files, either."

"Describe it."

"For one thing, it's enormous. I'm not going to have to worry about anybody spotting my drone for a while. This outfit must have every detector in the jungle screaming blue bloody murder. Besides, it's closed up."

"What do you mean by that?"

"It's got a smooth hull all around, Mr. Mayor. It isn't the usual platform with buildings on it and a spindizzy screen around both. It's more like a proper spaceship, except for its size."

"Any communication between it and the pack?"

"About what you'd expect. Wants to join the march; the king gave it the okay. I think he was pleased; it's the very first answer he's had to his call for a general mobilization of Okies, and this one really looks like a top-notch city. It calls itself Lincoln-Nevada."

"It would," Amalfi said grimly. He mopped his face. "Give me a look at it, O'Brian."

The screen lit up. Amalfi mopped his face again.

"All right. Back your drone off a good distance from the march and keep that thing in sight from now on. Get 'Lincoln-Nevada' between you and the pack. It won't shoot at your drone; it doesn't know the drone doesn't belong there."

Without waiting for O'Brian's acknowledgment, Amalfi switched over to the City Fathers. "How much longer is this job going to take?" he demanded.

"ANOTHER SIX MONTHS, MR. MAYOR."

"Cut it to four at a minimum. And give me a course from here to the Greater Magellanic Cloud, one that crosses Earth's orbit."

"MAYOR AMALFI, THE GREATER MAGELLANIC CLOUD IS 140,000 *LIGHT YEARS AWAY FROM THE ACOLYTE CLUSTER!"*

"Thank you," Amalfi said sardonically. "I have no intention of going there, I assure you. All I want is a course with those three points on it."

"VERY WELL. COMPUTED."

"When would we have to spin, to cross Earth's orbit on E-Day?"

"FROM FIVE SECONDS TO 15 *DAYS FROM TODAY, FIGURING FROM THE CENTER OF THE CLOUD TO EITHER EDGE."*

"No good. Give me a perfectly flat trajectory from here to there."

"THAT ARC INVOLVES 958 *DIRECT COLLISIONS AND* 411,002 *GRAZES AND NEAR-MISSES."*

"Use it."

The City Fathers were silent. Amalfi wondered if it were possible for machinery to be stunned. He knew that the City Fathers would never use the crow-flight arc, since it conflicted with their most inelectable basic directive: *Preserve the city first.* This was all right with the mayor. He had given that instruction with an eye to the tempo of building on Hern VI; he had a strong hunch that it would go considerably faster after that stunner.

And as a matter of fact, it was just 14 days later when Amalfi's hand closed on the master space-stick for Hern VI, and he said:

"Spin!"

VI

The career of Hern VI from its native Acolyte cluster across the center of the galaxy made history—particularly in the field of instrumentation. Hern VI was a tiny world, considerably smaller than Mercury, but nevertheless it was the most monstrous mass ever kicked past the speed of light within the limits of the inhabited galaxy. Except for the planet of He, which had left the galaxy from its periphery and was now well on its way toward Messier 31 in Andromeda, no such body had ever before been flown under spindizzy or any other drive. Its passage left permanent scars in the recording banks of every detecting instrument within range, and the memories of it graven into the brains of sentient observers were no less drastic.

Theoretically, Hern VI was following the long arc laid out for it by Amalfi's City Fathers, an arc leading from the fringe of the Acolyte cluster all the way across the face of the galaxy to the center of the Greater Magellanic Cloud. (Its mass center, of course; both clouds had emerged too recently from the galaxy as a whole to have developed the definite orbital dead-centers characteristic of "spiral" nebulae.) The mean motion of the flying planet followed that arc scrupulously.

But at the speed at which Hern VI was travelling—a velocity which could not be expressed comfortably even in multiples of *c*, the old arbitrary velocity of light—the slightest variation from that orbit became a careening side jaunt of horrifying proportions, before even the micro-second reactions of the City Fathers could effect the

proper corrections.

Like other starmen, Amalfi was accustomed enough to travelling at transphotic speeds—in space, a medium ordinarily without enough landmarks to make real velocity very apparent. And, like all Okies, he had travelled on planets in creeping ground vehicles which seemed to be making dangerous speed simply because there were enough nearby reference points to make that speed seem great. Now he was finding out what it was like to move among the stars at a comparable velocity.

For at the velocity of Hern VI, the stars became almost as closely spaced as the girders beside a subway track—with the added hazard that the track frequently swerved enough to place two or three girders in a row between the rails. More than once Amalfi stood frozen on the balcony in the belfry of City Hall, watching a star that had been invisible half a second before cannoning directly at his head, swelling to fill the whole sky with glare—

Blackness.

Amalfi felt irrationally that there should have been an audible *whoosh* as Hern VI passed that star. His face still tingled with the single blast of its radiation which had bathed him, in despite of the planet's hard and nearly cross-polarized spindizzy screen, at that momentary perihelion.

There was nothing the matter, of course, with the orbit corrections of the City Fathers. The difficulty was simply that Hern VI was not a responsive enough space craft to benefit by really quick orbit corrections. It took long seconds for the City Father's orders to be translated into enough vector thrust to affect the flight of the dead planet over parsecs of its shambling, paretic stride. And there was another, major reason: when all of Hern VI's axial rotation had been converted to orbital motion, all of a considerable axial libration had also been converted, and there was nothing that could be done about the kinks that that put in the planet's course.

Possibly, had Amalfi spotted his own city's spindizzies over the surface of the planet, as he had those of the all-purpose city and the plague city, Hern VI might have been more sensitive to the space-stick; at the very least, the libration could have been left as real libration, for it wouldn't have mattered had the planet heeled a little this way and that as long as it kept a straight course. But Amalfi had left the city's drivers undisturbed, for the most cogent of all reasons: for the survival of the city. Only one of the machines was participating at all in the flight of Hern VI, that being the big pivot spindizzy at 60th Street. The others, including the decrepit but now almost cool 23rd Street machine, rested.

". . . *calling the free planet, calling the free planet . . . is* there anybody alive on that thing? . . . *EPSILON CRUCIS, HAVE YOU SUCCEEDED IN RAISING THE BODY THAT JUST PASSED YOU? . . . CALLING THE FREE* PLANET! YOU'RE ON COLLISION COURSE WITH US—HELL AND DAMNATION! . . . *CALLING ETA PALINURI, THE FREE PLANET JUST GAVE US A HAIRCUT AND IT'S HEADING* for you. It's either dead or out of control . . . Calling the free *planet, calling the free pla . . .*"

There was no time to answer such frantic calls, which poured into the city from outside like a chain of spring freshets as inhabited systems were by-passed, skirted, overshot, fringed, or actually penetrated. The calls could have been acknowledged, but acknowledgment would demand that some explanation be offered, and Hern VI would be out of ultraphone range of the questioner before more than a few sentences could be exchanged. The most panicky inquiries might have been answered by Dirac, but that had two drawbacks: the minor one, that there were too many inquiries for the city to handle, and no real reason to handle them; the major one, that Earth and one other important party would be able to hear the answer.

Amalfi did not care too much about what the Earth heard—Earth was already hearing plenty about the flight of Hern VI; if Dirac transmission could be spoken of as jammed, even in metaphor (and it could, for an infinite number of possible electron orbits in no way presupposes a Dirac transmitter tuned to each one), then Earth Dirac boards were jam-packed with the squalls of alarmed planets along Hern VI's arc.

But about the other party, Amalfi cared a great deal.

O'BRIAN kept that other party steadily in the center of his drone's field of vision, and a small screen mounted on the railing of the belfry showed Amalfi the shining, innocuous-looking globe whenever Amalfi cared to look at it. The newcomer to the Okie jungle—and to the march on Earth—had made no untoward or even interesting motion since it had arrived in the Okie's ken. Occasionally it exchanged chit-chat with the king of the jungle; less often, it talked with other cities. Boredom was setting in in the jungle, so there was now a fair amount of intercity touring; but the newcomer was not visited as far as O'Brian or Amalfi could tell, nor did any gigs leave it. This, of course, was natural: Okies are solitary by preference, and a refusal to fraternize, providing that it was not actively hostile in tone, would always be understood in any situation. The newcomer, in short, was giving a very good imitation of being just a member of the hegira—just one more Burnham tree on the way to Dunsanine—

And if anyone in the jungle had recognized it for what it was, Amalfi could see no signs of it.

A fat star rocketed blue-white over the city and dopplered away into the red, shrinking as it faded. Amalfi spoke briefly to the City Fathers. The jungle would be within sight of Earth within days—and the uproar on the Dirac was now devoted more and more to the approach of the jungle, less and less to Hern VI. Amalfi had considerable faith in the City Fathers, but the terrifying flight of stars past his head could not fail to make him worry about overshooting E-Day, or undershooting it, however accurate the calculations seemed to be.

But the City Fathers insisted doggedly that Hern VI would cross the solar system of Earth on E-Day, and Amalfi had to be as content as he could manage with the answer. On this kind of problem, the City Fathers had never been known to be wrong. He shrugged uneasily and phoned down to Astronomy.

"Jake, this is the mayor. Ever heard of something called 'trepidation'?"

"Ask me a hard one," the astronomer said testily.

"All right. How do I go about introducing some trepidation into this orbit we're following?"

The astronomer sounded his irritating chuckle. "You don't," he said. "It's a condition of space around suns, and you haven't the mass. The bottom limit, as I recall, is 1.5 times 1030 kilograms, but ask the City Fathers to be sure. My figure is of the right order of magnitude, anyhow."

"Damn," Amalfi said. He hung up and took time out to light a cigar, a task complicated by the hurtling stars in the corner of Amalfi's eye; somehow the cigar seemed to flinch every time one went by.

There would be no point in pressing Jake further. He was not the city's original astronomer; that man had fallen victim to a native of a planet called St. Rita's, after he had insisted once too often to said native that St. Rita's was not the center of the universe. Jake had been swapped from another city for a pile engineer and two minor photosynthetics technicians under the traditional "rule of discretion," and he had turned out to be interested only in the behavior of the more remote galaxies. Persuading him to think about the immediate astronomical situation of the city was usually a hopeless struggle; he seemed to feel that problems of so local a nature were beneath notice.

The "rule of discretion" was an Okie tradition which Amalfi had never before evoked, and never since, for it seemed to him to smack suspiciously of peonage. It had evolved, the City Fathers said, from the trading of baseball players, a term which meant nothing to Amalfi.) The results of his one violation of his own attitude sometimes seemed to him to smack of divine retribution.

Nevertheless, grousing over Jake introduced no trepidation into the orbit of Hern VI, and the time was growing dangerously short. The cigar lit, he next called Hazleton.

"Mark, you once tried to explain to me how a musician plays the beginning and the end of a piece a little bit faster than normal, so that he can play the middle section a little bit slower. Is that the way it goes?"

"Yes, that's *tempo rubato*—literally, 'robbed time'."

"What I want to do is introduce something like that into the motion of this rock-

pile as we go across the solar system, without any loss in total transit time. Any ideas?"

There was a moment's silence. "Nothing occurs to me, boss. Controlling that kind of thing is almost purely intuitional. You could probably do it better by personal control than O'Brian could set it up in the piloting section."

"Okay. Thanks."

Another dud. Personal control was out of the question at this speed, for no human pilot, not even Amalfi, had reflexes fast enough to handle Hern VI directly. It was precisely because he wanted to be able to handle the planet directly for a second or so of its flight that he wanted the trepidation introduced; and even then he would be none too sure of his ability to make the one critical, razor-edge alteration in her course which he knew he would need.

"Carrel? Come up here, will you?"

The boy arrived almost instantly. On the balcony, he watched the hurtling passage of stars with what Amalfi suspected was sternly repressed alarm.

"Carrel, you began with us as an interpreter, didn't you? You must have had frequent occasion to use a voice-writer, then."

"Yes, sir, I had."

"Good. Then you'll remember what happens when the carriage of the machine returns and spaces for another line. It brakes a little in the middle of the return, so it won't deform the carriage-stop by constantly slamming into it; isn't that right? Well, what I want to know is: how is that done?"

"On a small machine, the return cable is on a cam instead of a pulley," Carrel said, frowning. "But the big multiplex machines that we use at conclaves are electronically controlled by something called a klystron; how *that* works, I've no idea."

"Find out," Amalfi said. "Thanks, Carrel, that's just what I was looking for. I want such an apparatus cut into our present piloting circuit, so as to give us the maximum braking effect as we cross Earth's solar system that's compatible with our arriving at the Cloud on time. Can it be done?"

"Yes, sir, that sounds fairly easy." He went below without being dismissed; a second later, a swollen and spotted red giant sun skimmed the city seemingly by inches.

The phone buzzed. "Mr. Mayor—O'Brian here. The cities are coming up on Earth. Shall I put you through?"

Amalfi started. Already? The city was still megaparsecs away from the rendezvous; it was literally impossible to conceive of any speed which would make arrival on time possible. The mayor suddenly began to find the subway-pillar flashing of the stars reassuring.

"Yes, O'Brian, hook up the viewing helmet and stand by. Give me full Dirac on all circuits, and have our alternate course ready to plug in. Has Mr. Carrel gotten in touch with you yet?"

"No, sir," the pilot said. "But there's been some activity from the City Fathers in the piloting banks which I assumed was by your orders, or one of the city managers. Apparently we're to be out of computer control at opposition."

"That's right. Okay, O'Brian, put me through."

Amalfi donned the big helmet—

—and was back in the jungle.

THE entire pack of cities, decelerating heavily now, was entering the "local group"—on arbitrary sphere with a radius of 50 light years, with Earth's sun at its center. This was the galaxy's center of population still, despite the outward movement which had taken place for the past centuries; and the challenges which were now ringing around the heads of the Okies were like voices from history: 40 Eridani, Procyon, Kruger 60, Sirius, 61 Cygni, Altair, BD—404048, Wolf 359, Alpha Centauri . . . To hear occasionally from Earth itself was no novelty; but these challenges were almost like being hailed by ancient Greece or the Commonwealth of Massachusetts.

The jungle king had succeeded by now in drumming the hobo cities into a roughly military formation: a huge cone, 18 million miles along its axis. The cone was pointed by smaller towns unlikely to possess more than purely defensive armament. Just behind the point, which was actually rounded into a paraboloid like the head of a comet, the largest cities rode in the body of the cone. These included the king's own town, but did not include the "newcomer," which despite its size was flying far behind, roughly on the rim of the cone—it was this posi-

tioning which made it possible for Amalfi's drone to see almost the entire cone in the first place, for O'Brian's orders were to keep the big sphere in view regardless of how much of the jungle he had to sacrifice.

The main wall of the cone was made up mostly of medium sized heavy-duty cities, again unlikely to be heavily armed, but having the advantage of mounting spindizzy equipment which could be polarized to virtual opacity to any attack but that of a battleship.

All in all, Amalfi thought, a sensible organization of the materials at hand. It suggested power in reserve, plus considerable defensive ability, without at the same time advertising an immediate intention to attack.

He settled the heavy viewing helmet more comfortably on his shoulders, and laid one hand on the balcony railing near the spacestick. Simultaneously, a voice rang in his ears.

"Earth Security Center calling the Cities," the voice said heavily. "You are ordered to kill your velocity and remain where you are pending an official investigation of your claims."

"Not bloody likely," the king's voice said.

"You are further warned that current Rulings in Council forbid any Okie city to approach Earth more closely than ten light years. Current Rulings also forbid gatherings of Okie cities in any numbers greater than four. However, we are empowered to tell you that this latter Ruling will be set aside for the duration of the investigation, provided that the approach limit is not crossed."

"We're crossing it," the king said. "You're going to take a good look at us. We're not going to form another jungle out here—we didn't come this far for nothing."

"Under such circumstances," the speaker at Earth Security continued, with the implacable indifference of the desperate bureaucrat operating by the book, "the law prescribes that participating cities be broken up. The full penalty will be applied in this case as in all cases."

"No it won't, either, any more than it is in 94 cases out of a hundred. We're not a raiding force and we aren't threatening Earth with anything but a couple of good, loud beefs. We're here because we couldn't hope for a fair deal any other way. All we want is justice."

"You've been warned."

"So have you. You can't attack us. You don't dare to. We're citizens, not crooks. We want justice done us, and we're coming on in to see that it gets done."

There was a sudden *click* as the City Fathers' Dirac scanner picked up a new frequency. The new voice said: "Attention Police Command 32, command HQ speaking for Vice Admiral MacMillan. Blue alert; blue alert. Acknowledge."

Another click, this time to the frequency the king used to communicate with the jungle.

"Pull up, you guys," the king said. "Hold formation, but figure to make camp 15° north of the ecliptic, in the orbit of Saturn but aboue 10° ahead of the planet. I'll give you the exact coordinates later. If they won't dicker with us there, we'll move on to Mars and *really* throw a scare into them. But we'll give them a fair chance."

"How do you know they'll give *us* a fair chance?" someone asked petulantly.

"Go back to the Acolytes if you can't take it here. Damned if I care."

Click.

"Hello command HQ. Command 32 acknowledging blue alert, for Commander Eisenstein. Command 32 blue alert."

Click.

"Hey, you guys at the base of the cone, pull up! You're piling up on us."

"Not in our tanks, Buda-Pesht."

"Look again, dammit. I'm getting a heavy mass-gain here—"

Click.

"Attention Police Command 83, command HQ speaking for Vice Admiral MacMillan. Blue alert; blue alert. Acknowledge. Attention Police Command 32, red alert, red alert. Acknowledge."

"Eisenstein, Command 32, red alert acknowledged."

Click.

"Calling Earth; Proserpine II station calling Earth Security. We are picking up some of the cities. Instructions?"

("Where the hell is Proserpine?" Amalfi asked the City Fathers.

("PROSERPINE IS A GAS GIANT, 11,000 MILES IN DIAMETER, OUTSIDE

THE ORBIT OF PLUTO AT A DISTANCE OF—"

("All right. Shut up.")

"Earth Security. Keep your nose clean, Proserpine II. Command HQ is handling this situation. Take no action."

Click.

"Hello command HQ. Command 83 acknowledging blue alert, for Lt. Commander Fiorelli. Command 83 blue alert."

Click.

"Buda-Pesht, they're bracketing us!"

"I know it. Make camp like I said. They don't dare lay a finger on us until we commit an actual aggression, and they know it. Don't let a show of cops bluff you now."

Click.

"Pluto station. We're picking up the vanguard of the cities."

"Sit tight, Pluto."

"You won't get them again until they've made camp—we're in opposition with Proserpine, but Neptune and Uranus are out of the line of flight entirely—"

"Sit tight."

EARTH'S sun grew gradually in Amalfi's view, growing only with the velocity of the drone, which was the velocity of the jungle. Earth's sun was still invisible from the city itself. In the helmet, it was a yellow spark, without detectable disc, like a carbon arc through a lend-system set at infinity.

But it was, inarguably, the home sun. There was a curious thickness in Amalfi's throat as he looked at it. At this moment, Hern VI was screeching across the center of the galaxy, that center where there was, mysteriously, no condensation of stars such as other galaxies possessed; the hurtling planet had just left behind it a black nebula in which every sun was an apparition, and every escape from those suns a miracle. Ahead was the opposite limb of the Milky Way, filled with new wonders.

Amalfi could not understand why the tiny, undistinguished yellow spark floating in front of him in the helmet made his eyes sting and water so intolerably.

The jungle was almost at a halt now, already down to interplanetary speeds, and still decelerating. In another ten minutes, the cities were at rest with reference to the sun; and from the drone, Amalfi could see, not very far away as he was accustomed to think of spatial distance, something else he had never seen before: the planet Saturn.

No Earthly amateur astronomer with a new, uncertain, badly-adjusted home reflector ever could have seen the ringed giant with fresher eyes. Amalfi was momentarily stupefied. What he saw was not only incredibly beautiful, but obviously impossible. A gas giant with rigid rings! Why had Earthmen ever left their system at all, with a world so anomalous in their very backyard? And the giant had another planet circling it, too—a planet more than 3000 miles through—in addition to the usual family of satellites of Hern VI's order of size.

Amalfi had been in deep space for centuries, but he had never seen anything remotely approaching Saturn before.

Click.

"Make camp," the king was saying. "We'll be here for a while. Dammit, you guys at the base are still creeping on us a little. We're going to have to stop here—can't I pound that into your heads?"

"We're decelerating in good order, Buda-Pesht. It's the new city, the big job, that's creeping. He's in some kind of trouble, looks like."

From the drone, the diagnosis seemed accurate. The enormous, spherical object had separated markedly from the main body of the jungle, and was now well ahead of the trailing edge of the cone. The whole sphere was wabbling a little as it moved, and every so often it would go dim as if under unexpected and uncontrollable polarization.

"Call him and ask if he needs help. The rest of you, take up orbits."

Amalfi barked, "O'Brian—time!"

"Course time, sir."

"How do I know when this spacestick comes alive again?"

"It's alive now, Mr. Mayor," the pilot said. "The City Fathers cut out as soon as you touch it. You'll get a warning buzzer five seconds before our deceleration starts into the deep part of its curve, and then a beep every half second after that to the second inflection-point. At the last beep, it's all yours, for about the next two and a half seconds. Then the stick will go dead and

the City Fathers will be back in control."

Click.

"Admiral MacMillan, what action do you plan to take now—if any?"

Amalfi took an instant dislike to the new voice on the Dirac. It was flat, twangy, and as devoid as a vodeur of emotion, except perhaps for a certain self-righteousness tinged with *Angst.* Amalfi decided at once that in a face-to-face meeting the speaker would always look somewhere else than into the face of the man to whom he was speaking. The owner of that voice could not possibly be anywhere on the surface of the Earth, looking aloft for besiegers or going doggedly about his business; he was instead almost surely crouched in some sub-cellar.

"None, sir, at the moment," said the cops' Command HQ. "They've stopped, and appear to be willing to listen to reason. I have assigned Commander Eisenstein to cover their camp against any possible disturbance."

"Admiral, these cities have broken the law. They're here in defiance of our approach limits, and the very size of their gathering is illegal. Are you aware of that?"

"Yes, Mr. President," Command HQ said respectfully. "If you wish me to order individual arrests—"

"No, no, we can't jail a whole pack of flying tramps. I want action, Admiral. These people need to be taught a lesson. We can't have fleets of cities approaching Earth at will; it's a bad precedent. It indicates a decline of interstellar morality. Unless we return to the virtues of the pioneers, the lights will go out all over Earth, and grass will grow in the spacelanes."

"Yes, sir," said Command HQ. "Well spoken, if you will permit me to say so. I stand ready for your orders, Mr. President."

"My orders are to *do* something. That camp is a festering sore on our heavens. I hold you personally responsible."

"Yes, sir." The Admiral's voice was very crisp. "Commander Eisenstein, proceed with Operation A. Command 82, red alert; red alert."

"Command 82 acknowledging red alert."

"Eisenstein calling Command HQ."

"Command HQ."

"MacMillan, I'm taping my resignation over to you. The President's instructions don't specify Operation A. I won't be responsible for it."

"Follow orders, Commander," Command HQ said pleasantly. "I will accept your resignation—when the maneuver is completed."

The cities hung poised tensely in their orbits. For seconds, nothing happened.

THEN pear-shaped, bumpy police battleships began springing out of nothingness around the jungle. Almost instantly, four cities raved into boiling clouds of gas.

The Dinwiddie pickup in the proxy backed itself hurriedly down the intensity scale until it could see again through the glare. The cities were still hanging there, seemingly stunned—as was Amalfi, for he had not imagined that Earth could have come to such a pass. Only an ideal combination of guilt and savagery could have produced so murderous a response; but evidently the president and MacMillan made up between them the necessary combination—

Click.

"Fight!" the king's voice roared. "Fight, you lunkheads! They're going to wipe us out! Fight!"

Another city went up. The cops were using Bethé blasters; the Dinwiddie circuit, stopped down to accommodate the hydrogen-helium explosions, could not pick up the pale guide-beams of the weapons; it would have been decidedly difficult to follow the king's order effectively.

But the city of Buda-Pesht was already sweeping forward out of the head of the cone, arcing toward Earth. It spat murder back at the police ships, and actually caught one. The mass of incandescent, melting metal appeared as a dim blob in Amalfi's helmet, then faded out again. A few cities followed the king; then a larger number; and then, suddenly, a great wave.

Click.

"MacMillan, stop them! I'll have you shot! They're going to invade us—"

New police craft sprang into being every second. A haze gradually began to define the area of the Okie encampment: a planetary nebula of gas molecules, dust, tiny condensations of metal and water vapor. Through it the Bethé guide beams played, just on the edge of visibility now; but the

sun, too, was acting on the cloud, and the whole mass was beginning to re-radiate, casting a deepening luminous veil over the whole scene, about which the Dinwiddie circuit could do very little. The whole spectacle reminded Amalfi of NGC 1435 in Taurus, with exploding cities substituting novas for the Pleiades.

But there were more novas than the cities could account for, novas outside the cone of the encampment. The police craft, Amalfi noted with amazement, were beginning to burst almost as fast as they appeared. The swarming, disorganized cities were fighting back; but their inherent inefficiency as fighting machines ruled them out as the prime causes of such heavy police losses. Something else, something new was happening—something utterly deadly was loose among the cops—

"Command 82, Operation A sub a—on the double!"

A police monitor blew up with an impossible, boundless flare.

The cities were winning.

Any police battleship could handle any three cities without even beginning to breathe hard and there had been at least five battleships per city when the pogram had started. The cities hadn't a chance.

Yet they were winning. They streamed on toward Earth, boiling with rage, and the police ships and their utterly deadly weapons exploded all over the sky like popcorn.

And, a little bit ahead of the maddened cities, an enormous silver sphere wallowed toward Earth, apparently out of control.

Amalfi could now see Earth herself, as the tiniest of blue-green dots. He did not try to see it any better, though it was growing to a disc with fantastic speed. He did not want to see it. His eyes were already fogged enough with sentimental tears at the sight of the home sun.

But his eyes kept coming back to it. At its pole he caught the shine of ice . . .

. . . *beep* . . .

The sound shocked him. The buzzer had already sounded, without his having heard it. The city would cross the solar system within the next two and a half seconds—*or less,* for he had no idea how many beeps had probed at his ears without response during his hypnotic struggle with the blue-green planet.

He could only guess, with the fullest impact of his intuition, that *now* was the time—

Click.

"PEOPLE OF EARTH, US THE CITY OF SPACES CALLS UPON YOU—"

He moved the spacestick out and back in a flat loop about three millimetres long. The City Fathers instantly snatched the stick out of his hand. Earth vanished. So did Earth's sun. Hern VI began to accelerate rapidly, regaining the screeching velocity across the face of the galaxy for which two Okie cities had died.

"—YOUR NATURAL MASTERS TO OKAY, THE MANS OF STARS, WHO THE UNIVERSE - UNDERSTANDING LONG - LIFE - UNDERSTANDING INHERITORS, THE INFERIOR HOME-STAYING DECADENT EARTHPEOPLES THEREOVER, THE NEW RULERS OF, ARE ABOUT TO BE BECOMING. US INSTRUCTS YOU SOON TO PREPARE—"

The mouthy voice abruptly ceased to exist. The blue fleck of light which had been Amalfi's first and last sight of his ancestral planet had already been gone for long seconds.

The whole of Hern VI lurched and rang. Amalfi was thrown heavily to the floor of the balcony. The heavy helmet fell askew on his head and shoulders, cutting off his view of the battle in the jungle.

But he didn't care. That impact, and the death of that curious voice, meant the real end of the battle in the jungle. It meant the end of any real threat that might have existed for Earth. And it meant the end of the Okie cities — not just those in the jungle, but all of them, as a class, including Amalfi's own.

For that impact, transmitted to the belfry of City Hall through the rock of Hern VI, meant that Amalfi's instant of personal control had been fair and true. Somewhere on the leading hemisphere of Hern VI there was now an enormous, white-hot crater. That crater, and the traces of metal salts which were dissolved in its molten lining, held the grave of the oldest of all Okie legends:

The Vegan orbital fort.

It would be forever impossible now to know how long the summated, distilled, and purified power of the Vegan military, conquered once only in fact, had been bowling through the galaxy, awaiting this one unrepeatable clear lane to a strike. Certainly no answer to that question could be found on the degenerate planets of Vega itself; the fort was as much a myth there as it had been anywhere else in the galaxy.

But it had been real all the same. It had been awaiting its one chance to revenge Vega upon Earth, not, certainly, in the hope of re-asserting the blue-white glory of Vega over every other star, but simply to smash the average planet of the average sun which had so inexplicably prevailed over Vega's magnificence.

Not even the fort could be expected to prevail against Earth by itself—but in the confusion of the Okies' march on Earth, and under the expectation that Earth would hesitate to burn down its own citizen-cities until too late, it had foreseen a perfect triumph. It had swung in from its long, legend-blurred exile, disguised primarily as a city, secondarily as a fable, to make its last bid.

Residual tremors, T-waves, made the belfry rock gently. Amalfi got to his feet, steadying himself on the railing.

"O'Brian, cast us off. The planet goes on as she is. Switch the city to the alternate orbit."

"To the Lesser Magellanic?"

"That's right. Make fast any quake damage; pass the word to Mr. Hazleton and Mr. Carrel."

"Yessir."

The Vegan fortress had nearly won, at that; only the passage of a forlorn and outcast-piloted little world had defeated it. But the Earth would never know more than a fraction of that, only the fraction which was the passage of Hern VI across the solar system. All the rest of the evidence was now seething and amalgamating in a cooling crater on the leading hemisphere of Hern VI; and Amalfi meant to see to it that Hern VI would be lost to Earth forever . . .

As the Earth was lost to Okies, from now on.

VII

Everyone was in the old office of the mayor: Dee, Hazleton, Carrel, Sgt. Anderson, Jake, O'Brian, the technies; and, by extension, the entire population of the city, through a city-wide two-way p.a. hookup; even the City Fathers. It was the first such gathering since the last election; since that election had been the one which had put Amalfi into office, few present now remembered the occasion very well, except for the City Fathers—and they would be the least likely of all to be able to apply that memory fruitfully to the present meeting. Undertones were not their forte.

Amalfi began to speak. His voice was gentle, matter-of-fact, impersonal; it was addressed to everyone, to the city as an organism. But he was looking directly at Hazleton.

"First of all," he said, "it's necessary for everyone to understand our gross physical and astronomical situation. When we cut loose from Hern VI awhile back, that planet was well on its way toward the Greater Magellanic Cloud, which, for those of you who come from the northerly parts of the galaxy, is one of two small satellite galaxies moving away from the main galaxy along the southern limb. Hern VI is still on its way there, and unless something unlikely happens to it, it will go right on to the Cloud, through it, and on into deep intergalactic space.

"We left on it almost all the equipment we had accumulated from other cities while we were in the jungle, because we had to. We hadn't the room to take much of it on board our own city; and we couldn't stick with Hern VI because Earth will almost certainly chase the planet, either until the planet leaves the galaxy, or until they're sure we aren't on it any longer."

"Why, sir?" several voices from the g.c. speaker said, almost simultaneously.

"For a long list of reasons. Our flying the planet across the face of the solar system—as well as our flying it through a number of other systems and across main interstellar traffic areas—was a serious violation of Earth laws. Furthermore, Earth has us chalked up as having sideswiped a city as we went by; they don't know the real nature of that

'city.' And incidentally, it's important that they never find out, even if keeping it a secret results in our being written up in the history books as murderers."

Dee stirred protestingly. "John, I don't see why we shouldn't take the credit. Especially since it really was a pretty big thing we did for the Earth."

"*Because we're not through doing it yet.* To you, Dee, the Vegans are an ancient people you first heard about only fifty years ago. Before that, on Utopia, you were cut off from the main stream of galactic history. But the fact is that Vega ruled much of the galaxy before Earth did, and that the Vegans always were, and have just shown us that they are still, dangerous people to get involved with. That fort didn't just exist in a vacuum. It had to touch port now and then, just as we do. And being a military machine, it needed more service and maintenance than it could take care of by itself.

"Somewhere in the galaxy, there is a colony of Vega which is still dangerous. That colony must be kept in utter ignorance of what happened to its major weapon. It must be made to live on faith; to believe that the fort failed on its first attempt but may some day be back for another try. It must not know that the fort is destroyed, or it will build another one.

"The second one will succeed where the first one failed. The first one failed because of the nature of the nomadic kind of culture on which Earth has been depending up to now; the Okies defeated it. We happened to have been the particular city to do the job, but it was no accident that we were on hand to do it.

"But for quite a while to come, Okies are not going to be effective or even welcome factors in the galaxy as a whole; and the galaxy, Earth in particular, is going to be as weak as a baby all during that period, because of the depression. If the Vegans hear that their fort did strike at Earth, and came within a hair's breadth of knocking it out, they'll be building another fort the same day they get the news. After that—

"No, Dee, I'm afraid we'll have to keep the secret."

Dee, still a little rebellious, looked at Hazleton for support; but he shook his head.

"Our own situation, right now, is neither good nor bad," Amalfi continued. "We still have Hern VI's velocity. It's enough lower than the velocity we hit when we flew the planet of He to make us readily maneuverable, even though clumsily, especially since we're so much less massive than a planet. We will be able to make any port of call which is inside the cone our trajectory would describe if we rotated it. Finally, Earth has figures only on the path of Hern VI; it has none on the present path of the city.

"Cast up against that the fact that our equipment is old and faltering, and will never carry us anywhere again under our own steam. When we land at the next port of call, we will be landed for good. We have no money to buy new equipment; without new equipment we can't make money. So it will pay us to pick our next stop with great care. That's why I've asked everybody to sit in on this conference."

One of the technies said, "Boss, are you sure it's as bad as all that? We should be able to make some kind of repairs—"

"THE CITY WILL NOT SURVIVE ANOTHER LANDING," the City Fathers said flatly. The technie swallowed and subsided.

"Our present orbit," Amalfi said, "would lead us eventually out into the lesser of the two Magellanic Clouds. At our present velocity, that's about a year's journey away, still. If we actually want to go there, we'll have to plan on that year stretching on by another six months, since the clip at which we're traveling now is so great that we'd blow out every driver on board if we undertook normal deceleration.

"I propose that the Lesser Magellanic Cloud is exactly where we want to go."

Tumult.

THE whole city roared with astonishment. Amalfi raised his hand; those actually in the room quieted slowly, but elsewhere in the city the noise went on for quite a while. It did not seem to be a sound of general protest, but rather the angry buzzing of large numbers of people arguing among themselves.

"I know how you feel," Amalfi said, when he could be sure most of them could hear him again. "It's a long way to go, and though there are supposed to be one or two

1st Lieutenant Lloyd L. Burke U.S. Army Medal of Honor

THE RED KOREAN strongpoint had stalled our attack; Lieutenant Burke saw that a breakthrough must be made. Rallying 35 men, he crept close to the enemy bunkers. He laid down a grenade barrage. Then he ran forward to an exposed knoll and opened a one-man pitched battle. He turned a light machine gun into the Red position. He caught live enemy grenades in mid-air and threw them back. Once he killed three men with his pistol. Before sunset Lieutenant Burke and 35 men had defeated 300. The lieutenant says:

"Every day, men who fought in Korea are coming home. They're finding jobs—partly because they and you and I own nearly 50 billion dollars' worth of U.S. Defense Bonds. For Bond savings—which protect our families financially—are also building a great backlog of *national* prosperity. Reason enough for investing in Bonds—don't you agree?"

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colonies on the near side of the Cloud, there can be no real interstellar commerce there, and certainly no commerce with the main body of the galaxy. We would have to settle down—maybe even take to dirt farming; it would be a matter of giving up being an Okie, giving up being a star-man. That's a lot of give up; I know.

"But I want you all to remember that there's no longer any work, or any hope of work, for us anywhere in the main body of the galaxy, even if by some miracle we manage to put our beat-up old city back into good order again. We have no choice. We *must* find a planet of our own to settle down on, a planet we can claim as our own."

"ESTABLISH THIS POINT," the City Fathers said.

"I'm prepared to do so. You all know what has happened to the galactic economy. It's collapsed, completely. As long as the currency was stable in the main commerce lanes, there was some pay we could work for; but that doesn't exist any longer. The drug standard which Earth has rigged up now is utterly impossible for the cities, because the cities have to use those drugs *as drugs,* not as money, in order to stay alive long enough to do business at all. Entirely aside from the possibility of plague—and you'll remember, I think, what we saw of that not so long ago—there's the fact that we live, literally, on longevity. We can't trade on it too.

"And that's only the beginning. The drug standard will collapse, and sooner and more finally than the germanium standard did. The galaxy's a huge place. There will be new monetary standards by the dozens before the economy gets back onto some stable basis. And there will be thousands of local monetary systems in operation before that happens. The interregnum will last at least a century—"

"AT LEAST THREE CENTURIES."

"Very well, three centuries. I was being optimistic. In either case it's plain that we can't make a living in an economy which isn't at least reasonably stable, and we can't afford to sweat out the waiting period before the galaxy jells again. Especially since we don't know whether the eventual stabilization will have any corner in it for Okies or not.

"Frankly, I don't think the Okies have a prayer of surviving. Earth will be especially hard on them after this 'march,' which I took pains to encourage all the same because I was pretty sure we could suck in the Vegans with it. But even if there had been no march, the Okies would have been made obsolete by the depression. The histories of depressions show that a period of economic chaos is invariably followed by a period of extremely rigid economic controls—during which all the variables, the only partially controllable factors like commodity speculation, unlimited credit, free marketing, and competitive wages get shut out.

"OUR city represents nearly the ultimate in competitive labor. Even if it lasts through the interregnum—which it can't—it will be an anachronism in the new economy. It will almost surely be *forced* to berth down on some planet selected by the government. My own proposition is simply that we select our *own* berth, long before the government gets around to enforcing its own selection; that we pick a place hundreds of parsecs away from the outermost boundary-surface that that government will think to claim; a place which is retreating steadily and at good speed from the center of that government and everything it will eventually want to claim; and that once we get there, we dig in. There's a new imperialism starting where we used to be free; to stay free, we'll have to go out in the jungle and start our own little empire.

"But let's face it. *The Okies are through.*"

Nobody said anything. Stunned faces scanned stunned faces.

Then the City Fathers said calmly, "THE POINT IS ESTABLISHED. WE ARE NOW MAKING AN ANALYSIS OF THE SELECTED AREA, AND WILL HAVE A REPORT FROM THE ASSIGNED SECTION IN FOUR TO FIVE WEEKS."

Still the silence persisted in the big chamber. The Okies were testing it—almost tasting it. No more roaming. A planet of their own. A city at rest, and a sun to come up and go down over it on a regular schedule; seasons; a quietness free of the eternal whirling of gravity fields. No fear; no fighting, no defeat, no pursuit; self-suffi-

ciency—and the stars only points of light, forever.

A planet-bound man presented with a similar revolution in his habits would have rejected it at once, terrified. The Okies, however, were used to change; change was the only stable factor of their lives. It is the only stable factor in the life of a planet-bound man, too, but the planet-bound man has never had his nose rubbed in it.

Even so, had they not been in addition virtually immortal—had they been, like the people of the old times before space travel, pinned like insects on a spreading-board to a lifespan of less than a century—Amalfi would have been afraid of the outcome. A short lifespan leads to restlessness; somewhere, within the next few years, there has to be some El Dorado for the ephemerid. But the conquest of death had almost eliminated that Faustian frenzy. After three or four centuries, people grew tired of searching for the unnameable; they learned; they began to think of the future not as holding a haven of placidity and riches, but simply as the realm of things that had not happened yet. They became interested in the budding, the unfolding present, and thought about the future only with an attitude of indifferent acceptance toward whatever catastrophe it might bring. They no longer burned out their lives seeking catastrophe, under the name of "security."

In short, they grew a little more realistic; and more than a little tired.

AMALFI waited with calm confidence. The smallest objections, he knew, would come first. He was not anxious to have to cope with them, and the silence had lasted so much longer than he had expected that he began to wonder if his argument had become too abstract toward the end. If so, a note of naive practicality at this point should be proper—

"This solution should satisfy almost everyone," he said briskly. "Hazleton has asked to be relieved of his post, and this will certainly relieve him of it most effectively. It takes us out of the jurisdiction of the cops. It leaves Carrel as city manager if he still wants the post, but it leaves him manager of a grounded city, which satisfies *me*, since I've no confidence in Carrel as a pilot. It—"

"Boss, let me interrupt a minute."

"Go ahead, Mark."

"What you say is all very well, but it's too damned extreme. I can't see any reason why we have to go so far afield. Granted that the Lesser Magellanic is off the course Hern VI is following; granted that it's pretty remote; granted that even if the cops go looking for us there, it's too big and unpopulated and complex for them to hope to find us. But couldn't we accomplish the same thing without leaving the galaxy? Why do we have to take up residence in a cloud that's moving away from the galaxy at some colossal speed—"

"NINETY-FIVE MILES PER SECOND."

"Oh, shut up. All right, so that's not very fast. Still and all, the cloud is a long way away—and if you give me the exact figures I'll bust all your tubes—and if we ever want to get back to the galaxy again we'll have to fly another planet to do it."

"All right," Amalfi said. "What's your alternative?"

"Why don't we hide out in a big cluster in our own galaxy? Not a picayune ball of stars like the Acolyte cluster, but one of the big jobs like the Great Cluster in Hercules. There must be at least one such in the cone of our present orbit; there might even be a Cepheid cluster, where spindizzy navigation would be impossible for anybody who didn't know the local space-strains. We'd be just as unlikely to be traced by the cops, but we'd still be on hand inside our own galaxy if conditions began to look up."

Amalfi did not choose to contest the point. Logically, it should be Carrel, who was being deprived of the effective command of a flying city, who should be raising this objection. The fact that the avowedly retired Hazleton had brought it up first was enough for Amalfi.

"I don't care if conditions ever do look up," Dee said, unexpectedly. "I like the idea of our having a planet of our own, and I'd want it to be as far away from the cops as we could possibly make it. If that planet really does become ours, would it make any difference to us whether Okie cities become possible again two or three centuries from now? We wouldn't need to

be Okies any longer."

"You'd say that," Hazleton said, "because you haven't lived two or three centuries yet, and because you're still used to living on a planet. Some of the rest of us are older; some of the rest of us like wandering. I'm not speaking for myself, Dee, you know that. I'll be happy to get off this junkpile. But this whole proposition has a faint smell to me. Amalfi, are you sure you aren't forcing us to set down simply to block a change of administration? It won't you know."

Amalfi said, "Of course I know. I'm submitting my resignation along with yours the moment we touch ground. Right now I'm still an officer of this city and I'm doing the job I've been assigned to do."

"No, I didn't mean that. Let it go. What I still want to know is why we have to go all the way out to the Lesser Magellanic."

"Because it'll be ours," Carrel said abruptly. Hazleton swung on him, obviously astonished; but Carrel's rapt eyes did not see the older man. "Not only our planet—whichever one we choose—but our galaxy. Both the Magellanics are galaxies in little. I know; I'm a southerner, I grew up on a planet where the Magellanics went across the night sky like tornadoes of sparks. The Greater Magellanic even has its own center of rotation; I couldn't see it from my home planet because we were too close, but from Earth it has a district Milne spiral. And both clouds are moving away, taking on their own independence from the main galaxy. Hell, Mark, it isn't a matter of one planet. That's nothing. We won't be able to fly the city, but we can build spaceships. We can colonize. We can settle the economy to suit ourselves. Our own galaxy! What more could you want?"

"It's too easy," Hazleton said stubbornly. "I'm used to fighting for what I want. I'm used to fighting for the city. I want to use my head, not my back; your spaceships, your colonization, those things are going to be preceded by a lot of plain and simple weeding and plowing. There's the core of my objection to this scheme, Amalfi. It's wasteful. It commits us to a situation where most of what we'll have to do will be out of our experience."

"I disagree," Amalfi said quietly. "There are already colonies in the Lesser Magellanic. They weren't set up by spaceships. They were set up by cities. No other mechanism could have made the trip at all, in those days."

"So?"

"SO THERE'S no chance that we'll be able to settle down placidly and get out our hoes. We'll have to fight to make any part of the Cloud our own. It's going to be the biggest fight we've ever had, because we'll be fighting Okies—Okies who probably have forgotten most of their history and their heritage, but Okies all the same, Okies who had this idea long before we did, and who are going to defend their patent."

"As they have a right to do. Why should we poach on them when a giant cluster would serve us just as well? Or nearly as well?"

"Because they are poachers themselves—and worse. Why would a city go all the way to the Lesser Magellanic in the old days, when cities were solid citizens of the galaxy? Why didn't *they* settle down in a giant cluster? Think, Mark!

"They were bindlestiffs. Cities who had to go to the Lesser Magellanic because they had committed crimes that made every star in the main galaxy their enemies. You could name one such city yourself, and one you know *must* be out there in that cloud. And not only because Thor V still remembers it, but because every sentient being in the galaxy burns for the blood of every last man on board it. Where else could it have gone but the Lesser Magellanic, even though it starved itself for fifty years to make the trip?"

Hazleton began kneading his hands, slowly, but with great force. His knuckles went alternately white and red as his fingers ground over them.

"Gods of all stars," he said. His lips thinned. "Yes. They went there if they went anyplace. Now there's an outfit I'd like to meet."

"You aren't likely to, Mark. The Cloud's a big place."

"Sure, sure. And a few other bindlestiffs. But if the Thor V outfit is out there, I'd like to meet them. I don't care about the others. Except for the Thor V outfit, the

Lesser Magellanic is ours, as far as I'm concerned."

"A galaxy," Dee murmured, almost soundlessly. "A galaxy with a home base, a home base that's ours."

"An Okie galaxy," Carrel said.

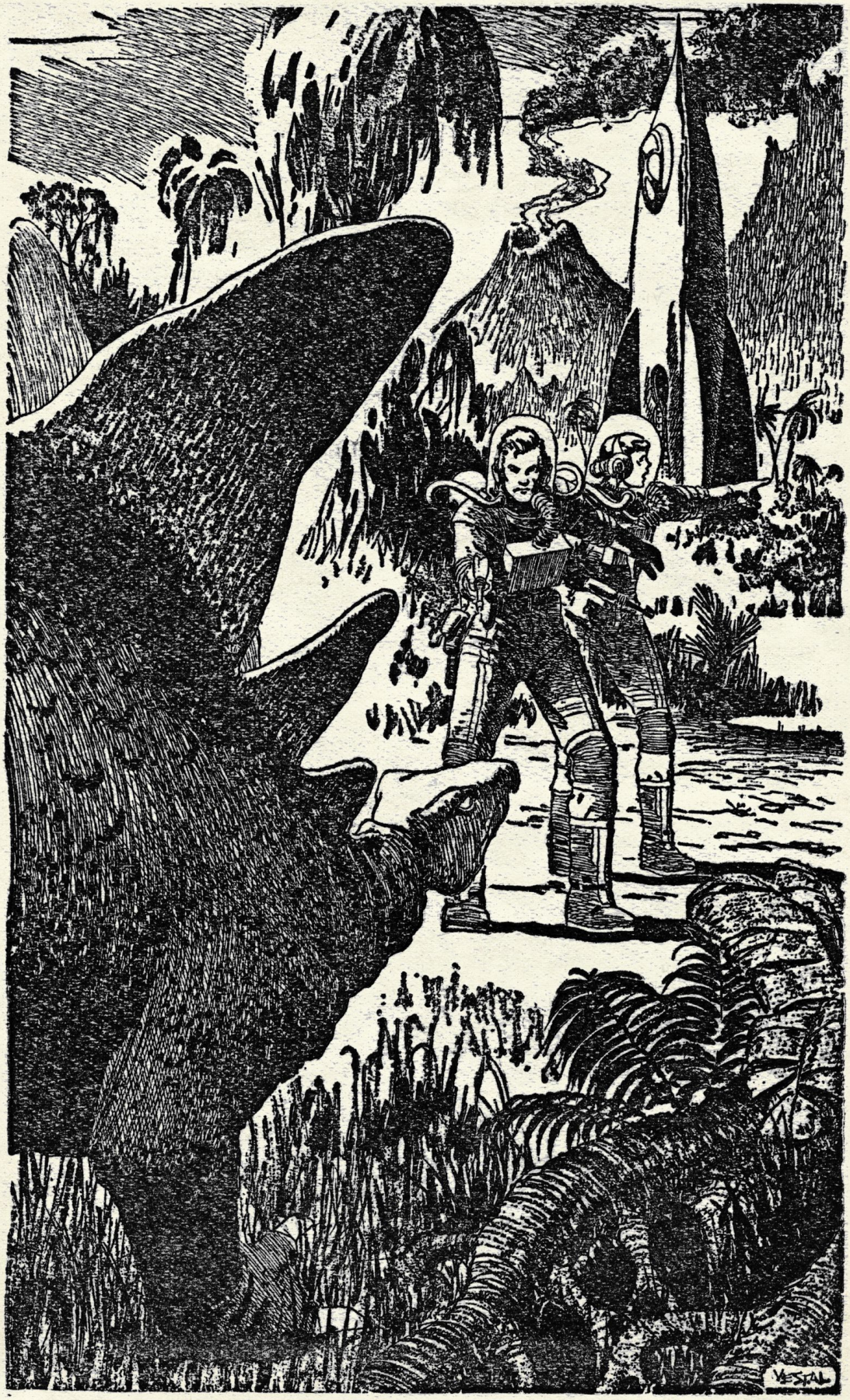
The silence sifted back over the city. It was not a contentious silence now. It was the silence of a crowd in which each man is thinking for and to himself.

"HAVE MESSRS. HAZLETON AND CARREL ANY FURTHER ADDITIONS TO THEIR PLATFORMS?" the City Fathers blared, their vodeur-voice penetrating flatly into every cranny of the hurtling city. "IF NOT, AND IF THERE ARE NO ADDITIONAL CANDIDATES, WE ARE READY TO PROCEED WITH THE ELECTION."

For a long instant, everyone looked very blank. Than Hazleton began to chuckle.

"No additions," Hazleton said. Carrel said nothing; he simply grinned, transported.

Ten seconds later, John Amalfi, Okie, was the mayor of an infant galaxy.


VESTAL

SURVIVOR OF MARS

By VARGO STATTEN

Revenge! Jad Inicus, Martian, emblazoned it on the corridors of centuries. It throbbed to awakening in Arnath Layton, Earthman. Streaking across the gulf of time and space he answered the ancient, angry cry.

CHAPTER ONE

VENUS was dying. The mighty scientific civilization which existed upon it had reached its zenith and now faced the ultimate problem which must come to all races sometime: how to continue living on a planet which is on the decline.

The death of Venus was the sole preoccupation of the scientists inhabiting the planet. For many centuries they had ignored the first evidences of coming disaster. The slow diminishment of clouds; the gradual evaporation of the oceans as they were sucked remorselessly into space; the almost total disappearance of water vapor. Venus was now a world of deserts. The end was coming—and fast.

At the window of his home in the city of Tranil, the governing center of the planet, Dal Kilrax, scientific ruler of the race, gazed sadly upon the wilderness.

In appearance Dal Kilrax was a perfect product of his world. He resembled an upright slug—a complete shiny body, curiously slimy on the exterior, with a protuberance

for a head. He had two pairs of arms, supplied with tentacled feelers. Hair was totally absent. Locomotion was gained by two extensions at the base of the body which served as feet. His face possessed a toothless mouth, an air-intake which would have been a nose in any other type of being, and two very large eyes. Here there was evidenced the creature's tremendous intelligence. They were sagacious, thoughtful, mirroring the profound speculations which governed him at the moment.

Far away in the distance over the low mountain tops a whirling dust storm rose blackly against the blinding sun and then streamed to the southwest, blotting out the aridity of the desert. Out there was a temperature of 190 degrees Fahrenheit.

The sound of the door opening made Dal Kilrax turn. It was Yedi, his second-in-command, and one of the most brilliant scientists in the race.

"Master," he acknowledged, "I thought I should report upon my findings to you concerning the state of our planet."

"I hardly need a report, my good friend. The view from this window is quite sufficient. All I need to know is: how long has our world to live?"

"At the most, ten orbital circuits. After that the atmosphere itself will start to leak into space."

"I have been wondering," Yedi continued, reflecting, "if we could not migrate to the fourth world—the planet Maza. It is a thriving planet with plentiful air and water. It is populated by curious bipeds who sprout hair on their heads. As yet their science has not reached a particularly high level. I think we could very soon deal with them."

Dal Kilrax shook his head. "No, Yedi. For one thing, even if we domiciled ourselves on Maza we would endure immense physical discomfort because it is only half the size of our planet. Its gravity is also proportionately less. That being so our brains would not be as efficient. A brain must have a steady blood supply to keep it in order, and a weak gravity would cause untold trouble. Hundreds of our race might die off—that we could not afford. There are so few of us already. No, Yedi, that is not the answer."

Yedi watched a distant plume of dust rising to the zenith before he spoke again.

"Then how about the third world from the sun—Kronj?"

Again Kilrax shook his head. "No. It is a very, very young world, lashed by tempests and, in many parts, still steaming with mephitic vapors. The only point it has in common with this planet is that the gravity is almost the same. That would not compensate for the fetid seas and atmosphere and the vast struggle which would be necessary to tame that world's exuberant youth."

Yedi was silent. One by one he could sense the lights going out throughout the system. All the possibilities of migration seemed to be evaporating—and if migration was not the answer it meant death—absolute and complete, under the blazing sun or in the frigid night, upon a world from which the last trace of atmospheric vapor had vanished.

"What about our moon?" he asked at length. "I know it is airless, but we could perhaps overcome that difficulty by sealing ourselves underground—"

"Again, no. We can seal ourselves underground *here* if we wish—though the life is utterly unnatural for us. My main reason for refusing our moon as a haven, however, is because it is infested with inert life spores, utterly lethal to us. If those spores happened to seep into our underworld they would come to life in the warmth and air and emit deadly toxic vapors, chiefly carbon dioxide. Since we are essentially oxygen-nitrogen breathers that would be fatal."

"Then, this is the end of the road?" Yedi questioned, finally. "We die because our science, mighty though it is, is not mighty enough to defy natural laws?"

"There is one way . . ." Dal Kilrax meditated through an interval. "It is not one which I like taking—viewing it from the standpoint of a living person who loves his world; but as a scientist, responsible for the continuance of our race, I have no alternative. It will mean the death of millions on the world of Maza and the rapid decline of *their* planet into extinction, but that is the law of the Universe."

"What have you in mind, Master?" Yedi inquired.

"THE greatest feat ever attempted by the science of this planet—and the only possible course we can take if we are to survive. You had better summon the Governing Council, Yedi, and I will address them en masse. This is not a matter for you and I to talk over in secret conference."

Dal Kilrax was in his usual seat of office, on an isolated rostrum near an enormous glassless window. Behind him, on the arid plains, dust fled inexorably over the parched wastes.

"That we face crisis has long been apparent to you," he said, when the meeting had been formally opened. "The problem of our continuation as a scientific race has long preoccupied me—and it has forced me to a most unhappy decision. I fully expect that the scientists of future ages will write us down as fiends, heartless monsters, and men of evil intent—but that is because they will not be aware of how desperate is our need. We are left two choices: to rejuvenate this senile world of ours, or perish. No other world is suitable for us to live upon—so we must take the possessions of a happier world, that of Maza, the fourth planet from the sun."

"May I ask what is meant by possessions?" asked a scientist of the North Circle.

"A planet has only two possessions worthy of mention," Dal Kilrax answered. "Air—and water. The two things we most desperately need. I am suggesting that we should take them."

"Without warning?" another scientist asked, aghast.

"Yes, without warning. You do not suppose the inhabitants of Maza would give up their air and water if we asked them, do you? We have only one aim: survival."

For a long time the issue was argued back and forth, just as Dal Kilrax had anticipated it would be—but in the final analysis it became more than obvious that his was the only plan which could save the race, ruthless though it was. So the matter turned to the scientific issues involved.

"What kind of people are these Mazians?" asked one of the Council.

"They are fairly intelligent," Yedi answered. "They have space travel by means of crude rocket propulsion, and they understand radio to quite an advanced degree. Also they seem well versed in ordinary scientific technique, but are still a long way behind us. In appearance they are rather queer. The Mazians walk upright on two legs, possess round-shaped bodies crowned with queer furry mats. Their eyes are set flat in their craniums, as ours are, and they have openings which are presumably for food or speech. Revolting creatures. And they are big—very big. I would place them as eight feet in height."

"Lesser gravity demands greater size," Dal Kilrax commented. "And their atmosphere?"

"Perfect for our needs, Master. Oxygen and hydrogen in copious quantities, together with nitrogen, argon and krypton. Their oceans are combined oxygen and hydrogen, with a heavy sodium chloride basis."

"I would like to view this planet," one of the Council requested—and so his wish was gratified.

Shields dropped over the glassless windows, blotting out the unmitigated glare of the Venusian day. Television contact with the city's observatory brought onto a wall screen a perfectly clear image of the planet Maza, which—though 73-million miles distant—was crystal sharp. Delicate fingers of light-gathering magnetism hurtling across the void made this miracle of telescopy possible.

In silence the scientists studied the view—a prosperous, thriving world of green, clouds floating in its dense atmosphere, cities sprawling in the emerald landscape, the dots of seagoing traffic scattered about the oceans. The planet Maza, in the heyday of its life, a world which one day a race as yet unborn would call Mars.

"Excellent," Dal Kilrax decided at length. "We need delay no longer. Now, gentlemen, this is what I propose . . ."

WITH the coming of the next day-period activity began, following out Dal Kilrax's scientific plan to the letter.

Silent, faultlessly efficient robots marched single-file to a point 2,000 feet up on the distant mountain range within sight of Tranil. With them they bore metal-synthesizing machines, tools and scientific engines of all descriptions.

The Venusians worked untiringly on the erection of a vast, latticed tower of metal.

At the tower top reposed a circle of polished copper, able to turn swiftly on massive gimbals, and within the centre of the circle, suspended by electro-magnets, was a curiously designed transmitter fitted with numberless graded lenses. Both this instrument and the copper hoop were connected by stout cables dropping the length of the tower and thence passing through the supporting bed of hardened pressure-resisting metal in which the tower was embedded. From this point the cables continued their journey to a complicated switchboard deep under the city in a specially equipped laboratory.

The most difficult part of the work was done.

In the course of another day Dal Kilrax and his race forsook the ground levels of Tranil and sealed themselves underground. If their plans matured according to expectations a sea would eventually roll where the desert now stood, burying Tranil beneath the waves. But against this possibility they had taken every safeguard.

A network of tunnels and shafts passed into the mountain range from their underground habitat and emerged at a point 6,000 feet up the range. These served as air-purifying vents and could also be traversed and ascended in the levitators. From such a vantage point up the mountain the race hoped to be able to take stock of their re-made world when the chaos had subsided.

Nothing had been overlooked; nothing left to chance. The valves that closed the roof of their underground city had been tested and found capable of withstanding an almost inconceivable water pressure, a pressure which could only exist on the bottom of an ocean.

Dal Kilrax thrust most of his misgivings aside when the time came to take the last steps. His qualms of conscience at the frightful blow he was about to deal a thriving world were outweighed by his fierce desire for survival.

Standing in the enormous laboratory he looked on the gathered members of his race. Vast electrical engines of every shape and design stood around him in a wilderness of glittering metal. Generators, vacuum tubes, enormous anode and cathode balls roped together by slender but enormously powerful filaments; great ladders and bridges of insulated metal perched between titanic electro-magnets—the whole array of *n*th degree electricity was present, some of it comprehensible to those who watched, but much of it an enigma reflecting the prodigious intelligence of its creators.

At length Dal Kilrax made a statement:

"Gravity, my friends, is as much a force as light or heat. It has definable limits and its power can be increased or decreased at will—that we know from our levitators which lift easily against the pull of gravitation. Also, we know it from our space machines which shield gravity and hurl us away from the gravitational field. We know that, even as ordinary radio waves can be heterodyned, so can a correct force operate to 'heterodyne' gravitational fields and render the part in question entirely free from gravitation.

"So, then, we come to our plan . . .

"Across space, directly to Maza, we shall protect a heterodyning beam, which when it strikes that planet will encompass one-thousand miles of surface area. This heterodyning beam will be in the exact center of what we can call a tunnel of force. That is to say, this tunnel will be a beam having walls of vibration solid enough to withstand the sudden uprushing vortex of water and air. Obviously, with part of Maza degravitated and this force tunnel immediately over that part, the air and oceans will be sucked up our force tunnel by the normal process of following the line of least resistance. But for our force tunnel they would spew sunwards, hence the presence of the tunnel to hold them in one fixed path, until they deluge down on the surface of this planet."

A question came from the assembly.

"What of the people and cities of Maza, Master? Will not they too be absorbed toward the tube and rain down upon us?"

"No, because the binding molecular forces that hold solid things together will be destroyed by *our* forces, but degravitated water and air can only reassemble into their original non-solid form."

Dal Kilrax became silent, waiting for questions. None came. It was evident the entire assembly was in agreement with him and resolved upon the plan. Satisfied, the

ruler turned and studied the elaborate computations built by the mathematical machines. He checked the exact position of 73-million miles distant Maza, together with the path the heterodyning beam and tube of force would have to take through space.

Finally he surveyed the meters on the solar-energy potential scale. They registered 86-million volts potential. Almost in silence the energy-storing apparatus continued working under a 30,000-volt load, catching on its endless series of brushes a constant flow of charges directly from the sun itself.

"WE ARE ready," Dal Kilrax said, and moved over the insulated floor to the switchboard, nerve-center of the mammoth machines. He closed a master-switch—

Instantly terrific energies burst amidst the machines. The yellow-lighted laboratory became bathed in quivering, pale-violet flame. It began to reek ozone. Shivering purple threads lashed themselves like living things between the anode and cathode globes. With a crashing, crackling roar the energy blasted from them into the midst of swiftly rotating copper balls and whirling governors. Tubes flared green, dynamos shieked a deafening whine of song. In the distance, a group of gigantic turbines spun before the onrush of synthetic water, shot through with rippling filigrees of amethyst color. Bolt after bolt of energy slammed into the transforming chamber of the energy-projecting machinery, hurled thence through the cables to the complicated equipment at the tower top.

Dal Kilrax stood motionless before the switchboard, his eye moving from meter to meter, gauge to gauge, intently following slender threads of red which quivered to a danger mark and then dropped swiftly as he closed switches with methodical precision.

The laboratory began to quiver with the intense, exultant thunder of that energy. Stifling heat beat along its length, but the Venusians were accustomed to this. They were not watching their ruler's efforts. Their attention was fixed on two screens—the one giving a view of the tower outside by means of X-ray transmitters, and the other a view of Maza, kept constantly in position by electric motors.

The heterodyning wave, working from the complex apparatus in the center of the copper hoop, was invisible, only the jerking meter needles testifying to its light-fast progress across the gulf of space. But within a few minutes there burst forth from that enormous copper circle a dazzling lavender beam, stabbing into the sky until it was lost in utter remoteness. The sandy, arid plain below, formerly lighted only by the solitary moon, was now bathed in the alien glare of electrical fire. Dust storms gathered and whirled, eddying into sudden violence at the disturbances in the atmosphere.

The scientists watched breathlessly, steeling themselves against the glaring, flashing riot of self-created thunder and lightning. Their gaze was now fixed on the Mazian spacevisor. Since the tube of energy was travelling across the void at the speed of light it would take some 6½ minutes to cover the gulf of approximately 73-million miles.

The din remained constant: the energy-tube flared in unvarying pale-purple fire from the copper ring on the tower . . . Seconds crept into minutes.

Three . . . four . . . five . . . six—

A low sigh escaped from the scientists as they saw that the gravity-heterodyning beam, slightly in advance of the force tunnel, had arrived. It struck that thriving green planet in the center of its principal ocean. . .

The outcome was cataclysmic. With gravity suddenly rendered of no account over a thousand-mile area, all things in that area ceased to hold together. Ships caught in its midst flew apart, the very atoms of their constitution no longer obeying normal attractive laws. They mushroomed out, visible on the mirror as blurs on the ocean.

The sea itself writhed and tumbled as though suddenly stirred by titanic submarine forces. A vast tidal wave shot to the zenith—and at that identical second the tube of force struck squarely over the area, a pale, enormously distended haze of lavender enveloping three-quarters of the ocean.

Degravitated, helpless to hold on to their native world, both sea and air thundered in a thousand incredible furies and spuming cataracts towards the vacuum of the force-tube area. The tube drew a hole in the ocean with the mighty strength of a suction-pump, driving deep down to the bed of the ocean —but there the range limit of the hetero-

dyner ceased. On the ocean bed the law of gravity was still normal.

The whole face of Maza changed. The planet became covered with a tempest of unimaginable force. The clouds thickened, whirled madly, obscuring the vision below. Only that purple beam probing relentlessly through the murk told how successful the cosmic theft had been.

Those in the laboratory turned their attention away from the murky enigma and instead searched their exterior vizor. They had not long to wait.

Abruptly, the clear, flickerless intensity of the empurpled hoop atop the tower was blurred by the arrival of the first conglomerated mass of air and water from Maza, thrust through the hoop like water from a hose nozzle. A raging tumult of quintillions of ice-shards slammed into the mountain range and rebounded in a mighty avalanche, whirling thicker and ever thicker, black against the moon and stars. In a few seconds the entire view of the beam was obliterated by tumbling vortices of twirling atmosphere and water vapor.

The din of a million Niagaras and tempests reached the ears of the buried scientists with a noise like distant thunder. The smashing of their external vizor by the fury of waters and cyclone deprived them from viewing the consummation of their masterpiece . . . They could only guess.

CHAPTER TWO

IT WAS a typical morning on the planet of Naj—or Maza, as the scientists of its nearest neighbor would have called it. The sun was shining from a warm summer sky, here and there a cumulous cload floated. It seemed as though a spell of fine weather had settled in.

Certainly Jad Inicus hoped so. He had been hard at work recently on the new mine shafting, and working underground for long periods was no picnic. He longed for the chance to get out into the fresh air with his wife and young son, to take a holiday amidst the green fields, or perhaps by the side of the ocean. He had a rest period coming to him, so perhaps he might be able to get it almost immediately. He sang to himself as he shaved before the mirror. Downstairs he could hear his wife singing too. It was one of those kind of mornings with Nature spreading her beneficence.

Jan Inicus lived in a typically suburban home on the outskirts of one of the main cities. He was a typical young man of the Najian race—massive, well over seven feet tall, broad-shouldered, yellow-eyed, with the flat face and broad nostrils of a true Najian. Otherwise neither he nor his surroundings were very much different from those which would come to a world called Earth in the far distant future.

Jad made an end of his shaving at last and hurried downstairs. Breakfast was awaiting him in the bright, clean living-room. He kissed his wife Liola gently and then stood back and admired her.

"I think you get prettier," he said, reflecting—and she laughed.

"And you get sillier, Jad!" she admonished. "Here are we, a staid married couple —and have been for five years—and you behave as though we'd just met. Prettier indeed!"

To his point of view Liola *was* pretty. She had a tangled mass of black hair, the prevalent yellow eyes, and blunted features. Like Jad she was tall—nearly six-feet-eight.

"Trax gone to school?" Jad enquired, as he started eating.

"Only until noon. He finishes today for the summer holidays. . ." Liola settled herself at the other end of the table and began to attend to her husband's needs.

Jad glanced towards the sunny window, then across towards the calendar.

"I'm going to ask today if I can have that overdue vacation," he said. "I've earned it—and it's time you had a rest from the house."

Liola's eyes glowed. "Oh, Jad, that would be wonderful!

He abandoned the remainder of his breakfast, picked up the provision case his wife had packed in readiness for him, and then departed. Singing to himself he swung down the quiet suburban street, enjoying the hot sunlight and gentle breeze before it came his time to plunge underground and direct operations in the drilling of a new tunnel linking the northern city with the southern. It was a big project, and well paid, but like everything else it had its drawbacks.

He arrived at the mining site on time, exchanging banter with his colleagues, until the elevator carried them all down the 400-feet drop into the area of operations. Down here there was a blaze of floodlight and gangs of men working with atomic cutting tools and screaming drills. Jad thought of the sunny surface and sighed, putting down his provision case on its accustomed rock.

"Everything okay?" he enquired of the supervising engineer, whose shift he was taking over.

"Everything. We had a bit of trouble at the fifth seam: one of the drills chewed up, but otherwise everything is working out to schedule. A few more weeks and we'll join the boys boring in from the north."

Jad nodded, changed into his overalls and crash helmet and then moved forward to inspect operations. He had hardly reached the nearest giant drill before there was the sound of the alarm bell. The noise it made could clearly be heard, even above the rattle and clang of the drilling equipment.

Puzzled, Jad looked about him. He could see no particular reason for the alarm being sounded. Everything seemed to be progressing normally—or was it? Suddenly he caught sight of figures flying helter-skelter towards him, the babble of their voices reaching his ears. Almost as quickly the sound of their voices was drowned out by a satanic rumbling.

Jad whirled round, startled. Fissures were gaping in the walls of the tunnel, leaping quickly up the tunnel sides. Chunks of rock started to clatter down from the roof. He seized one of the workers as he came dashing past.

"What's happened?" Jad demanded. "What is it? A cave-in or something?"

The man gulped for breath and pointed towards the radio which was screaming at the far end of the tunnel. The announcer sounded terrified.

"An earthquake or cyclone of some kind has struck the surface! It seems to be a hurricane, tidal wave, and landslide combined. Stay below until—"

Abruptly the voice was truncated. From far above came the smashing concussion of myriad thunders. Jad looked at the wondering and frightened men around him. He could feel his own heart beating more rapidly with alarm.

"I'm not stopping," he declared flatly. "I'm heading for the surface."

"Don't be a fool!" one of the engineers cried. "From the sound of things it's far worse up there than down here. I've just been through to the surface by radiophone and it seems there's hell let loose. No warning, no anything. A perfect summer day suddenly turned into chaos. . ."

"I've a wife and son up there," Jad interrupted, his face taut and sweating.

He wasted no further time talking. He raced back down the short length of tunnel to the sound of the growling and creaking of slowly cracking walls. A massive piece of ceiling dislodged itself not a foot behind his flying form. With a set face he hurried along the last stretch of the tunnel and gained the elevator shaft.

Clearly to his ears down the 400-feet bore came the roaring and screaming of a million furies, the shriek of a super-hurricane, the hammering din of an outraged atmosphere. A momentary frown crossed his face. The thing was utterly abnormal. Storms of such terrific severity were unknown in the summer, and very rarely came in the winter, either. It was a freak of Nature of some kind.

A deeper roaring suddenly replaced that of the wind. It rose louder and louder, developing into a scream that mingled oddly with the screech of voices. . .

Faster—louder—faster—Only just in time Jad flung himself away and on to his face as the shaft cage came slamming down in a cloud of dust, pitching forth struggling, terribly injured occupants.

FOR perhaps ten seconds Jad stood appalled, then realizing there was nothing he could do he vaulted on to the wreckage, seized the framework of the shaft wall, then began to ease his body upwards inch by inch.

It was a ghastly, terrifying ascent. The shaft quivered constantly, more than once threatening to fling him down the ever increasing distance to the depths below. Jad's fingers were bleeding, his nails torn, his body soaked in perspiration—but little by little, finger and toe, he clawed upward, ever upward, only pausing once as he heard a vast

concussion from the depths. He realized he had been right: the lower shaftings had caved in. . .

The last hundred feet was sheer hell. His muscles were brittle long before he had finished the climb—but still he clung on, exerting every ounce of his considerable physical strength, until at last, he dragged himself over the edge of the shaft and lay motionless, not daring to move over the final rim round the shaft top. There was something insane going on outside, a tumult beyond imagination.

Incredulous, panting for breath, he watched a sky which was thick with boiling, swirling clouds tearing towards the sea not five miles away. Buildings, trees, whole landscapes were shifting and whirling towards that unseen spot. The epicenter of the disturbance seemed to be situated somewhere over the ocean itself. More he could not discern, but he could feel his skin pricking with electric discharge and it felt as though the short hairs at the back of his scalp were standing upright.

The only thought in his mind now was for Liola and little Trax. What could have happened to them in this ghastly hell of screaming winds and earthquake? Finally the thought became so intolerable Jad felt that he ought to move. So he crawled over the final rim and again lay flat for awhile, the breath knocked out of him, dirt and stones raining into his face and cutting into his body. He did not dare stand: to have done so would have meant being lifted off his feet and flung in the wake of everything else towards the sea.

He had hardly started to move again before rain descended in a colossal deluge. He felt like an insect under the flood of a tap. The gray light which had persisted up to now deepened abruptly to midnight darkness, split only by the savage lash of lightning. Thunder crashed without pause, one clap coming on top of the other with an ear-splitting regularity.

Jad, his clothes practically stripped from him with stones, clawed his dogged way for two miles through the hell. If he could cover one more mile he would reach the suburban area where his home lay—or had lain. His journey automatically brought him to one corner of the city and he was faced by a vision that stunned him.

Everywhere people were on the move flying from the horror. Lofty spires were toppling; taller buildings were being blasted from summit to base by bolts of lightning. Whole areas had been washed away by boiling waters where rivers had risen abruptly and swilled inwards in a devouring tide.

Jad just did not understand it. Bemused by anxiety for his wife and son, he could not bring this mighty cataclysm into proper focus. It defied all reason . . . He went on crawling forward, somehow preserved from disaster. He crawled the last mile on knees which were cut and bleeding, clawed with fingers that had lost nails and feeling, or he listened like a hunted animal to the screams and shouts of his fellow men as they were savagely maimed or caught up in the titanic winds and flung into the dark.

Stupidly, weighted down with rain, Jad finally reached the spot that had been his home. Like everything else it was a crumbled mass of churned up stone and mud. He flung himself in the debris, screaming his wife's and son's names aloud in his anguish. He dived deep into the rubble, searching for perhaps the maimed body of his wife. Trax, he remembered, would still have been at school.

For thirty minutes he kept up his frantic burrowing, and at the end of that time he sank down weakly, sobbing, regardless of the blinding thunderbolts, caring no more for the fiendish howling of the winds. At last he turned a gaunt, embittered face to the merciless sky. There was insanity up there. Electrical energies had gone mad, energies that were tearing the heart out of his beloved world.

The ground rumbled and quaked. There was the ponderous concussion of mountains shifting, of vast tracts of land gulping inwards. The whole planet was in agony . . . Jad crawled into the hole he had made in the debris and dragged stones in on top of him.

There he lay, quivering with cold or fear, his mind dulled, every normal sense knocked out of him. Hours—days—weeks . . . He had no idea. At times he was unconscious. But at last he did begin to comprehend that the mighty winds were abating and that the

tremors of the ground had ceased. An aching, tortured calm hung over everything.

Jad began to move, stiffly, his limbs like lead. He pushed aside the stones and, by degrees, stood up. He took stock, and was silently incredulous. There had come to his world a state of things such as he had never thought possible—a condition which surely belonged to the last days of a planet, not one in its hey-day cold, biting wind, icily rarefied, cut into him. The sky was cloudless now, but of a deep blue tint which told Jad, with his scientific knowledge, that the atmosphere was much attenuated. The sun was hanging at the zenith, looking extremely woeful and casting hardly any warmth.

Shivering in his rags Jad absorbed the scene of profound desolation from which all traces of everything he had known and loved had gone. The entire city nearby was a shambles of smashed and tumbled stone. Thousands of crushed bodies lay in every imaginable posture. Nothing was stirring—at least, not in this region. Jad could not believe that he was the only survivor. There must be others. There had *got* to be others! He would go mad in the solitude otherwise.

Mechanically he began moving on half-paralyzed legs. He looked out to where the sea should have been, but there was no sea—only a vast desert, puddled here and there where condensation had occurred. In the midst of the desert, smashed and twisted, lay the remains of ships.

"GONE!" Jad whispered to himself. "Everything has gone! Our seas, our peoples, everything we had built up. But why? Such things do not happen. They are outside natural law. . ."

He paused and stared into the heavens, utterly bewildered. Then the ache in his stomach and the frigidness of his limbs warned him that he had to keep moving and find nourishment quickly if he was to survive. So he headed in the direction of the city ruins. To his infinite joy he found he was not alone. Other men and women, ragged and frightened like himself, had obeyed the herding instinct and huddled together following the great convulsion. Jad joined them and, as silent as they were, he helped himself to the tabloid foods which one of the number had evidently managed to find in the city's debris. He drank water from the puddles and then crept nearer to the fire made up of timber driftwood. Crouched on his haunches he stared into the flames and tried to understand.

Very slowly the injury done his mind by the shattering events was beginning to heal. He had the chance to take stock of himself now the primitive apetites of food and drink were satiated. He started talking to the men and women around him.

"Are we alone?" he questioned. "Do we represent all that is left of the civilization of a proud planet?"

The women looked at him dumbly, but did not answer. One of the men, however, youngish and bearded—stirred himself.

"I don't believe we can be, friend. This disaster seems to have embraced the whole planet, and since it is a fairly big place there must be others somewhere—like us, no doubt. Whatever the horror was that struck us it has left one obvious result. We have to start building all over again."

Jad moved across to where the man was seated. The pale sun cast on well-cut features, scarred and dirty though they were. Jad felt he had a man here who was after his own heart—thoughtful, intelligent, though as baffled as anybody else by the Convulsion.

"I am Jad Inicus," Jad said, shaking hands. "And before all this came I was a mining engineer, working on the north to south tunnel project. I managed to escape the underground just in time."

The other gave a wan smile through his beard. "Rila Vunz," he introduced himself. "Technically I'm a research chemist, though just at the moment I'm a nomad, like the rest of the people."

"Married?" Jad inquired.

"No—and on an occasion like this I'm glad of it. I judge from your expression, my friend, that you have lost somebody dear to you."

"Wife and son."

There was silence. One of the crouching women threw a piece of wood on the fire. The smoke gushed smuttily to the violet sky. This was a suddenly paradoxical world—inhabited by primitive people, whilst the planet itself had mysteriously become senile.

"Funny I found no traces," Jad commented at length, his mind still on his wife and son. "No signs of them in the debris of the house. I'm still hoping with everything I know that they live . . ."

"We need to get some order into this confusion," Rila Vunz decided, his eyes on the near-savages around the fire. "You and I are men who have still retained our sanity in spite of what has happened: these other poor people have been reduced to the status of animals. It means complete atavism unless somebody takes things in hand."

The eyes of both men met. Then Jad gave a nod.

"In that I agree. I suggest we see what can be made of the ruins of this city and we'll take over some kind of authority in an endeavor to get things working again."

He got to his feet and Vunz rose beside him. Together they began to move from the little, unheeding group of people around the fire and started an exploration of the shattered city. Practically the first thing they came upon was attire, in the ruins of a former department store. They clad themselves warmly against the piercing wind and then made an inventory of the articles which had survived so that everything could be fairly rationed. Jad and Vunz, in fact, had assumed control of the situation, considering themselves the only two beings fitted for it—and probably they were right. Further, having something to occupy them helped to heal their minds of the stunned horror which the Convulsion had produced.

They found that the store was not the only place which had partly survived. In various parts of the city they came upon tools, precious oxygen and hydrogen cylinders, machines, electrical equipment, and a hundred and one other odds and ends all useful in the creation of a new order of society.

As the sun was sinking and the winds became even more chilly more survivors came drifting into the sanctuary of the ruins. Some from far out in the desert, others from unexpected hiding places, until by sunset—a bleak panorama unrelieved by a single cloud or horizon mist—quite three hundred men, women and children were in the city's remains. Such a gathering around various camp fires came as a surprise to Jad and Vunz as they returned to the city center towards the close of their operations.

"Will you tell them what we propose doing, or shall I?" Jad questioned.

"I leave it to you, my friend. You seem to have a better sense of organization than I."

Jad nodded, selected a tall heap of rubble for his platform, and then called the squatting groups to attention. In the blaze of the fire amidst the searing wind they looked at him dully.

"My friends, you have none of you yet recovered from the frightful blow to the senses which has only just abated," Jad said. "That is understandable, but with time the memory of it will subside and you will begin to realize that you live in a shattered world. The point is that without organization and some decent mode of living you might easily die. I have a plan for you, and I wish you to heed it."

Since the response was a childlike silence Jad continued:

"OUR first need is for shelter. Here beside me is Rila Vunz. We have discovered that under the ruins of that shattered store yonder there is an enormous basement. It can be made air-tight against the frigid cold of night and we can also create a system of waste-air disposal. The oxygen and hydrogen tanks we have found can produce water for us until we have discovered where there is some natural source. Once we are below we can work out a method of living so that everybody can have whatever privacy they wish. . .

"It is inconceivable," Jad said, "that we people here represent the sum total of survivors. Throughout the planet there must be others. Rila Vunz and myself are going to explore once we have seen you folk domiciled in passable comfort. It is possible that at the remains of the airport we might find a machine which can be made air-worthy. In any event we intend to look tomorrow. For tonight, then, we offer shelter. Follow me—and give me your names as you enter. This has to be done correctly."

So Jad and Vunz between them, using some of the dried out paper they had found in the store and a bottle of green dye for ink—to say nothing of a sliver of wood for a pen—began to make the first register of

living beings following the great Convulsion. Jad was half-way through his entries with a long file of men and women still to come in the light of the twin moons when a woman's tired voice said:

"Liola Inicus and son, Trax."

The wood sliver dropped from Jad's hand and he looked up in amazement. It *was* Liola, half clad, shivering, the small boy under the protection of her arm. Instantly Jad sprang up, overturning the table in his excitement.

"Liola!" he cried hoarsely. "Oh, thank the gods!"

She looked astounded for the moment and then sacrificed herself thankfully to his arms. When he had finished smothering her and the boy with kisses he found words again.

"But—but Jad, I never *realized* it was you talking on that stone! You're dressed in such heavy clothes, and with all that beard, and you didn't give your name. . . ."

"An oversight," Jad interrupted cheerfully. "I just don't care what I did, or said. I've found you and Trax and I don't care if the heavens fall!"

"I think they did," Liola said, her voice sombre, and in the moon and firelight there was still the bleakness of utter horror in her eyes.

"Shall I continue the register?" Rila Vunz asked, coming forward. "I gather you've found your wife and boy, Jad. I'm more than glad; you know that."

Jad made the introductions quickly and then turned back to the ex-chemist.

"Yes, Rila, if you wouldn't mind. I want to give especial attention to my wife and boy."

"I quite understand. I'll see you below."

Hugging Liola to him and carrying the tired boy on his mighty shoulder Jad led the way down the steps amidst the people into the basement depths. Here there was illumination of sorts, cast by undamaged lamps burning a crude oil. Already the vast space was commencing to fill with men and women, all of them thankful to be shielded from the frightful night wind. In groups they were crouching around crude oil fires.

"Here—this is a good corner," Jad said, moving to it. "We can take this as our little plot for the time being."

He put down the boy, patted Liola's arm, and then hurried across to where the blankets were stored. He began the task of having them distributed fairly and, this done, returned to his wife and spread a blanket on the floor. She settled down thankfully, the boy snuggling beside her.

"Food and drink follows," Jan announced. "I have to wait for Rila before that can be handled . . . In the meantime, tell me how you escaped the Convulsion."

"As it happened," Liola responded, "Trax came home very early. I was going into town to get some shopping done, and I took Trax with me, of course. The bus had just reached the city outskirts when the cataclysm burst in all its fury after the preliminary rumblings. Along with everybody else we dashed for safety in a subway. We remained there with hundreds of other men and women . . . I don't know how long. Then at last we came out. All of us were unhurt, but utterly bewildered."

Liola paused and laid a hand on Jad's arm. "Jad, what *happened?*"

"I don't know," Jad responded. "Some day we will find out. Maybe if we could examine space it would help to solve the problem. Perhaps we ran into a cosmic fault, where everything was suddenly degravitated; perhaps we . . . Oh, I don't know."

Jad glanced up and said no more. Rila Vunz was approaching to make arrangements concerning the food.

CHAPTER THREE

DAL KILRAX of the second world from the sun surveyed — and was well pleased. With his slug-like contemporaries, the Chosen Council of the planet, he stood on a high eminence and looked out over a rolling ocean. Its waves glittered in the sunlight as they cascaded on a distant shore—which had formerly been desert. The sky had clouds, drifting in a tropic breeze. Now and again the clouds masked the merciless sun and brought blessed relief to the torrid planet.

"We have done well," Kilrax commented at length. "A world of oceans, and clouds, and vapor. Yes, my friends, we are born again."

Meanwhile, the world of Maza, was becoming populated by survivors still emerg-

ing from the ruins. In all parts of the planet they set up their independent groups and, for the most part, lived underground in old-time basements, subways, and mine-workings. Here there lay the only protection from the savage cold of the night.

Here and there undamaged radio sets had been dug up and, using a rebuilt transmitter from the shattered broadcasting station, Jad Inicus—self-nominated ruler of the survivors, with Rila Vunz as his deputy—did what he could to give the people courage, and instructed them how to settle themselves in a new order of society.

He set in motion two big projects. One was the driving of canal network from the poles of the planet, and the other was the recasting of the mighty object glass for the planet's biggest telescope. This instrument was still intact—and, remounted on its universal bearings in a roughly rebuilt observatory, it stood in the middle of one of the deserts.

Jad concentrated more time on the fashioning of a new lens than he did on the water-channels. He was more and more obsessed with the notion that the catastrophe had been the work of intelligent beings, and, if so . . . But only a study of space could give him the answer.

Within limits, the survivors were comfortable as an underground community. They had fallen into their own natural little grooves and community spirit was the one thing which kept them welded together as a people. Liola, for her part, had turned the section belonging to herself, her husband and son, into a passable imitation of their former home. The only thing lacking was the garden and the fresh winds and sunny surface. That had gone, perhaps forever.

Rila Vunz, an untiring worker on the canal project, only relaxed at intervals, and then it was in the company of Mava Klansif, a young, blonde-headed woman of the scientific group who had more than her share of feminine appeal. They were married just three months after their first meeting.

A year passed. By this time the network of channels was a quarter of the way across the globe from the poles, driven through arid desert and wastelands.

In the shattered industrial regions of the planet only partly rebuilt, Jad Inicus, helped by his wife when she could spare the time, supervised the blast foundries which made the metal sheeting for the channels, and also cast by degrees the huge lens for the telescope. It was a great hour when the vast lens was finally mounted, and, Jad, Liola, Rila and Mava arrived for their first survey of the heavens since the catastrophe.

Jad, as he swung the telescope to follow the nearest planetary neighbors, suddenly caught his breath. With quick movements he adjusted the eyepiece, then peered intently into it.

"I don't understand it," he whispered, astounded. "Or *do* I? Is it the answer?" He straightened up and motioned with his head to Rila. "Take a look at Minitus, Rila."

The ex-chemist did so, moving the eyepiece lenses until he had the second planet from the sun in intensely clear focus. For a long while he surveyed the view, then he rose from the lenses to meet Jad's grim yellow eyes.

"That planet is completely changed," Jad said slowly, clenching his fist. "Throughout the history of our world, and in all our astronomical records, it has been a world of deserts with one or two scattered civilizations—supposedly dead ones. Now it has suddenly taken clouds unto itself and is, to all intents and purposes, thriving!"

Rila Vunz's expression slowly changed. The lines hardened about his jaw.

"You mean. . .?"

"Obvious, isn't it?" Jad's voice lashed like steel wire. "No cosmic accident could account for an atmosphere suddenly appearing on Minitus whilst ours has disappeared—almost. It means only one thing. Our air and water were *stolen* from us, and the thieves are there, on Minitus!"

"But if Minitus is a dead world. . ." Liola began, but Jad cut her short.

"Plainly, it isn't! We have assumed it to be dead because our telescopes are not powerful enough to see life—only the blurs of cities. Obviously Minitus possesses people of a high scientific order, and utterly ruthless ones too. Yes, how devilishly clear the whole thing now becomes," Jad went on, his eyes glittering with fury. "They had a world which was dying because of its nearness to the sun. Its air and water must long ago have been sucked out into space—so they

used scientific power to bridge the gap to this young world of ours. They stole everything it possessed and left us with a hulk—whilst they preen themselves beneath a dense atmosphere! They must have oceans, fertile lands, everything they need. And we rot in deserts of rust!"

It was very rarely that Jad Inicus became so enraged Rila and the two women were silent whilst he poured forth invectives on the scientists of the second world; then at length he began to calm again. But the murderous glint remained in his yellow eyes.

"THOUGH it seems too preposterous to be a coincidence," he said finally, "we must be *sure*. The inhabitants of that world *might* have found a way to create an atmosphere, a way which had nothing to do with the Convulsion which hit us. I do not believe that is possible, but I intend to make certain. You and I, Rila, will travel to Minitus and see what lies below that cloud blanket. If there are oceans and green lands we know then that cosmic thieves caused our woes."

"And if we are sighted approaching that planet, you know what it means," Rila pointed out.

"We're taking the risk. If I am satisfied that cosmic robbery has been done I shall devote all the rest of my life to vengeance! I will make these scientists pay to the utmost for the wrong they did us."

Jad's expression showed that he meant every word he said. There was a hard cruelty about him which neither his wife nor Mava had ever seen before.

"And the present projects in force here on Naj?" Rila asked quietly. "The improvements of the underground cities; the channels from the poles?"

"There is nothing to stop them proceeding without help from us," Jad answered. "You, Liola, I delegate to take my place: you know exactly what needs doing, and the workers themselves know what the plans are. You, Mava, can deputize for Rila. In any case we shall not be gone long. For the moment this mystery takes precedence over everything. We have got to know the truth."

Less than two hours later, a space-ship had been fuelled and took off from the desert outside the nearest communal shelter. Within limits the machine was reliable enough, using atomic power and rocket propulsion to drive it into the void. By degrees the deserts of Maza were left below in the light of the twin moons and, gradually, the space machine came out of the planet's shadow and into the glare of the unmasked sun.

"Suppose," Rila said, quietly thoughtful as usual, "we do satisfy ourselves that those scientists caused our downfall. What possible plan can we devise against them? Do not forget that they are infinitely ahead of us in science: they *must* be to have created such a plan."

"We'll think of something," Jad answered tautly. "Certainly *I* will not allow them to get away with such a murderous onslaught."

Rila said no more. Though as bitter against the inhabitants of Minitus as Jad himself, he was not the type of person to attempt the impossible. To him, to try and be avenged on such super-scientists, seemed very much like suicide. He had not the dogged perseverance, or the staying power of Jad Inicus. When Jad became devoted to anything, either in the affectionate or vicious sense, nothing moved him.

And by degrees the tiny flyer continued on its way through the void, the star-dusted emptiness of infinity all around it, the home world falling away gradually below. It gleamed reddish where the sun was catching it, the redness created by the slow spread of ferric oxide. Ahead in the gulf there was a world of gray clouds—mysterious, cloud-wrapped, the as yet unexplored third world of Nivoon, third from the sun. And way beyond it the planet thief, Minitus, his clouds gleaming in dazzling whiteness in the sunlight.

"Do you think," Rila asked, his eyes on the third world, "that it might be a good idea to have a look at that planet whilst we are in the vicinity? You spoke recently of migration: it might be a world to which we could move."

"On the way back we'll look," Jad acknowledged, and he dismissed the matter so abruptly it was plain that he was thinking of only one thing . . . Minitus. Nothing else was even registering upon his mind.

The distance was immense—73-million miles, and the spaceship was not of a design which could move with any great speed. So

the two men took turns at the controls, a necessary precaution because, as the orbit of the third world was passed his mass swung them slightly off course and it had to be reset.

But gradually, inevitably, the world of Minitus grew larger, and as it did so its small attendant moon also became visible as a circling silvery speck.

"Up to now we do not seem to have been observed," Jad commented, surveying the gulf ahead. "I hope our luck remains that way. What I intend doing is entering the clouds and then dodging down until we are beneath them. We'll survey and make film records of everything we can find, and then return home.

Rila nodded but did not say anything. He checked the cameras and then moved to the porthole to watch events as the planet and its moon swept nearer through the void. It was the sound of spluttering from the rocket jets, as Jad threw them into forward repulsion—to break the gravity of Minitus—that made him glance up sharply.

He saw Jad's face strained and sweating as he operated the switches. His movements showed there was something desperately wrong. Quickly he jumped up and examined the power plant.

"What's wrong?" Rila asked abruptly, crossing over to him.

"Everything. The rocket chambers have seized! This space-ship is an old model and a good deal of the rocket casing is in pretty bad shape. While we have beeen cruising through space with free velocity the jet tubes have cracked with the interstellar cold. If only I'd thought of that possibility I'd have kept a trickle of power through them to keep them warm. As it is, the sudden blast of heat has smashed fissures in them. . ."

"Only one thing to do," Jad said, whirling to the locker and dragging out a space-suit, "we must repair one of the jets and attend to the other in less difficult conditions. We can land on that moon for the time being to finish the repairs: we don't want any faulty parts about us when we visit Minitus. Our very lives may depend on the speed at which we can get away. You keep the vessel on course, Rila, and I'll attend to the tube."

Rila nodded and settled at the switchboard. As quickly as he could, Jad scrambled into his space-suit, screwed up the helmet and then collected the necessary tools. He hurried up the escape ladder, went through the pressurizing lock and so emerged to the exterior of the vessel. Out here the void was all around him and only the safety-line kept him from floating from the ship's tiny mass. He worked his way down to the nearest set of tubes and set to work, leaning out over bottomless nothing with the distant Minitus and its moon apparently drifting slowly to meet him.

It was hair-raising, difficult work but Jad kept steadily at his task, slowly welding together the rents in the tubes. By the time he had finished Minitus and his satellite had come a good deal nearer.

Returning to the control room he quickly removed his suit and then took over at the switchboard in place of Rila. Very gently he began to allow the power to flow to the rocket tubes.

"IF WE do it by degrees we might make it," he said. "It was the abrupt temperature change that caused the trouble last time."

Tensely he watched as the power was increased, then he sighed in relief as with a sudden burst the one series of rockets blazed normally, instantly making their reaction felt and checking the headlong fall.

"Good enough," Jad said, glancing up. "We'll land on that moon, complete the repair, and then carry on to Minitus."

Several hours passed before he came near enough to the small, airless satellite to attempt a landing—and by this time the vessel had slowed down to little more than a crawl. Apparently the moon was an airless waste of rocks, deep valleys, and arid plains, flooded in the terrific glare of the sun. Only a matter of perhaps 300,000 miles distant loomed Minitus himself, the snowy brilliance of his cloud-blanket hurting the eye.

Lower Jad brought the machine, and lower—finally landing with hardly a jolt. He gave a sigh of relief and then studied the externalmeters. They showed air-pressure to be non-existent and the temperature not far short of boiling point. In fact, conditions to any satellite or world without atmosphere facing a naked sun. Gravity was

extremely feeble, far less even than distant Naj.

"It won't take long to repair the other tubes if you give me a hand, Rila," Jad said. "Let's be on the move."

They climbed into space-suits, left by the pressure lock and so gained the rocky exterior. Immediately they were ankle-deep in a soft carpet of infinitely tiny brown objects, which looked very much like seeds. They lodged everywhere, in the cracks of the space-suits, in the belts, the welts of the heavy boots and even in the hinges of the helmets as the movement of the men's feet stirred the tiny seeds upwards in a fine cloud.

They paid no attention to the spores. Unloading their equipment they went to work on the second series of tubes and made the necessary repairs; then they returned to the control room and climbed out of their suits, thankful to emerge into clear air again.

"Nothing now to stop us going ahead," Jad said. Putting his space-suit aside, he switched on the power. "You'd better stick by the guns in case of sudden attack. It is just possible, if we are being watched, that the inhabitants of Minitus will wait until we are within their own territory, then they'll let us have it."

The power surged into the tubes, and they held under the blast of heat. In a burst of flame the machine lifted and, within a few minutes, it was well away from the little satellite and speeding across the gulf towards the blinding silver of Minitus's cloudbanks.

Before very long the vessel was touching the topmost layer of the dense cloudbanks. Immediately everything outside was shut out by a whirling scum of vapors. Jad switched on the detector screens, slackened speed, and then began to creep downwards gently, alert for the first sign of a barrier to his progress which would be immediately registered by the probing ray on the instruments.

After perhaps ten minutes of dropping he swung aside suddenly before the dangerous peaks of a mountain range. A looming mass of ice and snow swung past the streaming windows and was gone into the murk. Thereafter nothing seemed to interfere and at last the machine plunged below the cloud-level and into a view of rolling ocean stretching away to the horizon.

Jad studied the scene with gleaming eyes.

"This isn't proof positive, but I certainly don't credit that it is coincidence," he said. "Up to now this planet has been dead—a mass of deserts. Where did the ocean come from, and all this copious water vapor in the form of clouds if it wasn't from our world?"

"I think you're right," Rila said. "Better keep on going and see what else we can find."

Jad swung the vessel into the cloud-cover at intervals, then dodged below them again. At length the ocean was crossed and there came into view a vast tract of green landscape. There were no trees or big plants—just a wilderness of waving grass, deeply green, suggestive of very new life full of tremendous vitality.

"The desert blossoms," Jad commented sourly. "Moisture has sunk down into the ground from the ocean and these plants have started growing in the hot atmosphere—and that," he broke off, looking intently ahead, "looks like a city of some kind."

"Some city!" Rila exclaimed with a whistle. "Look at the size of those buildings! And the lay-out of the streets and pedestrian-way! And those beacons, and towers, and areas filled with space-ships and aircraft. This is no one-eyed civilization, Jad: it's untold centuries ahead of us in knowledge. The sooner we get out, the better."

Jad hurtled back into the clouds and circled for a minute or two.

"We'll take one photographic record," he said, "and then be on our way—but in my mind there's no longer any doubt."

He set the cameras and then dived below cloud-level again. In the interval the machine had moved a fair distance from the city—even though it was still within camera range. Jad was not even looking at the city, however. His attention had been attracted by the tall summit of a tower half-way down the mountain range ahead.

"Looks like a radio transmitter of sorts," Rila said, gazing down on it.

Jad did not answer. He plunged in a power dive to within a hundred feet of the tower top, photographing it constantly as he dropped—then he swung up again, straight into the clouds, and kept on going with the rocket jets in full blast.

"No pursuit, no anything," Rila said, puzzled, as they sailed out into the void beyond Minitus's atmospheric envelope. "I don't quite understand it."

"Two possible reasons," Jad said. "One is the obvious one that they didn't see us—and the other is that if they *did* see us, they think we're so far below them in intelligence we are not worth chasing."

Which latter was exactly the right answer, had Jad but known it. Dal Kilrax and his fellow scientists had certainly seen the investigating flier, but had taken no action. They were perfectly sanguine of the fact that there was nothing the small-brained beings of Maza could possibly do to upset the majestic plans of the super scientists.

"THAT tower was very interesting," Jad said, thoughtfully as the flyer continued to hurtle onwards into space. "It was not a radio transmission tower. Something very much different. I had time to notice there was a copper hoop at the top and it was of enormous size. If we obtained good photographs of it I may be able to determine its nature when we can study them."

Rila nodded and then he glanced about the control room. Something had obviously been troubling him for some time. Now he sat down suddenly, holding his forehead.

"Queer," he said, puzzled. "I feel giddy."

Jad frowned, his mind flashing immediately to possible scientific retaliation on the part of the scientists of Minitus, then as he looked vaguely about the control room for some explanation for Rila's unaccountable malady he gave a start.

"Plants!" he ejaculated, amazed. "Take a look!"

Rila did so, his gaze fixed on three ordinary looking plants waving and growing gently from the boot welts of the spacesuits which had been abandoned on the floor. In the light gravity, created by nullifiers, they were growing at stupendous speed and already had flowers.

Jad rose from the control board and went across to them; then he felt as though the floor had come up and hit him. He dropped flat, his head swimming, and only with difficulty did he get on his knees again. Rila made an effort to help him but he too found his knees buckling.

"Poison vapors!" Jad gasped huskily. "They're coming from these plants—Quickly, that knife there. Give it to me. I can't make it."

Rila made a desperate effort and clawed his way to the control board. He coughed thickly and fought for breath. Then his hands closed round the knife in the rack and he yanked it free. He tossed it across the control room. Jad seized it and hacked savagely at the plants. They withered instantly as he severed them from the base. Still the air remained heavily laden with toxic vapors.

Breathing hard, his face gleaming with perspiration, Jad dragged himself back to the control board and increased the air pressure, at the same time stepping up the waste-product consumer by fifty per cent. On the air-testing gauge there was registered a heavy preponderance of carbon-dioxide, with a smattering of other toxic gases such as argon and ammonia.

Slowly, very slowly, the strangling gases in the control room began to evaporate and Rila and Jad breathed more freely. At least they were able to move and look at each other.

"You realize what happened?" Jad asked, getting up and checking the course, then turning to look at Rila.

"I think so. Those plants came from the spores which lodged on our boots and suits when we landed on that satellite. In the warmth of the control room here, and with atmosphere in which to flourish, they matured—very rapidly with no hindrance from gravity. When they had reached maturity, in the shape of flowers, they emitted poisonous vapors as some plants emit perfume. If we hadn't have acted quickly we'd have been suffocated."

Rila was silent for a moment, gazing into the depths of space and the far distant view of his home world; then he made a further comment.

"Presumably that moon formerly had such plants growing upon it until it became extinct. The spores dropped and remained lifeless in the interstellar cold."

Jad removed the films from the camera, and dropped them in the automatic developing tank. After fifteen minutes they were ejected—finished. To set them in the

portable cine-projector was only the work of a moment. In silence, the metal shutters closed over the portholes, Jad and Rila studied the scenes presented to them.

"Little doubt that the scientists of Minitus are of a pretty high order," Jad said. "Their city and air and space grounds reveal that . . . But what particularly interests me is that tower. The more I see of it the more I think it may have had some connection with the disaster which befell our world. Otherwise, why is it in such an isolated position, halfway up a mountain range where it has an uninterrupted view of the sky? Why is it at least a thousand feet in height? And did you notice that enormous copper hoop and the queer projector? The whole basis of the thing is magnetic."

"Certainly looks like it," Rila admitted.

"They caused the Convulsion," Jad decided clenching his fist. "I don't believe there can be any doubt about it any more. And I began to think it may just be possible that chance has handed back to us a way to get revenge."

Back home, he explained to the people that he believed the scientists of Minitus were responsible for the Convulsion; he spoke of his private plans to his wife, Rila, and Mava.

"My plan of vengeance is a massive one —and it is cast into a mould which involves future centuries and generations as yet unborn," he said. "No more than three-hundred-thousand miles from the surface of Minitus, the criminal world, there whirls its moon. A moon covered with countless millions of toxic spores which thrive in warmth and moisture. Suppose their nice new world made so perfect with the air and water they have stolen from us, became the breeding ground for tens-of-millions of these deadly spores . . . what then?"

Rila, Mava and Liola looked at each other but they did not comment.

"Minitus would be a heaven for these spores," Jad continued. "There'd be no stopping them! Since Minitus has become a hot-house planet the conditions could not be better."

"You mean send the spores to Minitus—somehow?" Liola sounded vague.

"I mean," Jad answered bitterly, "to destroy the moon of Minitus! The attractive pull of Minitus over three-hundred-thousand miles will drag that satellite's shattered pieces down upon itself. Many of the rocks and boulders will do damage, of course, in the form of giant meteorites—but that is only part of my concern. The interesting fact would be that those spores would be drawn down too—to sprout, and finally to destroy!"

"I think," Rila said, "you are overlooking the scientists of Minitus. They would find a way to destroy such growths."

"To begin with, yes," Jad admitted. "But I maintain that they could no more completely extinguish the growths than we could wipe out all the green stuff on our planet—and *keep* it wiped out. There just isn't enough scientific power available to be able to do it. In time, the robbers of Minitus would find the growths getting the better of them—and the constant outflow of toxic gases into the atmosphere would undoubtedly drive them away from their planet in the end. They would have to leave their stolen paradise and find fresh worlds to conquer."

"Mmmm . . . That would take hundreds of years probably," Mava remarked.

"Which is exactly what I expect," Jad answered. "Did I not say at the beginning that my plan is cast in the future?"

"And what do you expect to happen in the future?" Rila asked, still mystified.

"I EXPECT, long after we are dead and forgotten, that a descendant of mine will make the final moves in the scheme of vengeance which I am now perfecting. As I see it, in the generations to come, the scientists of Minitus will find that they have to migrate. Where will they go? To the third world of Nivoon? I hardly think so. By that time Nivoon will have a race upon it, and a pretty thriving one. They might fly to the outer worlds, but there again, gravity would probably be against them . . . So, finally, they would probably come here, to this very planet they have wrecked."

"By then," Rila pointed out, "this will be a dead world, Jad."

"I am aware of it—but scientists who will steal oceans and air from one world will not hesitate to do it from another. My guess is that they will settle here and try and rob

the third world of *its* air and water. In other words, history repeating itself. The same crime over again."

"Perhaps," Mava said, after thinking for awhile, "you are right Jad. Certainly they won't take the planet nearest the sun, with his sun-cracked surface on one side and eternal frost on the other."

"They will come here—ages hence," Jad insisted. "I am convinced of it. And when they do they will walk to their death. That is what I am planning."

"You are making a rather large assumption in saying that a race will be thriving on Nivoon," Rila pointed out. "How do we know it will? As yet it is a world of vapors, tangled forests, and primitive conditions. We have no guarantee that a race will ever appear there."

"It will—because we shall make it do so."

Jad's complete assurance was surprising.

"I have decided that everything must be sacrificed to this plan of vengeance—even my own son. I am assuming you will be agreeable, Liola, since you have as much reason as I have to see these thieving scientists destroyed . . . but if your consent is not given I shall still act in spite of you. I shall devote everything to my one end—vengeance."

"WHAT do you wish of Trax?" Liola asked, half fearfully, her mother's soul reacting against her husband's ruthlessness.

"I wish him, when he grows to late adolescence, to marry a girl whom we shall specially select. From now on I shall devote much of my time to teaching them what I wish them to understand. They will grow up with only one incentive—revenge upon the scientists of Minitus. Later they will go to the third world and there domicile themselves.

"They will become the progenitors of a new race. If a natural race grows up on Nivoon beside them it matters not, because Trax and his bride-to-be will be far ahead in intelligence and able to take control.

"Finally," Jad said, clenching his fists, "the children of Trax and his wife will be born, inheriting much of their parents' inherited strains and knowledge. There will come the children of the children, and so on down the centuries until, by all the laws of biology, there will arise one descendant who will have all the characteristics of his original forebears. He will finish the plan of vengeance which I shall start. The scheme is mighty, as I said at first. It calls on imponderable laws and the factors of biology. It involves the recessive and dominant units of birth . . . but I am convinced it will work out, long after we have gone."

"Trax himself shall answer," Liola said at length, "when he is old enough to understand. If he wishes to join in this plan of vengeance, I shall not stop him."

"He *shall* join, in it," Jad retorted, his eyes glinting. "I will not take 'No' for an answer . . . As for the girl who shall be married to him—"

"Would it be possible to delay your search in that direction for a few months?" Mava questioned, interrupting. "I mean," she finished, glancing at Rila for a moment, "that before long I shall have a baby. If it chances to be a girl, then surely you need look no further?"

Jad relaxed a little and smiled. "I could not wish for anything more wonderful," he said. "Let us hope it does turn out to be female. Very well, I'll hold that part of the business up until the event is over. In the meantime work on the canals from the poles must proceed as fast as possible."

"In say twenty years—at which time you propose to send Trax and his wife to Nivoon—I cannot see that that world will be very much different to what it is now," Rila commented. "A young and savage world. I only hope that the scientific resources Trax and his wife will take with them will be sufficient for them to master that planet's harshness."

"They will survive," Jad answered. "They will survive because they must. In any case, we will pay a visit to that planet before then and study it at first hand. We should have done it on the way back from Minitus, but there just was not the time . . . Or perhaps we may study it telescopically."

Jad moved, full of determination to be pressing ahead with his plans.

"I must see what can be done to speed up the building of the canals," he said, and with that turned away.

CHAPTER FOUR

FROM that moment onwards Jad Inicus was obviously driven by one all-consuming purpose—vengeance. Though he kept the needs of his shattered planet constantly in mind, and never once let the people down, it was plain that his main desire was to finish the canal net-work already beginning to honeycomb the planet from the poles to the underground shelters.

He grew tougher, harder, crueller. He was no longer the happy young man who had sung to himself as he shaved that morning when the Convulsion had come. Each time his particular period above was over he would return to his underworld domicile with a craggy face, hard mouth, and gleaming eyes.

There was one period only when he relaxed, and that was at the birth of Mava Vunz's child. That it proved to be a daughter, and normal in every way, delighted him. He seemed to accept it as a sign that his plan was a justifiable one, then once again he was back at work—driving, slogging, gouging the canals across the pitiless wastes.

At the end of the year ferric oxide was making savage inroads on the planet. The old metal girders and skeletal walls of the one-time cities were now bright red. The sea bottoms and endless acres of devastation were crawling with rust, flaking and destroying. The air, too, was becoming more than ever rarefied as the upper levels seeped out into the remorseless vacuum of space. At the most, as far as the atmosphere was concerned, Mars had perhaps another century to live. No more.

Still Jad Inicus and his gangs of workers drove on. The canals were blasted across the plains and then linked up into central oases. Around these there began to grow a new type of plant, adapted to an air that was almost wholly thin oxygen.

Ceaselessly, endlessly, red sand flew skywards as the empty dreary wastes echoed to the rattle of the blast-guns and the detonation of explosives. An army of determined engineers gouged the dying planet from pole to pole, but only Jad knew exactly the end to which he worked.

Two years. Three years. Five years. Then, at long last the colossal canal project was complete. Water was flowing from pole to pole, to some extent irrigating the desert. Through it, warm currents from electric stations were infused to defeat freezing. Even so, life on the surface was still impossible.

For the time being Jad was satisfied. With the canal network operating perfectly he returned to his underground domicile and turned his superhuman energy into a new path—the education of his young son, Trax, now ten years of age, and Crenia Vunz, Rila and Mava's little daughter.

At times, Rila and Mava called a halt to what they considered the mal-education of their daughter—but always Jad had his way. He was masterful, relentless, everlastingly brooding upon the scientists of Minitus and the vengeance he would one day exact.

Years . . . and more years. Trax and Crenia grew steadily and healthily despite the amazing environment in which they lived.

But they were not as other childen. They both knew from the moment that intelligence really began to react that they had a destiny to fulfil, that their lives were inextricably linked. And, overwhelming everything, was the pitiless hatred they developed for the scientists of faraway Minitus. Jad worked on it, fostered it, hammered it home.

"I think," Liola said one day, when Jad had just finished one of his "educational" sessions, "that you are taking far too much on yourself, Jad. It is bad enough to infuse our own son with hatred, but to do the same thing to Crenia is quite unforgivable. She is not your child, and neither Rila nor Mava like what you are doing. They have told me as much."

Jad smiled inscrutably. He looked like a man of fifty—craggy, iron-faced, weather-beaten, always governed by supreme inflexibility of purpose.

"Neither Trax or Crenia belong to anybody individually," he answered. "They lost that right when they became pawns in a plan of vengeance. They are the children of the race of Naj as a whole, not the offsprings of individuals."

Liola was silent, performing some trifling domestic task. Jad looked at her sharply in the glow of the battery lights.

"Why don't you say something?" he de-

manded roughly. "I don't make a statement just for the satisfaction of hearing myself say it!"

"I have said all I need to say, Jad."

"You're biased, Liola. Just biased."

"No." She shook her head slowly. "Just disheartened—at seeing the man I once loved so utterly changed."

"Once loved!" Jad jumped up and glared at her. Then he caught her shoulders in his powerful hands. "What do you mean by that? You're not implying that because I follow a purpose unswervingly you have ceased to care for me?"

"That's what I do mean. You are corrupting the young, Jad. Have your own vengeance, by all means, because the Convulsion was something which happened within your memory, but why wish all this hatred into the minds of two young and quite unspoiled people? What *good* can it do?"

Jad controlled an impulse to burst into a rage. Instead he answered quietly:

"I surely do not need to explain again what my purpose is? Trax and Crenia will hand down their hatred to their own children; they, in turn, will hand it down again. And not only hatred, but knowledge—the knowledge of how to perform a certain act which will consummate my vengeance."

"Vengeance! Vengeance!" Liola threw up her hands helplessly. "As if there were nothing else in the universe."

"There isn't."

"I don't agree, Jad. This world is doomed, certainly, but we still have the chance to migrate into space. Maybe we might sojourn for the rest of our lives without finding a resting place, but even that would be better than this everlasting concentration of purpose to one vengeful end."

"I have examined every possibility," Jad said deliberately. "Migration would not avail us anything. We cannot go to Minitus, the only worthwhile world, with its stolen air and seas, because science there would smash us. And the third world of Nivoon is still too young and savage. The outer planets are molten. The only worlds we could find would take us lifetimes to reach. No—we die here."

"You say Nivoon is young and savage, yet you propose to send Trax and Crenia there."

"Only because it is part of the plan, and also because they will be adapted to the conditions. Throughout the years I have been training them they have been subjected every day to a gravity of twice ours—such as they will experience on the third world—and they are so used to it by now they will be able to accommodate themselves. We could never do that at our riper years. And I will not be questioned, Liola! I know exactly what I am doing."

Liola was silent for a moment, her face drawn.

"Jad, why can't you forget this plan of vengeance? I know we were the victims of scientific criminals, but does it get us any further to seek revenge? Rest assured, something will overtake *them* in the end. . ."

"It certainly will," Jad snapped. "And I shall create it! I am not leaving repayment to some nebulous chance."

Jad set to work on the construction of an enormous turbine, shafted to a dynamo and able to develop colossal power. It made the scientists who saw it, and the engineers who built it, scratch their heads in wonder—but since Jad's word was absolute law they raised no enquiries.

This huge machine in itself, created in the foundries which had prepared the necessities for the canal scheme, swallowed up a year of Herculean activity—and after this, two more years went by in the making of two vast obelisks of pure copper, coated with a rust-resisting and highly conductive alloy. Each obelisk was 300 feet long and 50 feet wide at the base, the tips tapering to a point. Once these were finished heavily insulated wires wound on massive drums were manufactured, together with numberless sheets of metal tested to withstand a pressure of 1,000 pounds to the square inch.

Most of the apparatus which had been made was transferred to the south pole over the freezing deserts and in the midst of searching winds. With the apparatus went dredging and construction machines for the purpose of drilling a shaft beneath the ice-cap to a depth of 500 feet. The top glacier was removed for a square mile and the water constantly pumped away, whilst the supporting sheets of metal were slid into position and firmly bolted and welded.

Lower the shaft sank, and lower still,

until at the base it was made to widen out into a buried power-chamber, likewise supported from the water and ice pressure by the pre-arranged metal sheets . . . Two more years passed swiftly in the construction of the power chamber. One of the huge copper obelisks was lowered to the exact center of the chamber and sunk into a pit fifty feet deep, filled in with insulated material which cooled to the hardness of age-old granite.

Then the turbine and dynamo were lowered and assembled. The dynamo was wired up to the copper electrode, and the turbine, so devised that it was directly under a subsidiary shaft in contact with the flood waters below the ice-cap—the shaft being so arranged that after the waters had supplied their rush to the turbine they would be turned off into the exterior again through sluices without any danger of flooding the chamber.

The vent hole of the turbine water shaft was in effect a huge metal cap, held in place by a massive bolt linked by a complicated contrivance of machinery to yet another of Jad's short-wave remote-control radio receivers. Once that remote controlled apparatus was actuated the shaft vent would dislodge itself and start up the machinery, transmitting a rising voltage of electricity in the dynamo and thence transferring the power to the copper electrode in the water outside.

The metal cap of the turbine shaft would remain open for sixty minutes, then an automatic spring actuated by a weight would suddenly dam the sluices and allow the chamber to flood. The whole idea was a masterpiece of automatic engineering, capable of control from any distance. . .

And at the opposite pole of the planet, during the interval the other copper obelisk had been sunk in a similar fashion, but without a power-house around it. It was in truth a negative pole—

To a planet-sized battery!

BY THE time the various equipments had been gathered together for the return journey, the ice-caps had frozen over the copper electrodes and hidden them from sight. Thus buried, unexposed to the activity of oxygen in the open air, and composed of highly resistant metals, they could by very reason of their toughness survive for uncounted generations—until the day when automatic control would release that flawless vent machinery and set the vast turbine and dynamo in action. To the coming of such a day Jad had directed all his energies—and those of his people.

Jad summoned Trax and Crenia to his underworld home. They came promptly; and also present were Rila and Mava, silent and wondering.

"You two young people have the destiny of Naj in your hands," Jad said deliberately, his piercing yellow eyes fixed on them. "I do not have to explain why. For years I have drilled you in what you must do."

"We know every detail," Crenia said eagerly.

"And are only too willing to do as you ask, father," Trax added promptly.

"Good! Good!" Jad looked at them in satisfaction and then in insolent triumph at Liola, Mava and Rila, as they stood looking on.

"We are to go to the third world," Trax said. "Are you going to tell us that that time has at last arrived?"

"It has. But before you go you must be legally married by the common law of Naj. That ceremony I intend to perform now. And you"—Jad glanced towards his wife, Mava and Rila—"will be the witnesses of its sanctity. Trax—Crenia, link your hands together."

They obeyed; then in accordance with the custom of the planet remained silent whilst Jad performed the ceremony. When it was finished he regarded them thoughtfully.

"You will go to Nivoon tonight," Jad stated, and he gave Liola a disapproving glance as she caught her breath quickly.

"Yes, father," Trax said obediently, and smiled into the masterful eyes. Crenia, for her part, did not say anything at all.

"I call it murder!" Rila said in sudden bitterness. "I cannot stop Crenia because she is at an age to please herself—but it *is* murder, sending them to Nivoon which we have never even explored."

"It is not murder," Jad answered coldly. "Nor do we need to explore Nivoon first. I have made all the necessary studies from the observatory. Nivoon *is* a young and savage world—yes. I grant you that. But not

all of it is dangerous. There are calm regions amidst the forests."

Nothing more was said.

At sunset, when the desert was a sea of ochre fire, the lone spaceship bearing husband and wife went swiftly out towards the frigid stars, turned in a vast arc, and headed for the distant orb of the third world.

Only Jad Inicus watched it go, and on his stern face there was the smile of a conqueror.

CHAPTER FIVE

FOR several nights after the departure of the space machine, following a course which took it well beyond the range of Minitus where watchful scientists might be on the alert, Jad studied the progress of the silver speck from the observatory. When at last it was beyond range he turned to other things. He explained his next move to his wife, Rila, and Mava in the underground home.

"I have come to the last move," Jad said, his eyes bright with the fires of energy. "I intend to destroy the moon of Minitus by a remote-controlled projectile. I have made experimental tests with small rockets and find them perfectly amenable to radio guidance. So I intend to drive a full-sized rocketship by radio to that moon. The projectile will be loaded to capacity with nirtalium, which, as you know, is the most violent explosive known to our science."

Without asking for opinions, or explaining further, he departed—working alone at his task. In the small laboratory annex where he worked there was stacked immense quantities of the deadly nirtalium. Since it was liable to explode with terrific violence from mere contact he had to work with extreme care, gradually loading the projectile to capacity. Finally the task was done and Jad checked over the automatic radio-control. Satisfied that it was working correctly he went to the surface, travelled by tractor to the distant observatory, and once there, settled himself at his specially designed radio apparatus. The sole astronomer in charge of the observatory gave a questioning glance. He had been aware of the radio apparatus for some time, but not of its purpose.

"In a while," Jad said, "you will see a rocket projectile leaving this planet. When you have it in focus inform me."

The astronomer nodded and adjusted his telescopic sights. Jad pondered his radio controls for a moment or two and then moved a switch.

"The projectile is in sight, sir," the astronomer announced.

Jad switched on an automatic control for a moment and took the astronomer's place at the telescope. In silence he watched the projectile hurtling skywards in a long arc of flaming, vivid light, climbing into a remote disappearing point which was swallowed up in the clear, motionless glitter of the stars.

"Keep it in focus as long as you can," Jad instructed.

"Are you controlling that projectile remotely, sir?" the astronomer ventured.

"I am." He seated himself at the radio equipment once more and, his eyes on the screen, gripped the knobs that controlled every movement of the flyer in the depths of space.

It was not very long before the rocketship had travelled so far from Naj as to be invisible.

"Train your telescope on the moon of Minitus," he ordered. "When you sight a black speck in front of it inform me."

It was towards dawn when the astronomer, fatigued and sore-eyed, gave a start as he peered through the lenses. The moon of Minitus was looming clearly, bright where the sun was catching it—and against that ardent surface was a black speck, becoming smaller with distance.

"It's visible, sir!" he exclaimed sharply.

"That's what I have been waiting for!" Jad exclaimed.

He moved the automatic controls, which from here on could take complete charge since the path had obviously been charted correctly, and got up stiffly from his chair. Taking over the twin eyepieces he peered through them.

And, just as dawn came, the projectile struck its target—with overwhelming results. Suddenly the satellite of Venus spewed and belched outwards in a trillion hurtling fragments. It broke up into boulders, stones, and enormous fields of swirling dust. The

atmosphere of Minitus visibly writhed and boiled under the sudden alteration in gravitation. Somewhere under those dense clouds oceans must have spilled over, convulsed into tidal waves, before they settled down to almost tideless seas.

The whole thing was over in minutes—or so it seemed to Jad and the astronomer, but in those minutes a moon had died and settled into a vast carpet of hazy fragments drifting down across 300,000 miles to the dense clouds of Minitus. Jad had been right in his calculations: the terrific explosion and inward thrust, together with the pull of Minitus, had prevented the debris forming into rings and instead had pulled it downwards far enough to prevent the least suggestion of orbital formation.

Jad drew a deep breath of satisfaction and removed his eyes from the lenses. He met the gaze of the astronomer—puzzled but respectful.

For a moment Jad became nearly magnanimous. He clapped the weary scientist on the shoulder.

"YOU have been very patient, my friend," he said. "What you have just witnessed is the last link in a scheme of revenge which will bring the damnable robbers of Minitus into the dust with the passage of time . . . Arrange for somebody to relieve you here. I want constant reports on the state of Minitus, and if any space machines are seen leaving that planet give instant warning. It is possible attack will follow. If so, we must be well prepared for it. . ."

And on Minitus itself absolute chaos had arrived with the destruction of the satellite. Since it was not the custom of the scientists of Minitus to keep a constant watch on their moon, the first intimation they had of trouble was a tremendous earthquake—occasioned by the breaking up of their satellite. In consequence the stolen oceans rolled about the landscape like agitated water in a swinging bowl. Vast areas delegated to staple foods were destroyed in the inrushing deluge.

It thundered into the great master-city of the scientists, catching many of the inhabitants before they had a chance to realize what was upon them. All over the planet havoc was wrought and a screaming tempest replaced the customary calm of the planet. It was in the midst of the tempest as the scientists cowered in what shelter they could find in their battered, flooded city, that the first meteorites created by the disintegrated moon began to arrive.

According to radio reports none of the cities on the planet had escaped completely. They had either been flooded or smashed by meteorites, and the damage to the great grain-growing areas was incalculable. Entire oceans had shifted position, overwhelming productive regions and giving up enormous tracts of sandy waste which would have to be specially restored before they could become of service. Casualties, too, it appeared, had been fairly heavy.

"There is no doubt in my mind," Dal Kilrax said bitterly, "that the disaster which recently befell us was deliberately created. Our moon has totally disappeared, and it could certainly not have split up in that fashion without the help of some outside agency. There can only be one answer to the upheaval. The people of Maza."

"Frankly, Master," Yedi said, "I cannot blame them. I think in their place I would have done the same thing."

"I think it might be better, Yedi, if you directed your admiration into other channels," Dal Kilrax answered, his voice icy. "What we have got to realize is that these Mazians are not such ignorant fools as we thought. To have destroyed our moon, presumably with the hope that the meteoric remains would batter us to destruction, was no mean feat of science. A race which can do that cannot be under-estimated. Later they might attempt something really dangerous—if they are allowed to."

The Council waited expectantly as Dal Kilrax pondered; then after awhile he resumed.

"This race on Maza obviously has more resources than we realized. We have been complacent and dismissed them from our calculations as a lower order of beings. But we have been warned in time. This attack on us must be answered with all the scientific power we possess. It is obvious they know that *we* robbed their world, and for that reason they may launch other disasters upon us. So, we must stop them. We shall

visit Maza with the largest fleet we can gather and leave not one mile of its surface unattacked."

There was no questioning Dal Kilrax's edict. The preparation of an armada began, the vessels to be fitted with the most devastating weapons known to the science of Minitus.

It was in the midst of these preparations that Yedi began to receive reports as disconcerting as those concerning the arrival of the meteorites. He took the information immediately to Kilrax as he made the finishing touches to his plan of attack.

"Master," Yedi said anxiously, "I have just received reports from the arable areas to the effect that a new type of plant is arising amongst our remains of staple foods. It grows with tremendous rapidity and emits a toxic gas. Analysis shows a high proportion of carbon-dioxide, argon and ammonia."

Kilrax gave the slightest of starts. "How many of these plants are there?"

"Hundreds, Master. Even thousands. At least six areas have reported them, and they may also be prevalent in those vast new spaces created by the earthquakes—"

"Spores!" Dal Kilrax snapped, rising in anger. "I had overlooked that possibility. As I once told you, our moon was choked throughout its surface with toxic spores, which was one reason why we never migrated there and created air and water in which those spores could come to life. Now they have descended here, by natural gravity. They are extremely dangerous to us. See to it that every one of them is destroyed, down to the roots, immediately."

"Very well, Master . . . And the journey to Maza? When does it commence?"

"Within the hour—and this new revelation hardens the necessity for destroying these upstarts who dare to upset our plans . . ."

So, whilst armies of worker-scientists went to attack the sprouting, livid green growths, Dal Kilrax and his warriors set off for Maza. They reached the planet in record time, their machines flashing through space at inconceivable velocity. Jad Inicus was, of course, warned of the approach of the avengers and made what hasty preparations he could—but before very long it was clear to him that his own plan of revenge had led his entire race to destruction.

Dal Kilrax showed no mercy, because he dared not. To him, the inhabitants of Maza had become dangerous pests and must be exterminated. So for six hours his armada ranged up and down the dreary wastes of the planet, battering it with mighty explosives, gouging the sand with heat and disintegrating beams reaching into the underground with shattering supersonic vibrations.

Jad and his people fought to the death—but though they survived the surface onslaught of beams and explosives, they could not withstand the supersonic beams. These shattered the life out of them and brought down the walls of the underworld on the screaming thousands packed below. The survivors of the Convulsion were blotted out in a hellish ruin of tumbling rocks and immeasurable tons of twisted metal . . .

Through his X-ray detectors Dal Kilrax was fully aware of what had happened in the underworld, but even this did not satisfy him. He continued to range the planet, snuffing out odd survivors here and there. He destroyed the observatory with its telescope, and traveled as far as the poles. Here, however, he did not concentrate much attention since he knew it was impossible for life to be existent in this frigid region—and for that reason the queer mechanisms and copper obelisks created by Jad escaped notice, hidden as they were under the ice-caps.

Dal Kilrax surveyed below for the last time, and then gave the order for departure. The chapter written by Jad Inicus was finished . . . Yet, not quite. At the poles were the legacies he had left behind—waiting.

UPON his return to his home planet Dal Kilrax was greeted with news which destroyed something of his complacency. It was brought to him in his private suite by the man who had been left in charge of the plant destruction.

"I have to report, Master, that we are not making very good progress in the destruction of these alien growths," he announced. "For every plant we destroy six spring up in its place. The climate, too, is against us. It nourishes the plants to an excessive degree."

"Understand this," Dal Kilrax said de-

liberately. "Those plants *must* be destroyed, even if every available resource on the planet is turned solely to that end. We cannot afford to have our atmosphere slowly impregnated with toxic vapors which, in time, will poison us. Spare no effort."

The scientific worker bowed himself out and Dal Kilrax sat in troubled silence.

Trax and Crenia had arrived on the third world safely enough and, as Jad Inicus had planned it, they had not enough fuel to enable them to return to Naj even had they wished. At this moment they were gazing out on Nivoon's primitive forests. The forest was a perfect Garden of Eden—but it was not upon the vegetation which Trax and Crenia looked, but upon giant beasts which occasionally lumbered into view, inspected the space machine from a distance, and then moved away into the fastness.

It seemed that one particular beast, bolder than the others, was intent on a more thorough examination. It was gigantic in size, possessing an enormous ridged back, armor-plated skin, and loathsome head.

"He's coming a bit too close for my liking," Trax decided finally.

He moved quickly to the electronic gun, but before he could angle the weapon around to such short focus the diplodocus had reached the machine. It examined it intently, its gigantic head and ridged eyes looming massive in the porthole. Trax swung his weapon helplessly; Crenia backed away in alarm—then suddenly the monster began shoving. Plainly it did not like the metal visitor and showed it by pushing with its enormous cranium. The vessel immediately began to roll, little more than a plaything to so gigantic a beast.

Trax and Crenia were bounced and rolled helplessly about the control room, then before they could take any action the diplodocus was joined by other beasts as large as itself. Between them, their mighty feet pounding, they dented and battered the space machine as though it were an old tin. Finally, tiring of their sports, the monsters lumbered away leaving Trax and the girl to get slowly to their feet.

"They'll come again and again," Trax said seriously, taking down hand guns from the rack and giving one to Crenia. "Our hoped-for home is no longer safe. Another attack of that kind and we might be crushed under battered metal. I think the best thing we can do is go out into the jungle."

Crenia braced herself and glanced towards the airlock. Her voice was quiet.

"Very well, Trax, if that's what you think is best."

Trax smiled and hugged her to him. "There's nothing to fear, Crenia. We have superior weapons and intelligence. Father has always told us we need nothing more."

Crenia did not answer. She was wondering if perhaps the masterful Jad Inicus had not under-estimated the situation. None the less she turned dutifully to the storage lockers and began to arrange provisions for herself and Trax, together with a spare supply of clothing. Thus equipped she and Trax finally stepped outside into the blistering heat of the forest, and looked about them.

Suddenly, life appeared—on a totally different plane to that of the diplodocus. It was manlike, on two legs. In all there were perhaps eight or nine men and women, roughly clad, carrying primitive weapons, hair growing lank on their narrow foreheads. Massive though they were they had not the proportions of the man and woman from Naj.

"The real inhabitants of this planet," Trax murmured, his gun ready. "Little more than savages—even apes. Life here is very young, Crenia—"

He had no chance to get any further for the men and women, evidently instinctively sensing the strangers would destroy them if they did not act fast, suddenly lunged forward in a concerted rush. There was no organized attack in their movement: they simply flung themselves on the young man and woman and overpowered them.

By a superhuman effort Trax tore himself free and, with a savage blow of his gun butt, sent one of the Earthmen crashing to the ground. But the remainder, redoubling their efforts, tore the gun from his hands and battered him into unconsciousness.

CHAPTER SIX

SINCE the savage sub-humans who had abducted Crenia and Trax were of different tribes it caused the two young Na-

jians to become separated. Struggling desperately against impossible odds they saw each other for the last time.

Many months later Crenia's child was born—but to Crenia there was only afforded the merciless hardship of the jungle with none of the refinements of science to which she was accustomed. Under the strain her life flickered out. Savage, fearsome eyes looked down upon the mite who had come into their midst and, following the first law of man, they tried in their uncouth way to care for the little creature's needs.

Over a thousand miles away across the forest Trax was still alive. In fact much more than this: he was a mighty warrior. The relentless life about him had taught him that the science of Naj was no use in such circumstances: he had had to atavise and become like his contemporaries, with the one exception that he had intelligence and imagination—and for this very reason was one to be feared. His giant stature was also a deterrent to any over-jealous tribesman who thought of questioning his authority. Towering seven feet high among his tribe, and possessing uncanny knowledge and gifts, he was a god to these very primitive beings.

Time and again he tried to learn of the fate of Crenia, and failing to do so the dull ache in his heart increased. Then one day, nearly a year later, he had news of her death through the passing of a tribe and immediately he set off through the forests in search of her last resting place, and with the hope he might find the child which the tribe had said had been born.

But Trax failed in his endeavors. He fought monsters, beasts and winged pterodactyls on his journey; he smashed his way through the virgin forest, but in the wilderness he lost himself. And, little by little, it was forced on his unhappy mind that Crenia and the child she had borne were only memories. So Trax chose one of the savage women as his mate and to a certain extent it eased the ache in his heart. He had something once more to care for, to fight for, to even die for if need be. Little by little he was slipping down the scale of achievement, descending until he was little higher than the sub-humans themselves, so completely did the force of environment mould him.

Only one memory never deserted him but remained like a clearly burning flame in his consciousness—Vengeance! When he died at the raging feet of a dinosaur, just after the birth of his daughter, he was still thinking of vengeance and of vast dreams unfulfilled.

And the daughter grew lustily to savage womanhood, a creature magnificent in her own limited way, but utterly different from the kind of being Jad Inicus had imagined. In fact the links he had forged had been smashed by circumstance and now only time could repair the defect . . .

Meantime, Dal Kilrax was appreciating just how complete had been the vengeance of the men of the fourth world, even though they had been obliterated for their audacity. For many years the battle against the plants and spores had been continuing, but slowly and relentlessly the plants were winning. They now covered three quarters of the torrid planet.

He summoned Yedi.

"I am forced to an unpleasant decision, Yedi," Dal Kilrax said, gazing absently through the window upon the distant carpet of swaying green. "We must migrate. Not immediately. In perhaps another twenty or so generations. We can hold off the plants that long with our scientific destroyers, but by then our atmosphere will be so polluted with toxics we shall *have* to go. So we may as well start preparing. Each child that is born from here on, Yedi, must be scientifically trained to become accustomed to a gravity equal to that of Maza, and must also be adapted to his thin, near-zero atmosphere."

"You—you mean . . ." Yedi hesitated, baffled. "You mean that we should migrate to the very planet we robbed?"

"Yes. A strange turn of events, is it not? Had we not robbed it of air and water and instead invaded it we would be well domiciled there, though depleted in numbers from battle."

"Why Maza?" Yedi questioned. "We have the third world—"

"A world too difficult to handle, my friend. It is still mainly jungle and populated by hordes of savages. We would have a most uncomfortable time. We *do* know

that Maza is quite dead, as far as living beings are concerned—and, of course, by the time we arrive there its atmosphere will probably have gone too, hence the reason for only trained pioneers visiting that planet. You and I, and those of the older school, will probably be dead by then—but those who come after us will carry on our tradition of conquest."

"Even so, Master, they cannot be expected to live on a dead world!" Yedi protested.

"They will not. They can gather to themselves all the necessities to restore Maza to flourishing life . . . water, and air. The third world can provide those needs."

With that Dal Kilrax became silent. He had given his orders: it only remained for them to be obeyed . . . And on the third world the son of Crenia and Trax had grown to a manhood—a true Najian, and quite unaware that somewhere amidst the savage tribes in the vast forests there roamed his half-sister, actually a half-breed, yet with the heritage of Naj as strongly developed in her mind as it was in his. Yet, so inscrutable is Destiny, these two never met.

When the time came they mated with the men or women around them, became parents, but of necessity their children were removed half-breeds, dimly aware of some strange heritage, the government of unknown mental urges, of vengeance, of a plan to be fulfilled.

Matehood. Off-springs. Down through the centuries, and either by chance or design each child was, unknown to its parents, a half-breed.

Age upon age. Generation on generation. The third world changed and became known as Earth. To the people of this world the fourth planet became Mars and the second Venus. The forests and swamps of primeval time, the Glacial Epochs and Antedeluvian Ages, gave way before reason and advancement. Villages became towns, towns became cities, and man marched on. On Venus the descendants of Dal Kilrax watched these changes, still keeping up their unending fight against the plants and training every male and female for the day when migration would become necessary. It could not be long removed. The air of Venus was slowly becoming fouled.

On Earth, down through the ages, the memory of a great purpose still hovered. Down the corridor of time there echoed the remembrance of a plan to be fulfilled.

MOST people liked the Henry Layton family. They were typical of millions throughout the British Isles in the golden years between 1980 and 2000, the years when war had finally been banished from Earth by its very frightfulness and the true Era of Progress had commenced.

They had two children—Arthur and Gwendolyn, aged seven and eleven respectively. Then the third child, a son, was born—and the destiny of the Laytons took a sudden diagonal turn.

They discovered at an unexpectedly early date that their younger son was by no means like other boys. At one year of age he could speak normally; at two he could memorize long passages from text-books and recite them back almost immediately. Psychologists, doctors, quacks, and newspaper men came to see him; movie and television companies offered vast sums for exclusive rights to his development—but being normal man and woman Henry Layton and Lucy flatly declined. Son Arnath might be a prodigy, but he was still their boy. Yes, even his Christian name was peculiar and Henry Layton wondered from what recess of the mind it had been conjured.

Arnath grew normally enough—to commence with. It was not his stature which was interesting but his vast mental resources. At the age of seven he had the abilities of a child of sixteen; and at sixteen he was cleverer than any scientist in the world, and knew it. He was quite the most extraordinary of men—and yet likeable. Both his mentality *and* his stature now compelled interest. He stood seven feet four in his socks and was proportionately broad with the limbs of a Hercules. His hair was blond and inclined to be curly, his eyes a deep yellow.

He was a phenomenon and a genius—and knew it, but it was because he was not certain how he had achieved this state that he decided to enquire into it. He also wished to know why he was haunted by the ever-growing conviction that he had a purpose

to fulfill, some task to perform.

In a general way his attraction towards women was negligible, but there was one woman in whom he seemed to have an interest—not because she was beautiful or had any claims to appeal, but because she had a scientific mind. She was a secretary in the Scientific Bureau in which Arnath worked, and he could never find a better listener than Christine Grant.

"I believe," he told her one day, pausing in the midst of dictating a scientific report to the Government, "that I have solved the reason for my peculiarities."

"Peculiarities?" Christine Grant looked surprised. She glanced up from her notebook, studying Arnath through her rimless glasses. He was sitting slumped in his swivel chair, a faraway look in his tawny eyes.

"I can hardly be called normal," he murmured, glancing at her. "Definitely my case belongs to the field of biology, and it is in that field where I have sought the answer to my problem—and found it. I believe," Arnath finished, musing, "that I am a Martian."

"It's staggering!" Christine Grant declared. "And what in the world led you to that conclusion, anyway? I know you are a giant and that you have great knowledge—but there have been such people before. They didn't explain it away by their being Martians."

"My case is different, Chris—and I can talk freely to you because you understand biology as well as I do . . . As I see it I have all the characteristics of a Martian of the higher plane—that is, one developed to the full scope of his abilities. We know that Mars today is a dead, dehydrated planet, but once upon a time the possibility of beings like myself existing there cannot be ruled out. Naturally, I did not just *happen.* There must have been a reason for my coming into being. The reason must lie with my parents."

Arnath changed position in his chair and meditated; then he continued:

"Somewhere, at some time, two Martians must have come to this world—a by no means unlikely happening. A man and a woman. They must have had a child, in whom would be the true strain of a Martian. Through circumstances we can only guess at, that true Martian was not repeated in the children of the children. The Martian unit must have lain dormant for generations. You know, as I do, that the genes, the hypothetical submicroscopic bodies located in the chromosomes are the unit factors of heredity. A change in the genes leads to the inheritance of new characteristics, better known as mutations."

"Yes—definitely," Christine Grant assented, all attention.

"Well, in such a manner as two perfectly normal parents might give birth to an Albino child, so evidently my own parents both possessed, by chance, the recessive Martian unit—far flung throwback to dimmest time. Up to that point no two had ever married who *both* possessed the unit. When that did happen I was born—even though my brother and sister are perfectly Earth-born. You understand?"

"Yes," Christine Grant admitted, frowning. "But it is a tremendous shock."

Arnath laughed gently. "Don't let it worry you, Chris. Even if I *am* of another world by heredity, I am still of this one by birth. But, somehow, I feel that all this is not just chance. I cannot credit that I was brought into being without a reason—and it is that reason that I *must* find!"

BY THE time he was thirty he had made enough money to enable him to retire and work things out. Through five more years, little by little, he pieced together his strange memories—the memories of a world lashed by tempest and flood, of a tube of force and boiling oceans, of gouging canals and buried machinery— Hazy, indefinite things which slipped by as fast as they were seized.

So, to bring these memories into full clarity he made for himself an electric machine—a stimulator which, reacting on the brain cells responsible for memory, purged them of all waste material. In consequence, as he lay on the couch beside the instrument, he was able to see in his mind's eye all the racial memories which normal effort of will could not bring into focus. And he was astounded.

He saw his home planet in its hey-day, the thriving cities and the happy people going to and fro, and because he was re-

motely descended from Jad Inicus he beheld the events which had been apparent to him. He lived again over that far-gone morning of terror when the Convulsion had struck.

In different sessions he pieced together the whole story. He realized something of the tragic bitterness of spirit which had ruled his forebear. For awhile, in his dream-like state of induced memory, Arnath Layton almost *was* Jad Inicus, so complete did the link of memory become.

The memories ended when Jad Inicus had completed his huge scheme to exact vengeance, when he had buried his strange machinery at the poles and had come to watch a spaceship climbing away to the stars . . . Arnath relaxed and sighed, thinking on the things he had seen. At last he understood.

His next moves took up the thread at almost the point where Jad Inicus had dropped it. By pulling certain influential strings Arnath had no difficulty in getting himself appointed as scientific adviser to the world's greatest observatory—in Central California. Here there was housed the 800-inch telescope, the wonder of its time. His only object in being in the observatory at all seemed to be so that he could study moonless Venus and dehydrated Mars. Upon both planets he made copious notes—to the puzzlement of the astronomer-in-charge. In fact the astronomer—Dr. Peters—inwardly resented the presence of this massive genius in his territory; and finally said so one night.

"It would help a lot, Mr. Layton, if I knew what the Government is hoping to achieve by having you here. For myself I fail to see the purpose of it."

"There are certain matters concerning Mars and Venus which demand my attention," Arnath answered ambiguously, busy with his notes.

Dr. Peters frowned, lounging against the vast end of the telescope. He somehow felt uncomfortable locked up with this pleasant giant in the lonely reaches of the observatory.

CHAPTER SEVEN

AFTER Arnath completed his research he buried himself in a laboratory in the country whilst he worked out the details of a space machine. Various engineering firms, sworn to secrecy in regard to the plans—for the space flyer was generations ahead of anything yet devised by Earthlings—were given their orders and within a few months the flyer was ready, Arnath himself assembling the various sections with the help of robot tools and cranes. The full flower of his scientific genius had apparently arrived.

When he was ready, and the vessel equipped with all the devices he required, he took solemn leave of his mother and father.

In half an hour he was back at his country laboratory. The operation of various switches caused a wall of the laboratory to open outwards, making it possible for the space machine, on its rubber-wheeled cradle, to be driven into the open under the impulse of radio waves. This done, Arnath set the automatic switches in the laboratory and then climbed into the vessel.

Settling at the control board he moved the switches. The machine literally flashed from Earth and into space. In twenty minutes it was moving at twice the speed of light—a speck in the void, driving towards the majestic brilliance of Venus, some 80-million miles distant.

In an hour the journey was complete. Arnath cut down the speed and switched on light-photon deflectors. By this means all incoming waves of light to the exterior of his machine were polarized. To all intents and purposes it achieved complete invisibility. Special screens, however, able to operate through the intermediate polarized lines, enabled Arnath to view the exterior.

Finally Arnath had driven the machine completely below the cloudbanks and, at slow velocity, swept over the landscape of dense green vegetation.

Here and there amidst the density he caught glimpses of the ruins of once mighty cities. There were crumbling terraces, smashed stone columns, huge and lonely walls, fallen bridges, streets choked with weeds. Here was a planet entirely in the strangling grip of vegetation, all of it thriving lustily in the tremendous heat.

Arnath began to frown. The absence of life worried him. He began to wonder if the scheme in which he knew he was a

vital part had come to an unexpected conclusion . . . He sent his machine to the night-side and here again there was revealed the interminable jungles of green.

So back to the day-side—back and forth across the planet, constantly searching, until at last Arnath noted a low range of hills in the distance. He headed towards them, to discover as he came nearer that they were not hills but mountains, climbing high into the clouds. He ascended over them and began to drop on the other side. He sighed in satisfaction as the twirling vapors of cloud on the screen gave place to the vision of a solitary city, sombre in its magnificence, ringed around with the devouring green yet mysteriously held at bay.

"Tranil," he whispered. "Last outpost of this accursed race . . . Still surviving."

He brought his machine to a halt and it remained 3,000 feet over the city, invisible, supported by levitating beams.

"They cannot long be delayed in their migration," he mused. "Unless they have found a way of adapting themselves to the change in atmosphere. Yet, even then, they cannot forever hold off the green life . . ."

He paused as his attention was caught by an array of gleaming space ships in the distance, at a far quarter of the city. In all there were perhaps a hundred of them.

"THERE can be no other purpose in migration," Arnath decided. "Which means I am still in time. Providing it is their intention to go to Mars."

He considered this prospect for a moment or two, his racial memory so clear that he knew the Venusians *had* to go to Mars if the plan long ago devised by Jad Inicus was to mature. If they were going elsewhere it would throw things into confusion. So Arnath switched on his radio-detection apparatus and sent the probing beam down into the heart of the city in the hope that it might pick up outflowing sound waves.

Almost immediately Arnath began receiving sounds through the loudspeakers, mere jumbles of words which to him were in a completely foreign language. Not that this mattered. His mechanical interpreters would be able to strike the root words of the language and from this, in the manner of an adding machine, work out the derivations and, consequently, the language.

For nearly two hours Arnath recorded the trapped conversations electrically, his probing beam centred on a giant building in the city centre which he assumed must be the headquarters. At the end of this time he shut off the power and transferred the recorded spools to the interpreters. Then he fled away into space again.

The mechanism, however, had a tough job to handle; but at last there came the click in the speakers which showed it was ready to give forth the interpreted version of the sound waves it had sifted. Arnath leaned forward and listened intently.

". . . and those orders are now complete. There is nothing more to be arranged . . ."

Arnath waited, frowning.

". . . not as our past ruler Dal Kilrax would have wished it, otherwise I would go to the third world even now. It is as *he* wished it that it must be . . ."

To Arnath none of this made sense and he shifted position impatiently. On and on the interpreting machine droned, giving forth short bursts of translated sentences which, to Arnath, made little sense. Then just as he was about to give up a few particular sentences caught his attention.

". . . a matter of only a few weeks before the final balance of atmosphere makes life here impossible . . ."

". . . to Maza, of course, the fourth world, as Dal Kilrax in his long gone wisdom ordered . . ."

Arnath switched off, his eyes gleaming. Maza, the fourth world. Mars. Then the plan had still time to work. Arnath wasted no more time. Switching on the power he began streaking across the gulf once more, this time heading for Mars, a journey of 73-million miles—yet in the space of sixty minutes he had covered it and, his polarizing screens still in operation in case Venusian scientists were watching Mars telescopically, he began to land towards the North Pole.

When his instruments told him he was directly over it he switched on the X-ray beams and studied the screens which reacted to them. By their agency he was able to see what lay deep down under the ice-caps—from which water still flowed through the many channels gouged so long ago by Jad

Inicus and his pioneers.

On the screens there appeared complicated machinery, buried turbines and generators, and a huge obelisk of copper—as perfect in the underground chamber as the day Jad Inicus had bedded it there.

Satisfied, Arnath flew south over the empty wastes, and as he went, gazing down with tawny eyes upon the wilderness, he felt himself seized by a tremendous nostalgia. This was *his* world. He was no part of Earth with its beings of limited intelligence. He was the last surviving Martian in a line of courageous fighters. He, of all Martians, was entrusted with a supreme task—and Providence had timed it that he still had the opportunity to exact retribution for a crime committed untold generations before.

At the South Pole his X-ray beams told him all he needed to know. The equipment buried there was in as perfect condition as that at the North Pole. The remainder was up to him—so he turned his machine back into the void and began to streak towards Earth.

Arnath did not begin work immediately. He retired into the house part of his queer "hermitage," ate and drank, and then slept. Though he had set a given hour for awakening, he found himself roused considerably before it—by the strident ringing of the door bell.

Rising, he drew a gown about his pajamas and went to admit his visitor. To his surprise the pale light of dawn fell on the somewhat austere features of Christine Grant. She was in a severe costume, a white shirt blouse showing where the jacket had flowed open.

"Chris!" Arnath looked at her in amazement. "How in the world did you find me?"

As she did not immediately answer he motioned into the hall. She entered and the door closed.

"This isn't ethical, of course," she said. My apologies for arriving at such an unholy hour. You see, as secretary in the scientific department, it was not difficult for me to ask the astronomical division to keep a close watch on your space machine when it returned to Earth, and to note the approximate spot where it landed. Everybody knows you made a trip into space supposedly to test new regions—so to watch for your coming back was the most logical thing to do."

Arnath wandered to an armchair and seated himself.

"I imagine," he said, "that all the world knows by now that I have returned. I was not at any particular trouble to hide my arrival, though I could have done so quite easily. None of which explains why you have so suddenly decided to come and see me, after such an interval of time."

She was silent for a long time, hesitating; then she asked a surprising question.

"Arnath, do you believe in dreams?"

"Perhaps. Though I class them mainly as the disordered conceptions of the subconscious."

"Even if one dreams of the same thing night after night? Or rather not necessarily the *same* thing, but as the same personality connected *with* that dream."

"How do you mean?" Arnath had become intent.

"My dreams started shortly after you had left the institution," Christine continued. "I had always had them, but in a hazy kind of way so that they did not mean anything—but can you account for the fact that night after night, as the years have passed, these dreams have been clear enough for me to actually live them?"

"What sort of dreams?"

Christine sat back and closed her eyes behind the rimless spectacles.

"I seem to see tremendous forests, Arnath, such as I know existed in the prehistoric Carboniferous Era. Not only that: I see savage men. And back of it all somewhere is a half formed idea that I have some kind of mission to fulfill, though I do not know what it is . . ." The girl opened her eyes again and added, "I don't know whether it has any significance or not, but these dreams began to become clear shortly after the time you told me you are a Martian by descent, if not by birth."

ARNATH got to his feet suddenly. "This may be very interesting, Chris," he said quickly. "Pardon me for a moment while I dress, then we'll go into the laboratory."

He hurried from the room, but before long he was back again, drawing his tie into position.

"Why didn't you seek me out before?"

he questioned, as Christine rose from the settee.

"Because I knew you had too many matters of your own to deal with—and besides I thought such strange dreams would wear off. It was only when they didn't that I decided to seek you out."

Arnath motioned her from the room and directed her into the laboratory across the hall. She stood looking about her for a moment as he switched on the lights, then her gaze travelled to the space machine in its own particular corner of the huge place.

"Was your trip successful?" she enquired.

"Extremely so." Arnath was busy with his racial memory apparatus. "I visited both Mars and Venus."

Christine gave a start. "In that short time? But you only left yesterday evening!"

"I am aware of it. I moved at twice the speed of light, as one can when utilizing magnetic lines of force. However, what I discovered—and what I intend to do—is definitely my own exclusive business, unless this apparatus should show that you are as much entitled to know the facts as I am."

Christine considered the apparatus thoughtfully, then lay down on the couch beside it as Arnat motioned his hand. She rose again in protest as Arnath lowered the electroded helmet.

"What are you going to do?" she asked in alarm.

"Nothing of which you need be afraid, Chris." Arnath gave a reassuring smile. "When did I ever hurt you, or try to deceive you? This is a memory-stimulator. It will enable you to think of those strange dreams of yours and really enact them. I want you to speak whilst doing so, telling me exactly what you behold."

"Very well," Christine promised, and relaxed again as Arnath fitted the helmet in position.

This done he settled in a chair near her, switching on a recorder so her words could be retained for a later hearing; then he snapped on the current.

Looking at Christine he pictured the knowledge of things normal ceasing for her. He pictured her brain undergoing a sudden clearance of unwanted information. The mental lumber would be thrown out and basic memories bared . . . So Christine began talking and told of how she was moving through the depths of a primeval forest with a man at her side who looked very much like, and yet was not quite, Arnath.

She hesitated, then continued. She stated that there were men and women of a savage tribe on the move. Suddenly she was finding herself swept aside, dragged from the nearness of Arnath—if it *was* Arnath—so close beside her.

Of the rest she spoke of anguish, of lingering hours in the suffocating heat—of darkness—and then the impression that she was moving through the jungle with the rest of the tribe. But now she seemed to be an entirely different personality.

"It fades . . . It has—gone."

Christine stopped speaking. Until this moment she had apparently been repeating in word pictures everything which had presented itself to her mind. Now her eyes fluttered open again and she found Arnath looking at her pensively.

He continued meditating for awhile and then smiled. Getting to his feet he went to the bench, mixed a series of chemicals, and then returned with a foaming drink.

"You need this," he said. "It will soon revive you."

Christine took it gratefully. When she had drunk it she looked expectantly at Arnath.

"Well?" she asked. "Strange dreaming, was it not?"

"The people of Earth," he said, "have a saying—'There is a destiny which shapes our ends . . .' I was never more convinced of the rightness of it than at this moment. You have not been aware of it until now, but you have related exactly the experiences which befell the daughter of Trax, a remote ancestor of mine. I, it would seem, am remotely descended from the wife of Trax—Crenia by name. Which makes you my half-sister."

"You actually mean," she asked at last, "that long, long ago I was the daughter of the man who was also your father?"

Arnath shook his head slowly.

"Not the actual daughter, but descended in a straight line so that you carry her memories and strains. You are the daughter *of* the daughter, *of* the daughter, and so on. My father was married to Crenia of Mars.

They had a child—a son—and Crenia died when it was born. Trax became separated from Crenia by force of circumstances and married a woman of his tribe, who bore him a daughter. That is how the half-sister relationship comes about . . . I know all these facts to be true because I too have experienced the effects of stimulated memory."

"Which explains so much," Christine responded, sitting up slowly on the couch. "Our mutual understanding, of a type so different to the attraction of a man for a woman, or vice versa. We are of the same blood, the same lineage. I, too, then, must be a Martian!"

"It is not a heritage to be ashamed of," Arnath replied, rising to his gigantic height and looking down on her.

"I wonder."

Arnath frowned. Christine looked up at him intently.

"I have an inner feeling," she said, "that the Martians are concerned only with revenge. That *you* are concerned only with revenge, that *I* am.

Arnath began moving slowly, talking as he wandered about the great laboratory.

"Countless generations ago, Chris, my father and mother argued about the rightness of my father's one purpose in life—just as you and I are threatening to argue now. I believe, from the masculine viewpoint, that my father's ambition was entirely right. He had the will to destroy the cruellest enemies his planet had ever encountered, and he handed on that ambition to his son, and to his son's wife. They transmitted it again, which is why I—a true Martian—have it very strongly developed, and why you—a half-breed Martian if I may use the term—have not quite brought your inner convictions into focus."

Christine rose from the sofa and moved across to where Arnath was standing. She caught at his arm.

"Arnath, who is this—this *something* you and I, as descendants of the Martian race, are supposed to avenge?"

"It is our duty to avenge the almost total destruction of our planet by the ancestors of the beings we now call Venusians. Long ago, on one Martian summer day . . ."

And by degrees Arnath gave the entire story, as he had read it from his own memory under stimulation. When he had finished he paused for awhile and then added:

"The scheme devised by Jad Inicus is about to be brought to completion. That is why I went to Venus and Mars. I wanted to be sure that the Venusians had not left their home planet; and I also wanted to be sure that Mars still holds the necessary equipment to make revenge absolute."

"But what *is* this revenge?" Christine demanded. "You still do not tell me. What is it that Jad Inicus planned to do?"

"BUT for one thing, Chris, I would tell you." Arnath moved to the nearby bench and began to assemble various radio components. "As it is, I hesitate. You are clearly not entirely in agreement with a scheme of revenge, so maybe it is better you know nothing of it."

"If it involves the killing of innocents I not not *want* to!" Christine retorted.

"Innocents?" Arnath glanced at her, his handsome face granite-hard. "Innocents? And they destroyed a civilization and millions of happy people, just to perpetuate themselves? Where's your sense of proportion?"

"It's not a question of that. Listen to me, Arnath!" Christine caught his hand compellingly and forced him to look at her. "The people of Venus are not the original Venusians who caused such havoc—just as you and I are not the original Martians who suffered. It's something lost forever—and it ought to stay that way. Why perpetuate a vengeance?"

"Because it is part of us," Arnath answered coldly.

"Part of you, perhaps, but not of me."

"Which proves my point," Arnath shrugged. "You are not devoted enough to the cause to be informed of its details. And it may interest you to know, Chris, that the present men of Venus are every bit as ruthless as their ancestors. If this plan of Jad Inicus' is not completed this world will be the next to be almost, if not totally, destroyed. The men of Venus have said so—not in words that I have heard, but it is the only logical course. They intend to domicile on Mars. Mars, as a planet, is useless without dense air and oceans. Only one planet can provide those—Earth."

"You do not *know* this!" Christine insisted.

"Not actually, no. I am working on a logical assumption."

Arnath turned back to the work he was doing on the radio components, then Christine said flatly:

"Related we may be, Arnath—almost brother and sister—but I will not be a party to mass-murder!"

"Very well," he answered. "Just as long as you do not hinder me . . ."

CHAPTER EIGHT

ARNATH'S work on the radio equipment seemed to be of a particularly complicated nature, for even though he worked eighteen hours out of twenty-four, it was nearly ten days and nights later before he had the apparatus to his satisfaction. Christine, who had accepted his invitation to stay beside him, had not the remotest idea what purpose the equipment served. It was big, incredibly complex, and seemed to embody a radio power not known—on Earth.

"Just what *is* it?" Christine asked, on the evening when Arnath had at last finished his task.

"A radio key," he answered, deliberately evasive. "It will transmit a radio wave of a special length, devised by Jad Inicus himself. It will transmit the wave to Mars and, once there, certain locks will be actuated which, in turn, will start up machinery. After that there will be—" Arnath checked himself and added, "I shall not start up the equipment until I know the Venusians have started for Mars. I have the planet constantly in the sights of my telescope over there."

Christine glanced towards the telescope, turning slowly on its electric bearings so it would keep pace with the earth's revolution. Then she looked at the radio equipment. There was a strange expression on her coldly intelligent face.

"When do you expect the Venusians to leave for Mars?" Christine asked suddenly.

"They cannot be long delayed," Arnath answered. "I got that much from their conversation. With every hour their atmosphere must be building up into rank poison."

"And you do not consider that is vengeance enough? Jad Inicus brought about that state of affairs and has at last driven the Venusians from their planet—or will have done soon. Is anything more needed?"

"Much more," Arnath answered absently, considering the screens.

"This radio equipment is the one thing which can seal the door of the Venusians, I suppose, if they go to Mars?"

"*When* they go to Mars," Arnath corrected.

Christine was silent. Hugging her elbows she began to wander about the laboratory. Arnath took little heed of her, his brooding gaze on the telescope screens. It was a sudden alarming crash and the tinkle of falling glass that made him glance up. In blank amazement he stared at Christine, her pale face flushed for once, a heavy adjustable spanner in her hand. Before her on the bench the radio equipment was a smashed debris of broken glass and twisted wires. On the floor lay components battered from their fixtures.

"All right, glare at me!" she said fiercely. "Do what you like! I've smashed your precious equipment for you!"

Arnath strode angrily across the laboratory and gripped her slim shoulders. He shook her violently.

"Chris, you fool! You idiot! Do you realize what you have *done?*"

"Yes— Wrecked your apparatus and saved my race from whatever fate you were planning for them."

"*Your* race?" Arnath stared at her in amazement. "What are you talking about? *Which* race? You are an Earth woman of Martian descent, Chris—or have you forgotten it?"

She shook her head vehemently. "I am neither. I am a Venusian!"

It was not often Arnath was taken off his guard, but he certainly was this time. He could not take his eyes from Christine's suddenly vindictive face. And whilst she talked she was backing away towards the door.

"A Venusian!" she repeated. "We of Venus have been able for centuries to pick up radio-waves from Earth, so naturally we knew of the rising of a phenomenal young giant in the midst of Earth peoples. Arnath Layton, the wonderman, and so obviously

of Martian descent with his yellow eyes and huge stature. The Venusian council was worried as to what this Martian might do—if he had any knowledge of what had taken place in the early days of his race. If so, he might be dangerous—so one of the race was instructed to visit Earth and find out everything possible about Arnath Layton. I was that emissary, and I don't have to tell you how hard I have tried to learn your innermost secrets."

"And failed," Arnath pointed out.

"I have not learned your ultimate purpose, Arnath, but I have destroyed the means by which you could make that purpose come true."

"I think not. I shall build the apparatus again."

"No, Arnath, you will not." Christine had a queer weapon in her slender hand now. "I would have killed you long ago, but first I was trying to follow orders by discovering your real objective. I have failed in that even though I have smashed your equipment. I have no alternative now but to wipe you out and then return home to my planet with the information that Mars is quite free to be taken over. Doubtless you have been wondering why the Venusians didn't depart for Mars long ago? They were informed by me that they should not do so on any account until I had made sure the planet was safe . . ."

"You have played your part cleverly, Chris," Arnath admitted.

"I had to. We of Venus are clever, but you are also clever. I had to seem quite a natural person, which is why I left you alone for so many years whilst I knew you were not doing anything of great moment. It was your space journey that made me think it time I contacted you again. As for my memory-dreams, I made them up as an excuse, to get further into your confidence. I knew they must be accurate—or sounded it—because all I did was read *your* memory and tell it back to you. We of Venus are telepathists—except when a person guards a secret completely. Then we cannot break the barrier. Which is why I have not been able to read your innermost thoughts."

Arnath said nothing. Hands in jacket pockets he stood waiting, his yellow eyes on Christine's weapon.

"And now you are going to die," Christine said steadily. "This gun is created by my own race, Arnath, and emits a beam which can liquefy flesh. You have been a grand enemy to fight, but after all it is my planet, or yours, and I prefer it to be mine."

Arnath did not answer. He was still smiling—only it was frozen and fixed, the cruel smile of an avenger. His eyes never moved from Christine's. She looked at them steadily—too steadily—and found it difficult to move her gaze. In fact she could not. There was an iron compulsion in Arnath's yellow eyes.

"Call it right against wrong," he said deliberately, "or that your intelligence is not quite on a par with mine. Whichever it is, I can master you, Chris. Take off your spectacles."

SHE hesitated, then she obeyed. Her big Venusian eyes, which the spectacles had minimized to look Earth-normal, were still looking at Arnath fixedly.

"And put your gun on the bench," he added, his voice quiet but irresistibly compelling.

Christine did exactly as he ordered, then dropped her hands slackly to her sides.

"You are a strong-willed young woman—or rather a strong-willed Venusian female," Arnath commented dryly, "but it seems I have still a trick or two to show you. Since you smashed the radio equipment you will now help me to rebuild it."

Hesitation flickered over Christine's face and then died away again. Completely mastered, she moved to the bench and commenced to sort out the ruins of the radio. Arnath moved so that he worked beside her, keeping his mind constantly dominating hers.

"Whether or not the Venusians have only just arrived on Mars or been there some time when I operate my radio-key does not signify," he said. "So it is not essential that I rebuild the apparatus at desperate speed. What really matters is that they do go to Mars—as they will when you tell them to."

For a moment or two Christine ceased working as she made a tremendous effort to regain her personality. The statement had penetrated into her overmastered brain—but hard though she struggled to reassert her

personality she failed.

"Over there," Arnath continued, "is a short-wave radio. With it you can easily contact your home planet. Do so, and tell them that the way to Mars is free. They can leave their own world any moment they choose."

Christine moved woodenly from the bench and across to the radio equipment. She sat down slowly before it. Arnath came over to her, switched on the power, and then motioned with his hand.

"You know the exact wave-length," he said. "Use it."

She began to adjust the dials, a blank faraway look in her eyes. After awhile she found the wave-length she wanted and drew the microphone to her. Arnath's eyes never left her as she began speaking. Reaching out, he switched on a recorder so that her words could afterwards be played back. Since she was speaking in her own tongue it did not make sense to Arnath.

The communication she made was brief. When she had finished she sat back heavily, hands in her lap, a look of dumb hopelessness on her face. Arnath gave a grim smile, then picking up a length of steel wire he bound her ankles to the chair legs and afterwards passed the wire round her throat to the chair back so she could not escape. This done he felt safe to remove his mental compulsion.

Immediately she stirred and looked at him in bleak hate.

"Thank you for doing as you were told," he said, and began to busy himself fitting the recorded spools into the matrix of the interpreting machine. "The one thing I wish to be sure of is that you sent the correct message. I cannot afford to take chances."

"What else *could* I do with your mind dominating mine?" she demanded angrily.

"I don't know. I just want to be sure."

She struggled savagely with the wires but was powerless to break them. Arnath ignored her efforts and waited for the Interpreter to function—which, presently, it did. The translated voice of Christine came forth.

"This is Kiuna calling from Earth. You may proceed with the fourth world migration. Nothing is standing in your way. Please verify."

There was a pause and then came the voice of the responding radio technician across the void.

"Message received, Kiuna. May the cosmos watch over you."

Arnath switched off and nodded. Christine—Kiuna of Venus—quite unable to break free, still sat glaring at him.

Arnath turned back to his radio apparatus and began to carefully rebuild the shattered parts. He started on a task which he knew would prove lengthy. At intervals he released the girl, preventing her from any untoward activity by the hold he had over her mind. He saw to it that she had her meals with him, that she slept when necessary, but otherwise she was beside him day and night, never once allowed any lattitude in which she could get up to mischief.

It was on the third night and Arnath had just finished tying Christine to her chair, when the alarm sounded from the telescope's photoelectric circuit. Immediately Arnath ceased working on his apparatus and hurried over to the screens. With gleaming eyes he stood watching the almost infinitesimal specks of space machines as they took off into the void. Christine watched too and a sense of desperate inner struggle crossed her face.

"At last," Arnath breathed, clenching his fists. "This is the hour for which I have been waiting—for which all the centuries have been waiting! If only Jad Inicus could see this moment! The entire race of Venus on its way to a death trap, and you, Christine, sent them there. Before long every man and woman of Venus will be destroyed. *Every* man and woman," he repeated, his eyes looking back towards the girl.

She said nothing. The wires were biting into her flesh, and they bit all the more as she tried uselessly to tear herself free.

By working all through the night Arnath succeeded in finishing his radio equipment by dawn. He looked across at Christine and beheld her slumped forward in her chair, apparently unconscious.

ARNATH moved across to her and untwined the steel wires from about her. She fell forward into his grip as he did so. He began to raise her and then suddenly gasped in surprise. The wires that had been about her wrists were now in her hands and

she brought them tight against his throat, twining them over and over at the back of his neck. Almost before he realized it a strangling garrot was choking him.

Instantly his fist slammed round with all the strength he possessed. It knocked Christine spinning. She was flung across the floor and hit the nearby bench heavily—but she did not fall over. She used the bench to straighten herself up again and, in so doing, realized that she was only a foot or two from the re-built radio equipment.

Arnath tore frantically at the wires choking the breath out of him. Dazed, his head spinning, he reeled to the opposite end of the bench where the wire clippers were hanging. He snatched them down, too concerned with his own predicament to pay any attention to Christine. He snapped the clippers and the wires fell away. At the same instant he saw Christine picking up the heavy stool from beside the bench whirling it over her head.

Instantly he threw the clippers, without having time to take aim. They struck the girl in the face and with a gasp of pain she dropped the stool back to the floor and flung up her hands to where the clippers had gouged a deep cut over her cheekbone.

"Not a second time, Chris," Arnath told her, panting for breath. "And I'm taking no more chances . . ."

He whipped up a stoppered jar from the shelf over the bench and flung it straight at the girl as she made a second effort to reach the radio equipment. The jar smashed on the floor at her feet and immediately released a cloud of pale blue fumes. Christine stopped, gulping and choking, blood trickling down her cheek. She looked at Arnath dumbly for a long moment as the lethal gas surged into her lungs—then her legs buckled and she crashed on her face amidst the broken glass.

So much Arnath stayed to watch, then he wrenched open the outer door and staggered out into the cool dawn, drawing in great gulps of fresh air. Behind him, the misty tendrils of the poison gas began to escape. He remained outside until the last trace of gas had gone and then wandered back slowly into the laboratory. Silent, dishevelled, he stood looking down at Christine's body.

Finally he moved across to it, hauled it up into his arms, and carried it across to one of his instruments. Securing it in place with the odd strands of wire lying about the floor he switched on the machine's current. Instantly the corpse glowed brilliantly, eye-searing for a moment—then it was gone in a cloud of vapors. Complete disintegration had been effected and not one atom remained in cohesion with another.

Arnath switched off and relaxed, his face grim. The absoluteness of the disintegrator was something that always disturbed him. There remained not one trace of Christine Grant—Kiuna of Venus.

Finally, Arnath moved back to his telescopic screen and studied it, changing the angle so that the instrument was put in line with Mars, but the daylight was fast waxing and the red planet was out of sight. Turning, he moved to the radio-phone and contacted the Central Californian observatory. As it happened, Dr. Peters was still on duty. He sounded surprised as the unmistakable voice of Arnath Layton came over the ether.

"Dr. Peters, you will find that very shortly there will be signs of life on Mars for the first time since records were kept," Arnath said.

"In what way?" The chief astronomer sounded sceptical. "Or have you decided to rehabilitate the planet? Since you say you are a Martian, Mr. Layton, I—"

"Listen to me," Arnath interrupted. "What is left of the Venusian race has migrated from that planet and will very soon arrive on Mars. In fact they may have arrived even now, depending on the speed at which they have crossed the void. I am giving you the chance of being the first man to announce life on Mars—and all the scientific credit that will accrue from that announcement. In return I want you to advise me the moment those signs of life are noted."

"Very well," Dr. Peters assented. after a pause, and it was plain that he did not for a moment suspect that he was being used as a go-between to send information when the Venusian fleet had reached Mars. "How do I contact you?"

"I will leave this waveband open.

"You have only to speak when you have

the information."

"As you wish—and thank you for the opportunity of making such an historic announcement."

"Not at all," Arnath responded dryly. "I would further suggest that you keep Mars constantly in focus because when the Venusians *do* arrive other things will happen—things which have never happened before. They ought to make cosmic history."

"I shall watch with interest," Peters promised, and with that Arnath turned away from the instrument.

He stood for a while, thinking; then he went into the house regions, changed and shaved, and had a meal. More comfortable physically, he returned to the laboratory and paced up and down slowly, musing, his ear cocked for the first sign of a communication from Peters—at which moment the signal buzzer would sound.

Noon came. The afternoon passed, and the early evening. Arnath was like a caged animal, keyed up for the supreme moment—then towards eight o'clock, as the evening light had almost gone, there came the signal. Instantly he snatched up the microphone and listened to the speaker.

"Yes? Arnath Layton speaking."

"Dr. Peters here." The astronomer sounded as impartial as ever. "I have just come on duty, Mr. Layton, and I have been checking a report made an hour ago. There are signs of life near the Ismenius Lacus Oasis. It seems to be bright and glittering—rather like a mass of silver pencils."

"Space ships," Arnath explained curtly, making a note on his scratch-pad. "The Ismenius Lacus Oasis . . . Thank you. All you need to do is to tell the world that there is life on Mars, and state where. And you had better do it quickly."

"Certainly I shall lose no time," Peters replied, "but why such desperate hurry?"

"Because where now there is life there will soon be death."

Arnath did not explain further. He switched off the radio-phone and moved to his complicated short-wave apparatus. As he sat down before it he hesitated for a moment, half smiling, half grim.

"I am doing this in your name, Jad Inicus," he said quietly. "Wherever you may be I hope that you can hear me. I hope still more that you can witness what is going to happen."

Over went his right hand and plunged a knife switch into position. There was a momentary flare of sparks. Then Arnath sat back, watching the dials, listening to the droning of the dynamo, picturing in his mind's eye the radio-waves leaping to the aerials atop his hidden retreat and, after that spreading their energy through space, their frequency identical to that planned by Jad Inicus untold generations before.

At the speed of light they crossed the gulf of 40-million miles, unseen messengers of destruction. They passed undetected across the rust-smothered desolations, through the very midst of the newly arrived Venusians, themselves, and they were unaware.

On went the radio-waves—right through the south pole ice-cap, right through the north pole ice-cap. They reacted on complicated machinery, still in good condition deep within its power-room under the ice.

A long-sealed bolt slid back, releasing a cataracting flood that boomed and thundered through a long vent and out through sluices. A massive turbine began to revolve, its bearings in beds of grease. As its large shaft gathered revs a dynamo attached to it began to rotate. Gradually a whining song of power was echoing through the desolate Martian underworld, a song of vengeance.

The armature spun swiftly between its magnets, building up horse-power upon horse-power. Electrical energy surged to the copper electrode, as yet only slightly eroded, and dispelled itself into the water, instantly slamming across the network of canals, even through the very air and ground itself, leaping to the negative north pole which was partaking of the whole negative preponderance of Mars itself.

The canals, the atmosphere, the ground, became livid energy, flaming, utterly annihilating. The Venusians, last of their merciless race, had no chance. They were incinerated utterly before they even realized what was upon them. Their space machines were liquefied, their base camp charred into the finest dust which blew away on the dreary wind.

For an hour the canals were deadly lines of force—then the sluice vent automatically closed, flooding the power-room. After a

deep and sullen explosion there was nothing left but a drooping copper rod, embedded at a slant in the ice . . .

ARNATH cut the power of his radio and sat back. He was breathing hard. His face was wet with the tremendous nerve strain of the task he had performed. He swung as the radio-phone buzzed urgently for attention.

"Yes?" he asked, his voice quiet, and Dr. Peters answered him—excited for once.

"You were right, Mr. Layton!" he cried. "The most amazing things have been happening on Mars. The canals—if canals they be—flamed blue for exactly one hour. Even the air was blue. Now everything seems normal again. But those silver pencils which you called space ships have gone. What did you mean by death replacing life?"

"Just what I said," Arnath responded. "What you saw, Dr. Peters, was the annihilation of the last of the Venusians, a race unfit to be in the community of planets. I was born solely to bring the vengeance of a remote ancestor to fruition, and now I have done it. He made of Mars a planet sized battery and its terrifying energy incinerated everything upon it. Soon there will be nothing but rust again. Rust . . . Eternal rust."

"I—I don't understand," Peters insisted. "Explain it in more detail. This vengeance you speak of—"

"It is done, my friend. I do not wish to speak of it again. One thing I *do* know: Earth is safe. There will be no theft of air and water. This bright, happy world can continue on its way undisturbed."

"But *was* there ever such a threat—?"

Arnath cut off the radio-phone. He was in no mood for answering the astronomer's urgent questions. Slowly he got to his feet and walked to the door which led to the garden. For a long time he stood looking towards a red star low down on the horizon. It looked serene, undisturbed. He smiled and, leaving the door open so he could still see the planet, he came back into the laboratory and looked about him.

"I have done what I set out to do," he said slowly, "and there is nothing left. I destroyed because I had to. I lived here because Destiny decided it that way . . . But to stay here would be folly. I have intelligence beyond these humble yet happy people. I do not fit amongst them. Either they fear me or pester me, and neither aspect interests me. As the last of the Venusians have been destroyed, so must the last of the Martians be destroyed also."

He drew up the couch from beside the memory-inducer and then settled upon it so that he could still see Mars low down in the mists. Reaching up to the bench now close beside him he took down a hypodermic needle and considered it. It had always been there, prepared, in case Earth law might find a way to prevent him finishing his plans. Now that no longer signified. He was finished with Earth, finished with everything. A man without a race and without a world.

He sank the needle into his arm—calmly, without haste, and replaced it on the bench. Then he lay back, still smiling. As Mars blurred before his dying vision his memories came back to him for comfort as he crossed the threshold of life into the unknown. Memories of his remote ancestor, Jad Inicus.

And now, at last, Jad Inicus could rest content. He was avenged . . .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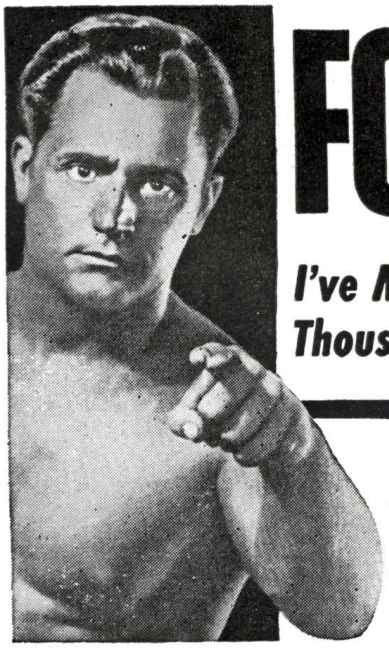

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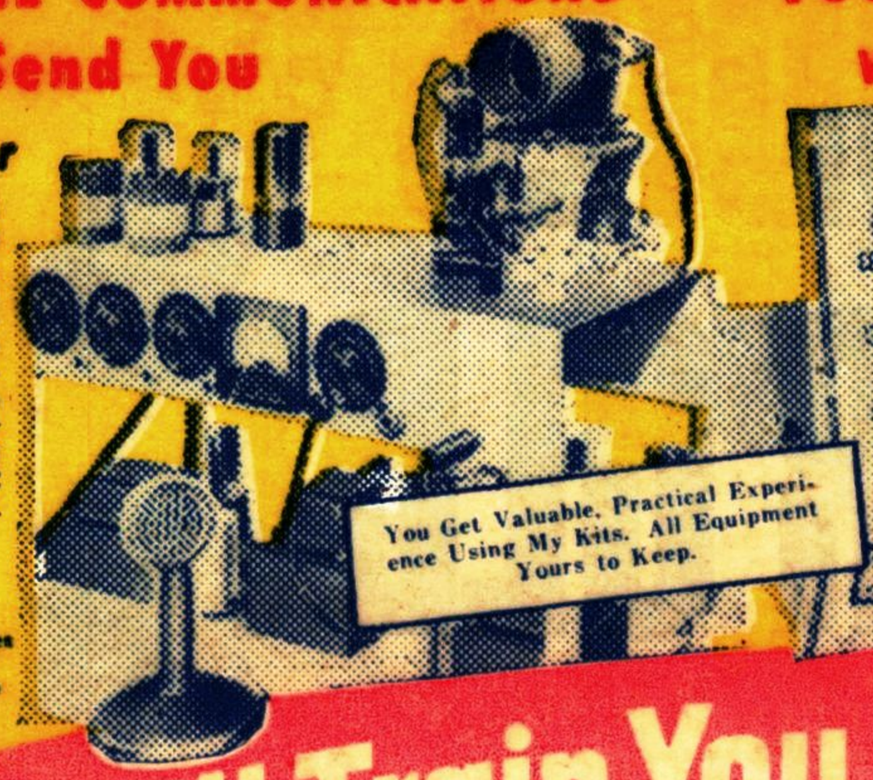

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